

Lesson Plans for Go in Schools

By

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### Acknowledgements

I wish to extend my appreciation to the seminal work of Ralph Tyler (Tyler, 1949) for providing the foundation for curriculum design in the form of his four fundamental questions known as the “Tyler Rationale”: “What educational purposes should the school seek to have? What educational experiences will lead to fulfilling these purposes? How can these educational experiences be effectively organized? [And] how can we determine whether these purposes are met” (Kridel, May 2000)? Tyler’s work gave educators the structure for the nascent field of curriculum development. Allan C. Ornstein and Francis Hunkins (Ornstein, 1993) informed my understanding of the instructional theories and instructional models of David Berliner, Benjamin Bloom, Jere Brophy, Walter Doyle, Nate Gage, Thomas Good, Carolyn Evertson, Herb Walberg, Barak Rosenshine, and Madeline Hunter. For my doctoral training, and my understanding of Heidi Hayes Jacobs’ curriculum mapping I am indebted to the exceptional guidance of Dr. Carolyn Chapman, professor emerita of Educational Leadership at the University of Nevada, Reno.

Lastly, I wish to acknowledge the perseverance and patience of the Masters in Teaching students of my Curriculum and Instruction courses at City University in Tacoma, Washington. As they struggled with the concepts of lesson planning and the improvement of instruction, I learned from their suggestions for ways to improve the model that I use for the lessons of this manual.

### Purpose/Rationale

Educators' support for the use of lesson plans ranges from the structuralist to the minimalist. The structuralist develops a lesson plan very much like a cartographer constructs a map. On the other hand, the minimalist asserts that filling in the small 2" x 2" box in pamphlets, that their publishers title "Planning Book," are sufficient for them. They eschew taking the structuralist approach because, they say, it takes too much time and work. Besides, they know what they are doing (even though nobody else could tell).

I chose the structuralist approach because it provided an extensive foundation for solid lesson planning with essential characteristics that took the guess work out of how to get where you want to go. Furthermore, I wanted to demonstrate both to educators, and to lay people, that lesson planning elucidated the act of teaching. Lesson planning reveals to anyone who wants to know not only the intent of the lesson, but also how the educator will assess performance to determine whether or not they succeeded in the lesson. Consequently, my use of the structuralist approach conforms with the educational research findings that emanated from the "school effectiveness" research of the 1970s and 1980s. I became acquainted with Kathleen Cotton's work when I was the Superintendent of the Chatham School District (CSD) in Alaska. I involved the CSD in the Northwest Educational Laboratory's *Onward To Excellence* school improvement process. Cotton (Cotton, 2000) redacted three decades of research. Regarding the development of a curriculum and teachers' use of lesson planning, Cotton found that:

Within [the general topic area of "Leadership, Planning, and Learning Goals"] are listed the classroom . . . practices that research has shown to foster positive student achievement, attitudes, and social behavior [when]:

1.1.1 Teachers emphasize the importance of learning [to]:

A. Reinforce to students that the things they are learning will be useful throughout their lives, giving examples of current and future applications.

1.1.2 Teachers use a preplanned curriculum to guide instruction [to]:

A. Develop and prioritize learning goals and objectives based on [classroom] guidelines, sequence them to facilitate student learning, and organize them into units or lessons.

C. Identify instructional resources and teaching activities, match them to objectives and student developmental levels, and record them in lesson plans.

E. Review resources and teaching activities for content and appropriateness, and modify them as needed to increase their effectiveness in helping students learn. (Cotton, 2000, p. 6)

The topic of goals and objectives are central to any discussion of an educational approach to lesson planning. The tensions between the structuralist and the minimalist approaches raise again the questions of "for whom?" and for "what purpose?" The structuralist answers that the goals and objectives are statements of student outcomes for the purpose to improve his/her achievement. The educational theorist best known for this objective's approach is Robert F. Mager (Mager, 1997). The minimalist answers that goals and objectives are only for the teacher to know what he/she is supposed to teach, and that they are self-evident from the lesson. In the following lessons, I have adopted the goals approach that Mager influenced. My rationale for taking this approach is: A goals objective is a statement that answers two questions for the teacher: (1) What do I want the learner to know, understand, or appreciate (or some other educational goal?), (2) How will I know if the student knows, understands, or appreciates? It has been my experience that prevalent practice among most public school teacher is to dispense with

objectives in lesson plans even though materials such as curriculum guides and textbooks contain them. From a teacher's perspective, I believe that there are advantages to providing teachers with objectives and curriculum guides? Parents and students are holding teachers more accountable for student learning. Just as in the healing professions, in the education profession performance objectives are increasingly the way of life. The minimalist, on the other hand, says that the objection to writing goals and objectives is that they take too much work for the minimal pay-off. In my approach, I hope to provide a model for educators, and for Go teachers, that the extra time spent writing goals statements have an enormous long-range pay-off. The little extra time that the teacher takes in the beginning to write goals and objectives, virtually eliminates the need for teacher to do them again and again in the future. So, it is a one-time task, which focused the act of teaching toward the improvement of instruction and student achievement. Finally, the research suggests that student learning is greatly enhanced when teachers:

Develop and prioritize learning goals and objectives . . . sequence them to facilitate student learning . . . identify instructional resources and teaching activities, match them to objectives and student development levels, and record them in lesson plans. (Cotton, 2000)

Another purpose I have for presenting these lesson plans is to solicit suggestions from other teachers of Go. I appreciate that each Go teacher has his/her own approach to teaching the game. Consequently, I submit these lesson plans in recognition that they are a work in progress that will greatly improve with the constructive suggestions of others.

## Lesson Plan One

*Basic Ideas***PREPARATION**

- OBJECTIVE/EALR(s)** 1. **EALRs**<sup>1</sup>: CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1, 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d  
**AKCSs**<sup>2</sup>: ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.
2. The student will be able to arrange (*knowledge*)<sup>3</sup> his/her stones so that when given a puzzle he/she will make the connection 100% of the time.
- STUDENTS** 3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. This is an introductory lesson to Go. Students may have prior experiences with the games of checkers, and Pente (which is similar in layout to a Go board).
- CLASSROOM MANAGEMENT** 5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home); 50' tape measure
6. The teacher will introduce the students to the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. The teacher will demonstrate to the students the proper way to greet the instructor and fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson. Have each child make a Go folder, and have a Go journal in which to record their thoughts on what they've learned each session. Ask the students to make a section in their Go journals for "Definitions." They will record their daily vocabulary words in the Go journals along with their reflections on each day's lesson, and the concepts that the teacher introduced. Name tags are optional.

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<sup>1</sup> EALRs = Washington State's Essential Academic Learning Requirements; CO = Communications; R = Reading; W = Writing; M = Mathematics; SSG = Social Studies Geography; SSIIS = Social Studies Inquiry and Information Skills; SSIGPS = Social Studies Interpersonal and Group Process Skills; SSCTS = Social Studies Critical Thinking Skills

<sup>2</sup> AKCSs = Alaska Content Standards; ELA = English/Language Arts; R = Reading; WL = World Languages; T = Technology

<sup>3</sup> Italicized items in the objective statement are the cognitive learning level(s) from Bloom's Taxonomy of domains: cognitive, psychomotor, and affective.

**CLASSROOM  
MANAGEMENT**

7. Send home a letter (attached on page 17) explaining the game of Go to parents. Solicit responses from parents about the degree of their interest/involvement with this child's learning about Go.

**INTRODUCTION****SET**

8. Prior familiarity with Go is not required. The teacher will give a brief history of the game of Go, how it is played today, and the opportunities for having fun and meeting new friends because of their involvement in the game and activities of playing Go (See attachment that follows).

**COMMUNICATION  
OF PURPOSE**

9. By learning Go you will not only become the newest part of a 4000 year old tradition that started in China, but also you will begin to play the game for fun and enjoyment. Go is an excellent way to exercise your mind, just as you exercise your body in gym class.

**BODY OF THE LESSON****PRESENTATION**

10. By learning Go you will not only become the newest part of a 4000 year old tradition that started in China, but also you will begin to play the game for fun and enjoyment. Go is an excellent way to exercise your mind, just as you exercise your body in gym class.

**PROCESSING**

11. The teacher will present some of the history of Go, then demonstrate the two different colors of stones, the matrix of the Go board (9 x 9, 13 x 13, and 19 x 19). The teacher will follow the demonstration with an exercise for the students to solve the puzzle.

12. The teacher will introduce the game by showing the students how old the game is using a 50' tape measure. One inch is equivalent to 10 years old. Ask students how old they are, and have them show the teacher on the tape measure what that would look like. Then demonstrate the age of the United States, the sailing of Christopher Columbus (1492), Roman Empire (476 B.C.) Greek culture (20'). Continue until the tape is out about 33'. This represents about 2000 BCE.

How many can name a famous American sports figure? How many a famous Go professional/player? In Asia school children know their names just as you know the names of sports figures in the U.S.

How many of the students participate in some form of martial arts? Or have friends that do? What are the benefits? Go is a "martial art for the mind."

The teacher will give instructions, and then follow-up with guided practice, and then one-on-one independent practice. The teacher will explain the recognized "manners" of Go: 1. Acknowledge your opponent at the beginning of the game; 2. place the stones on the board politely (do not move them around); 3. never comment on your opponent's moves (except to say "nice move!");

**PROCESSING**

4. always thank your opponent for the game; 5. accept resignations with grace (explain that it is always okay to resign).

**MONITORING**

13. The teacher explains to the students that the basic rule of Go is “surround to capture (see attachments). The teacher explains the capture rules. Keep it very simple. Students’ attention will wander after 3-4 minutes. Ask the students to visualize that the Go board is a large glass of orange soda, and each line coming out from a stone is a straw. Stones need to breathe to stay alive. Show how opposing stones block the straws, show Atari, then capture, as the stone dies from lack of air. The show how stones of the same color can breathe through the buddy system, they can hook their straws together. The students will pair up, and they will hand out the Go sets. Have students play the one-stone capture game (Yasuda, 2002) (see attached description).

14. The teacher will be looking for the students to demonstrate the three types of Go boards (9 x9 , 13 x 13, and 19 x 19) and explain the purpose of each. The teacher will observe students make the proper placement of the stones on the board. The teacher will demonstrate the set up of the board for *The Puzzle* activity, and explain the rules to the students. The teacher will be looking for students’ ability to solve a unique problem, and how each one goes about solving the problem.

15. The teacher will allow the students to set up the puzzle for themselves and then have their partner solve the puzzle. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations as the situation warrants. Yasutoshi Yasuda ((Yasuda, 2002) noted, “Concerned about social problems in Japanese schools, [he] began introducing the game to school children and discovered to his surprise that it had immediate positive effects. Children who were unruly became calmer and more interested in school generally; children who were withdrawn began to interact with others; children who were indifferent became animated. The effects were dramatic time after time (p. iii). . . Encouraged by these experiences with schoolchildren, Yasuda expanded his efforts to homes for the elderly and then to institutions for the mentally and physically handicapped. In every case, the game had tremendous positive effects. I [William Cobb] can attest personally to the reality of these effects because I have accompanied Yasuda to a number of schools and institutions in Japan on two separate visits and I have taught the game to hundreds of school children in the US myself. Currently I am working with a group of mentally handicapped elderly people. Everything Yasuda says about the power of Go is true” (p. iii).

## CLOSING

### CLOSURE

16. Remind students of concepts exposed today, and guide the students' attention to the vocabulary words that the teacher used in today's class (the teacher might want to write them on the board). Ask students to repeat the concepts and to define them for their colleagues. Students should start a section in their Go journals for "Definitions."

### ASSESSMENT

17. Playing a game of *First Capture Go* students will demonstrate the way to capture a stone on the 9 x 9 board.

### FOLLOW-UP

18. Vocabulary to learn: Corner, sides, center, the opening, the middle game, the endgame.

### REFLECTION (after the lesson)

19. What did you do that helped students learn and meet the objective?  
 20. What would you do differently if you taught this lesson again to make it more successful for students?  
 21. **SAKT**<sup>4</sup> 1-8; **SAKS**<sup>5</sup> 1-14; **AKSCRS**<sup>6</sup> Cultural Standards for Students: B-F; Cultural Standards for Educators: B-E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.  
 22. **PA**<sup>7</sup> 1. A—e; 2 A—F; 3 A—D; 4 A—E; 5 A—I; 6 A, E; 7 A—F; 8 A—E; 9 A—E; 10 A—G.

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<sup>4</sup> SAKT = Standards for Alaska's Teachers.

<sup>5</sup> SAKS = Standards for Alaska's Schools.

<sup>6</sup> AKSCRS = Alaska Standards for Culturally-Responsive Schools.

<sup>7</sup> PA = Washington State Performance-Based Pedagogy Assessment of Teacher Candidates.

### *Introduction*

Script:

1. Introduce yourself - last name first. Hi, I'm Dr./Mr./Ms., and I'm so happy to be here today. Explain that in Asian cultures, people use their last names first, because the family (or group) you come from is considered as or more important than yourself as an individual (This is a theme to develop during the program, as it is a direct correlation to the stones on the board - the group is more important than the individual stone.). In the U.S., we think of the individual as all-important, Asian cultures look at it differently. This is something you'll see in the game of Go.

2. I'm here to teach you Go, oldest, most popular, and most complex board game in the world. How old is this game, anyway? Here I take out the tape measure and ask for a volunteer to come up. I ask the class how old they are - say they are mostly ten years old. OK, we'll count your life span as one inch on this tape measure. One inch equals 10 years. Think of yourselves as one inch old.

Now the volunteer will hold the end of the tape measure and we'll walk backwards in time a little. I'm around 50 years old. that's five inches on the time scale (pull out the tape to 5"). Now our country, the U.S., is a little over 200 years old. Let's pull out the tape measure to 20", or almost two feet. Now that's a ways of time, but Go is much older than our country.

Now let's go back even further. How about to when Christopher Columbus discovered the new world? That was in 1492, or about 500 years ago. Let's pull out the tape measure to 50 inches, or about 4 feet. Go is still way older than even the discovery of the new world. Let's go back further, can you imagine about a thousand years? This was before a lot of what we think of as European culture had even developed. Let's pull out the measure 100" (about 8 feet.) I think we now need a second volunteer up here to help hold the tape measure (have a second child come up and hold the measure next to you, as the first child has moved 8 feet away).

Well, go is still way way older. Let's go back to the Roman Empire, the beginning of the Common Era, that's two thousand years ago - now we can pull the tape measure out 17 feet. I think we need a third volunteer to help now (as you are doing this, the tape measure is going down along one side of the classroom and has reached the back). Well, go is still MUCH older. Let's go back another 400 years, during the height of Greek culture, and Plato. This brings our measure out to 20 feet - wow. Go is still way older. Continue in this way till you get to around 2000 BCE, which is how old the game may be. the tape will end out being out around 33 feet. This usually captivates everyone and gets the class with you.

So, how many of you have heard of Go? raise your hands. (not many)

How many of you can name a basketball, or soccer player or figure skater? How many of you follow their careers, have pictures of them on your wall? raise your hands (most) In America, these sports are very popular, players are famous, make lots of money, are household names.

In Asia, Go players are the same as our basketball players. They are famous, play for big prizes, everyone knows their names. etc. Big world in Go over there - newspaper columns, televised tournaments, magazines devoted to the game. In Korea, there is 24 hour Go programming on TV. But there, perhaps no one has heard much about basketball. About ten percent of the Asian population plays the game- so there are probably a couple hundred million Go players- making it the most popular game in the world. So welcome to the big time game world.

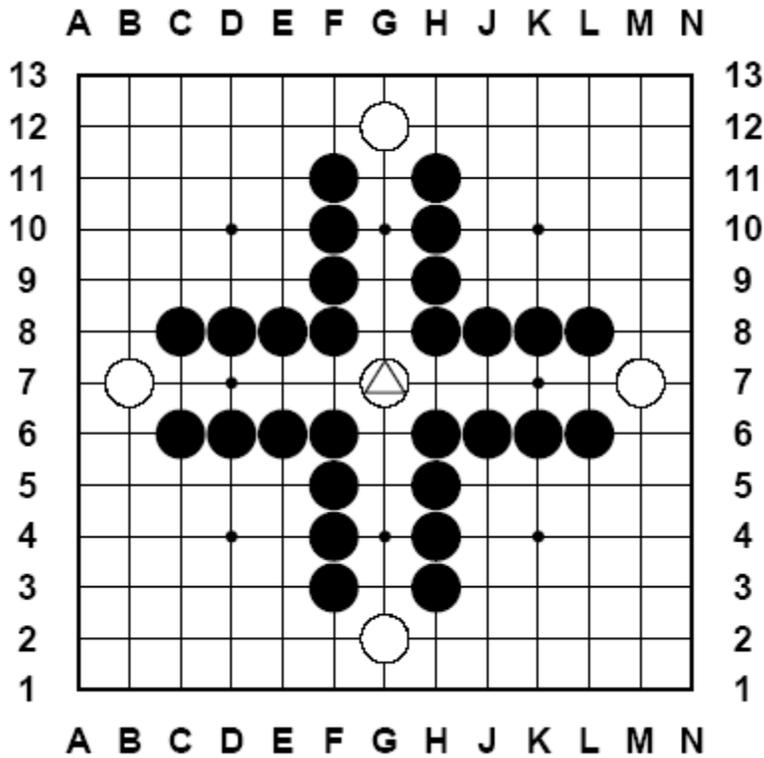
3. How many of you study, know about, or have a friends that study martial arts? raise your hands (many) What are the benefits of studying a martial art? raise your hands (You'll get many replies such as: physical fitness, conflict resolution, fun tournaments, concentration, confidence, managing conflict, etc.) Go is also a martial art - it is a martial art for the mind, and does for the mind the same things other martial arts do for the body.

4. Rating system - how many of you know about the belt system in martial arts raise your hands (many). Go, being a martial art, also has a rating system. Explain 30 kyu - 9 Dan professional. Explain handicap system.

5. Explain capture rules. Keep it very simple, you have 3-4 minutes before their attention starts to wander. I have them visualize the go board as being underwater, and each line coming out from a stone as a snorkel or breathing tube. Stones need to breathe to stay alive. Show how opposing stones block the breathing tubes, show Atari, then capture, as the stone dies from lack of air. Then show how stones of the same color can breath through the buddy system, they can hook their snorkels up together. As you explain, have students start a sheet titled "Go Definitions" with each week's new words. The words you will probably cover are below. Write the words on the board.

Then have them pair up, and hand out the sets. They'll be ready to play. Have them play to first capture. About five minutes before you need to end, clap your hands. Talk about taking care of the Go sets and how to put them away properly. Explain that the lender sets will be left in the classroom and they can check them out from the teacher and take them home to play with. (Weir, 2004)

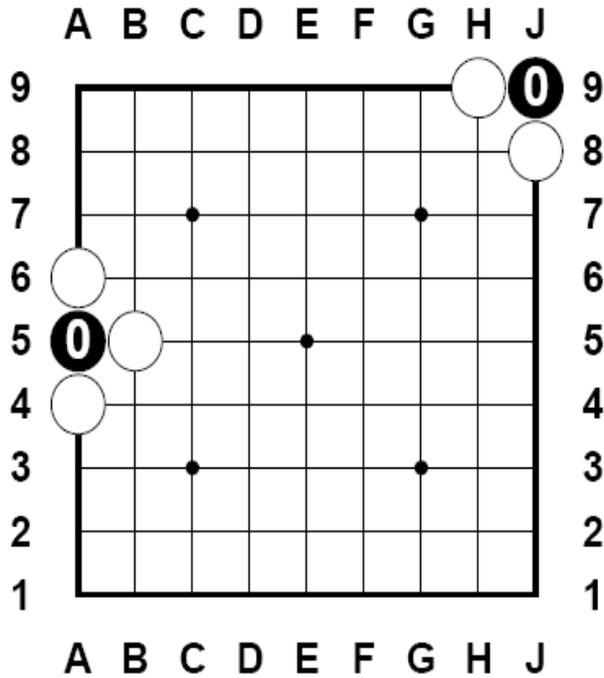
*The Puzzle*



“This is the first problem my grandfather gave me when I started learning go from him. In a game, the players alternate placing stones, but for this problem, the player with White can place two stones at a time. Two white stones are placed first, and then one black stone is placed. Then two white stones and one black stone again. The aim is for White to find a way to connect this marked white stone in the middle with one of the four white stones on the outside that Black cannot stop. My grandfather told me that I would be a genius if I could solve this problem” (Yasuda, 2004).

*Surround to Capture*

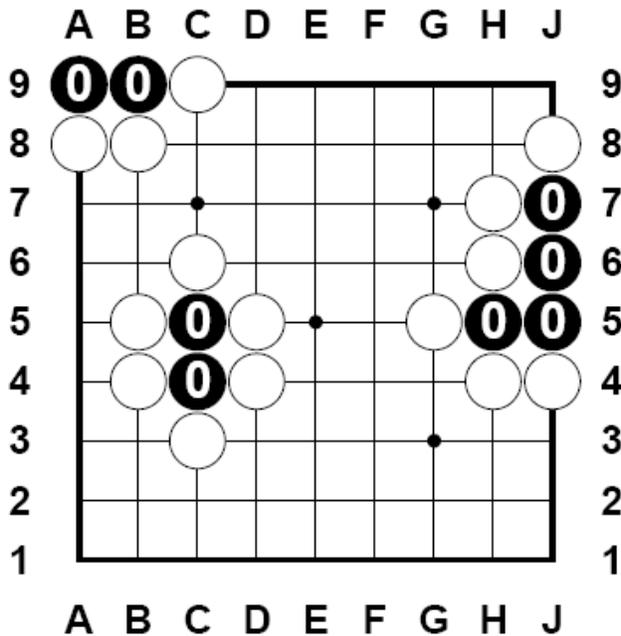
1. Surrounding a stone on the edge or in a corner



Stones in the center of the board must be surrounded from all four directions, but fewer stones are needed to surround on the edges or in the corners. In Diagram 1, the two black stones are both fully surrounded and captured. They should be removed from the board.

**Diagram 1**

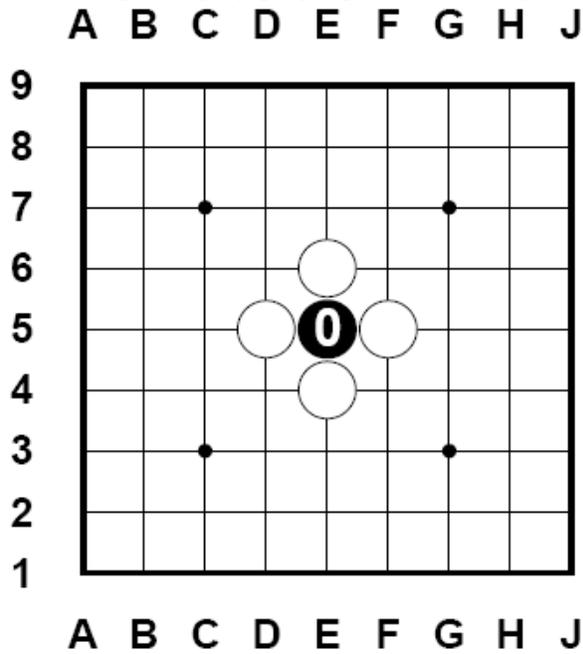
2. Capturing a group



When several stones are connected horizontally and/or vertically, they form a unit/group and can be captured as a whole. The three black units/groups in Diagram 2 have all been captured.

**Diagram 2**

3. Self-capturing by playing on an already surrounded point.



In Diagram 2, if the four white stones are already in place and Black plays 0, Black 0 is immediately captured because it is already surrounded when it is played. This self-capturing play has the same effect as White playing so as to capture a black stone.

What may look like a self-capturing move will not be if the play actually captures some stones of the other color. In Diagram 4, Black 0 captures the marked White stones, which are immediately removed, so Black 0 is not actually a self-capture. After Black 0 in Diagram 4, the board will appear as in Diagram 5.

Diagram 3

4. When playing on an already surrounded point is not a self-capture.

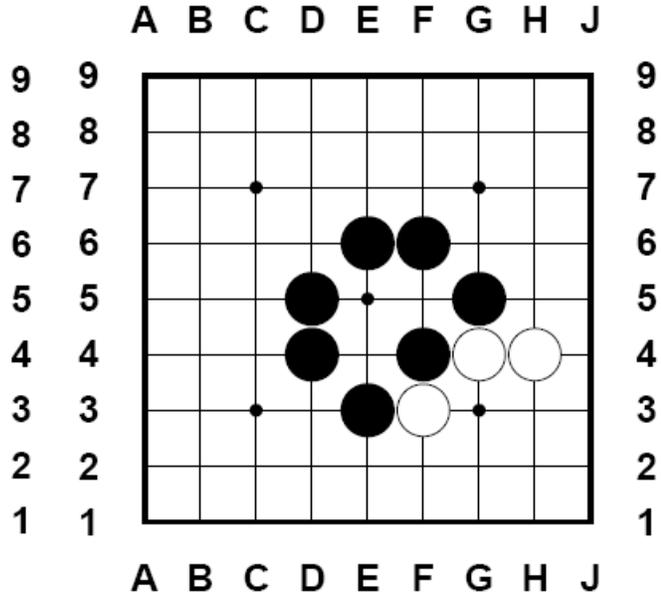
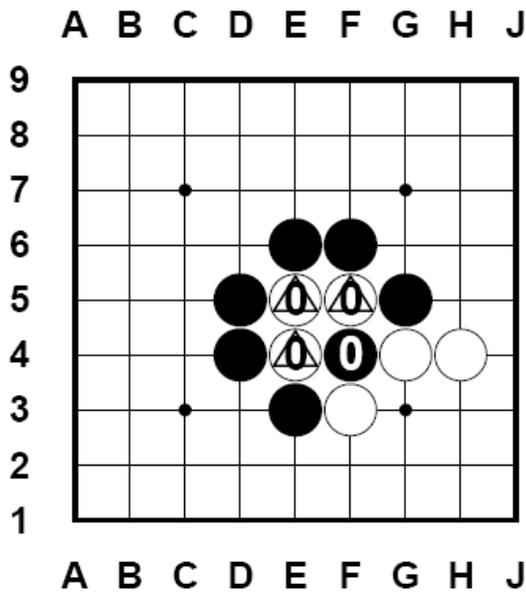


Diagram 4

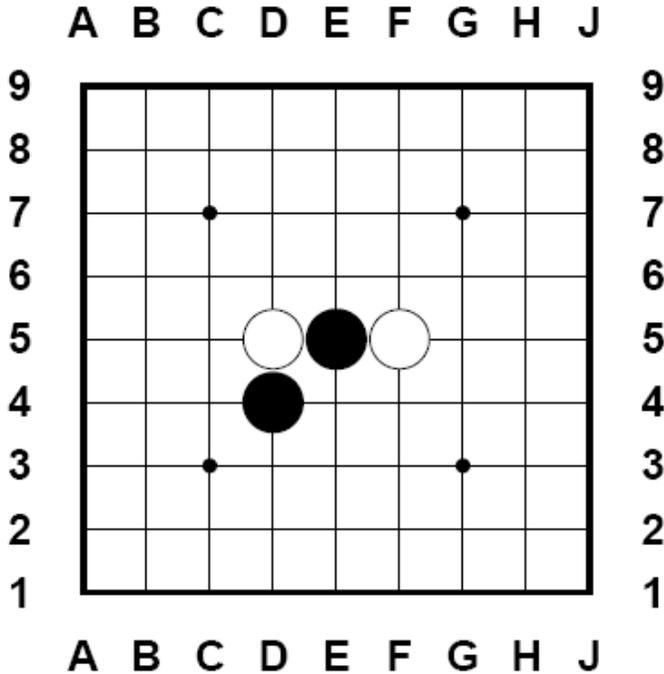
Diagram 5

(Yasuda, 2002)

*First Capture Go*

Cobb (Yasuda, 2002) described the game of *First Capture Go*,

The game is played on a grid of intersecting lines, 7 or 9 lines is a good size. The playing pieces are circular and of two contrasting colors, usually black and white, but any colors will do. They are played on the intersections and, after being placed, do not move. You can play on any intersection, including on the edges. Here is a 9 line board with four pieces, called “stones,” on it:



Black goes first, with the players taking turns. The object is to surround one or more of the other player’s stones by placing a stone on all the empty intersections it is touching.

In the next illustration, two black stones have been surrounded in this way. These stones, marked with triangles, are removed when their last empty intersection is covered, making White the winner because White has captured one of Black’s stones first.

*Introductory Letter*

DEAR PARENTS:

This year, your child will have the opportunity to learn to play Go; the oldest and most complex board game in the world.

Go is a strategy game that is played on a grid of intersecting lines. Two players alternate in placing black and white stones on the board with the aim of surrounding territory. The intertwining patterns of black and white stones becomes extremely complex and requires study and concentration to play well. No one has ever become a master of this game who has not learned it as a child.

The game provides an opportunity to develop a host of useful critical thinking skills. It has extraordinary potential for practice in problem solving and for developing a flexible and open-minded attitude. Players are motivated to seek creative plays that will combine attack and defense for maximum efficiency, thus developing appreciation for the complex and interconnected consequences of various possibilities. Japanese studies show that Go improves connected thinking ability in children. Play requires both left brain (analytical) and right brain (intuitive and artistic) concentration.

Go is a natural addition to the math curriculum. Our fifth grade curriculum requires understanding pattern recognition and geometric shapes. Learning shape sequences and solving game problems are ideal in achieving this objective. The game also provides excellent practice in imagining and recognizing abstract patterns and in learning to engage in precise analysis. Another part of the math objective is touched as students will learn to recognize a logical sequence and understand if/then statements of cause and effect. As the class participates in game analysis on the demo board, they will learn to place points on x-y grid co-ordinates as an introduction to graphing equations. For these reasons and more, Go is included as a part of education in many parts of far eastern countries where the game originated and has been valued for thousands of years.

Go is a significant intercultural experience. In ancient China, Go was one of the Four Accomplishments that were required of nobility before they could be considered properly civilized, the other three being poetry, painting, and music. At the point of his death, Confucius regretted not having spent more time on the game. In China, Korea, and Japan, Go has a respect and popularity on a par with major sports events here. There are magazines, newspaper columns, 24-hour television programming, and professional tournaments with purses in the hundreds of thousands of dollars devoted to the game. Professional Go players enjoy prominent celebrity status. Learning about Go gives one a window of understanding Eastern cultural norms.

One could argue that Americans involved in business and governmental relations with Far Eastern countries could become more effective by learning to play. As reported in *Business Week*, for some years the Darden School of Business at the U. of Virginia required all of its students in its Masters program to study the game. After an ill-fated trip by President Bush to Japan, the New York Times (1-6-92) stated that if President Bush had gone thinking in terms of Go instead of chess, he would have achieved far more. How much Go training is utilized in economics strategies is illustrated by Miura Yasuyuki, a prominent Japanese business executive, who recently published his memoirs as "*Go: an Asian Paradigm for Business Strategy*." In addition to its value in understanding Eastern mind set, we will be learning many Japanese terms and expressions used to describe various aspects of the game.

We will be introducing students to play on the IGS, the Internet Go Server, and other internet Go sites. Your child will be meeting players from all over the world, and will be taught lessons in intercultural etiquette. Students will learn to communicate politely and directly with their opponents respectful of cultural variations. In the past, we visited and played games with people on every major continent except Antarctica!

Go is an effective tool in developing positive social skills. firstly, etiquette is considered and essential part of play and will be covered in the classroom. Because of the nature of the handicapping system in Go, the focus is on the quality of the game more than winning and losing. Thus, players have an interest in improving each other's play as well as their own, and are in a position to enjoy new insights that are discovered in a game, even if the new insight results in a loss. Go encourages the development of patience in players. Not only must one learn to wait patiently for the other to play, but in order to play well, one must exercise patience and flexibility in play strategies. Go is a game which rewards balance over aggressions and greed, typified by negotiated settlements in which both parties experience some gain.

All this is a game that is intriguing and fun. If you find your child (or you) becomes interested in pursuing the game beyond the classroom, instruction is available with local teachers. Just like learning to play a musical instrument, becoming a strong player takes systematic work and study. Also, the Ann Arbor Go Club, which meets weekly on alternating Sunday afternoons and Thursday evenings at Border's Books, welcomes young players. During the year, the AAGC puts on tournaments with special sections for kids, and also hosts visiting professional Go players who will come into our classrooms. For information on instruction or club meetings, please call or email me. In the summer the AGA Summer Go Camp for Kids is a wonderful experience. Kids from all over the country come to have a week of camp fun and learn from professional players. A video about Go Camp is available.

There are computer programs available to play Go against your computer. A free one for beginners is available that can be downloaded from <http://www.smart-games.com/igowin.html>. There is a new interactive web site on which you can learn the game basics through a series of lessons. It's at <http://playgo.to/interactive/welcome.html>.

Finally, if you are connected to the Internet, your child can play go online. Go is one of the games available on [msn.games](http://msn.games) and also [yahoo.games](http://yahoo.games). The following site: [www.kiseido.com](http://www.kiseido.com) will provide the software to play on its site and has many players. To play on IGS, you will need to download client software. It's a bit complicated, but the telnet address is: [igs.joyjoy.net](http://igs.joyjoy.net).

I look forward to working with your children. Please don't hesitate to call with any questions or for further information.

Teacher's name (phone number and email)

## Lesson Plan Two

*Units & Liberties***PREPARATION**

- OBJECTIVE/EALR(s)**
- EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1, 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d.  
**AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.
  - The student will identify (*comprehension*) units on a board so that when given four White stones and five Black stones he/she will correctly name each unit with 100% accuracy.  
The student will locate (*comprehension*) liberties for any unit so that when given a diagram of a board with three to five units on it, he/she will correctly indicate the number of liberties for each unit with 100% accuracy.  
The student will be able to recognize (*knowledge*) the shape known as the “empty triangle,” such that when given a diagram of a board he will correctly locate one with 100% accuracy.
- STUDENTS**
- The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
  - In the previous lesson, students learned about the stones and different types of boards used for play. They also learned how to make a move, the parts of a game, and how to make territory, and shapes.
- CLASSROOM MANAGEMENT**
- 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home). Students can select the seat they want and the partner they wish to sit with.
  - The teacher will practice with the students the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. The teacher will demonstrate to the students the proper way to greet the instructor and fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school and classroom. Each student has a Go folder for recording games, vocabulary and reflection on the lesson.
  - The students will set up their lender set for their parent(s) and demonstrate to them how to count liberties. The teacher will encourage parents to play the “Five Star” game (aka “Gomoku”), and use the “capture two” rule.

## INTRODUCTION

### SET

8. All the stones in a unit live or die together as one. Liberties may be shared, but count only once for each unit regardless of how many stones share it.

### COMMUNICATION OF PURPOSE

9. The counting of liberties is basic to the effect of each game of Go. Whenever opposite groups of stones meet each other liberties are at stake. Whenever you get into a fight, the side with the most liberties usually wins the fight.

## BODY OF THE LESSON

### PRESENTATION

10. The “Basic Rule of Go”: Every unit on the board must have at least one liberty. A unit which has only one liberty is in Atari. Using the demo board, the teacher will demonstrate unit, and liberty, and shared liberty. A unit with less than three liberties is said to have a “shortage of liberties,” and should be defended if yours, attacked if your opponent’s.

### PROCESSING

11. The teacher will present students with examples of recognizing units and of counting liberties. The teacher will ask students to identify the units from the examples he/she gives. The teacher will encourage students to come up to the demo board and set up their own examples of “units,” and how he/she went about counting “liberties.” The teacher will explain the steps for counting the liberties of any unit: (1) pick any convenient starting point, (2) go either clockwise or counterclockwise around the unit, (3) if the unit completely encloses any liberties, they must also be included in the count.
12. Students will come to the demonstration board and explain how they counted liberties to the examples that the teacher places on the demo board. Students may also come up with their own patterns and then explain how they counted the liberties. (See following page for examples of counting liberties).

### MONITORING

13. The teacher will observe how accurately students identify units, and he/she will provide corrective feedback.
14. Teacher will ask students to demonstrate on the demo board a unit that they have constructed. If there are disabled students in the class, the teacher will make the appropriate accommodation to insure that all students have an opportunity to grasp the objectives of the lesson.
15. The teacher will ask the students to set up their own diagrams of units for themselves and then have their partner identify a unit and count the liberties. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations as the situation warrants.

## CLOSING

### CLOSURE

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class (the teacher might want to write them on the board). Ask students to repeat the concepts and to define them for their

**CLOSURE**

colleagues. Students should start a section in their Go journals for “Definitions.”

**ASSESSMENT**

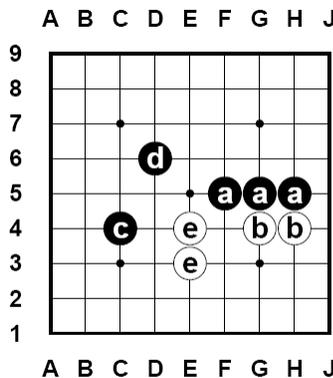
17. Playing a game of *First Capture Go* students will demonstrate after Black has played nine stones that they can identify a unit and count the number of liberties the 9 x 9 board. Make sample territories on the demo board.

**FOLLOW-UP**

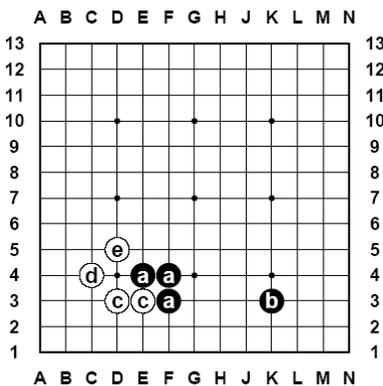
18. Vocabulary to learn: Unit, and Liberty (Mei). Students should record the vocabulary words in their Go journals.  
Try to bring in another Go player both to play a demo game with you (each player should comment on their thinking when they make a move, about filling dame points, and not playing inside your own territory, about passing, and when the game is over, and counting., and to assist in helping students determine when a game is over, and how to count liberties, etc.

**REFLECTION  
(after the lesson)**

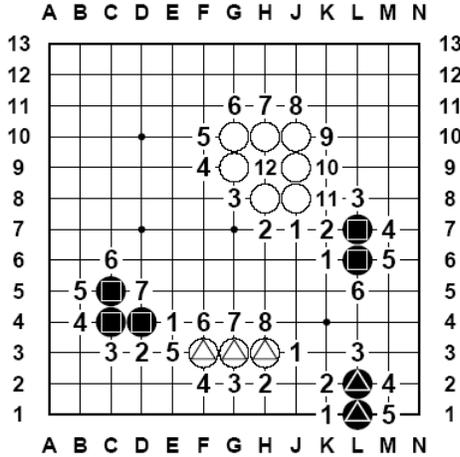
- 19. What did you do that helped students learn and meet the objective?
- 20. What would you do differently if you taught this lesson again to make it more successful for students?
- 21. **SAKT** 1-8; **SAKS** 1-14; **AKSCRS** Cultural Standards for Students: B-F; Cultural Standards for Educators: B-E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
- 22. **PA** 1. A—e; 2 A—F; 3 A—D; 4 A—E; 5 A—I; 6 A, E; 7 A—F; 8 A—E; 9 A—E; 10 A—G.



Diag. 1. Answer for Diag. 1:  
 9 Black has three units:  
 8 --the three stone unit marked “a”  
 7 --the one stone unit marked “b”  
 6 --the one stone unit marked “c”  
 5 White has two units:  
 4 --the two stone unit marked “d”, and  
 3 --the two stone unit marked “e”

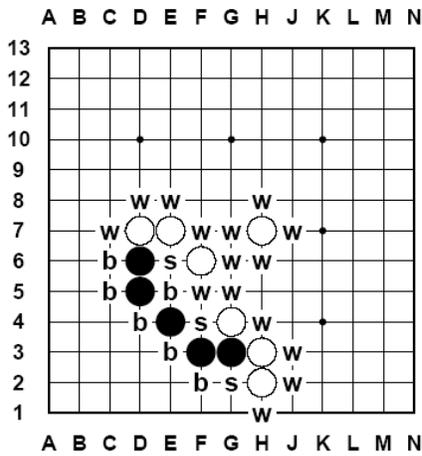


Diag. 2. Answer for Diag. 2:  
 Black has two units:  
 --the three stone unit marked “a”  
 --the one stone unit marked “b”  
 White has three units:  
 --the two stone unit marked “c”  
 --the one stone unit marked “d”  
 --the one stone unit marked “e”



Diag. 3. The number of liberties for each of the units is shown:

- the two-stone black unit on the edge marked with triangles has five liberties.
- the two-stone black unit on the right marked with squares has six liberties.
- the three-stone white unit at the bottom marked with triangles has eight liberties,
- the three-stone black unit on the left marked with squares has seven liberties (this is known as an “empty triangle”)
- the unmarked seven-stone white unit at the top has 12 liberties (don’t forget the one in the middle).

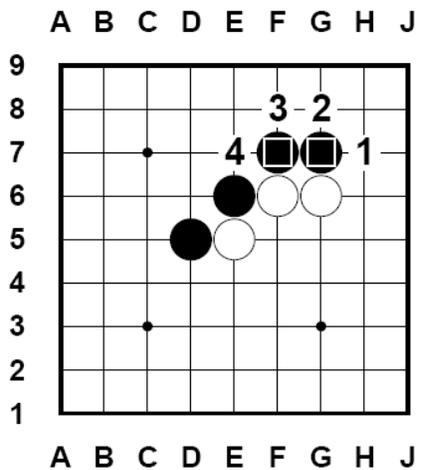


Diag. 4. For each liberty of the units show, determine if it counts:

- only for white stones
- only for black stones, or
- is shared by both.

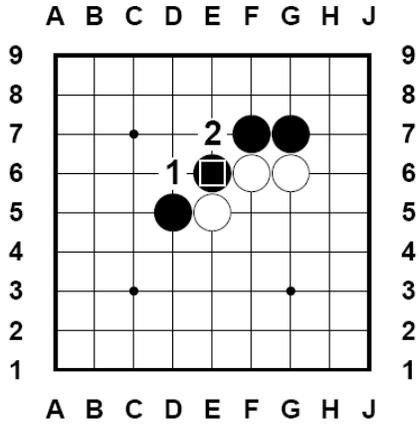
Answer:

- Liberties owned only by white stones are marked “w,”
- liberties owned only by black stones are marked “b,”
- liberties shared by both black and white stones are marked “s.”

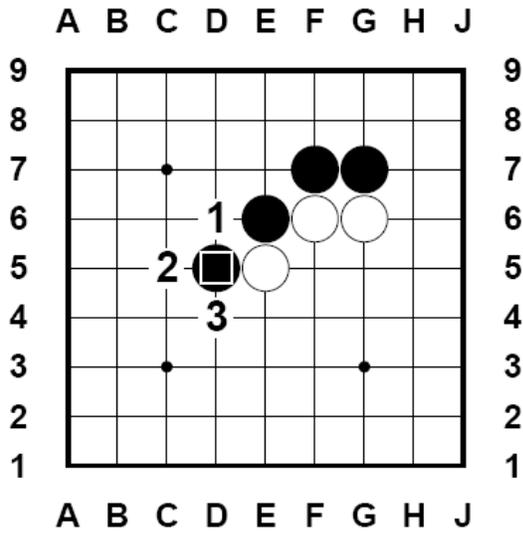


Diag. 5. How many liberties does each of the units shown here have?

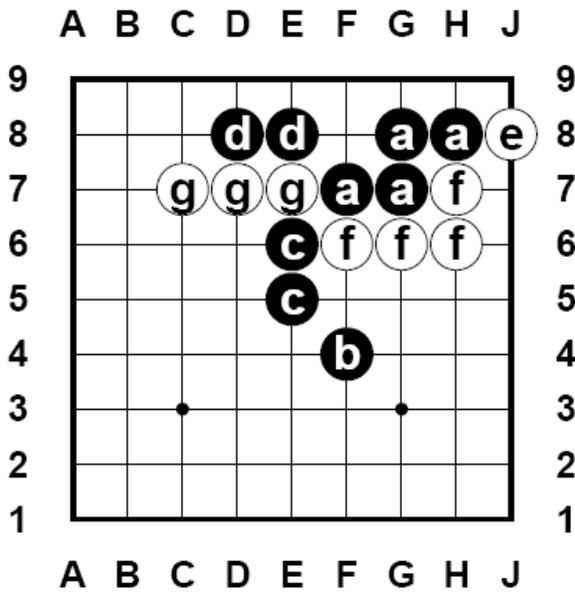
The marked two stone unit has four liberties.



Diag. 6. The marked one stone unit has two liberties



Diag. 7. The marked one stone unit has three liberties



- Diag. 8.  
 There are seven separate units.  
 --the four stone unit marked "a" has three liberties.  
 --the two stone unit marked "b" has four liberties.  
 --the two stone unit marked "c" has four liberties.  
 --the one stone unit marked "d" has four liberties.  
 --the one stone unit marked "e" has two liberties.  
 --the four stone unit marked "f" has five liberties.  
 --the three stone unit marked "g" has four liberties.

These examples show that: **there is no necessary relation between the number of stones in a unit and its liberty count.**

## Lesson Plan Three

*Capture***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d

**AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.

2. The student will be able to recognize (*knowledge*) and demonstrate (*application*) an Atari, a capture, and the end result (holding a prisoner) so that when given five problems he/she will have the correct outcome 100% of the time.

The student will be able to demonstrate (*application*) an illegal move so that when given three positions he/she will accurately identify them with 100% accuracy.

**STUDENTS**

3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. In the previous lesson, students learned about the concept of “unit” and “liberties,” and “shared liberties.” They also learned how to make a move, the parts of a game, and how to make territory, and shapes.

**CLASSROOM MANAGEMENT**

5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home). Students can select the seat they want and the partner they wish to sit with.
6. The teacher will practice with the students the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. The teacher will demonstrate to the students the proper way to greet the instructor and fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school and classroom. Each student has a Go folder for recording games, vocabulary and reflection on the lesson.
7. The students will set up their lender set for their parent(s) and demonstrate to them how to count liberties. The teacher will encourage parents to play the capture go game, and use the “capture two” rule.

**INTRODUCTION****SET**

8. A player is not required to capture a stone in Atari, nor is the other player required to take steps to remove the threat of Atari.

**COMMUNICATION  
OF PURPOSE**

9. Most moves in go are legal moves. However, there are some times when the move is illegal, in other words “against the rules.” The “suicide move” is the only illegal move in go. We are going to learn the concepts of capturing and when a move that looks like a capture is really a suicide move. Recognizing when a move is a suicide and when it is not, will prepare you for more complicated ways of playing in the future.

**BODY OF THE LESSON****PRESENTATION**

10. While capturing may sound exciting, if you concentrate on just capturing your opponent’s stones, you will lose every game. It is better to concentrate on making more liberties for the stones that your opponent attacks. Attempting to surround and capture enemy stones usually will lead to your undoing. On the other hand, if you allow your opponent to capture a few stones while you make big moves elsewhere on the board will have bigger pay-offs.

**PROCESSING**

11. The teacher will present students with three steps to removing an opponent’s stone: (1) Atari, (2) Capture, (3) prisoner. The teacher will demonstrate the illegal suicide move (see following pages for examples), and when an apparent “suicide move” really is not.
12. Students will come to the demonstration board and recreate the steps to a capture (see following page for problems to put on demo board for students to solve).

**MONITORING**

13. The teacher will observe how accurately students identify an atari and an illegal move.
14. Teacher will ask students to demonstrate on the demo board a capture move and an illegal move. If there are disabled students in the class, the teacher will make the appropriate accommodations to insure that all students have the opportunity to grasp the objectives of the lesson.
15. The teacher will ask the students to set up their own diagrams of potential capture situations and illegal moves, and then have their partners identify the potential capture move and the illegal move. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations as the situation warrants.

**CLOSING****CLOSURE**

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

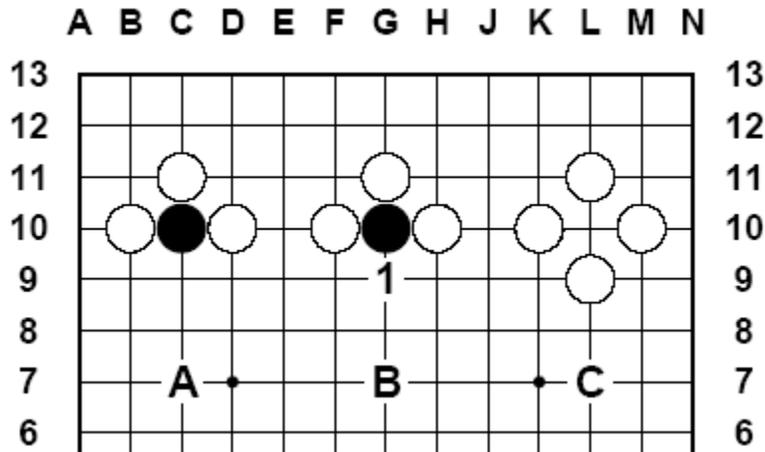
17. The teacher will ask students to demonstrate the way to capture a stone on the 9 x 9 board.

**FOLLOW-UP**

18. Vocabulary to learn: Atari; Capture, prisoner, and suicide move. Students should be ready to play the “capture five” game. The first person to capture five stones wins the game.

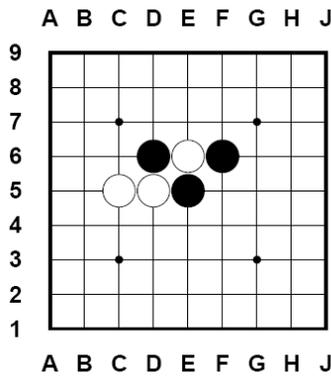
**REFLECTION**  
(after the lesson)

19. What did you do that helped students learn and meet the objective?
20. What would you do differently if you taught this lesson again to make it more successful for students.
21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G

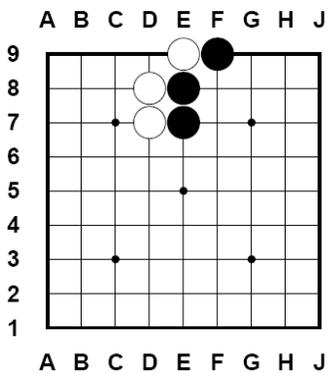


Diag. 1.  
A = Atari  
B = Capture when white plays at 1.  
C = Result (white has one Black prisoner)

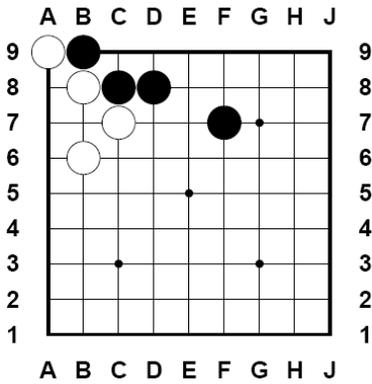
*Examples for counting liberties*



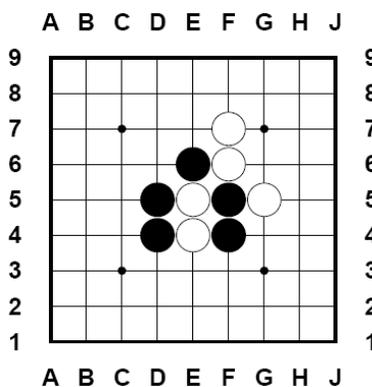
Problem 1. Black to play. How does Black play to capture a white stone?



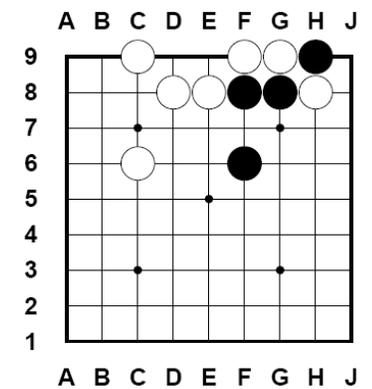
Problem 2. Black to play. How does Black play to capture a white stone?



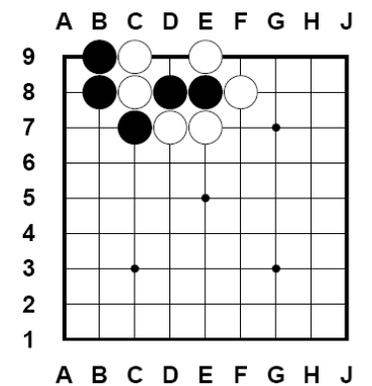
Problem 3. Black to play. How does Black play to capture a white stone?



Problem 4. Black to play. How can Black capture two white stones?

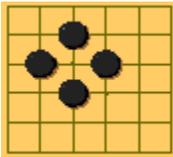


Problem 5. Black to play. How can Black capture two white stones?



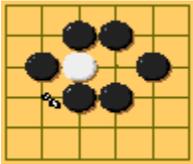
Problem 6. Black to play. How can Black capture two white stones?

Where You Can't Play - Suicide Moves

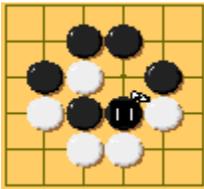


Explain there are illegal moves, called suicide moves, which are not allowed. For example.

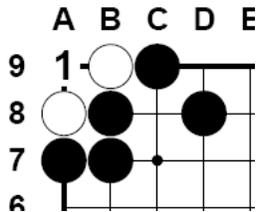
CAN'T PLAY IN THE CENTER HERE- because there are no liberties, the stone cannot breathe



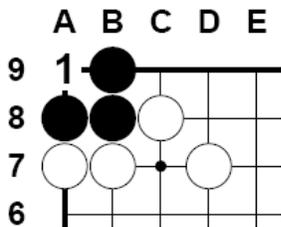
CAN'T PLAY THE SECOND WHITE STONE HERE



You CAN make a suicide move only if you will make an immediate capture. White to play.

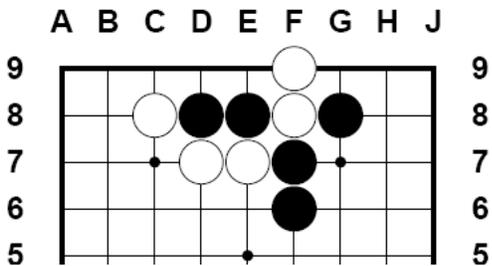


Diag. 2. White's two stones are both in Atari. W1 would be an illegal move.

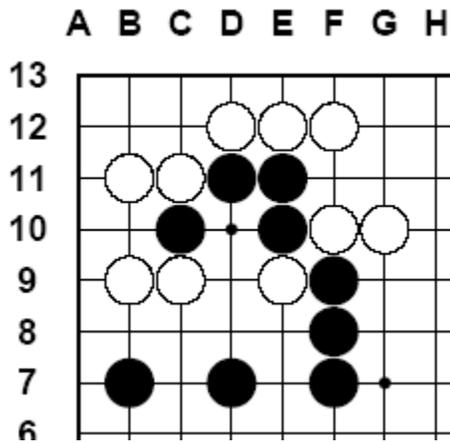


Diag. 3. No Atari on Black. W1 would be an illegal self-capture.

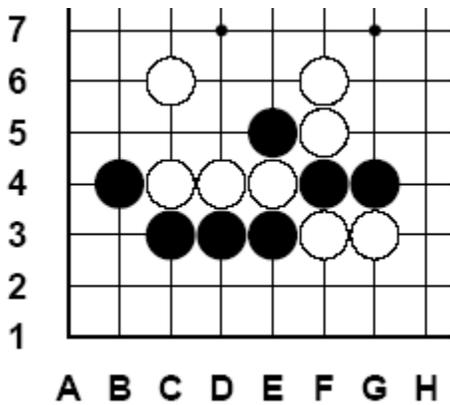
Recognizing Atari



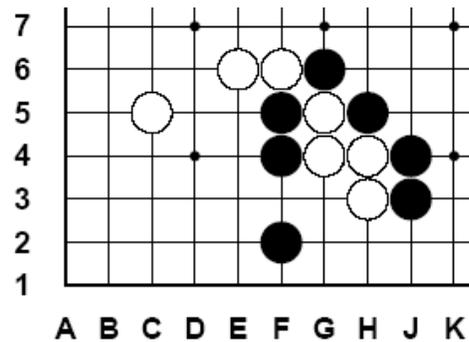
Diag. 4. Black to play. How should Black give *atari* to the two white stones on the edge?



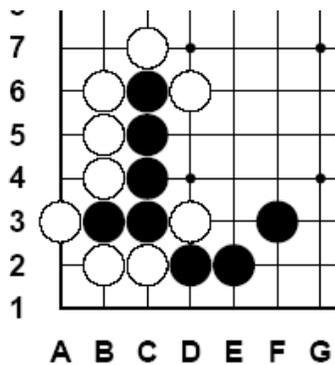
Diag. 5. Black to play. Which way should Black give Atari to the white stone in the center?



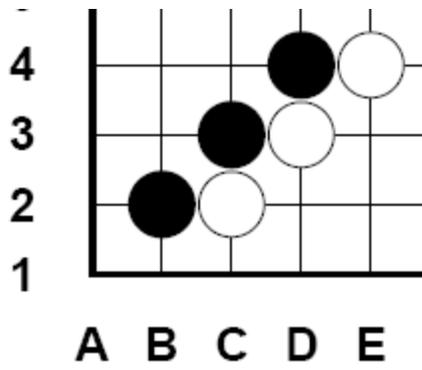
Diag. 6. Black to play. How should Black give Atari to the three White stones?



Diag. 7. Black to play. How should Black give Atari to the four white stones?



Diag. 8. Black to play. How should Black give Atari to the lone white stone?



Diag. 9. Black to play. How can Black give double Atari?  
(double atari—giving atari to two stones at the same time).

## Lesson Plan Four

*Eyes***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.
2. The student will be able to recognize (*knowledge*) whether a group of stones completely enclosed by stones of one color is a “real” or a “false” eye so that when given four examples of eyes he/she will identify whether they are “alive” or “dead” with 100% accuracy. The student will be able to recognize the “life” and “death” of symmetrical positions, and three-point through seven-point positions so that when given 10 problems he/she will identify them with 100% accuracy.

**STUDENTS**

3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. In the previous lesson students learned about Atari, capturing stones, and illegal (suicide) moves. In previous lessons the students learned the concepts “unit,” “liberty,” “shared liberties,” how to make territory, and shapes.

**CLASSROOM  
MANAGEMENT**

5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home).
6. The teacher will have the students practice the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. The teacher will practice with the students the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school and classroom as appropriate for this lesson. Each student has a Go folder for recording games, vocabulary and reflection on the lesson.
7. The students will set up their lender set for their parent(s) and demonstrate “real” and “false” eyes for them. Student will also demonstrate for their parents the key points of a symmetrical position, and the key points of four-point through seven-point eye-shapes. The teacher will encourage parents to play the capture Go game, and use the “capture five” rule.

## INTRODUCTION

### SET

8. No matter how many stones it contains, a unit enclosing only one real eye is not “alive,” and may be subject to capture. To capture a unit containing an eye, the opponent must fill the last liberty of that unit. If a group of stones surrounds two “real” eyes, then that group is “alive.” One exception to this is the “false” eye. A “false” eye is one whose enclosure is incomplete. When your opponent puts your incomplete group in Atari, you will have to fill in one or more of the points to connect (See Diag. 1 and following diagrams on the following pages).

### COMMUNICATION OF PURPOSE

9. Your main purposes should be to sketch territory to prepare to make eyes if and when necessary, and to try to build “influence” for later fighting. Converting what might be a “real” eye into a “false” eye is a fundamental technique that you can use in attacking, and in killing, opposing groups. Life-or-death fights decide the outcome of many Go games, so lots of practice in trapping, capturing, and escaping is highly desirable.

### BODY OF THE LESSON

### PRESENTATION

10. Set up a simple pattern on the demo board with one eye (dead), then two eyes (alive). Explain about “alive” needing two eyes, or being able to make two eyes if attacked. (See following pages for examples). Explain to the students the three essential steps in eye-making: (1) Enclose enough territory (need to have enough space to place a minimum of six stones); (2) Divide the space; (3) complete the eyes.

### PROCESSING

11. The teacher will demonstrate “alive,” and “dead” units (see Diags. 2-9). He/she will also explain the concept of “symmetrical positions (see Diag. 10),” and “key point.” He/she will demonstrate three-point eye-space, four-point eye-space, five-point eye-space, six-point eye space, and seven-point and more eye-spaces (see Diags. 10-18). He/she will then follow-up with guided practice, and then one-on-one independent practice. (See following pages for diagrams).

12. Students will come to the demonstration board and recreate the steps to a capture (see following page for problems to put on demo board for students to solve). The students will pair up, and they will hand out the Go sets. Have students construct their own “alive,” and “dead” shapes.

### MONITORING

13. A unit enclosing a three-point eye-space lives if the defender plays first, but dies if the opponent plays first. Whether eye-spaces of four to six points live or die depends on their shape and which side plays first. Assuming that both sides play correctly, complete eye-spaces of seven points or more are always safe, except in ko.

**MONITORING**

14. The teacher will have students come to the demo board and show their peers how the eye-space lives or dies.
15. The teacher will ask students to come to the demo board to set up their own problems involving “living” eye-space and “false” eye space, and then have their partner identify a “live,” “dead,” or “false” eye-space. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

**CLOSING****CLOSURE**

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

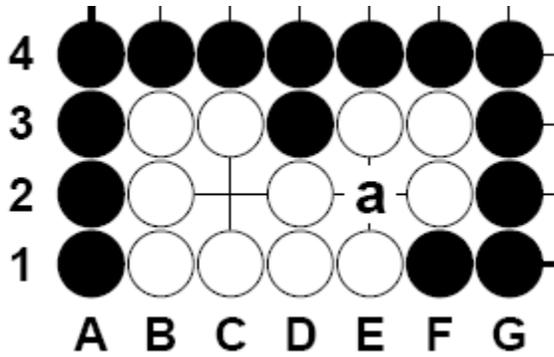
17. The teacher will instruct the students to play two games. In the first game, they should try to make life. Play in the opposite corners from each other, until you think you have a group that is alive. When you think your group is alive, raise your hand. The teacher will come and give you a reward when you’ve made life. As soon as both of the students are alive, quit the game and start another game. In the second game, try to play *eye-brow to eye-brow style* (don’t let your opponent make life). *Eye-brow to eye-brow* means playing right in each other’s faces, right in each other’s groups, trying to interfere. Play right on top of each other to prevent your opponent from making two eyes, but being careful not to be captured yourself. First person to make life wins the game.

**FOLLOW-UP**

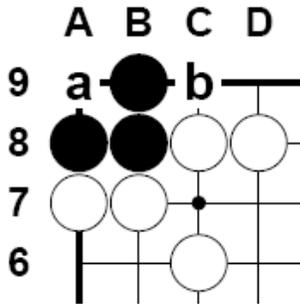
18. Vocabulary to learn: eye (one or more empty intersections surrounded by your own color stones on all four sides), alive (has at least two eyes), dead (has only one or no eyes), real eye (eyes need 3 of the corners to be occupied by your color stones in the middle of the board, all corners at the edge of the board), false eye (can be put in atari), symmetrical position, key point, miai, territory, and influence. The teacher will give worksheets that contain eye-shape problems to the students to solve. Students will come to the demo board and show their peers how they set-up and solved the eye shape problem (see following diagrams).

**REFLECTION  
(after the lesson)**

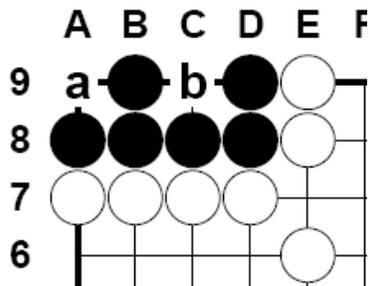
19. What did you do that helped students learn and meet the objective?
20. What would you do differently if you taught this lesson again to make it more successful for students.
21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G



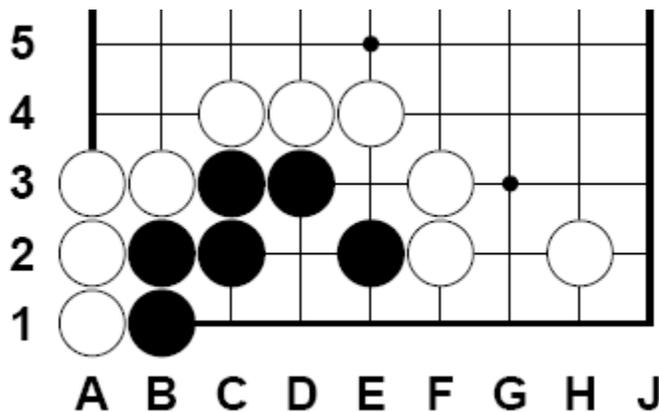
Diag. 1. The Black stone at F1 prevents White's group from a complete connection. Consequently "a" is a "false" eye.



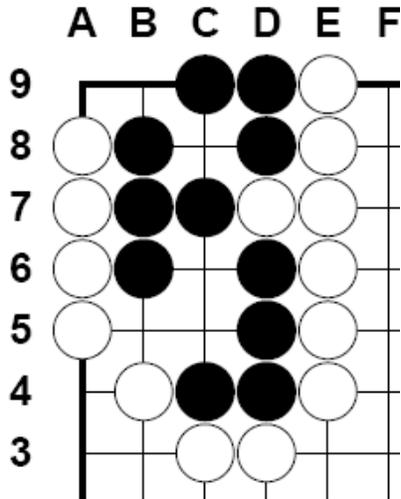
Diag. 2. The liberty marked "a" is a "real" eye for the Black three-stone corner unit. However, one eye does not secure the corner. When White plays at "b," he/she has filled the outside liberty, and W can capture the Black corner group by playing at "a."



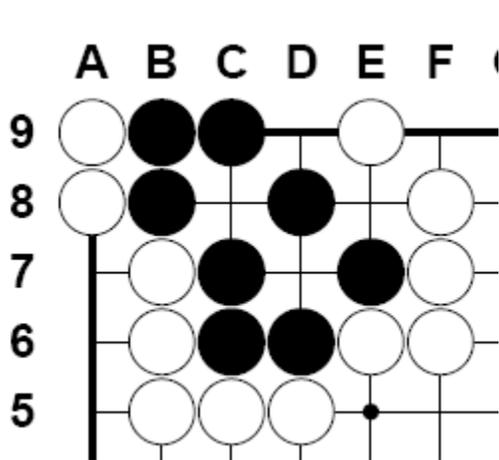
Diag. 3. The six-stone Black unit shown in Diag. 2 has two separate and distinct real eyes at "a," and "b." White can never legally play on either point. It would be an illegal suicide play.



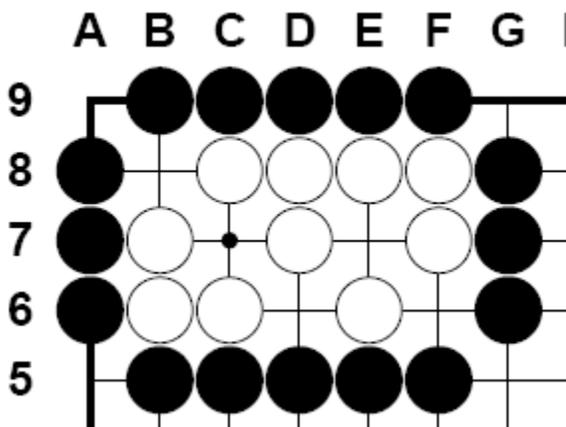
Diag. 4. Black to play. How does Black play to make a living group?



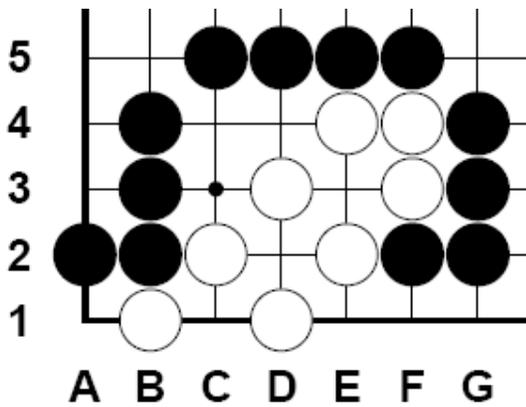
Diag. 5. Black to play. How does Black play to make a living group?



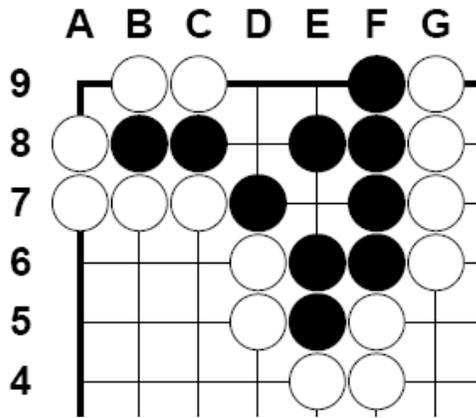
Diag 6. Black to play and live.



Diag. 7. Black to play and kill White

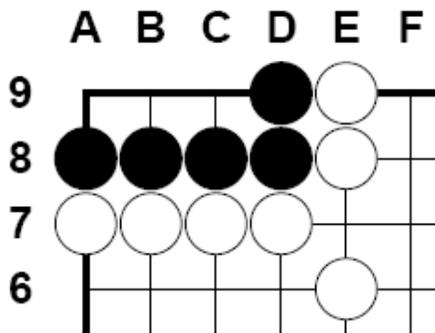


Diag. 8. Black to play. How does Black play to kill the white stones?

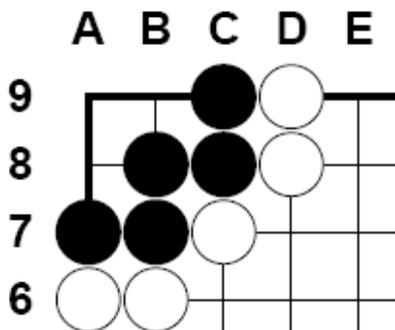


Diag. 9. Black to play and live.

*Three-point eye-space*

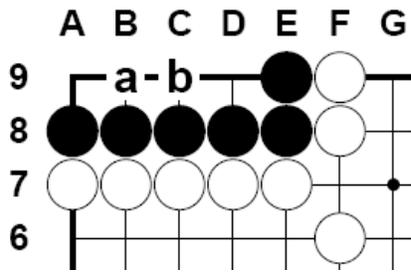


Diag. 10. In symmetrical positions, the “key point” is in the middle. Can Black divide this space to form eyes? He can if it is his/her turn. If it is White’s turn, then he/she can kill this unit by playing on the “key point” in the middle.



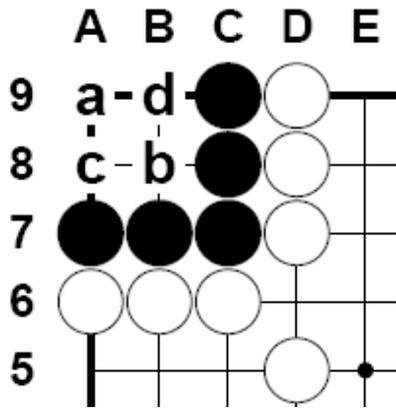
Diag. 11. In this position, the enclosed Black unit also has three liberties, but in an “L” shape instead of in a line. If it is Black’s turn to move, he/she can make two eyes by playing on the key point in the corner (A9). On the other hand, if it is White’s turn, he/she can kill Black’s unit by playing on the key point.

*Four-point eye space in a line*



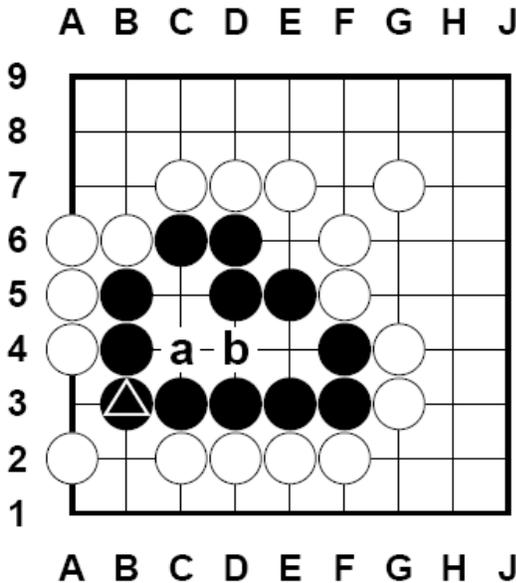
Diag. 12. This is a formation that has four point sin a row. Black has two key points, “a,” and “b.” If he/she plays at either, Black will have two eyes. If it is White’s turn to play, what ever key point white plays, black only needs to play on the other one to make two eyes.

*Four-point eye-space in a square*



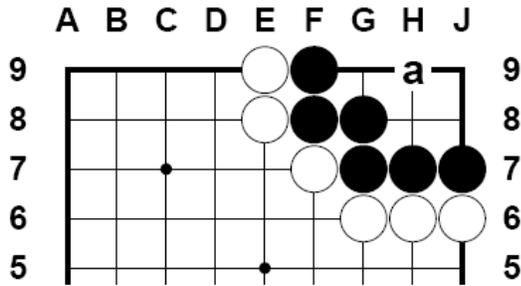
Diag. 13. Can Black make two eyes in this shape? Here Black has two pairs of key points, “a” and “b,” or “c” and “d.” As we saw above, for four-points in a row, playing at either key point made two eyes. However, with four-points in a square, the defender must play at both of either pair of key points to be safe.

*Four-point eye shape in an “L”*



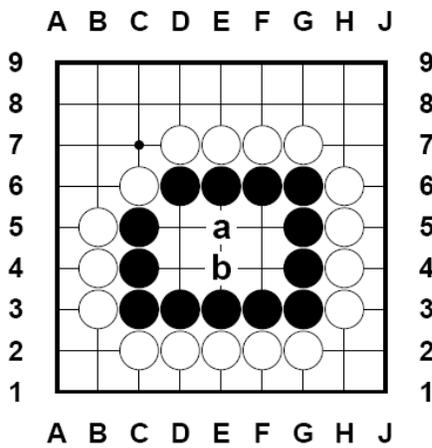
Diag. 14. This shape has two key points, “a” and “b.” If Black plays at either one he/she lives just like in the four-points in a row. However, if the marked Black stone is white, Black must play at “a” to live. If Black plays at “b,” it leaves open the possibility for White to create a “ko” threat (explained in a later lesson). Because the Black formation is incomplete, if Black does not play at “a” it is similar to a three-point eye-space instead of four.

*Five-point eye-space*



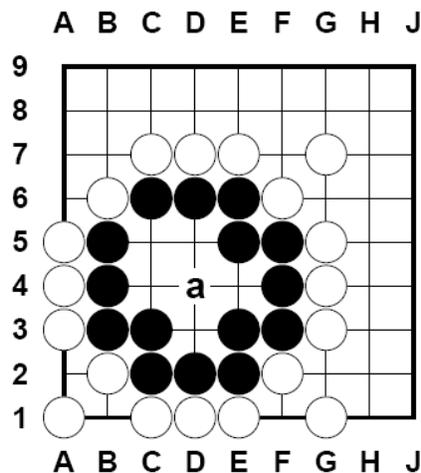
Diag. 15. If you add one point to the four-point square, you end up with this “axe-head” or “jeep” formation of five stones. This formation, like the three-point formation, also has one key point, at “a.” If Black plays first, then he/she can make two eyes by playing at “a.” If White plays first, then he/she plays on the key point and Black is dead.

*Complete six-point eye space*



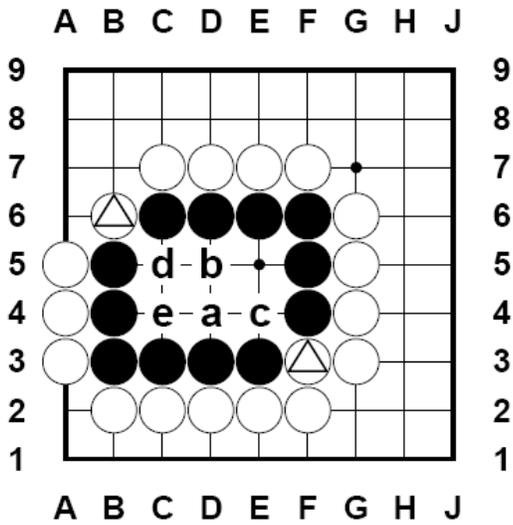
Diag. 16. There are twelve different forms of six-point eye-space with complete borders, and all but one of them are safe. The simplest and most common of these shapes is “six-points in a rectangle,” which has two key points “a” and “b.” If white attacks at either of these two key points, Black answers by playing on the other (this is called “miai”). Black will have two secure eyes. (See also Diag. 12 in Lesson Plan 5)

*The unsafe six-point complete eye-space shape (“Rabbit’s Head”)*



Diag. 17. This shape has only one key point at “a.” If Black plays at “a” then the shape has three eyes and is alive. However, if White plays at “a”, then Black is dead. Why? Because White can sacrifice other stones to create the “jeep/axe head” formation of the five-point eye-space.

*Unconnected six-point eye-space*



Diag. 18. The two marked White stones make Black's shape unconnected. If Black plays first, he/she can live. The two key points are "a" or "b" just as in the *complete six-point eye-space* diagram. If Black makes the move at "c" then White will kill the group when he/she plays at "d." This is because Black can not make an Atari against White's stones.

## Lesson Plan Five

*Seki***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.
2. The student will be able to analyze (*analysis*) a position that appears to be dead for either/or both of the opposing groups such that when given the three forms (see Diags. 4, 6, 7, 8, 9, and 10 on the following pages) of “Seki” he/she will correctly defend (*evaluation*) the formation as having dual life with 100% accuracy..

**STUDENTS**

3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.

**CLASSROOM  
MANAGEMENT**

4. This is the fifth lesson in the series. In the previous lesson, students learned about eye shapes that are “dead” or “alive.”
5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home).
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The students will set up their lender set for their parent(s) and demonstrate “dual life” positions. Then the student will play the capture Go game of “capture five with his/her parent(s)

**INTRODUCTION****SET**

8. Stones that can not form two separate and discrete eyes are “dead” as is if they can not escape. The exception is a “stalemate” like position called the “Seki” (see Diags. 1-3 and following diagrams on the following pages).

**COMMUNICATION  
OF PURPOSE**

9. Your main purpose in learning about Seki is to recognize that Seki is only a local stalemate, so even if one or more do occur in a game there will still be an overall winner and loser. “This kind of dual life can occur in real-life games, sometimes for small reduction (as in Diag. 11-12), and sometimes as big battles that end when both sides have only one eye and a shared liberty so that neither side is capable of killing the other” (Shotwell, 2003)

**BODY OF THE LESSON****PRESENTATION**

10. Set up the three forms of Seki (Diags. 4, 6, 7, 8, 9, and 10). Explain that in each position, it is assumed that the outside stones are safe, because if they are not the Seki will disintegrate, and both those stones and the inside stones of the same color will die.

**PROCESSING**

11. The teacher will demonstrate the three forms of Seki (see Diags. 4, 6, 7, 8, 9, and 10). The teacher will demonstrate what will happen if one side’s outside stones aren’t safe. He/she will then follow-up with guided practice (see Diags. 13-16), and then one-on-one independent practice. (See following pages for diagrams).
12. Students will come to the demonstration board and recreate the three forms of Seki (see following pages for Seki positions to put on demo board for students to solve). The students will pair up, hand out the Go sets, and construct their own Seki positions for each other.

**MONITORING**

13. The teacher will set up a position such that if one side moves first, he/she can make two eyes (see Diag. 12), but if the other side moves first, then the position can turn into Seki. The teacher will observe if students can determine which player will get the two eyes and which player will succeed in getting the Seki.
14. The teacher will have students come to the demo board and show their peers how a Seki succeeds or fails.
15. The teacher will ask students to come to the demo board to set up their own problems involving Seki, and then have his/her partner identify when a position is Seki or not. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

**CLOSING****CLOSURE**

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

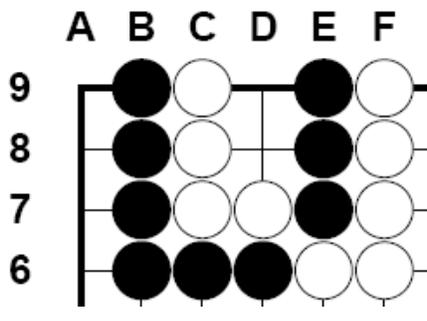
17. The teacher will instruct the students to play two games in which they are to get into a Seki-like situation. When they think they have created a Seki position, raise your hands. The teacher will come and give you a reward when you've made Seki. As soon as one of the students has created a Seki position, quite the game and start another. The first person to create a Seki position wins the game.

**FOLLOW-UP**

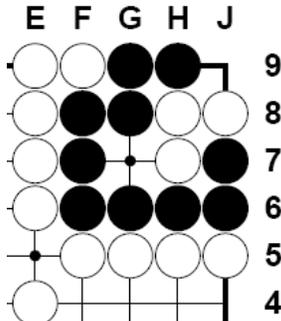
18. Vocabulary to learn: Seki. The teacher will give worksheet problems that contain Seki-like situations to the students to solve. Students will come to the demo board and show their peers how they set up and solved the Seki problem (see following diagrams).

**REFLECTION  
(after the lesson)**

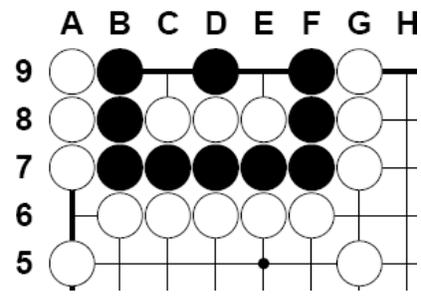
19. What did you do that helped students learn and meet the objective?
20. What would you do differently if you taught this lesson again to make it more successful for students.
21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G



**Diagram 1**

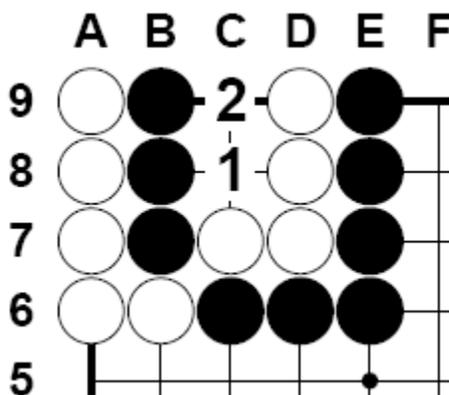


**Diagram 2**

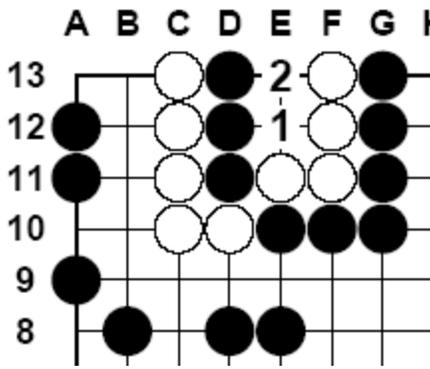


**Diagram 3**

*Seki Form 1*

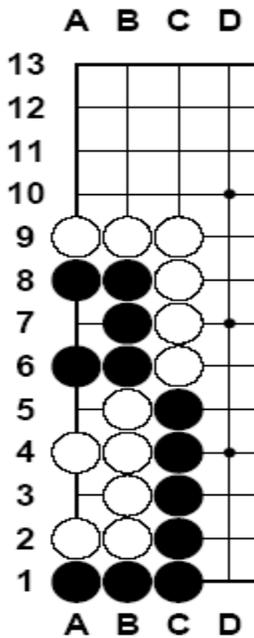


Diag. 4. Neither side has an eye. The key to this form of Seki is the two shared liberties, on which neither side can afford to play. If the outside stones are safe, if Black tries to capture at 1, this puts him/her in self-atari, and White will capture with 2.

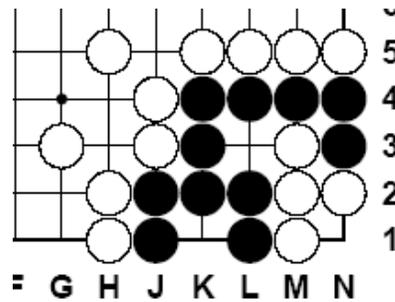


Diag. 5. This diagram shows what will happen if White's stones are not safe. In this case the Seki collapses and all of the White stones will die. Black first makes the sacrifice move at 1. White responds by playing at 2, thus capturing the four Black stones. Black responds by playing 3 at 1, and White is left with only one eye and thus is dead. What this illustrates is that Seki does not necessarily guarantee that Seki will give life.

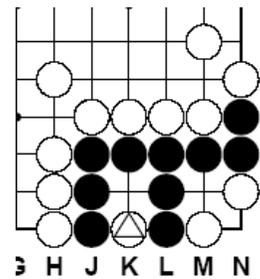
*Seki Form 2*



Diag. 6. Each side has an eye. In this form of Seki there is only one shared liberty.

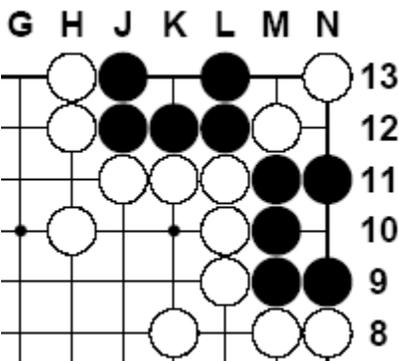


Diag. 7.

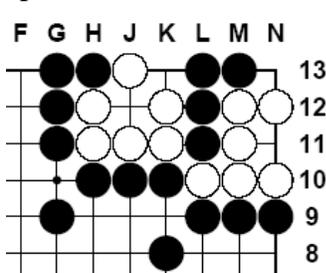


Diag 8. In positions like this, Black can gain one point at the end of the game by capturing the marked White stone.

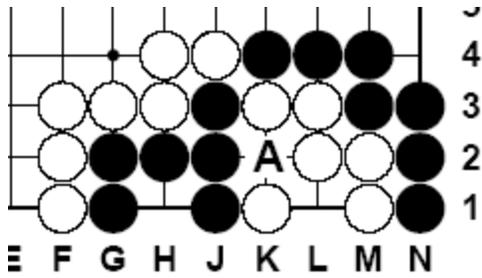
*Seki Form 3*



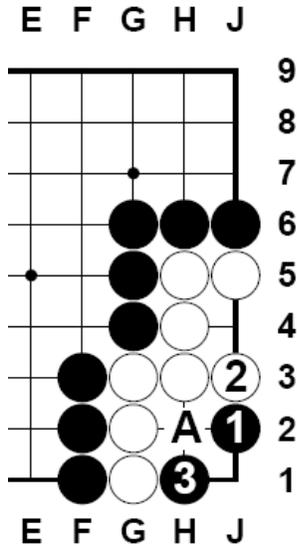
Diag. 9. Only one side has an eye. In this situation, Black has an eye, and White has none. At the end of the game, using the AGA rules, neither side gets any points for any of the open points in a seki.



Diag. 10.

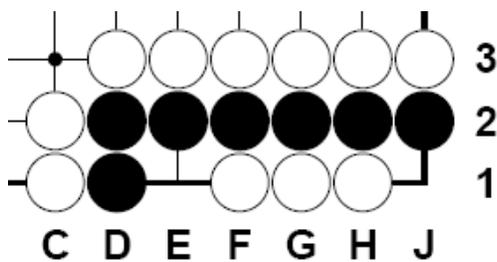


Diag. 11. There are many ways that a Seki can occur. In this diagram, neither player can move at A without self-atari.

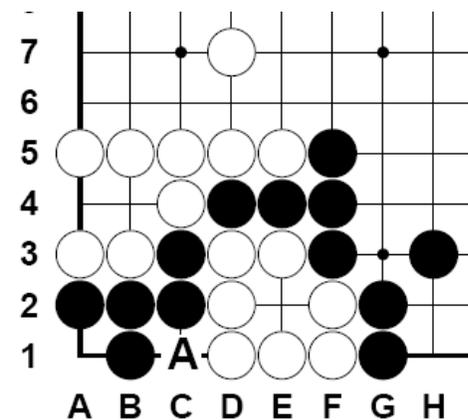


Diag. 12. If it is White's move, he/she can easily make two eyes. Notice that White has a *complete six-point eye-space*, which has two key points. If White plays at one or the other, he/she is safe. However, if it is Black's turn, and he/she plays at 1, White responds by playing at 2, in order to create the one eye-space, but Black responds at 3. Neither side can play at A, because in doing so he/she would kill themselves. Thus a Seki results in this corner position. This would be an example of using a Seki to make a small reduction in points.

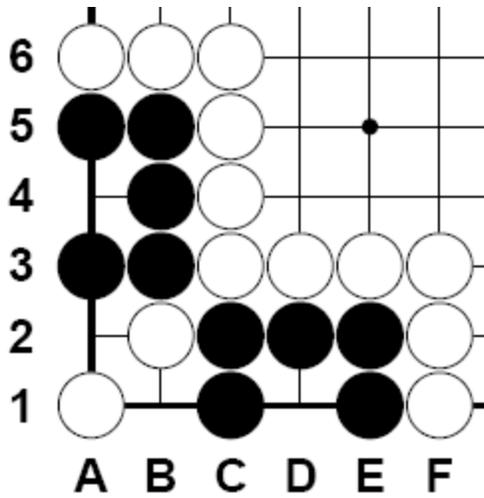
*Seki for guided practice*



Diag. 13.



Diag. 14. Both groups are cut off, but each group has one eye. Both Black and White are alive, though, because neither of them can attack at A. If they did, they would put their own stones in atari.



Diag. 15. Although Black has two separate eyes, White's two stones separate them. Although White has no eyes, Black and White have dual life.

## Lesson Plan Six

*“No Repetition” Rule***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.

**STUDENTS**

2. The student will be able to describe (*comprehension*) the “no repetition” rule so that when given the three forms (corner, edge, center) of a “ko,” he/she will be able to give the reason that the position cannot be repeated with 100% accuracy..
3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. This is the sixth lesson in the series. In previous lessons, students learned about eye shapes that are “real,” “false,” “dead” or “alive,” and “seki.”

**CLASSROOM MANAGEMENT**

5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home).
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The students will set up their lender set for their parent(s) and demonstrate the “no repetition” rule, and how it is applied in “ko” situations.. Then the student will play the capture Go game of “capture five with his/her parent(s).

**INTRODUCTION****SET**

8. The most important repeating local position is called “ko.” One side or the other captures a single stone. (see Diags. 1-3 and following diagrams on the following pages).

**COMMUNICATION  
OF PURPOSE**

9. Your main purpose in learning about the “non-repetition” rule is because in real-life games, you will encounter a “ko” or want to use a “ko” to advantage. Sometimes an entire game can depend on who wins the ko fight. The reason is that a needed eye or connection (and therefore the life or death of a large number of stones) may depend upon who wins the ko. See Diag. 6 for an example of this. The difference between the two outcomes is about 30 points. This is usually enough to change the result of most games. Understanding this concept is why ko is one of the most important and interesting parts of Go.

**BODY OF THE LESSON****PRESENTATION**

10. Set up the three forms (corner, edge, and center) of ko (Diags. 1). Explain that in each position an opponent’s stone is cut off and is in atari. The “no repetition rule” applies to all three types of ko.

**PROCESSING**

11. The teacher will demonstrate three forms of ko (see Diag. 1.). The teacher will explain that if the opponent chooses to ignore the other side’s “ko threat,” he/she may fill the ko, or capture one more of his/her opponent’s stones so that the ko ceases to exist. He/she will then follow-up with guided practice (see Diags. 2-3), and then one-on-one independent practice. (See following pages for diagrams).
12. Students will come to the demonstration board and recreate the three forms of ko (see following pages for ko positions to put on demo board for students to solve). The students will pair up, hand out the Go sets, and construct their own ko positions for each other.

**MONITORING**

13. The teacher will set up a position demonstrating the key concepts of ko (see Diags. 4-6), and ko threats (see Diags. 15-). The teacher will observe if students can determine which player will “win the ko.”
14. The teacher will have students come to the demo board and show their peers how a ko succeeds or fails (see Diag. 7-14).
15. The teacher will ask students to come to the demo board to set up their own problems involving Seki, and then have his/her partner identify when a position is Seki or not. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

**CLOSING****CLOSURE**

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

17. The teacher will set up a ko fight situation (see Diags. 15- and ask the students to form two teams. Each team gives the moves that they think would be advantageous to their side. When a team thinks they have created the optimal position for their side, raise your hands. The teacher will come and give you a reward when you've made the most points in the ko fight. The teacher will ask students to pair up, and one side sets up a ko situation. The other side gets to move first. As soon as one of the students has "won the ko" position, quit the game and start another. The first person to "win the ko" wins the game.

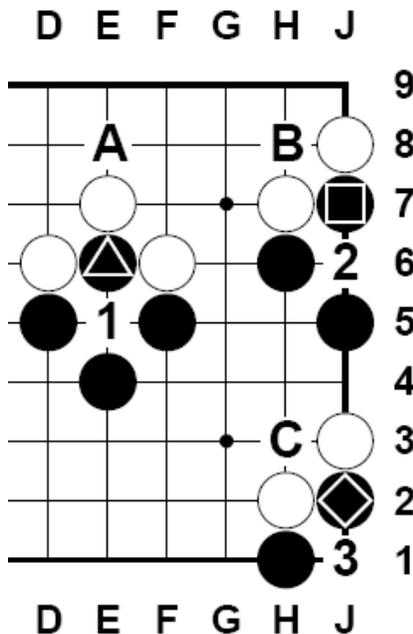
**FOLLOW-UP**

18. Vocabulary to learn: ko, ko threat, aji, joseki, and introduce the concept of the "monkey jump." The teacher will give worksheet problems that contain ko situations to the students to solve. Students will come to the demo board and show their peers how they set up and solved the ko problem (see following diagrams).

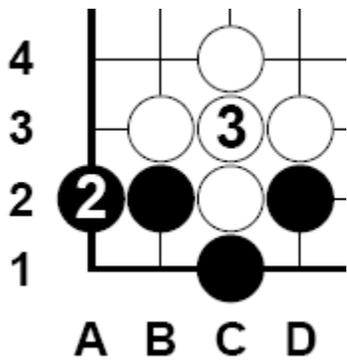
**REFLECTION  
(after the lesson)**

19. What did you do that helped students learn and meet the objective?
20. What would you do differently if you taught this lesson again to make it more successful for students.
21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G

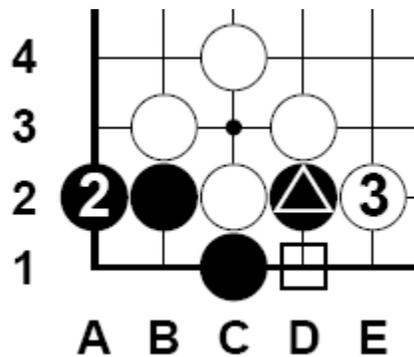
*Three forms of ko*



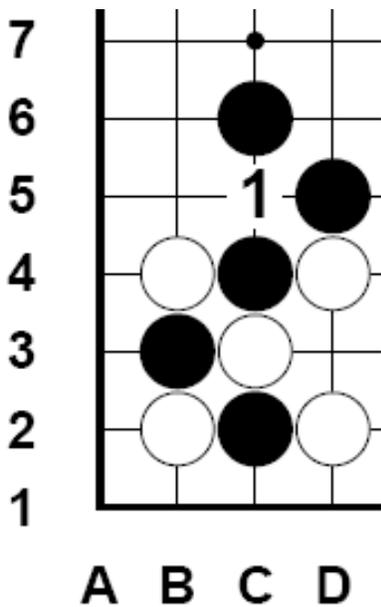
Diag. 1. **A** is the basic form of ko in the center of the board. **B** is a ko on the edge of the board. **C** is a ko in the corner. In **A** the marked Black stone is in atari. If White plays at 1 capturing the black stone, then the White stone is in atari. The "no repetition" rule states that the side that loses a stone in ko must first make a move elsewhere on the board before he/she can go back and re-capture. Consequently, Black would have to play a stone somewhere else on the board before he/she would be allowed to re-capture the White stone. Similarly, in **B**, the marked Black stone is in atari. If White plays at 2, then the white stone is in atari. Again, the "no repetition rule" requires that Black play elsewhere on the board before he/she can go back to capture the White stone. The situation in **C** is exactly the same as in **A**, and **B**. If White plays at 3, thus capturing the Black marked stone, then White's stone is in atari, but Black cannot re-capture White's stone. First, he/she must play elsewhere on the board, then he/she can come back to re-capture the White stone. The move that Black plays elsewhere is called a "ko threat."



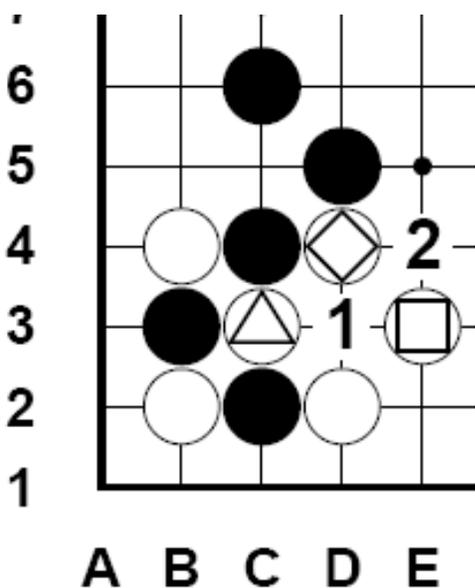
Diag. 2. If White does not consider Black's "ko threat" at 2 to be very important, then,



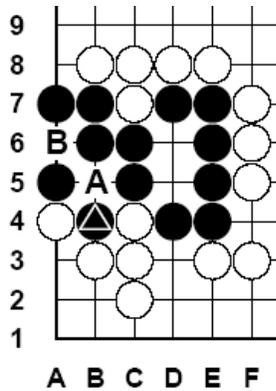
Diag. 3. White plays 3 at E2, putting the marked stone in atari, and capturing the marked Black stone by playing at D1 on his/her next move.



Diag. 4. Black and White are in the middle of a ko fight. If White plays at one, thus capturing the Black stone at C4, then the corner becomes White's territory for an approximate gain of 20 points. What happens, though, if it is Black's turn and he/she takes the ko?

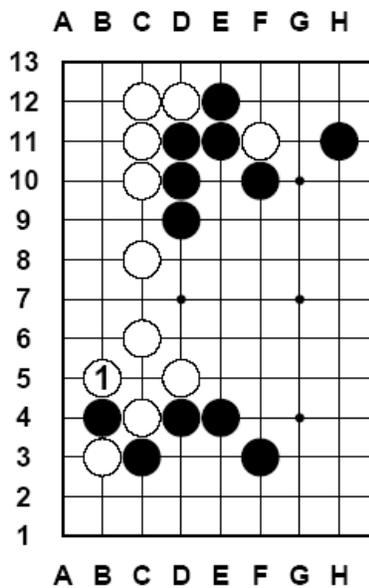


Diag. 5. After Black plays 1 taking the White stone marked with the triangle, White then plays the stone marked with a square, threatening to re-take Black's stone at D3. However, Black plays 2, taking the White stone marked with a diamond. Now Black has taken the corner and dominates the area in the immediate vicinity

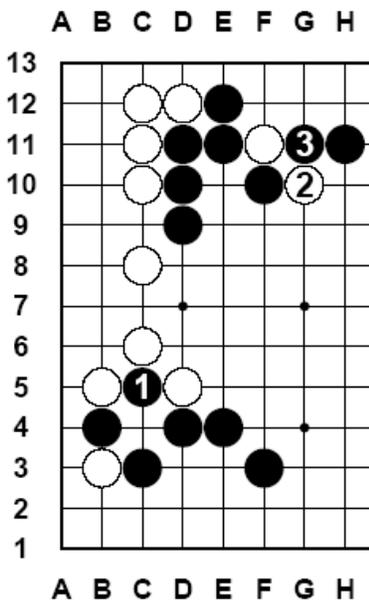


Diag. 6. In this situation, the marked Black stone is the focus of the ko fight. It has only one liberty at A. The very life-and-death of all of the Black stones is up for grabs if Black does not win the ko fight. Notice that the Black stones have only one sure (two-point) real eye on the right. If White “wins the ko” by capturing at A and then filling in at B4, then Black’s “eye” at B is a “false eye”. That leaves the 11 stones of Black’s group “dead” because it has only one real eye. White hasn’t captured them, yet, because Black still has six liberties. However, if it Black’s turn, and he/she “wins the ko” by connecting at A, then B becomes a second “real” eye for the entire group, and the Black group is “alive.”

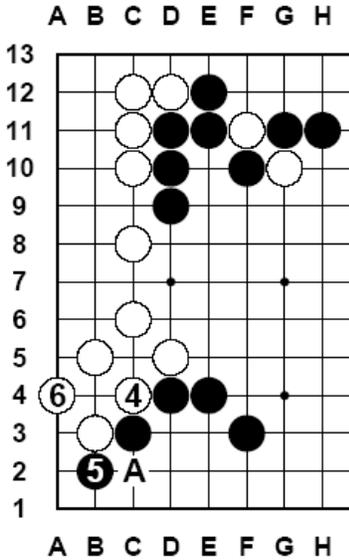
*Don't be afraid of ko*



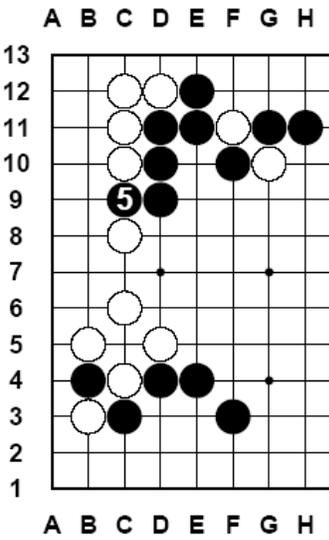
Diag. 7. Most beginners try to avoid a ko. However, fighting a ko can bring great rewards, so one should get more comfortable with playing ko. Let’s take a look at the following situation. In this diagram, White has played 1 to put the Black stone in atari. In most cases, one would just capture a stone that is on the 2<sup>nd</sup> line and is in atari. However, in this case there is a ko, so the situation is not that clear. How can Black play from this position?



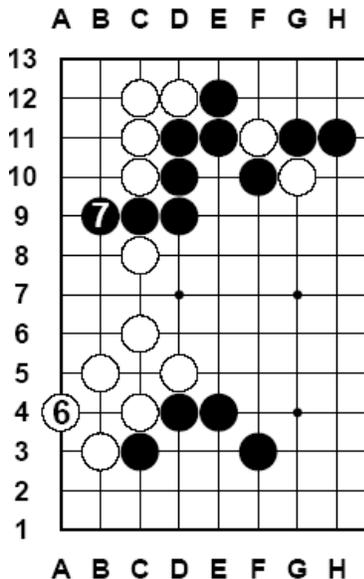
Diag. 8. Black would take the ko with 1, because White did not capture yet. Next, if White wants to try to save his/her stone at E11, he/she can play at 2, and Black then would play at 3, putting White’s E11 stone in atari.



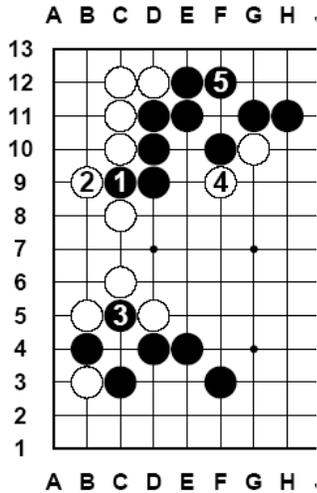
Diag. 9. White then re-takes the ko with 4. If Black is afraid of ko, then he/she may play at 5, to which White responds with 6. This leaves a cutting point at A. This is to illustrate what may happen if one is uncomfortable with ko fighting. If Black does not fight, White wins the ko by default anyway. Black must play a ko threat.



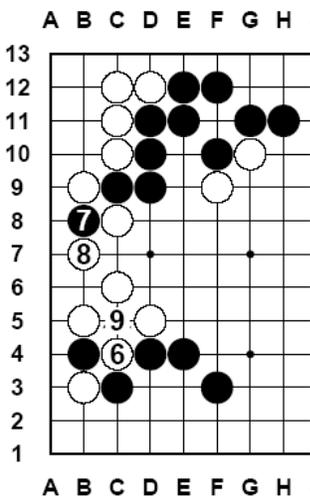
Diag. 10. If White takes the ko with 4, then Black should use his ko threat by playing at 5. Black 5 is a very strong move, because it threatens to penetrate into the White group.



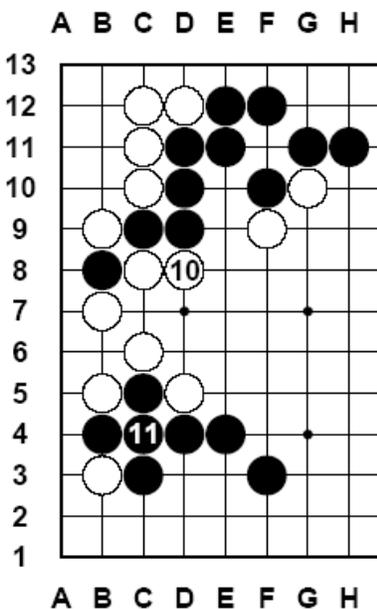
Diag. 11. If White chooses not to respond to the threat of Blacks penetration, and instead does 6, then Black plays at 7, cutting off the White corner group from the White group along the side.



Diag. 12. After Black plays the ko threat at 1, White responds at 2. Black then goes back and takes the ko with 3. If White plays the ko threat at 4, then Black plays 5 and captures the White stone at E11.

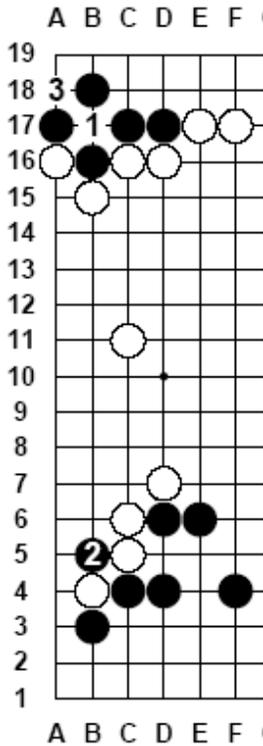


Diag. 13. After White takes the ko with 6, Black plays 7 as a ko threat. Black does this to sacrifice the stone to win the ko. After White plays 8, Black takes back the ko with 9.

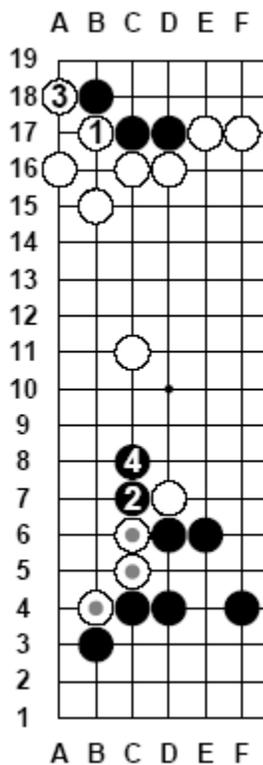


Diag. 14. White has run out of ko threats, so he/she plays 10. Since Black need not respond to this move, he/she can go back and connect the ko at 11. Since Black had more ko threats, Black won the ko. He/she also won a large territory on the lower left corner, and White's stones along Black's wall are almost useless. This is an example of fighting ko with ko threats. If your opponent fails to respond to the ko threat, you can still have an advantage when you carry out the threat. Even if you lose the ko, you gain compensation in some other part of the board.

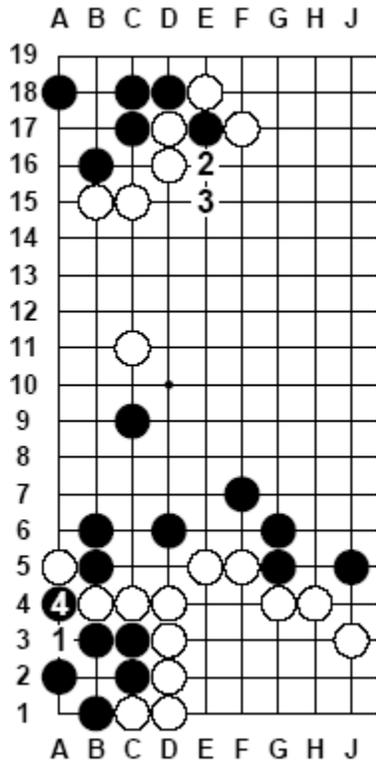
*Ko threats*



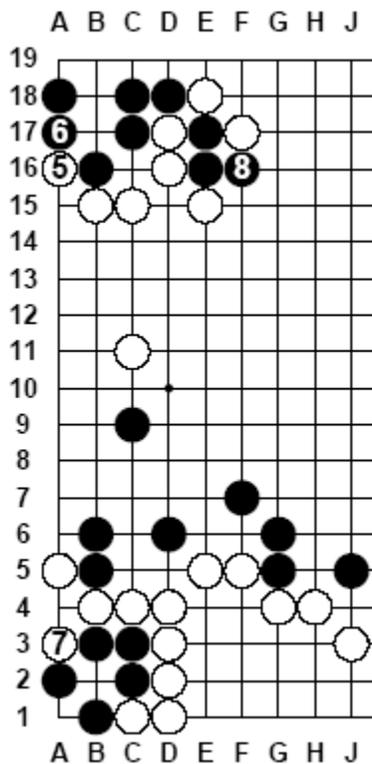
Diag. 15. Ko threats take advantage of “aji” (i. e. “remaining potential”) in positions that are undecided. In order to consider a ko threat successful, you have to be able to force your opponent to answer it. In this diagram, White plays at 1 capturing Black’s stone at B16. Black responds at 2. Should White respond to this? Since it looks like Black is in trouble in the upper left corner, White has the upper hand, and does not need to respond to 2. Even though Black would capture White’s stone at B4, White has more to gain by continuing to play in the upper left corner at 3.



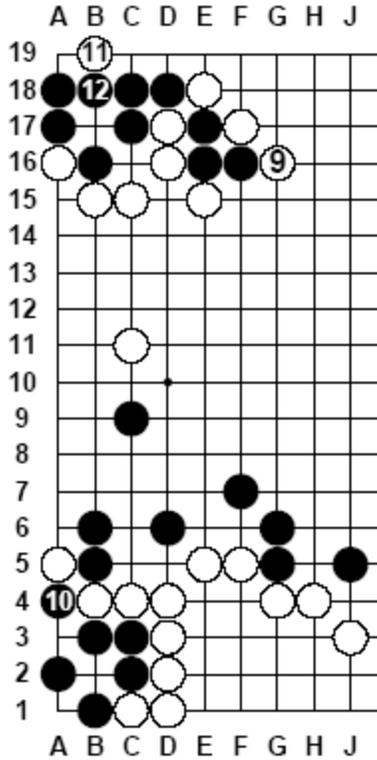
Diag. 16. If Black plays 2 at C7 as in this diagram, then white is compelled to answer. If White does not, then Black will extend to 4, and then will eventually capture the three marked White stones. Even though Black lost the ko in the upper right, he/she made up for it by taking a lot of territory on the lower left, and also threatening to eventually kill the three marked stones. The key to ko fighting is to find a ko threat that is so compelling to your opponent that they must answer or risk losing a lot of ground.



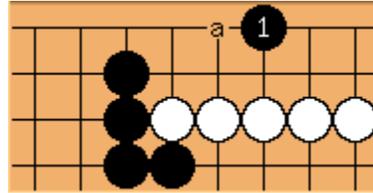
Diag. 17. In this position, suppose that with 1 White captures the Black stone at A3. Black responds with 2, trying to escape the ladder. However, White comes back with 3, and then Black re-takes the ko with 4.



Diag. 18. White then plays 5 as a ko threat, but Black plays 6 in order to prevent White's threat. White, on the other hand, re-takes the ko with 7, and Black continues to try to escape the ladder with 8.

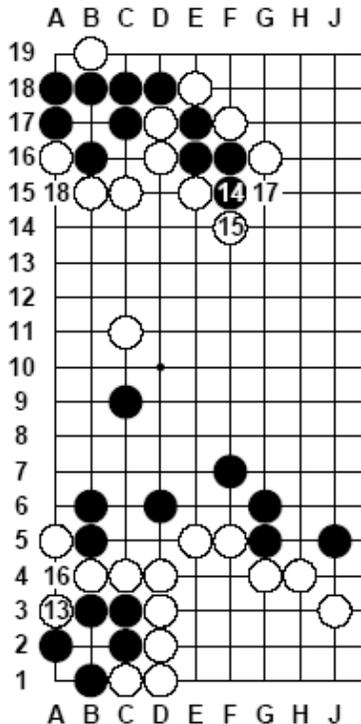


Diag. 19. White blocks Black's attempt to escape the ladder with 9. Black then re-takes the ko with 10. White responds with a "monkey jump"<sup>8</sup> ((Shotwell, 2003) move at 11, which forces Black to play at 12.



A *monkey jump* (Japanese: *saru-suberi*) is a large-knight jump from the second line to the first line into the opponent's would-be territory, reducing it by a considerable amount. The stone on

the diagram cannot be cut off. If White has a large territory to the right, the move can't be ignored and has to be replied to. A monkey jump is proverbially worth 9 points in sente, although the exact amount depends on the position, and it may very well be gote. In some cases a small jump to *a* is reasonable as well. This is sometimes known as a small monkey jump



Diag. 20. White takes the Black stone at A4. Black responds with 14 to try to escape the ladder, and as a ko threat. It does not appear as though White has enough ko threats left, so he/she can not win the ko. When White plays at 15, Black re-takes the ko with a6. Then White plays 17 and captures four of Black's stones. Black wins the ko by playing at 18 and capturing White at A16. The result is not a resounding success for Black, though, because he/she allowed White to capture too many of his/her stones in the ladder. Black would have done better if he/she would have looked for other ko threats rather than trying to escape from the ladder.

<sup>8</sup> "The monkey jump is generally a late-middle game maneuver that is often worth about 8-9 points and sometimes has greater uses for uniting apparently separated stones. It usually occurs when one player has a stone on the second line, and the opponents' stones are on the third line. The "jump" occurs usually on the first line and three points to the left or right under the opponents' stones. (see Shotwell, p. 50).

## Lesson Plan Seven

*Territory***PREPARATION****OBJECTIVE**

1. **EALRs** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; **SSG** 1 1.1; 2; 3 3.3; **SSIIS** 1.1a; 1.1b; **SSIGPS** 2.1, 2.1a; 2.1b; **SSCTS** 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.
2. The student will be able to recognize (*knowledge*) and to discuss (*comprehension*) the concept of territory so that when given three examples of territory, he/she will identify them correctly 100% of the time. The student will be able to apply (*application*) his/her knowledge of territory to create secure territory so that when asked to make a “safe” extension he/she will be able to make a “base” correctly 100% of the time.

**STUDENTS**

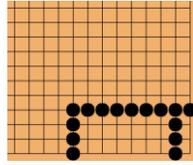
3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. This is the seventh lesson in the series, In the previous lessons the students learned about eye-shapes. This concept is a good introduction to the discussion of “territory.”

**CLASSROOM MANAGEMENT**

5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home).
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The students will set up their lender set for their parent(s) and demonstrate “territory.” Then the student will play the capture Go game of “capture five with his/her parent(s).

**INTRODUCTION****SET**

8. Territory is a strange concept in go because it is based on an understanding of the importance of land instead of prisoners (as in chess). Sensei’s library (<http://senseis.xmp.net/?Territory>) defines “territory” as, “A part of the board that is surrounded by stones belonging to a living group, and in which the opponent cannot make a living group.” Bradley (Bradley, 2001) defines “territory” as, “Open intersections entirely surrounded, singly or

**SET**

in groups, by safe (two-eyed) stones of a single color. (See Diag. 1). A “safe” extension along the third line (the line of territory) skips exactly  $(n+1)$  spaces from a wall of  $(n)$  stones to create a “base” (potential for creating two eyes) (see Diag. 3).

**COMMUNICATION OF PURPOSE**

9. Your main purpose in learning about territory is that the more of it you have the better. Your objective in a game of Go is to obtain more territory than your opponent. At the end of a game, each side counts up the number of points of territory it has. However, the end of the game is too late to calculate whether or not you are winning or losing the game. You should practice estimating the amount of territory you have throughout the game. You always will need to make your territory secure. You use the extension to attempt to make secure territory, or a base (see Diags. 4-) in which you can make at least two eyes. If you have stones that have no base, your opponent can kill them, so you should consider it very important to make bases.

**BODY OF THE LESSON****PRESENTATION**

10. In Diagram 1, ask the students how many points White has? How many does Black have? Using the demonstration board, set up an example of “territory” (see Diag. 2). Explain that the easiest way to make territory is to start in the corners first, then move to the sides. Move into the center last. Explain that the third line is the line of territory (see Diag. 2). Explain that it would be a mistake to try to place your stones in such a solid line to enclose territory because you would end up with less territory than your opponent.

**PROCESSING**

11. The teacher will demonstrate that in order to have “secure territory,” you must: (1) have borders that are complete and unbroken (no cutting points), (2) its surrounding stones have two real eyes (or can make them in the event of an attack), (3) the opponent can not play inside of it and live (see Diag. 3). Follow-up with guided practice, and then one-on-one independent practice.
12. Students will come to the demonstration board and recreate at least two positions (see following pages for potential territory positions for the students to solve) that show territory, and how to extend your territory in order to create a base (see Diags. 4-10). The students will pair up, hand out the Go sets, and construct their own territory and extension positions for each other.

**MONITORING**

13. The teacher will set up a position demonstrating territory (see Diag. 11). The teacher will observe if students can determine how many points of territory each player would have. The teacher will ask students to make an extension to create a base for making eyes. The teacher will observe if students make the appropriate number of skips between stones and walls on the third line to

**MONITORING**

make a base for eye-space.

14. The teacher will have students come to the demo board and show their peers “secure” territory, (see Diags. 12-13), and how to make an extension to create eye-space.
15. The teacher will ask students to come to the demo board to set up their own territories, and then have his/her partner identify the number of points for each side. The teacher will ask students to come to the board to set up an extension to create eye-space, and then have his/her partner identify the possible ways to make eyes in the space. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

**CLOSING****CLOSURE**

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

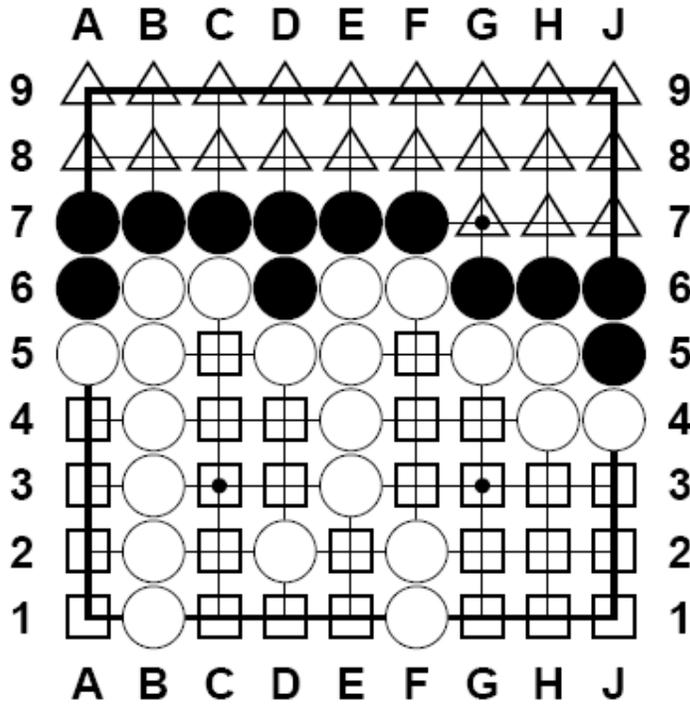
17. The teacher will set up territory situation (see Diags. 11) and ask the students to form two teams. Each team silently counts the number of points for their team. When a team thinks they have the correct number of points of territory for their side, raise your hands. The teacher will come and give you a reward when you’ve made the most points in the territory. The teacher will ask students to pair up, and one side sets up a territory situation. The other side gets to count first. As soon as one of the students has counted the correct number of points of territory, quit the game and start another. The first team to count the territory correctly wins the game.

**FOLLOW-UP**

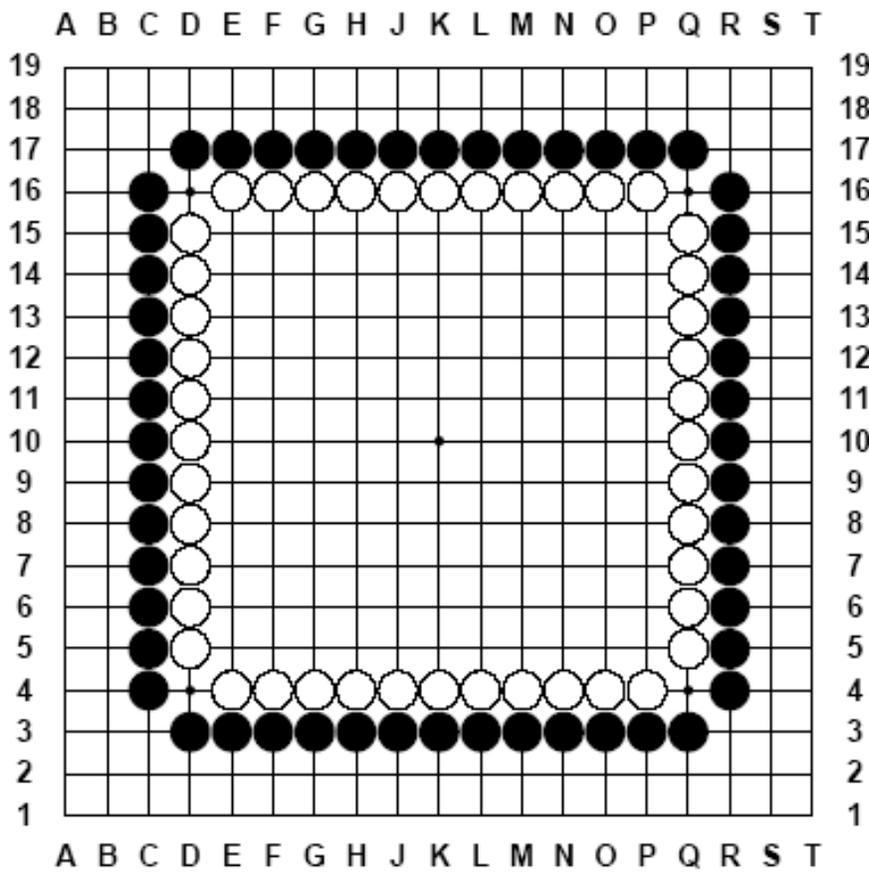
18. Vocabulary to learn: territory, dame (unoccupied spaces with black on one side, and white on the other; neutral, no points here for either player), komi (points given to white to compensate for not having the advantage of the first move), extension, and base. The teacher will give worksheet problems that contain territory situations to the students to solve. Students will come to the demo board and show their peers how they counted the territory (see following diagrams).

**REFLECTION  
(after the lesson)**

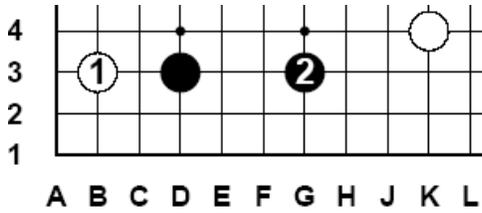
19. What did you do that helped students learn and meet the objective?
20. What would you do differently if you taught this lesson again to make it more successful for students?
21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G



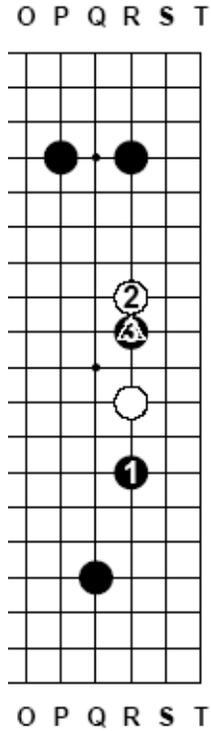
Diag 1. In this diagram, the squared points are White's points



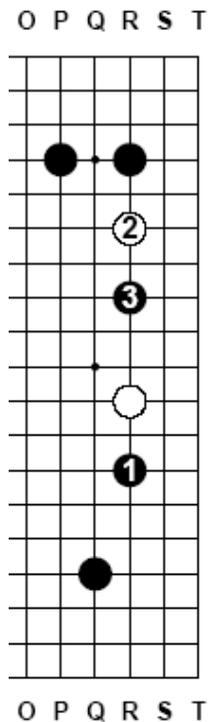
Diag. 2. In this diagram, all of Black's stones are on the third line, and all of White's stones are on the fourth line. Is Black's or White's territory larger?



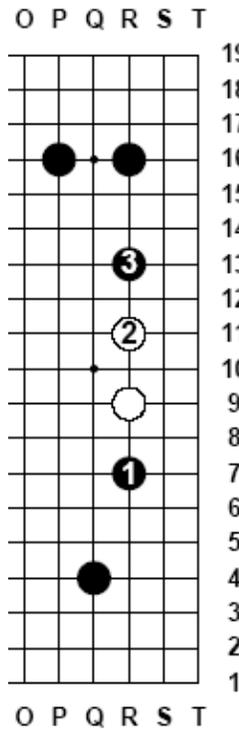
Diag. 3. In this position, Black's stone on D3 is all alone. White decides to attack at 1. Now Black is "pincer" on two sides. In order to protect himself/herself, Black should extend to 2 in order to create a "base" for the potential of making two eyes.



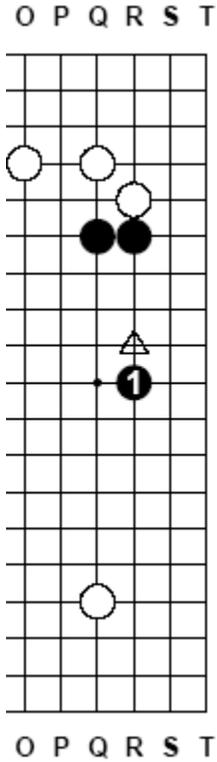
Diag. 4. Black plays 1 to approach White's stone at R9. If white does not defend his/her stone, then Black can attack at 3, thus denying White a base. A lone stone is a stone that invites an attack. So White should not ignore Black's approach. White should play at 2 (following the rule of skipping n+1 from "n" stones, or "If one, jump two; if two, jump three."). This is called an "extension."



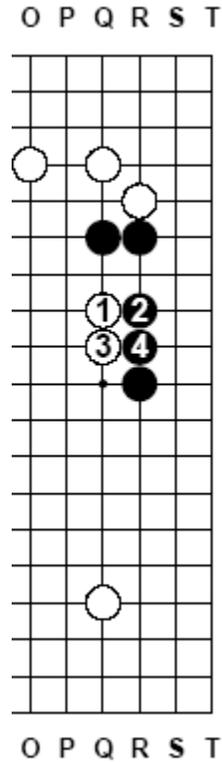
Diag. 5. If White decides to extend to 2 as in this diagram, he/she opens him/herself up to Black's invasion at 3. There's too much space between White's stones.



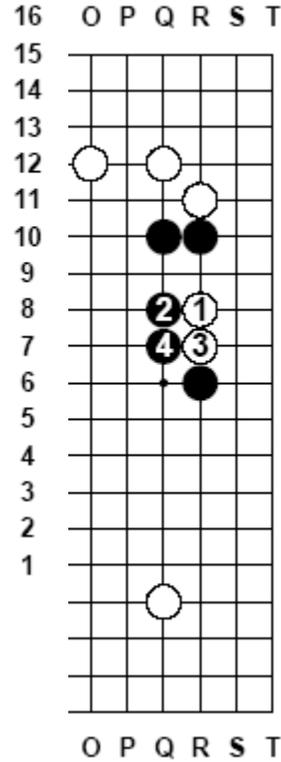
Diag. 6. On the other hand, if White decides to extend only one point to 2, then Black responds at 3, thus robbing white the chance to make a base for making two eyes.



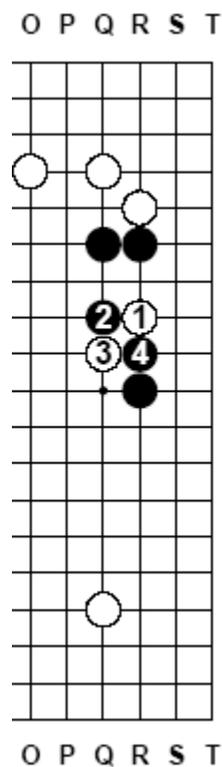
Diag. 7. In this case, Black has a wall of two stones. Consequently, Black should make a three-point extension at 1. If Black only extends to the marked point, then it is too narrow, and he/she is short-changing him/herself.



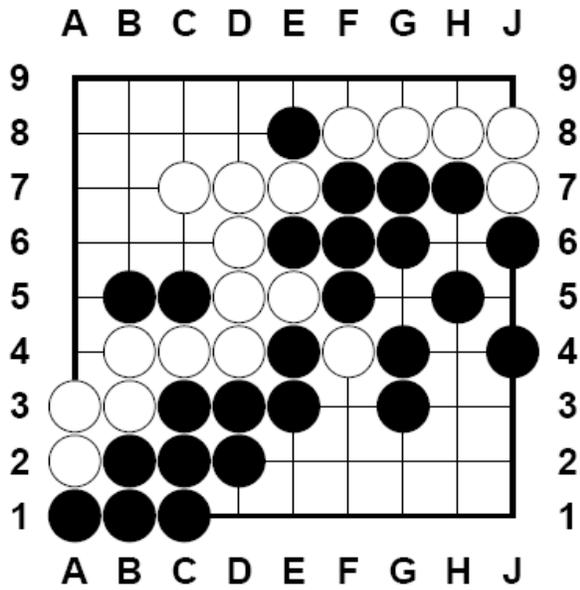
Diag. 8. If White attempts to cut Black's three-point extension on top, then Black goes underneath and plays 2, White responds with 3, and Black answers with 4.



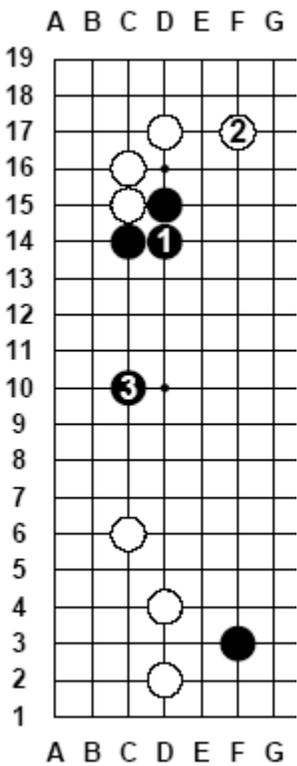
Diag. 9. If, however, White decides to attack on the third line at 1, then Black goes on top and blocks at 2. Then White responds at 3, and Black seals him/her in with 4.



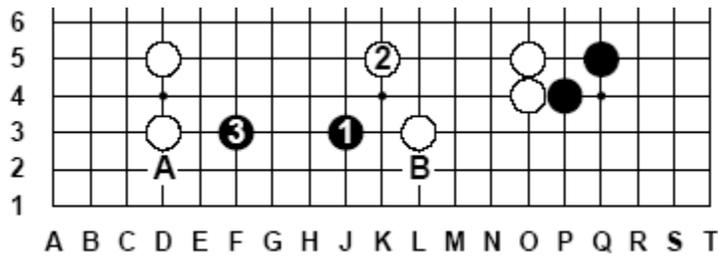
Diag. 10. If White 3, then Black 4. White is out matched.



Diag. 11.



Diag. 12. How should Black respond to White's move at 2? Black should make the three-point extension to 3.



Diag. 13. After Black plays 1, white answers with 2. What

should be Black's next move? Black can make a base with the two-point extension at 3. Follow-up moves for Black are at A and B, which is the standard way of making two-eyes in this kind of position.

## Lesson Plan Eight

*Influence***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.

**STUDENTS**

2. The student will be able to appraise (*evaluation*) a position so that when given two positions he/she will be able to tell the area of influence of a group of stones with 100% accuracy.
3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.

**CLASSROOM MANAGEMENT**

4. The previous lesson was on “territory.” This lesson expands on that lesson to illustrate a more subtle concept of “influence,” “the power of a group of stones, usually a solid, center-facing wall to affect whatever happens in its vicinity” (Bradley, 2001).
5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home).
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson
7. The students will set up their lender set for their parent(s) and demonstrate “influence.” Then the student will give his/her parent a number of handicap stones depending on the student’s assessment of his/her parent’s strength. He/she will play a game of Go with his/her parent(s).

**INTRODUCTION****SET**

8. “Influence” can also be called “thickness.” Each stone has a certain influence on the board. Captured stones have an influence close to zero. Surrounded stones that make a live group, influence only the surrounding group. Stones that are in open space have an influence on that open space and the stones bordering that open space. Influence is a **long range** effect. The stronger a group, the greater its influence on a neighboring area. The more open the neighboring area, the greater the group's influence. The weaker the

**SET  
COMMUNICATION  
OF PURPOSE**

other groups neighboring that area, the larger the group's influence.  
9. As Shotwell (Shotwell, 2003) points out, "Influence is only the potential to affect the course of later play [and] if used properly thickness can later result in a lot of territory. There is some risk involved in choosing influence over territory, but in many positions the only key to victory is via the use of thickness." Only experience can teach you how to decide which is worth more.

**BODY OF THE LESSON**

**PRESENTATION**

10. In Diagram 1, ask the students which side they think has the territory and which side has the influence? Using the demonstration board, set up an example of influence (see Diag. 2-4).

**PROCESSING**

11. The teacher will demonstrate the Go axiom that you "Don't play near thickness. Either your own or the opponent's" (see Diag. 5). The teacher will demonstrate the Go axiom "Drive towards your thickness" (see Diag. 6). Follow-up with guided practice, and then one-on-one independent practice.

12. Students will come to the demonstration board and recreate at least two positions (see following pages for potential "influence" positions for the students to solve) that show influence, and how to extend your influence in order to use its power (see Diag. 5). The students will pair up, hand out the Go sets, and construct their own influence positions for each other.

**MONITORING**

13. The teacher will set up a position demonstrating influence (see Diags. 7). The teacher will observe if students can determine which player has "territory" and which has "influence." The teacher will ask students to make an extension to create increase one's influence on the board. The teacher will observe if students make the appropriate number of skips between stones and walls to increase/decrease the player's influence on the board.

14. The teacher will have students come to the demo board and show their peers "influence" (see Diags. 8-10), and how to make an extension to increase his/her influence.

15. The teacher will ask students to come to the demo board to set up their own "influence" examples, and then have his/her partner identify the number of points for each side. The teacher will ask students to come to the board to set up an extension to increase his/her influence, and then have his/her partner identify the area of influence. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

**CLOSING**

**CLOSURE**

16. Remind students of concepts exposed today, and guide the students' attention to the vocabulary words that the teacher used in today's class. Ask students to repeat the concepts and to define

**CLOSURE**

them for their colleagues.

**ASSESSMENT**

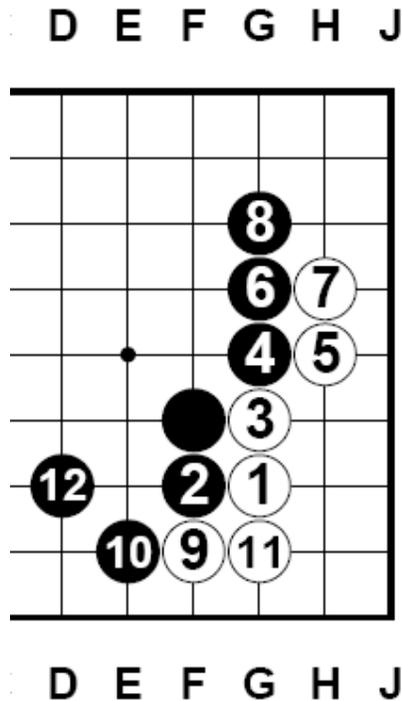
17. Play a demo game against the students. On a 9 x 9 board, give the “students’ team a four stone handicap. Ask the students to line up to take turns making moves on the demo board. Remind them not to comment on each other’s moves except to say “good move!” Some students may need your encouragement. Remind them that they have plenty of time. Give suggestions for possible moves if a student seems confused.

**FOLLOW-UP**

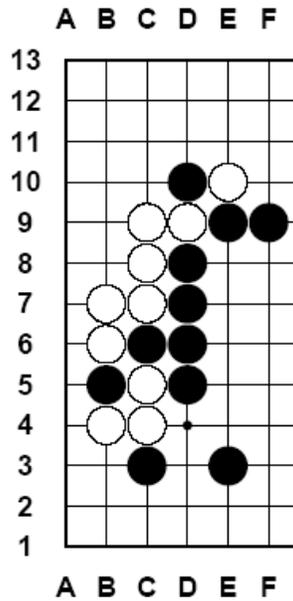
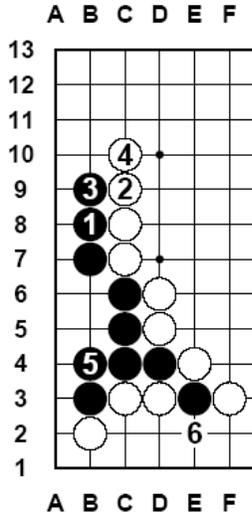
18. Vocabulary to learn: influence, thickness. The teacher will give worksheet problems that contain territory situations to the students to solve. Students will come to the demo board and show their peers how they counted the territory (see following diagrams).

**REFLECTION  
(after the lesson)**

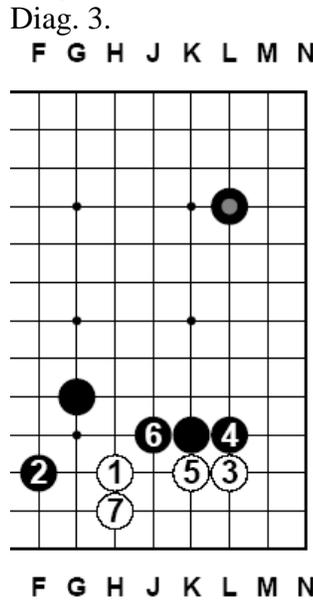
19. What did you do that helped students learn and meet the objective?
20. What would you do differently if you taught this lesson again to make it more successful for students.
21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G



Diag. 1. This is a joseki sequence in which White1 invades on the 3-3 point under Black’s (handicap) stone. White has pretty secure territory in the lower right corner. That is, if Black decided to invade the corner, in all likelihood his/her stones would die. For the time being Black has no secure territory in this area of the board. On the other hand Black’s wall (“thickness”) exerts a lot of “influence” over the rest of the board to the left. Even though White has sente in this position, it is considered an equal outcome because Black has “outside influence” over the rest of the board.



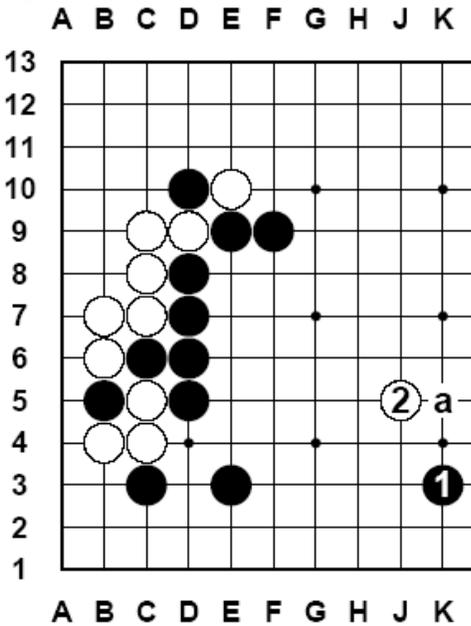
Diag. 2.



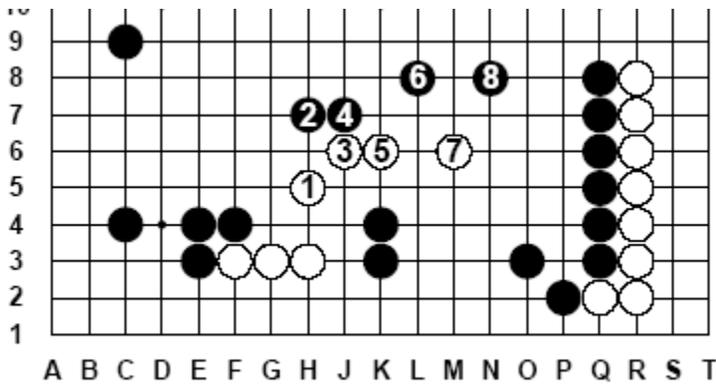
Diag. 3.

Diag. 4. Black has the hoshi stone and the marked stone in place. White approaches with 1. Black answers with the pincer at 2. White jumps into the corner with 3, and up to 8 the sequence is very common. White has thus taken territory but Black has created a group, consisting of the

wall 4-6-hoshi, virtually connected to 2 and 8. The marked stone provides for sufficient space to make eyes for the group. The Black configuration is strong and influences the center and the right side.

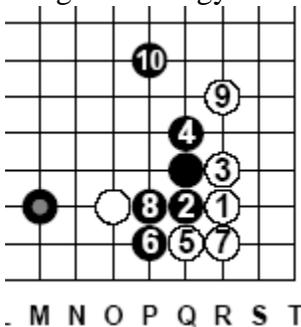


Diag. 5. B1 in this position is in an ideal spot because it allows for enough room between it and the Black wall to make best use of its power. If it were closer, then its power would be wasted. If it were further away, then it would just be an invitation for White to invade. If White invades too deeply, he/she should be in trouble (unless there are other stones around which aren't shown). So White should play cautiously with a "light" reducing move like W2 here (or at "a").



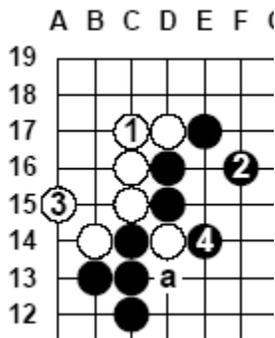
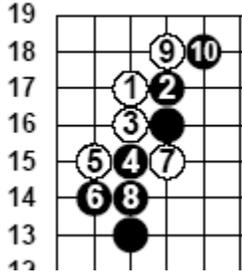
Diag. 6. White tried to invade Black's area, then White jumped out at 1. On the right, Black has a lot of thickness, and the advantage. Black caps at 2, which blacks White's attempt to escape to the center. If White plays the diagonal at 3, then Black pushes White towards his/her thickness with 4. White 5 and Black makes a knight's move to 6, and white makes a one-point jump to 7, but

Black counters at 8, thus sealing in White's stones. Driving weak stones towards your thickness is a good strategy.



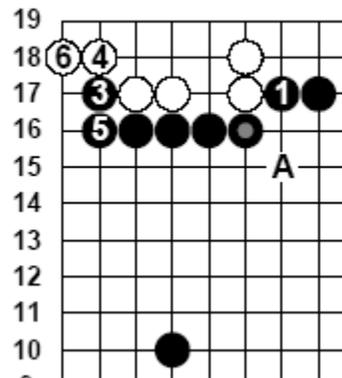
Diag. 7. Black builds a wall. The marked Black stone is closer to the wall, but because a White stone is already in the area, this makes perfect sense. This configuration is regarded as strong, and influences the center and lower side.

Diag. 8. This is what happens when White immediately makes a 3-3 point invasion. White 7 creates a weakness.



Diag. 9. The white stone is captured in a type of net, but some aji remains. White can not run out immediately, However. Black is thick.

Diag. 10. Black plays the marked stone instead of at a. Black 1 is a tight move. If White ignores it, Black 3 and 5 are then sente against the corner.



## Lesson Plan Nine

*Scoring***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1, 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.

**STUDENTS**

2. The student will be able to assess (*evaluation*) the position on the board so that when given a full-board position he/she will determine if the game is over, fill in the neutral points (dame) and then score it with 100% accuracy.
3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.

**CLASSROOM  
MANAGEMENT**

4. In the two previous lessons the teacher showed students how to determine territory and influence. In this lesson the teacher combines those lessons with lesson two on Units & Liberties, and he/she will introduce the concept of “scoring the finished game.”
5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home). The teacher will ask students to use their “game record sheets” to keep a record of the games the teacher will show them on the demo board.
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The students will set up their lender set for their parent(s) and show them one or more of the 9 x 9 professional games for which he/she kept a game record. Then the student will go through one or more of the games with his/her parent(s) and determine who the winner was at the end of the game.

**INTRODUCTION****SET**

8. Black and white alternate turns until there do not appear to be any more advantage to playing a stone. Since the aim of Go is to encircle as much territory as possible, the game is over when neither side can gain or lose any more territory. At that time, the

**SET**

players go through a process to verify that the game is over. The players then proceed to fill in the neutral points.

**COMMUNICATION OF PURPOSE**

9. The purpose of this lesson is to show how to finish a game and then score it to see which side won the game. Shotwell (2003, p. 106) says, “It’s important to remember that completing the borders is really just a continuation of the ‘endgame’ that the teacher will discuss in Lesson 12. So it often occurs on parts of the board quite early in the game, and not only just before both sides are ready to pass.”

**BODY OF THE LESSON****PRESENTATION**

10. In Diag. 1, ask the students to predict if Black is ready to pass? Use Diag. 2 to point out that there are more moves available for both sides. After discussion, post Diag. 3 on the demo board, and ask the students if White should pass? Place the moves from Diag. 4-5 on the board. Ask the students to predict again the next move, and ask them to explain their reasons for making their suggested move. If there are any liberties that remain between the safe stones of both sides, they are not credited to either side. These are “dame” points. Each player fills in the dame points alternatively in they are all filled. Put Diag. 6 on the board and ask the students to identify if there are any dame, which side should fill it and why? Put Diag. 7 on the board.

**PROCESSING**

11. The teacher will explain that players can end a Go game in three ways: (1) when both players say “pass” in succession; (2) by resignation; (3) if either player exceeds the time limits when playing with a clock.
12. Saying “pass” means that a single color of stones completely encloses a complete and unbroken border of stones; there are two eyes for each territory, or the opponent can not prevent the formation of two eyes; the opponent cannot or will not invade; or the only other possible moves are already in your territory. A player may make a “pass” move at any time, but when he/she does so, he/she must give a stone to his/her opponent. If the game is an “even” game (i.e. no handicap), then white must make the last pass. The opponent is not required to “pass” in kind. He/she may continue to play. When this happens, the play continues until such time as both players pass in succession. Resignation is a courtesy to one’s opponent if the situation is hopeless.

**MONITORING**

13. The teacher will set up a final position of a game (see Diag. 8). The teacher will observe how students manipulate the stones into groups of multiples of five or 10, fill in dame, and fill in empty spaces with prisoners.
14. The teacher will place a final position in the demo board and ask students to come to the demo board to show their peers how they count the final score of the game (see Diag. 9).

**MONITORING**

15. The teacher will ask students to come to the demo board to set up their own final position examples, and then have his/her partner identify the number of points for each side. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

**CLOSING**

**CLOSURE**

16. Remind students of concepts exposed today, and guide the students' attention to the vocabulary words that the teacher used in today's class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

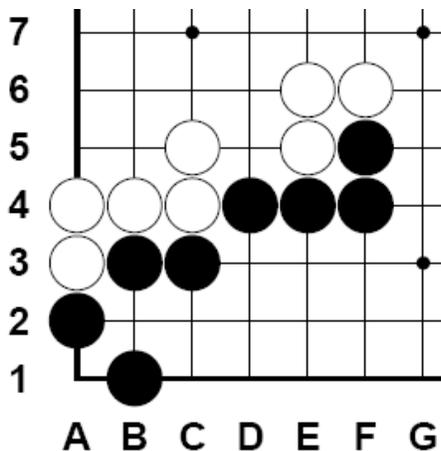
17. Play a demo game against the students. On a 9 x 9 board, give the "students' team a four stone handicap. Ask the students to line up to take turns making moves on the demo board. Remind them not to comment on each other's moves except to say "good move!" Some students may need your encouragement. Remind them that they have plenty of time. Give suggestions for possible moves if a student seems confused.

**FOLLOW-UP**

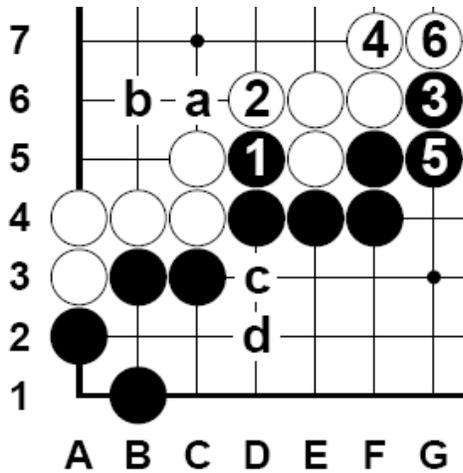
18. Vocabulary to learn: pass, dame, and komi. The teacher will give worksheet problems that contain problems for the students to solve (see diagrams 11-14). Students will come to the demo board and show their peers how they counted the territory (see following diagrams).

**REFLECTION  
(after the lesson)**

19. What did you do that helped students learn and meet the objective?  
 20. What would you do differently if you taught this lesson again to make it more successful for students.  
 21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.  
 22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A – G

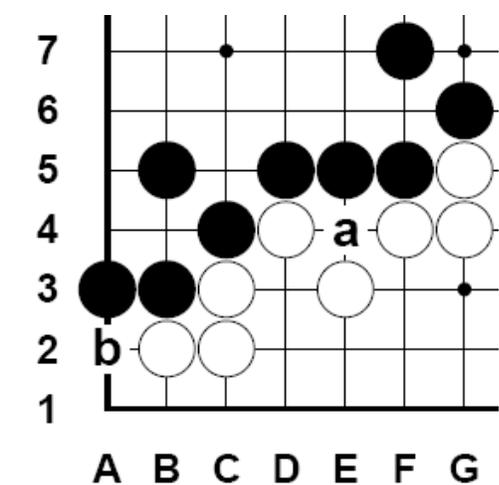
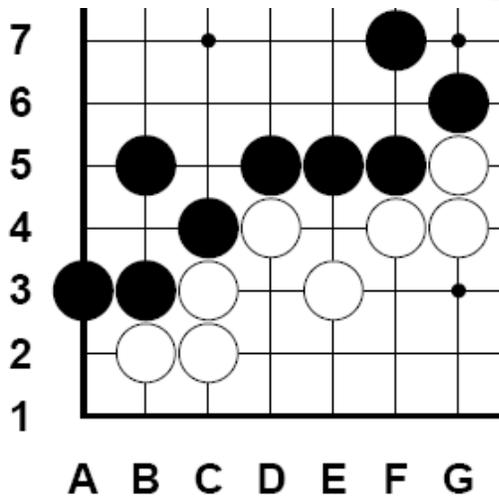


Diag. 1. Assume that you are playing on a 7 x 7 board. Should Black "pass" in this position?

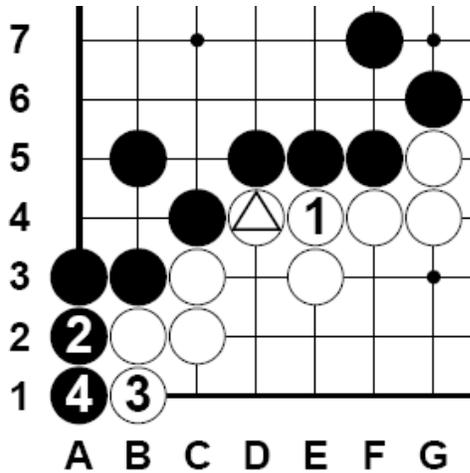


Diag 2. No Black should not pass: 1. White's wall is incomplete, and B1 can reduce White's territory by one point. Black then has sente, which forces White to move to 2 to complete his/her border. The territorial boundary in the upper right corner is also incomplete. B3 gains another three points. Black prevents White from playing at 5, and forces White to play at 4. The Black connects at 5, and the game is at an end. The Black cut at "a" doesn't accomplish anything, because White can come back and atari at "b." Similarly, at the bottom, if White plays "c", Black would capture him/her in a ladder. So both players are ready to pass.

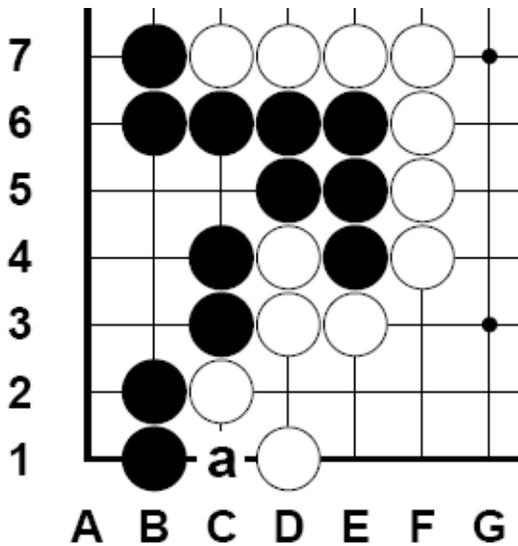
Diag. 3. This is another 7 x 7 game. In this position, should White pass?



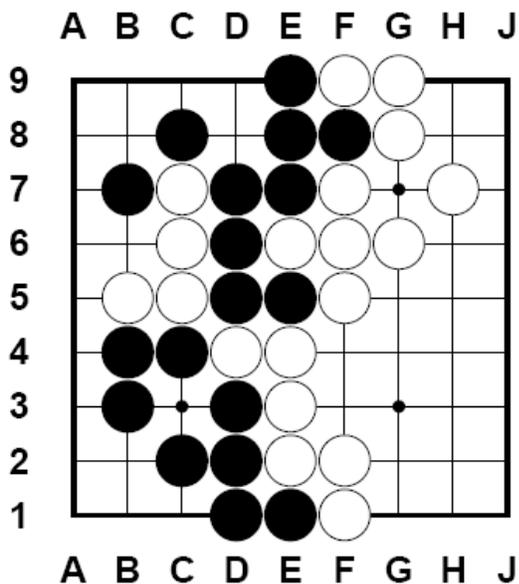
Diag. 4. Since there are two places, "a" and "b" in which the borders between Black and White are incomplete, White should not pass.



Diag. 5. White plays at 1 to protect the marked stone from atari. This is two points better for White. After B2, W3, B4, White passes and gives a stone to Black. Black also passes and gives a stone to White. Since this is a non-handicap game, White has to pass once more. So the result is:  
 White has 12 spaces + one Black stone = 13  
 Black has 16 space + two White stones = 18.  
 Consequently, Black wins the game by 5 stones.



Diag. 6. How many dame are there in this position? There is only one dame at "a," but only Black can fill it. White can not fill it. If White filled it then he/she would place him/herself in atari and Black would play at E1, White at D2, Black at F3 put white into atari.



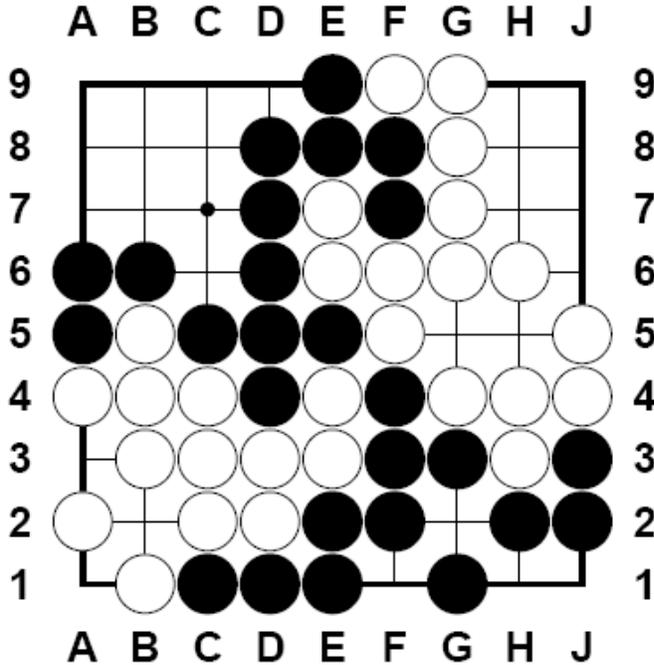
Diag. 7. Is this game over? How would you score it? Black has six prisoners, white has three prisoners. The komi is 6.5 points.

1. The players alternately fill in all dame using extra stones, not prisoners.
2. Both sides pass in succession and exchange "pass stones."
3. Each side removes from its territory as prisoners all abandoned opposing stones.
4. Each side fills its prisoners into territories of the same color, thereby subtracting them from the opponent's score.
5. Each side's remaining territory is rearranged by the opponent into easily countable groupings (usually multiples of 5 or 10 points)
6. Each remaining vacant intersection counts as

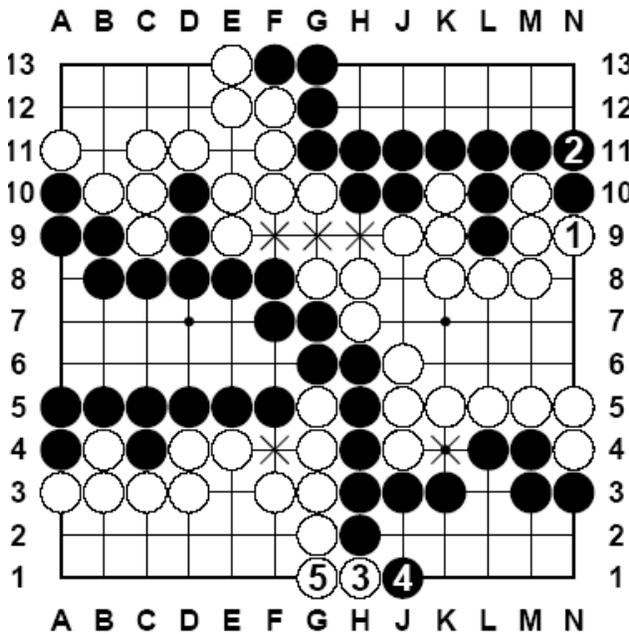
one point of score for the side that has surrounded it, except Seki.

7. Komi (compensation for playing second) is added to White's score.
8. The side with the higher total score wins the game.

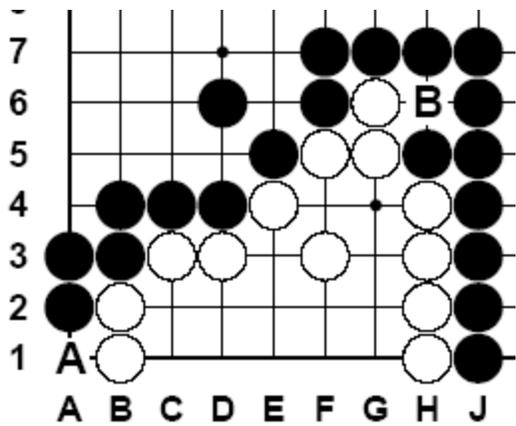
In this diagram Black has 23 points on the board, plus six prisoners = 29. White has 25 points on the board plus 3 prisoners, plus 6.5 komi, for a total of 34.5. Consequently, White wins by 5.5 points.



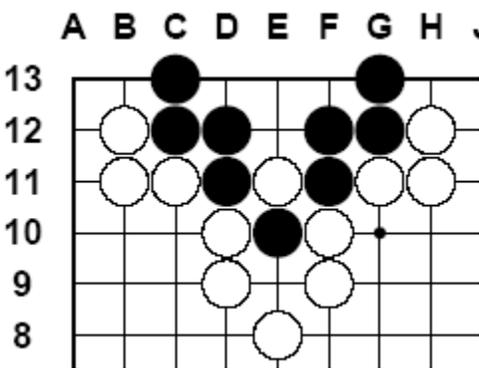
Diag. 8. Black has no White prisoners. White has three Black prisoners. Black has 15 points on the board and no prisoners for a total of 15. White has 12 points on the board, plus three prisoners, for a total of 15. However, there is 6.5 points of komi. Consequently, White wins by 6.5 points.



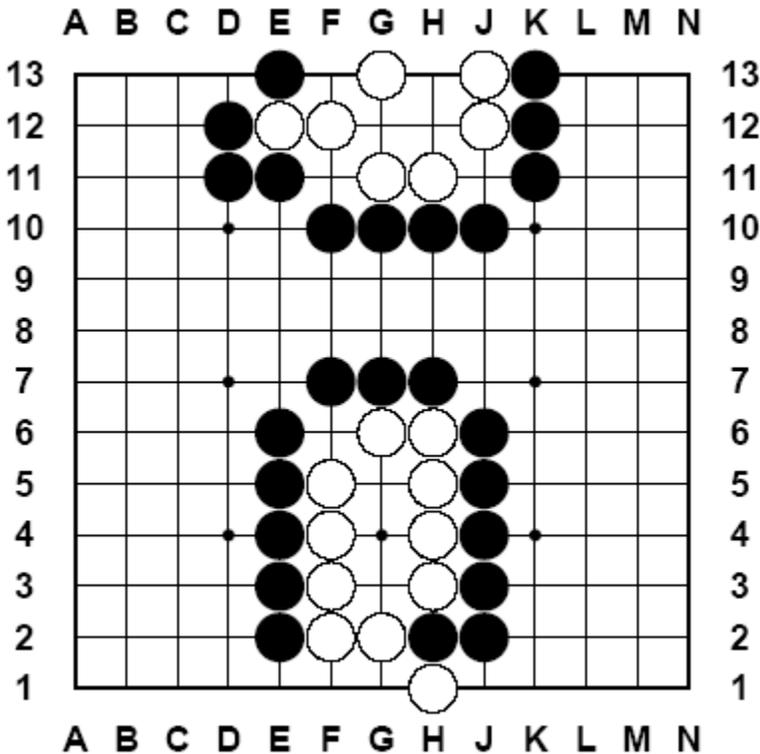
Diag. 9. Before 1 and 5 are played, this was the final position of the board, but the wall of territory are not complete at those points. Consequently, if it is White's turn, he/she plays at 1. Black connects at 2, and that connects the borders in this area. Next White plays 3, to which Black respond with 4, and White connects with 5. Now the borders of this area are finished. Now to take care of the dame points (marked with an X). These points are neutral points. If one side fills them in it does not effect the outcome of the game. Ordinarily, each side takes turns filling in the dame points. Sometimes, though, it makes a difference how the dame points are filled in. The following diagrams show a couple of situations.



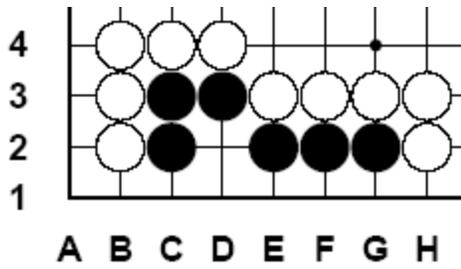
Diag. 10. There are two dame points, A and B, in this final position. If Black plays at A, then he/she takes away one of White's liberties. If White fills B, then Black can come back and play at C2, thus putting White's three stones in atari. Consequently, White should not play B, but play at C2 him/herself.



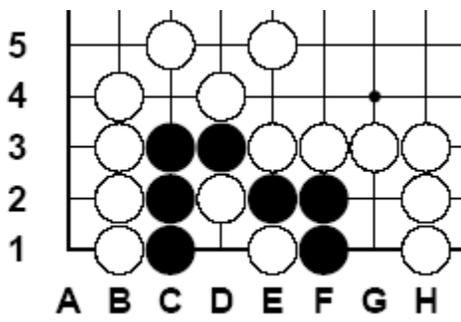
Diag. 11. Problem: Black to play. What move does Black make to live?



Diag. 12. Problem: Black to play. What moves does Black make to kill the white group at the top and the white group at the bottom?



Diag. 13. Problem. Black to play. How does Black make a living group?



Diag. 14. Alive or Dead? Is Black alive or dead? Is another move necessary?

## Lesson Plan 10

*Extensions, Connections, Cuts—Part One***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.

**STUDENTS**

2. The student will be able to describe and discuss (*comprehension*) extensions, connections, and cuts, so that when given three positions he/she will correctly show each 100% of the time.
3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. In Lesson Seven, the teacher introduced the students to the concept of territory. During that lesson, the teacher introduced some of the basics of extension. See Lesson Seven for more details. In the previous lessons the focus was mechanical and positional. In this lesson the teacher moves the emphasis to technical skill building.

**CLASSROOM MANAGEMENT**

5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home). The teacher will ask students to use their “game record sheets” to keep a record of the games the teacher will show them on the demo board.
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The students will set up their lender set for their parent(s) and show them the six forms of the extension, how to make connections, and the results of a cut.

**INTRODUCTION****SET**

8. There are some key techniques, such as extensions, connections, and cuts, to the game of Go. Players who wish to do well at playing Go should know these techniques..

**COMMUNICATION OF PURPOSE**

9. You will need to know these techniques because as in volleyball, for example, you have to learn how to pass, spike, serve the ball, and to practice those things over and over so that they become

**COMMUNICATION OF PURPOSE** automatic if you want to be a good player. The same is true of playing Go, because if you have to think about which technique to use, you probably will not react correctly and you will lose the game.

### **BODY OF THE LESSON**

**PRESENTATION** 10. “Extending” is one of the most common techniques in Go. From Diag. 1, show the students the six basic ways Black can play to extend his/her stones. Eventually, the player wants to solidly connect all of his/her extensions. There are two types of connections: “solid,” and “potential/virtual.” From Diag. 2, show the students how White can play to connect his/her stones in a “solid” connection. Next, show students the various forms of “potential/virtual” connections. In Diag. 3-6, show the students how White can cut the Black stones with the “Alien Symbol”(Kim, 1997).

**PROCESSING** 11. The teacher will demonstrate the six extension patterns, how to make connections, and how to cut. You use extensions to: (1) Enclose or attack an opposing group; (2) run away from an attack; (3) move into an adjacent area on the board; (4) build territory (or “thickness”); (5) Sketch out or enclose potential territory; (6) make eye-space; (7) prevent your opponent from doing the same thing.

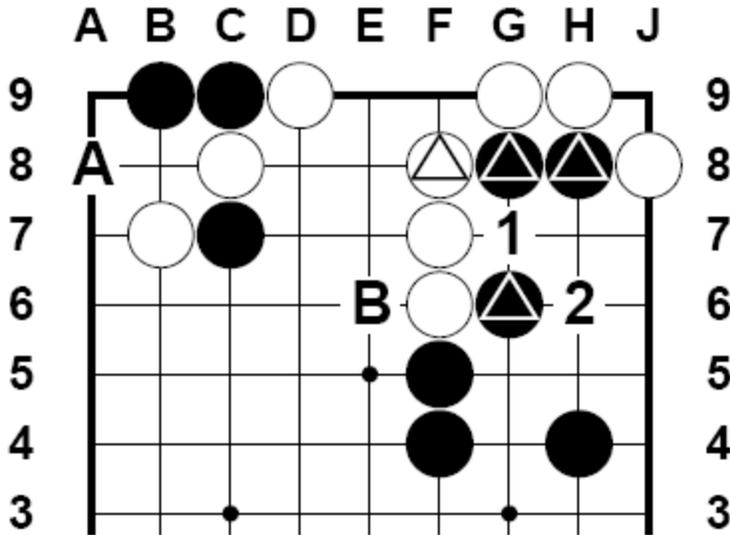
**MONITORING** 12. The students will pair up, and they will hand out the Go sets. Have students solve three puzzle problems (see Diags. 7-9).  
13. The teacher will ask students to demonstrate to their partner three of the six forms of extensions. Then his/her partner will demonstrate to him/her the remaining three extension patterns.  
14. The teacher will place a demonstration game on the demo board and ask students to come to the demo board to show their peers how he/she responds to the request to show an extension, connection, or cut (see Diag. 10).  
15. The teacher will ask students to come to the demo board to set up their own extension, connection, and cut position examples, and then have his/her partner identify the best extension, how he/she would connect, and identify if a cut would be successful. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

### **CLOSING**

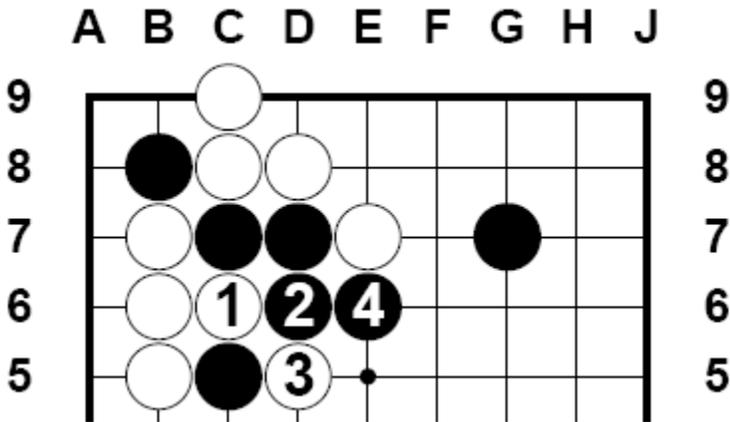
**CLOSURE** 16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT** 17. Play a demo game against the students. On a 9 x 9 board, give the “students’ team a four stone handicap. Ask the students to line up to take turns making moves on the demo board. Remind them not to comment on each others’ moves except to say, “good move!”

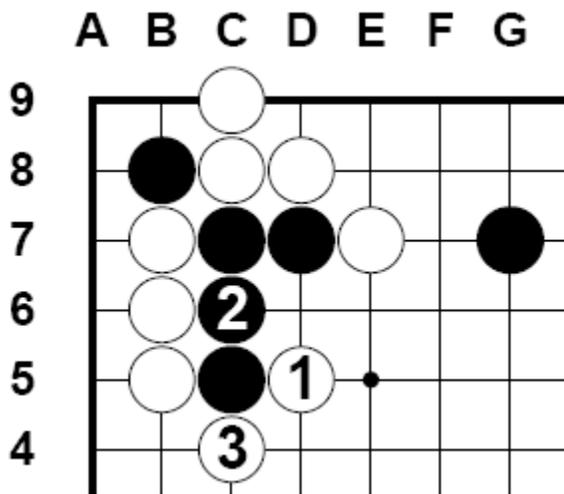




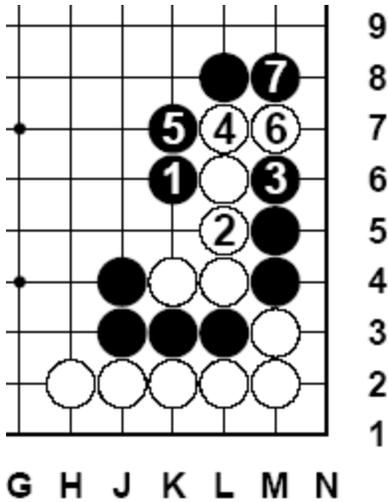
Diag. 3. The position labeled “A” is the basic form of the “Alien Symbol.” In the position labeled “B”, the three marked Black stones are threatening to form the “Bamboo Joint.” After White has “hit the head of two stones” with the forth marked (White) stone we see the beginnings of the “Alien Symbol.” There is a saying in go that you should try to prevent the formation of the “Bamboo Joint.” Consequently, should White block at 1, or 2?



Diag. 4. If White plays 1, then Black tries to escape with 2. White makes a “double atari” with 3. Black prefers to save three stones, and plays 4. White can capture one stone, but could he/she have captured more? Let’s see.

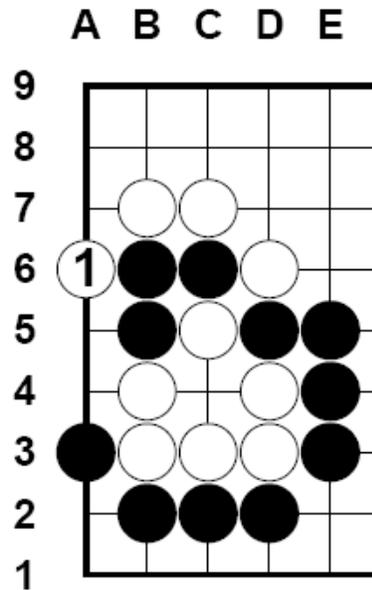


Diag. 5. If White elects to play at 1 (which is 2 in Diag. 3), then Black has to play at 2. White responds by playing at 3, and he/she has trapped the four Black stones. If Black chooses to sacrifice the two Black stones by playing at 3, then White still interjects at 2, and traps the two Black stones.



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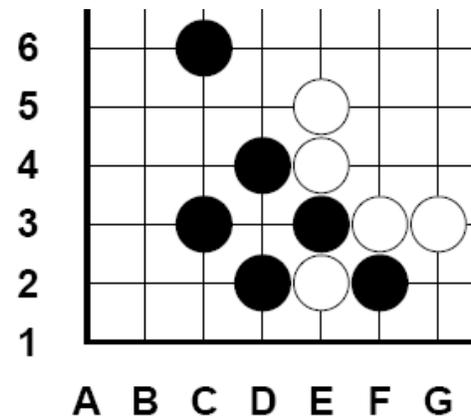
Diag. 6. Here's another look at the "Alien symbol." Black prevents the "Bamboo Joint" at 1. White connects at 2, and Black catches the stones in the sequence up to 7. The "Alien Symbol" basically comes about because Black has hit the head of two stones on two sides, then prevented the formation of the "Bamboo Joint" by placing a stone where White should place a stone to complete the "Bamboo Joint."



A B C D E

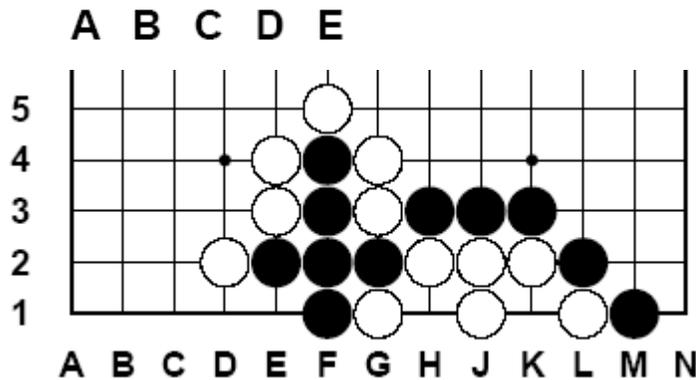
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Diag 7. Black to Play. White has played at 1. How does Black answer? (A ko fight).



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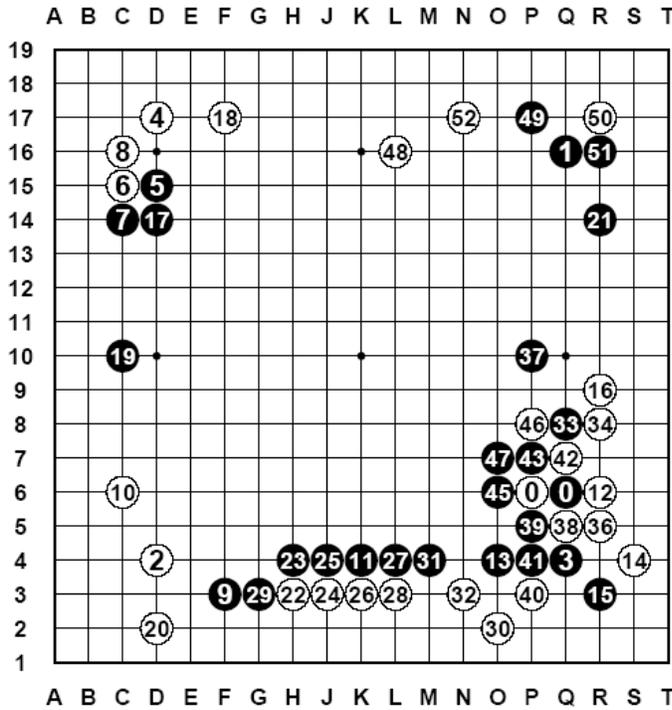
Diag. 8. Black to play. How does Black play in this position? (Take the ko).



A B C D E

5  
4  
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1

Diag. 9. Black to play. White has played at 1. How does Black answer? (Take the ko at H1).



Diag 10. This is an even game, so Black proceeds to fill in the two star point corners, and White fill in one star point and one 3-4 point (If Black does not play the approach move, White would respond with a knight's enclosure at 6 or a one-point enclosure at 5.). After taking the corners, the proverb tells us to concentrate on the sides. However, Black has decided to approach his/her opponent's "unsettled corner" with 5, a one-point approach. White attaches with 6, and Black makes a diagonal connection (actually a "hane") with 7. White "pulls back" with 8. Black decides to attack the lower left corner with 9. White doesn't want his 4-4 stone to get caught in an "eagle formation" (so he/she plays at 10. Black then extends to the right at 11. Now it is White who

wants to attack Black's lower right corner with 12. Black also does not want to get caught in a "double eagle," so he plays 13. Black responds with 15. Now White has the opportunity to extend up the right side with 16. This creates the "kite" formation in the lower right corner.

Now it's Black's turn to play and he/she decides to connect at 17. White extends with a one-point jump at 18, and Black responds with 19 according to the Go proverb about **extensions**: "If one, jump two; if two, jump three. White decides to protect his lower left corner territory with 20 (which serves two purposes: it solidifies the corner and it aims at invading Blacks lower-side framework. However, Black plays "gote" at 21 (if Black wanted, he/she could have played move 21 at H4, instead of R14 to strengthen his/her framework along the bottom side. White responds by jumping in with an invasion at 22. Black decides he/she is going to answer the White invasion by playing 23, thus pushing White along the third line and creating a monster wall for him/herself along the fourth line. White has to decide how he/she is going to live under this wall. So White **slides** under Black's stone at O4 with 30. Black prevents a **tiger's mouth** with 31, and White protects his/her flank with 32 (if White does not play 32, then Black plays at N2, and sets the trap for the **Loose Ladder**, explained in the next lesson). White can make two eyes now, so his bottom group is alive. Black's territory on the bottom side is non-existent, so White's invasion succeeded. However, Black cause is not at all lost. While White was trying to make eye-space, Black was making **thickness** with his/her wall facing the center. This result should be good for Black. He/she follows up with 33, 35, and 37 both to put pressure on the White stones on the right side, and to increase his influence over the center of the board. Black reveals his/her strategy is to make territory in the center. To do so, Black must protect his/her potential territory on all four sides. This task is not easy for Black, but if White tries to destroy Black's **aji** (potential) in the center, Black can retaliate strongly because of his/her **thickness** in the center to attack White. White tries to break through Black's formation with 38. Black responds with 39, because if he/she does not play here, then White will break out into the center. White 40 is a

**peep** at the **tiger's mouth**. Black connects with 41 (if Black does not connect at 41, then White will cut there, and Black two corner stones are history., and White plays at 42. When White plays the atari, Black blocks with 43 instead. White captures at 44, and Black blocks again at 45, thus sacrificing one stone. This is a situation in which Black must sacrifice one stone to accomplish his/her goal of solidifying his/her center influence. White responds with another atari at 46, Black connects at 47. White could capture Black's stone in atari, but he/she decides he/she wants to grab the star region at the top center with 48. To see the value of White playing at 48, try seeing what the situation would look like if Black played there instead.

Black makes the upper right corner enclosure with 49 (instead of 49, Black could play N17 (where White plays 52). However, White may mount an attack later by invading at the 3-3 point, which is almost impossible to kill). White decides to invade at 50, but Black blocks it with 51, and White can not live in the corner. White makes this exchange by planting a **sleeper** to see if he/she can use it later. White 52 has dual purpose: (1) it extends his/her territory on the upper side, and (2) it makes the sleeper stone more useful for later play. At this point the opening is finished.

## Lesson Plan 11

*Extensions, Connections, Cuts—Part Two***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.
2. The student will be able to describe, to discuss (*comprehension*), and to demonstrate (*application*) the elements of a ladder, a ladder breaker, Geta (trap/snare), the “crane’s nest,” the loose ladder, the “knight’s move,” the “dog’s neck” extension, the “horse’s neck” extension, the snapback, and the “robber’s attack,” so that when given one position of each he/she will correctly show each 100% of the time.

**STUDENTS**

3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. In the previous lesson the students learned the fundamental technical skills of making extensions, connects, and cuts. In this lesson the teacher builds on those concepts and introduces the student to “Ladders,” “Ladder Breakers,” Net/Traps/Snares (“Geta”), the “Crane’s Nest,” “Loose Ladder,” the “Knight’s Move,” “Dog’s Neck Extension,” “Horse’s Neck Extension,” “the “Snapback,” and the “Robber’s Attack.”

**CLASSROOM MANAGEMENT**

5. 9 x 9 demo board, class Go sets: bring in 9 x 9 sets (do not leave in the classroom), and lender sets (that the students can take home). The teacher will ask students to use their “game record sheets” to keep a record of the games the teacher will show them on the demo board.
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The students will set up their lender set for their parent(s) and show them the “Ladder,” how to block a ladder, the use of the “Net,” the “Crane’s Nest” formation, how to use the “Loose Ladder,” the “Knight’s Move,” the “Dog’s Neck and Horse’s Neck” extensions, how the “Snapback” works and the use of the “Robber’s Attack.”

## INTRODUCTION

### SET

8. In this lesson we explore the more difficult, but also essential, fundamental, and most interesting tactics of Go. Players who wish to do well at playing Go should know these techniques..

### COMMUNICATION OF PURPOSE

9. You will need to know these techniques because these tactics allow you to capture your opponent's stones that try to cut your stones. You will also need to know these techniques because, while connecting your stones is a good idea, it is not always the most efficient use of your stones. If you always want to make solid connections, you will lose because your opponent will get more territory than you will.

## BODY OF THE LESSON

### PRESENTATION

10. The "ladder," which is a virtual connection, is one of the most interesting capturing techniques. Players threaten to use them in almost every game of Go, and they can have a strong influence on the course of the game (see Diag. 1-2). The most experienced players, however, rarely play them out to the end. Instead, they try to find a way to break the ladder, and use one of several "ladder breaking" (see Diag. 3) techniques. The "geta," also known as a trap/snare, is one technique (see Diags. 4-6). The "crane's nest" is a form of "geta" that occurs when there is a string of three stones in a row (see Diag. 7). The "loose ladder" is a special form of "geta" in which one player drives the other player's stones around as in a ladder even though the attacked stones are not in atari, yet (see Diag. 8-9). There are three techniques that are very useful for attacking and defending: the "knight's move" (Diag. 10-11), the "dogs' neck" (which is a sort of double small knight's move) (see Diag. 12 and the "horse's neck" (which is a sort of double large knight's move) (see Diag. 13). The "snapback" (see Diag. 14-16) is basically a "throw-in" capturing technique in which you put one of your own stones in atari. You basically "bait a trap" for your opponent to take, and then you come back to capture more of his/her stones (see Diag. 17 for an example of a "pin," which is a form of snapback.. The "Robber's attack" (see Diag. 18-19) is another form of "snapback" or "throw-in" sacrifice to rescue threatened stones.

### PROCESSING

11. The teacher will demonstrate the ladder, how to place a stone for a "ladder breaker," how to set up a "geta," how to set up a "crane's nest," and the advantage(s) of the "loose ladder." The teacher will explain, and demonstrate the functions of the "knight's move": (1) to run, (2) to attack, (3) to enclose territory, and (4) to establish a form of virtual connection. The teacher will explain the two forms of the double knight's move: (1) the "dog's neck" (a "small knight's move," and (2) the "horse's neck" (a "large knight's move"). The teacher will demonstrate two "throw-in" techniques

**PROCESSING**

(1) the “snapback,” and the “robber’s attack.”

**MONITORING**

12. The students will pair up, and they will hand out the Go sets. Have students solve three puzzle problems (see Diags. 20-24).

13. The teacher will ask students to demonstrate to their partner the basic formation for the ladder, how to prepare themselves to use a ladder breaker, a “geta” formation, and the small and large knight’s move. Then his/her partner will demonstrate the “crane’s nest,” the “dog’s neck” extension, the “horse’s neck” extension, and the snapback.

14. The teacher will place a demonstration game on the demo board and ask students to come to the demo board to show their peers how to set up a ladder breaker, when it is preferable to immediately capture the ladder, or to use a “geta,” and to capture stones using a “snapback.”

15. The teacher will ask students to come to the demo board to set up their own ladders, ladder breakers, “geta,” “crane’s nest,” and snapback. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

**CLOSING****CLOSURE**

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

17. Play a demo game against the students. On a 13 x 13 board, give the “students’ team a three stone handicap. Ask the students to line up to take turns making moves on the demo board. Remind them not to comment on each others’ moves except to say, “good move!”

**FOLLOW-UP**

18. Vocabulary to learn: ladder, ladder breaker, “geta,” knight’s move, crane’s nest, dog’s neck extension, horse’s neck extension, loose ladder, and snapback. At home, the student will observe two games on the KGS or IGS servers between strong players. The student will report to the following class the observations they made of these players using a ladder, ladder breaker, “geta,” and snapback.

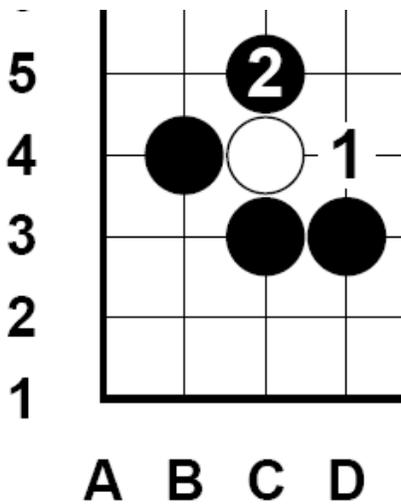
**REFLECTION  
(after the lesson)**

19. What did you do that helped students learn and meet the objective?

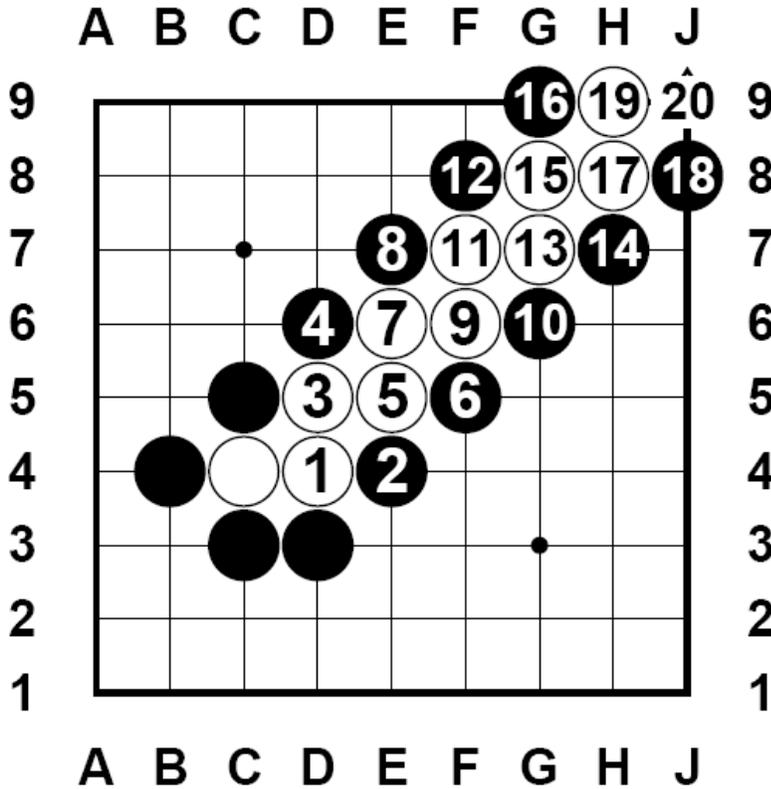
20. What would you do differently if you taught this lesson again to make it more successful for students.

21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.

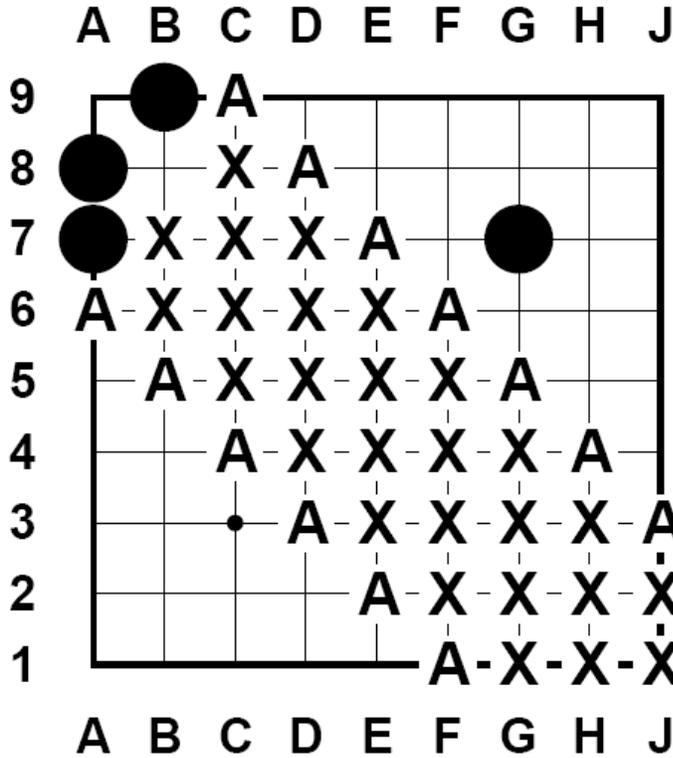
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G



Diag. 1. This is the classic position for the “ladder,” wherein Black has two stones aligned and one diagonally connected. White tries to cut. If it is Black’s turn, he/she can capture the White stone. He/she must not start with 1, though. White would escape and have two liberties. The most effective approach is for Black to play at 2. The following diagram shows what happens if White tries to escape.



Diag. 2. This diagram illustrates the classic “ladder” “shape.” Black drives White to the edge, and eventually kills him/her with 20. There are two ways to prevent the ladder. One is for White to cut his/her losses and allow Black to capture the one stone. White would benefit from this tactic if he/she played his/her “escape” stone elsewhere on the board to gain an advantage. The other way is called the “ladder breaker,” and is illustrated in the next diagram.

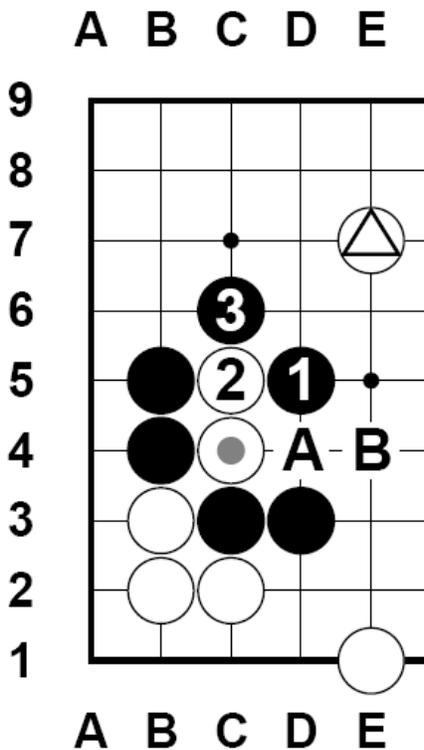


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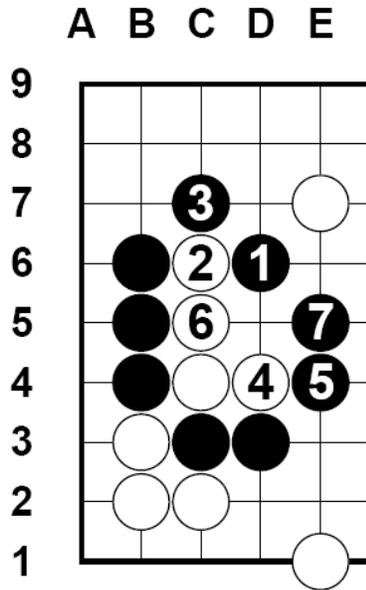
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Diag. 3. This diagram shows the “ladder breaker zone.” If it is White’s move and he/she places a stone on any of the points marked with an “A,” or one of the “x”s within the “zone,” he/she can prevent Black from succeeding with the ladder. The reason for this is that after White plays his/her stone on one of the points, he/she drives Black into a self-atari, making it possible for White to escape, to put Black into a double atari, or to capture a stone. Thus, Black’s plan is thwarted. White has to be careful, though, not to station the ladder breaker stone too far out. If too far out, Black can station a stone in between it, and then White is in trouble again. Does Black have a recourse? Yes, he/she can place a stone on one of the points in the

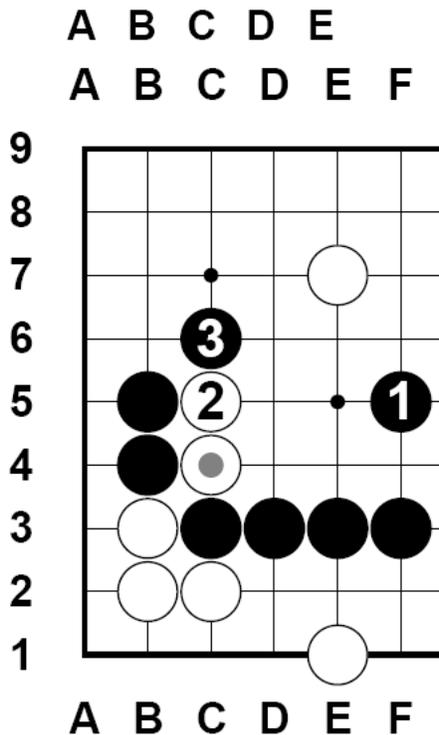
“zone” in between the White “ladder breaker” stone and the beginning of the Ladder to make it work again.



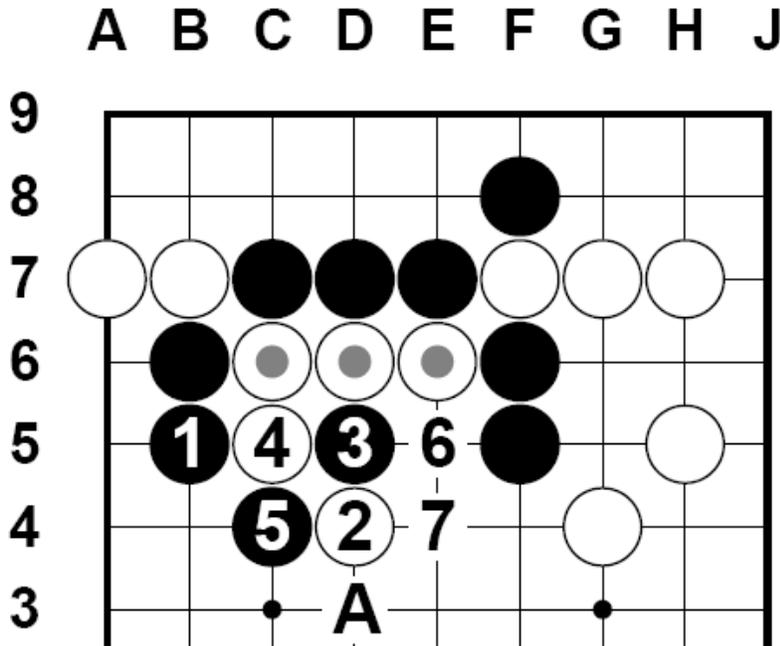
Diag. 4. In the initial stages of this position, White’s circled stone has cut the Black stones. It is impossible for Black to capture White’s stones in a ladder because of White’s marked stone, which is a ladder breaker. However, as suggested in the previous diagram, when Black plays at 1, and White tries to run with 2, Black blocks with 3. White cannot even escape if he/she tries to play at “A,” because Black will capture with “B.”



Diag. 5. There is a subtlety in the number of “framing” Black stones. If Black has three or more stones along one of the “frames,” he/she should place his/her “geta” stone in a one-point jump under the stone at the farthest extension. Here Black has a three stone wall along one of the “frames.” He/she can play his “geta” stone at 1, and still succeed in blocking White from escaping.

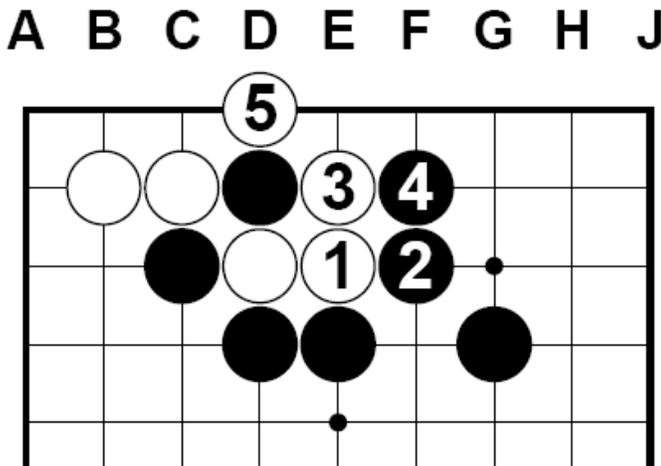


Diag. 6. In this position, Black has four “framing stones.” Black can proceed to establish his/her “geta” stone at 1, and he/she succeeds in trapping White’s marked stone. A major advantage of the “geta” is that it makes at least one eye. Consequently, “geta” produces good shape. Similarly, though, since Black’s “geta” stone is a “key-point” for Black, it is also a “key-point” for White. So Black has to be cautious. If Black chooses to play elsewhere, then White can play on the “key-point” and foil Black’s attempts to set the “geta.”



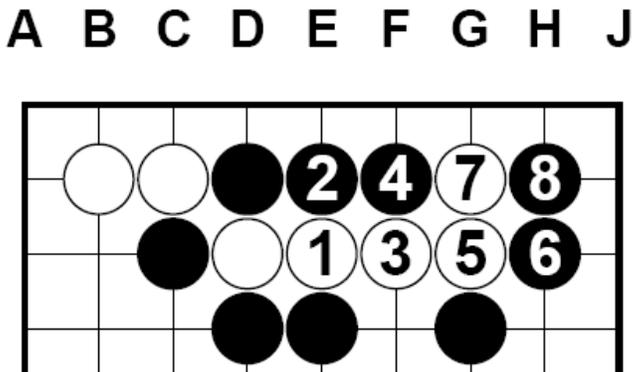
Diag. 7. The “crane’s nest” is a form of “geta,” and “snapback.” The basic formation of the “crane’s nest” occurs here when White’s three marked stones get hemmed in. If it is Black’s turn, he/she plays at 1. White tries to escape by playing at 2. Black plays a “throw-in” with 3. White puts Black into atari with 4. Black responds by playing at 5. If White thinks he/she is going to save his/her stones by playing at 6 and capturing Black’s stone at

3 then Black comes back and plays at 7, putting five of White’s stones in atari

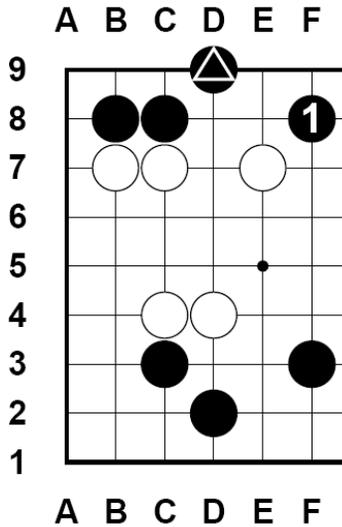


Diag. 8. This diagram shows what happens if Black gets a little greedy, He/she has just put the White stone at D7 in atari. White tries to escape with 1. Black blocks with 2, White continues his/her escape with 3, thus putting the Black stone in atari. Black responds by placing White’s group of stones in atari with 4. White captures with 5. While it looks like Black has gained in outside

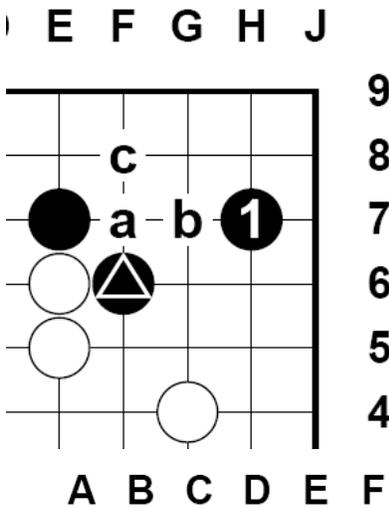
influence, White has secured the corner and created two eyes. Black, on the other hand, has maintained sente.



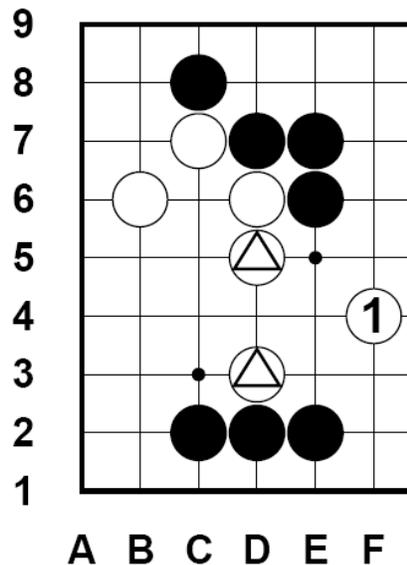
Diag. 9. However, Black can play more efficiently by pushing White’s stones with 2-8. Black reduces White’s liberties to two. Black’s three stones have three liberties, thus Black is ahead on the liberty count. Black not only gains the corner, but also five stones. However, the capture is in “gote,” which poses no immediate threat to White.



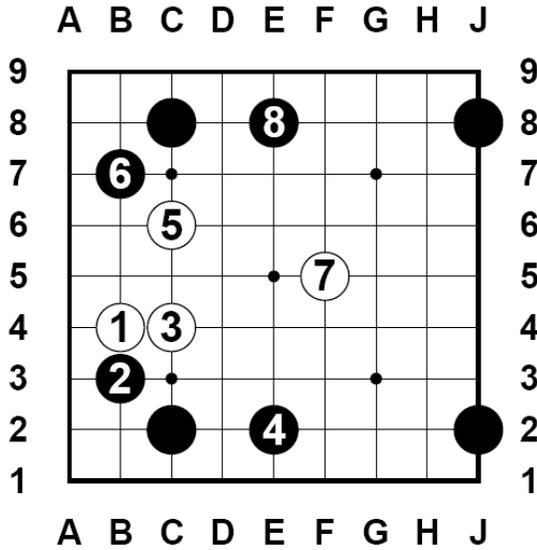
Diag. 10. The “knight’s move” is one of the six *haengma* (tactics for moving or running with your stones, cf. Diag. 1, Lesson Plan Ten). The “knight’s move” is often used for attacking, driving opponent’s stones in a particular direction, running away and to surround territory. In this diagram, 1 is an example of the “small knight’s move” with relation to the marked Black stone. It also succeeds in encircling White’s group.



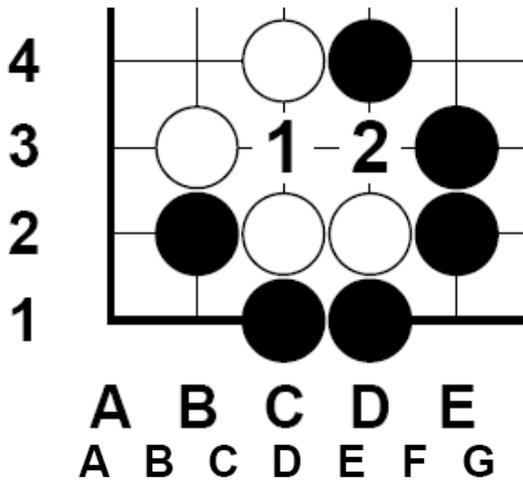
Diag. 11. This “knight’s move” scenarios shows how Black makes a virtual connection instead of making a solid connection at “a,” or a “Tiger’s Mouth” at “b,” or “c.” If White makes the error of playing a cut at “a,” then Black would connect at G6 catching White in a ladder. Black’s move at 1 also accomplishes a second goal of making an extension as far out as possible.



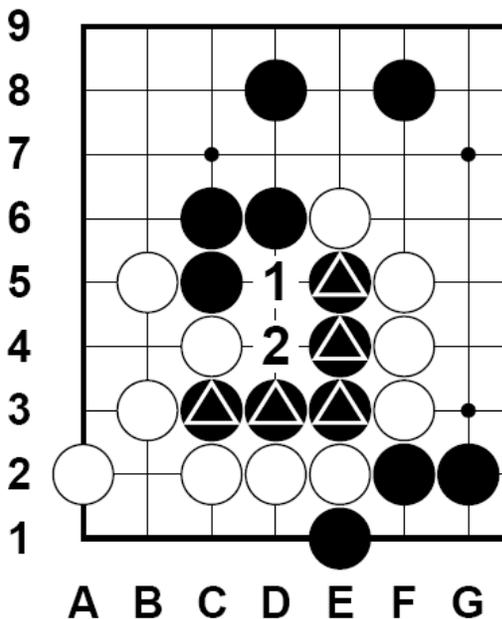
Diag. 12. Black is threatening to enclose White’s two marked stones, especially if Black plays at 1. However, if it is White’s move, White can prevent Black’s threat by playing at 1. This formation is known as the “dog’s neck,” and forms a small knight’s move from both of the marked stones.



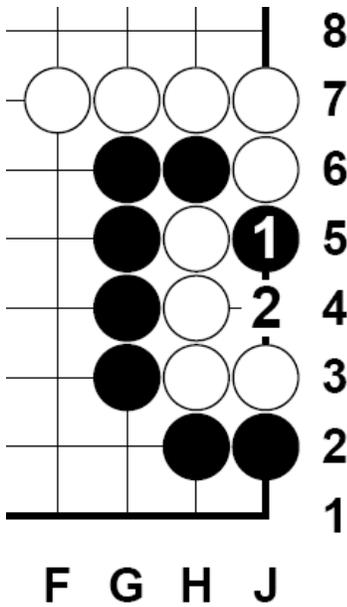
Diag. 13. The “horse’s neck” extension is the “large knight’s move” from two stones. In the diagram, White plays 1, to which Black counters with 2, which blocks White from the corner, and forces White to play 3. Black 4 continues Black’s efforts to sketch out Black’s position in the corner. White needs to make eye-space shape, so he/she plays at 5. Black wants to keep White out of the corner, so he blocks White with 6. Now it looks like Black is hemming White in, so White plays 7, the “horse’s neck” extension, and Black completes the encirclement with 8.



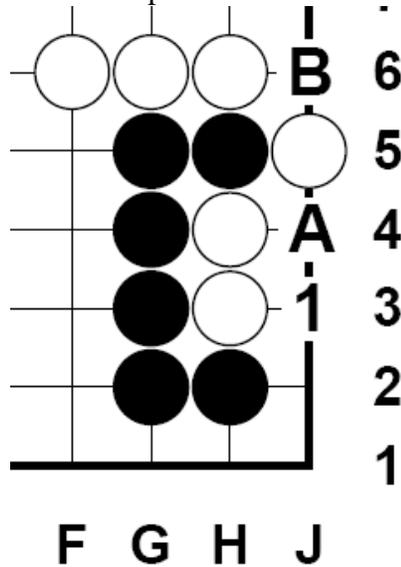
Diag. 14. This is a “snapback” position in which Black will put one of his/her stones in atari. If Black want to capture two White stones, he/she plays at 1, by which Black puts his/her stone in a tiger’s mouth. White responds by capturing the Black stone with 2. However, White now has three stones in atari, and Black comes back to play at 1, thus capturing the three White stones.



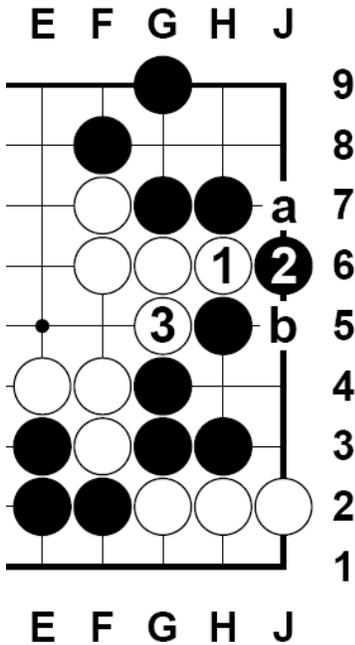
Diag. 15. Here is another example of a snapback. This time White must capture the five marked Black stones or he/she will lose his/her four stones on the right. Note that Black’s marked stones have two liberties. Can White capture them? If White puts him/herself in atari by playing at 1, then Black captures at 2, and puts White’s stone at C4 in atari. However, now Black has only one liberty. White recaptures by playing at 1 again, and captures six Black stones.



Diag. 16. Assuming it is Black's move, he/she can capture White's four stones on the right. Black put him/herself into atari with 1. White captures with 2, and then Black comes back to play a stone at 1 and captures the five White stones.

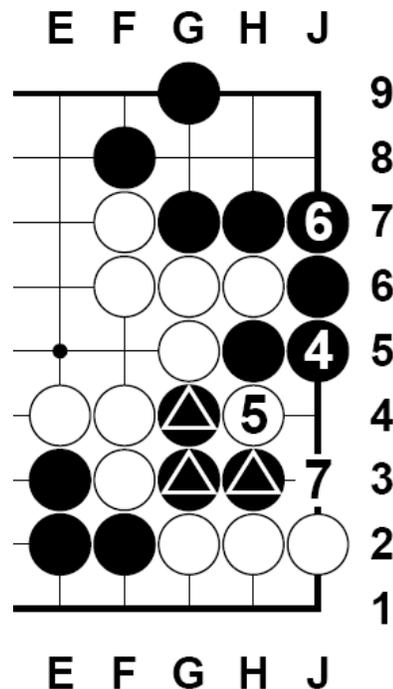


Diag. 17. This diagram illustrates the "pin," in which Black takes advantage of White two weak points at "A," and "B." Black plays at 1. If White tries to connect by playing at "A," then Black plays at "B" thus capturing four of White's stones. On the other hand, if White ignores Black's move at 1, and plays at "B," then Black plays his/her stone at "A," and kills two of White's stones.

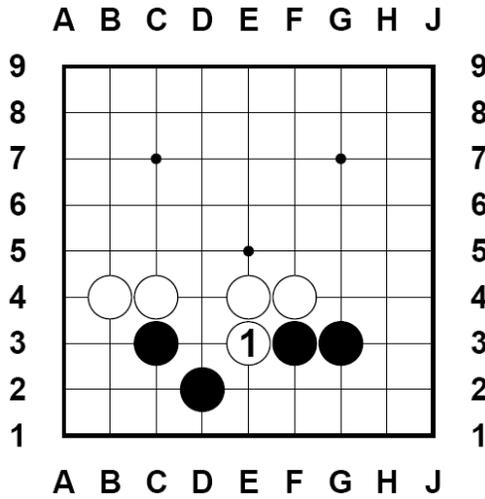


Diag. 18. It looks like White's three stones in the bottom corner are going to die. However, White knows the "robber's attack" which takes advantage of his/her ability to set up two cutting points that threaten to cut Black's groups apart. White proceeds to play at 1. Black doesn't want his/her stones separated, so he/she responds with 2. However, in doing so, Black has created the two cutting points at "a," and "b." White responds by playing at 3.

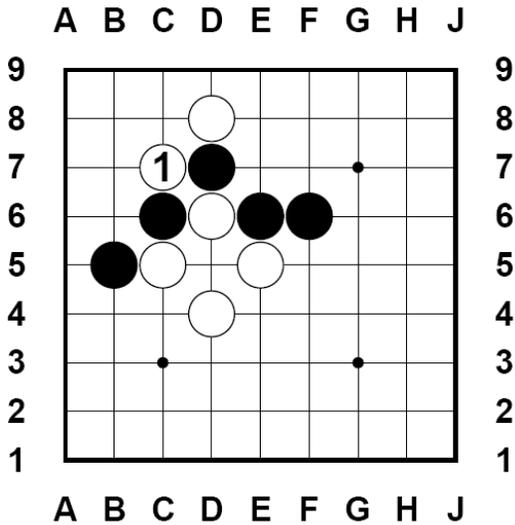
White still plays at 7 to stones, and freeing his/her



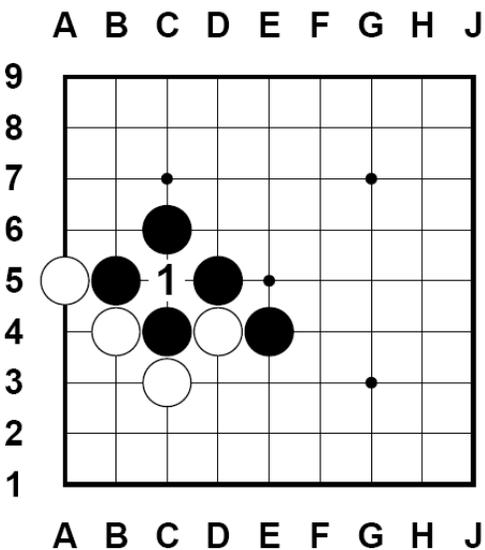
Diag. 19. Black connects with 4. However, White plays the self-atari at 5. If Black thinks he/she can save the three marked stones by capturing 5 at J4, then White plays 7, and puts the three marked stones in atari. Now Black is faced with having to choose to either lose the three marked stones or losing seven stones. On the other hand, if Black connects at 6, then threaten Black three marked stones in the corner.



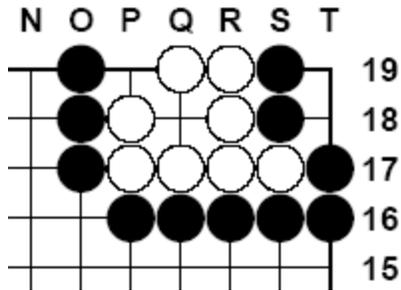
Diag. 20. Black to play. How should Black respond to 1? Black should play at E2 to link his stones on the left and right.



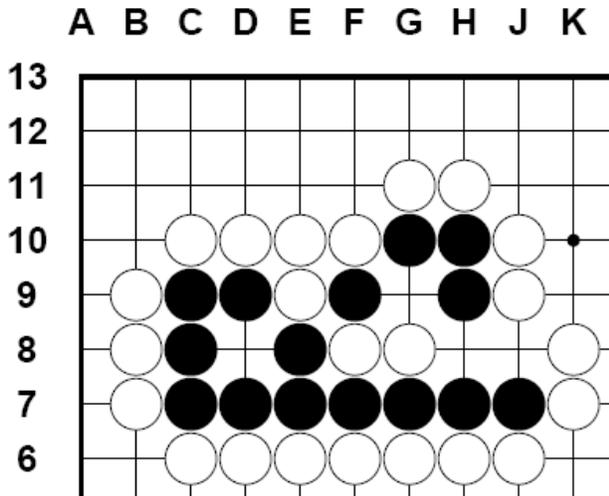
Diag. 21. Black to play. White plays double atari with 1. How should Black reply? Taking the ko at D5 is the only move for Black.



Diag. 22. Black to play. White 1 captures the Black stone at C4 in ko. How should Black reply? (Black should connect at E5)



Diag. 23. White to play and live. (1 move). What move does White make to give his/her stones life? White must set up a snapback by playing at T18. If Black captures, then White takes three of Black's stones and lives with two eyes.



Diag. 24. Black to play and live. (1 move). What move does Black make to give his/her stones life? (Black plays at H8. If White captures F9 by playing G9, then Black plays a snapback at F9 to capture three White stones.)

## Lesson Plan 12

*Basic Opening Strategy***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.

**STUDENTS**

2. The student will be able to use (*application*) a full-board opening so that when given the first 5-10 moves at the beginning of a game, he/she provide a strong response 100% of the time.
3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. In the previous two lessons, the students learned both the basic, and the more complicated extensions, connections, and cut techniques. In this lesson the teacher demonstrates that the correct sequence in the fuseki is “corners first, sides next, and the center last,” so that the students have a familiarity with the development of the opening of a game.

**CLASSROOM  
MANAGEMENT**

5. 13 x 13 demo board, class Go sets: bring in 13 x 13 sets (do not leave in the classroom), and lender sets (that the students can take home). The teacher will ask students to use their “game record sheets” to keep a record of the games the teacher will show them on the demo board.
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The students will set up their 13 x 13 lender set for their parent(s) and show them the development of a typical 13 x 13 line fuseki (see Diag. 1): (1) stake out the empty corners first (B1 to W4), (2) make corner enclosures (shimari) (B5, W6), or how to prevent his/her opponent from enclosing a corner (kakari), (3) make side extensions (B7, W8, W10, W12), or to prevent his/her opponent from making a side extension (W8, W12), and (3) center extensions (B11) last. Students will set up a more random opening through move 7 for their parents, and explain the major differences between the structured and the random placement of

**CLASSROOM  
MANAGEMENT**

stones and the affect their placement will have on the development of the rest of the game.

**INTRODUCTION****SET**

8. In this lesson the teacher will demonstrate two or three effective opening sequences (fuseki) that illustrate the principle of distribution (one or two of one's stones per area at first) and then to consolidate later as required. The student should place his/her opening stones so that they are not too close to either one of this/her own stones or to those of his/her opponent. Compare Diag. 2 with Diag. 3.

**COMMUNICATION  
OF PURPOSE**

9. Although tactical fighting is important to local fighting, as an overall strategy the fuseki actually determines the way that a game will unfold. There are many different ways to play a fuseki, and mastering the strategic opening requires a lot of skill that you gain through playing many games. Perhaps then the student can go on to advanced books on the subject of fuseki.

**BODY OF THE LESSON****PRESENTATION**

10. The opening is the time when the player sketches out his/her territorial bases. A solid opening strategy, like building the foundation to a house or a building, enable the player to build small or large structures. The classical opening strategy is to follow certain basic principles: (1) start from the corners, (2) after the corners, go to the sides, (3) use the third and fourth lines. The teacher demonstrates the best starting points in the corner, and explains that each offers advantages and disadvantages (see Diag. 4).

**PROCESSING**

11. The teacher will give instructions, and then follow-up with guided practice, and then one-on-one independent practice. If you start on the 3-3 point ("a" in Diag. 4), then you are guaranteed a small (10 points) amount of territory (see Diag. 5). Playing a stone on the 4-4 point ("b" in diag.4) is good for gaining influence, because your opponent can always play at the 3-3 point and then if he/she follows the joseki in Diag. 6, he/she can gain the corner, or, by changing one move (see Diag. 7), he/she can keep the corner and gain influence, but at the expense of giving white eye-space on the side. One example of a shimari occurs when you take the corner at the 3-4 point. There are basically three ways to enclose the corner (see Diag. 8). Another example of a corner enclosure (shimari) occurs when you take the corner at the 4-4 (star) point. Unlike the 3-4 point that only required one stone to secure the corner, the 4-4 point requires two stones to enclose the corner (see Diag 9). When contemplating enclosing a corner, you should consider what influence the shamari will project (see Diag. 10).

12. The students will pair up, and they will hand out the Go sets. Have students solve two puzzle problems (Diags. 11-12).

**MONITORING**

13. The teacher will ask students to demonstrate to their partner the basic formation for the order in which he/she will place stones for a balanced opening fuseki. Then his/her partner will demonstrate the corner enclosures (shimari) for the 3-4 point and the 4-4 point.
14. The teacher will place a demonstration game (see Diag. 13) on the demo board and ask students to come to the demo board to show their peers how to set up a fuseki and the corner enclosures for the 3-4 point and the 4-4 point. Teacher will continue with the demo game (Diag. 14-21), playing to the end, and asking students along the way about positions such as attachments, “geta,” etc.
15. The teacher will ask students to come to the demo board to set up their own fuseki and corner enclosures. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

**CLOSING****CLOSURE**

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

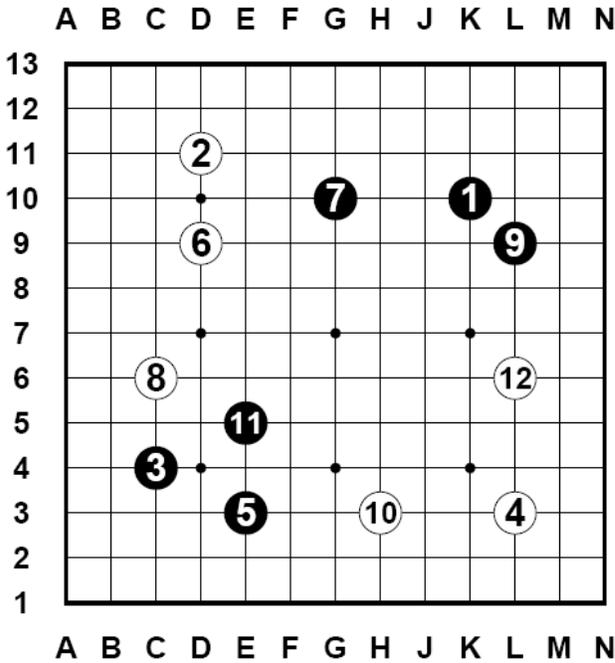
17. Play a demo game against the students. On a 13 x 13 board, give the “students’ team a three stone handicap. Ask the students to line up to take turns making moves on the demo board. Remind them not to comment on each others’ moves except to say, “good move!”

**FOLLOW-UP**

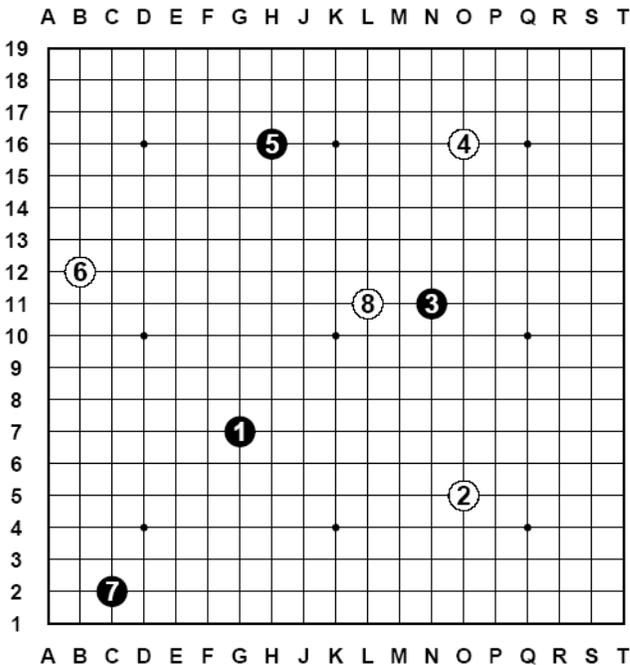
18. Vocabulary to learn: fuseki, joseki, shimari, and kakari. At home, the student will observe two games on the KGS or IGS servers between strong players. The student will report to the following class the observations they made of these players using fuseki, joseki, shimari, and kakari..

**REFLECTION  
(after the lesson)**

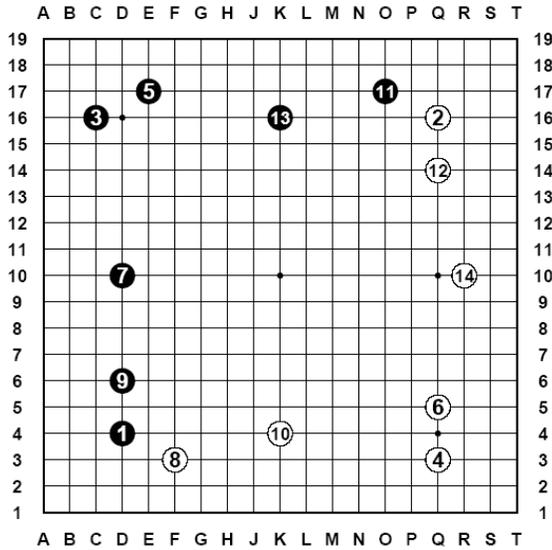
19. What did you do that helped students learn and meet the objective?
20. What would you do differently if you taught this lesson again to make it more successful for students.
21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G



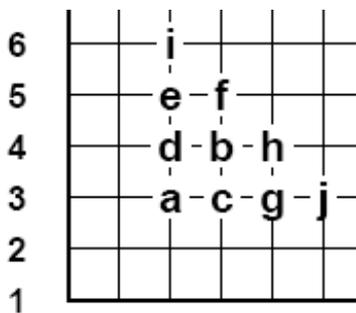
Diag. 1. This opening follows the patterns (1) fill the empty corners first (B1-W4), (2) make corner enclosures (B5, W6), or prevent your opponent from making corner enclosures, (3) make side extensions (B7, W8, W10, W12), or prevent your opponent from making side extensions (W8, W12), and (4) make center extensions last (B11). B11 prevents White from playing the same move which would completely hem in Black. W12 is performing double duty. Not only does White make an extension along the side, but White also prevents Black from doing so as well. The last point to make here is that none of the stones are too close to the edge (third line) and none make direct contact with another stone.



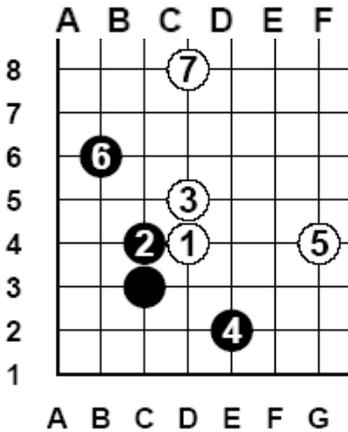
Diag. 2. In this diagram the stones are randomly placed across the board. They are neither connected, nor posing any immediate danger to the other stones on the board. There does not seem to be much coordination.



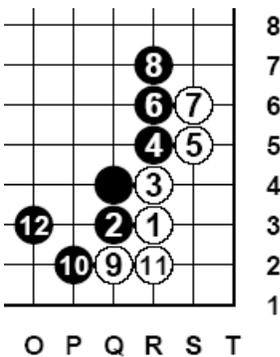
Diag. 3. This is a fairly “normal” opening sequence. What are the differences between this and Diag. 2? The stones in this diagram basically follow a more orderly development: (1) start in the corners (B1—W4), (2) make corner enclosures (B5, W6, W8, B11), (3) make side extensions (B7, W10, B13, W14), (4) use the third and the fourth lines (B11, B13, W10, W14).



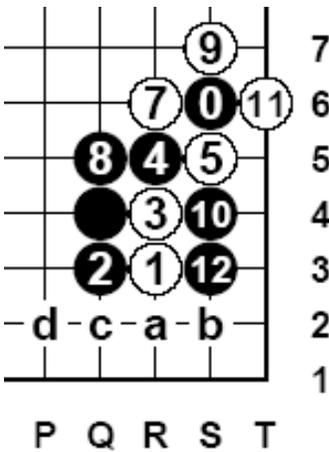
Diag. 4. Points “a” through “h” are the “best” places to start in the corner. Sometimes, “i,” and “j” are chosen.



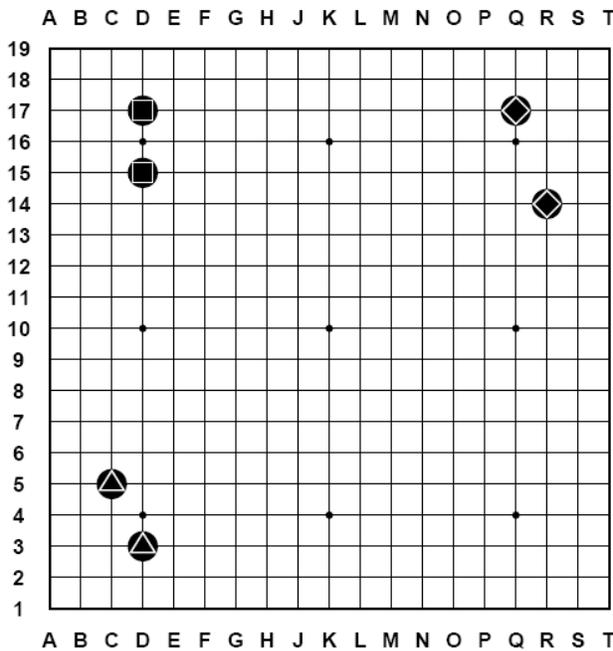
Diag. 5. With the Black stone already at the 3-3 point, this joseki sequence shows why starting at the 3-3 point has very little influence on the rest of the board.



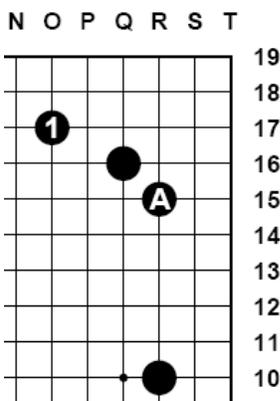
Diag. 6. This diagram illustrates the joseki that should unfold when Black plays on the 4-4 points and White decides to invade on the 3-3 point.



Diag. 7. On the other hand, if Black plays 6 at S6 instead of R6, Black can capture the two White stones (1, 3). Then if White plays “a,” Black plays “b,” White plays “c,” then Black plays “d” to take the corner. However, white captures the Black stone at S6 thus making eye-shape along the side.

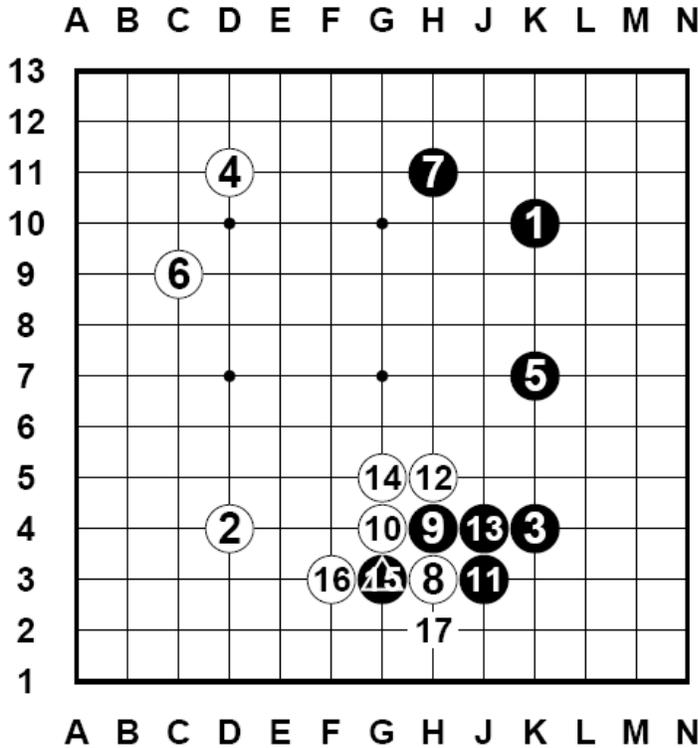


Diag. 8. Shimari (corner enclosure). When you take a corner by playing at the 3-4 point, then you need to follow-up with another stone in order to enclose the corner. The first is basically a “small knight’s” move from the 3-4 point as with the Black stones marked with triangles. The second technique is the “one-point” jump as with the Black stones marked with squares. The third enclosure is to use the “large knight’s” move as with the Black stones marked with the diamonds.



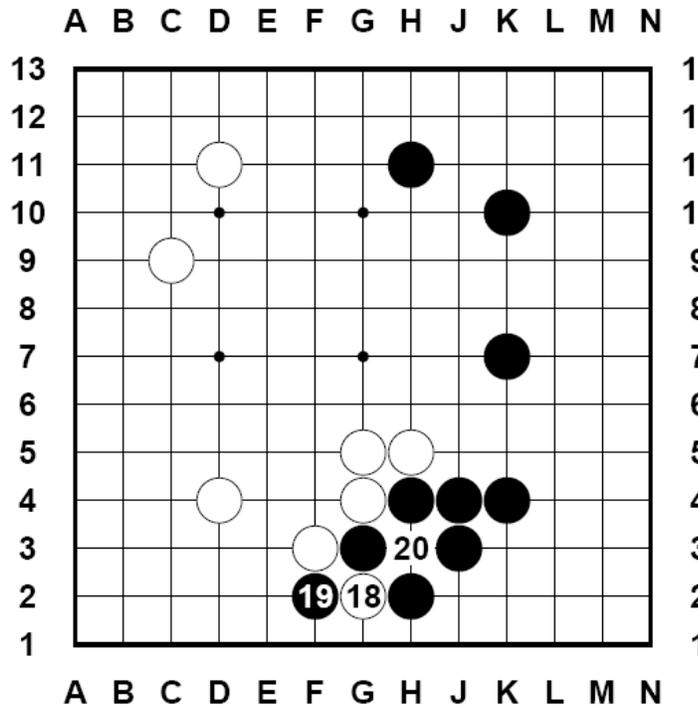
Diag. 9. From the 4-4 point, you can also make a knight’s move to enclose the corner. However, you will also need another stone at A in order to make secure territory in the corner. It is usually considered more efficient to shimari a 3-4 point corner, because it takes one less move. So, the advice is to enclose a 3-4 corner as soon as possible, but you can take a little more time about enclosing the star point corner. So, if you create a 3-4 corner, then you should think about enclosing it first. With a 4-4 corner you can think about approaching your opponent’s corners, or playing one of the big points on the side before finishing the shimari.



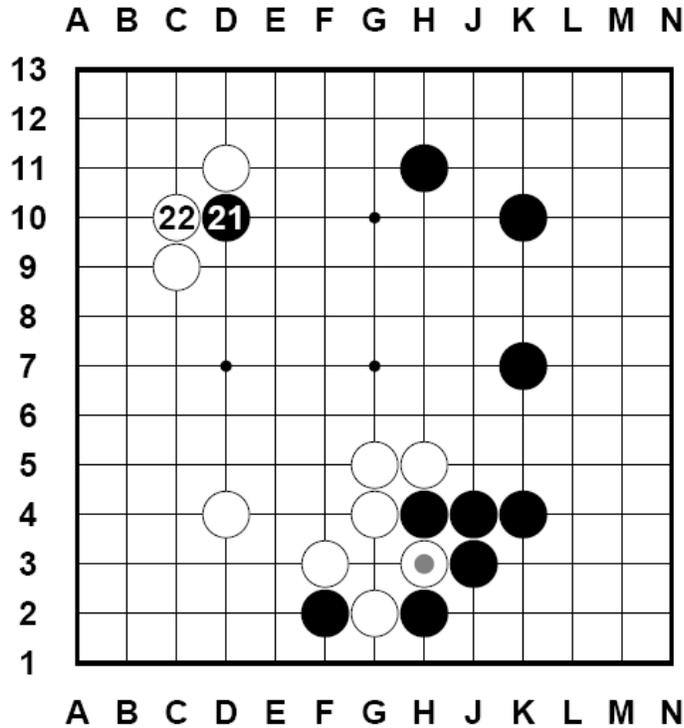


Diag. 13. A real game. With 1 and 2, Black and White respectively stake out two corners. With 3 and 4, Black and White stake out the remain two corners. With 5, Black makes an extension along the right side. White responds with the shimari of 6. Black 7 does the same for the upper right corner. Next, White 8 approaches Black's lower right corner. Black decides to fight for the lower right corner as well as extending along the lower side with the attachment at 9. White senses that his stone at 8 may be in trouble, so he/she plays 10. Black blocks any White escape into the corner with 11. White then decides to put Black's 9 in atari with 12. Black connects to his corner stones 3, and 11 with 13. White prevents Black's

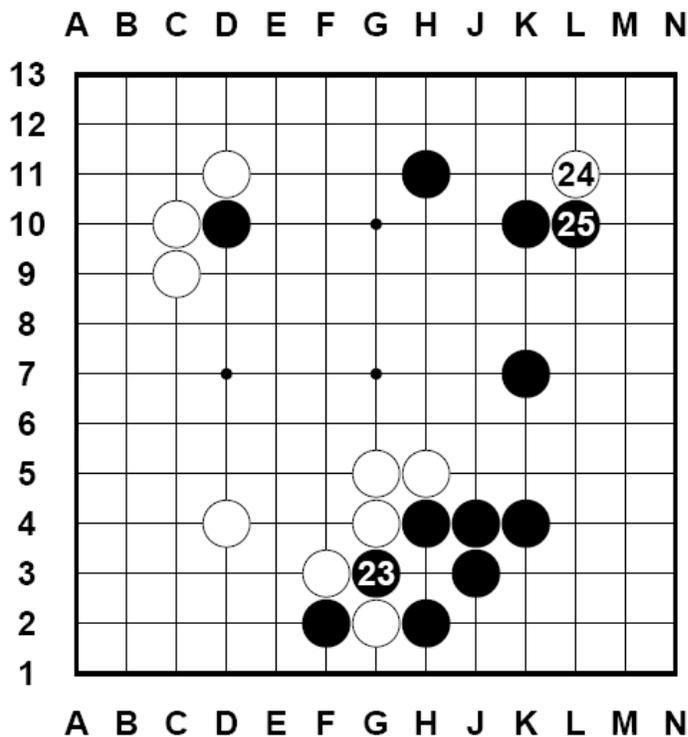
cut with 14. Black puts White's 8 in atari, and White counters by putting Black marked stone in atari with 16. However, Black can capture first with 17. He/she does so and places the White prisoner in his/her lid.



Diag. 14. After Black captures the White stone with 17, then White comes back to put the Black stone at G3 in atari with 18 to start a ko fight. Black threatens an atari of White 18 with Black 19, and White re-takes the ko with 20, but White's 20 is in atari.

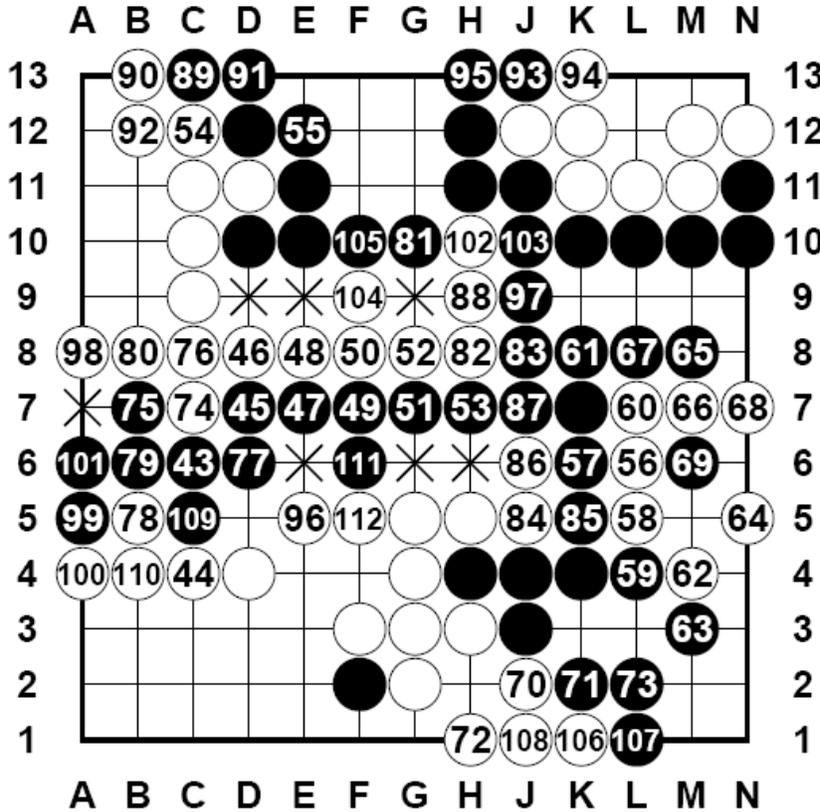


Diag. 15. The White stone marked with a circle is in atari. However, since it just captured in ko, Black may not return to G3 to recapture. Consequently, Black must play somewhere else on the board. He/she chooses to peek at 21, but this brings on White's block at 22.



Diag. 16. Black re-takes the ko with 23. Since white can not recapture immediately, he/she plays the corner invasion (kakari) as 24. Black's reply is at 25.





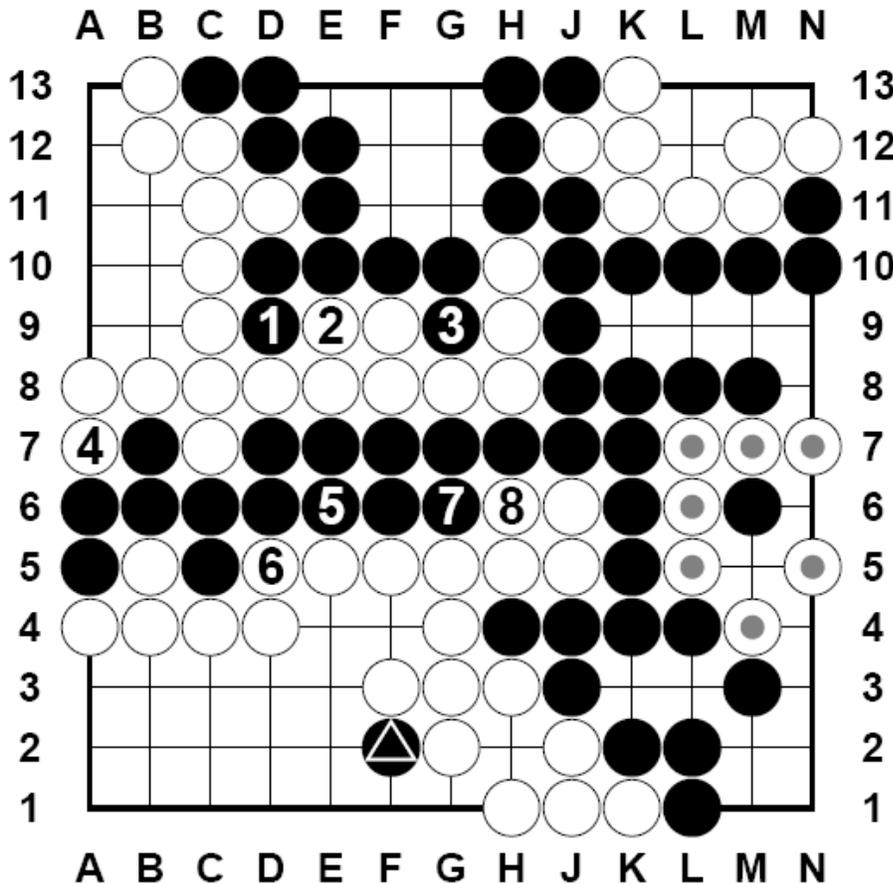
Diag. 19. Black decides to stake out a position on the left side and threatens to make a base. White protects his/her corner with 44, and Black makes a diagonal extension at 45. White attaches at 46 attempting to enclose these two stones. However, Black moves out ahead with 47. White wants to keep pace, so he/she plays 48. Black continues to keep ahead by playing 49. White keeps up. Black keeps heading with 51, and White responds with 52. Finally Black plays 53, and he/she has effectively separated White into three groups, while it looks like Black will be able to connect his/her three groups. White

wants to secure his/her upper left corner and plays 54. Black connects with 55. Then White turns his/her attention to an attempt to destroy Black's territory on the right side with 56. Black blocks with 57, and White extends to 58. Black blocks with 59. Next White wants to try to expand his/her eye-space territory, and plays 60. Black goes ahead with 61. White tries to intrude into the corner while also trying to carve out eye-space with 62. Black blocks with 63. White keeps Black from making a foray into N4, by playing 64. Now Black makes a one-point jump with 65. White continues making his/her border with 66. Black goes back to make a solid wall with 67. White extends to 68 in order to make two eyes to live on the inside. If it were White's turn, he/she could play at 69 and then have his/her two eyes to live. However, it is Black's turn and he/she plays at 69 to prevent White from making two eyes. Consequently, White's invasion that started with 56 is a failure. Seeing no profit here, White turns to threatening Black's lower right corner with 70 and puts the stone at H2 in atari. Black puts White 70 into atari with 71. White captures Black's H2 with 72. Black wants to make sure he/she has eye-space in the corner, so he/she strengthens his/her corner territory with 73. Since white suffered a loss on the right side, he/she turns his/her attention to threaten Black virtual connection on the left side by playing 74. Black makes a strong come-back with 75. White pulls back with 76, and Black makes a solid connection with 77. With 78, White threatens to cut the Black stones by playing at B6. However, it is Black's turn and he/she sees the wisdom of connecting with 79. White protects his/her corner territory with 80. Similarly, Black protects his/her territory on the top with 81. White extends with 82, and Black blocks with 83. Next White 84 threatens to cut Black's two groups in half. Instead, Black plays 85 to make a solid connection between his lower corner group, and his center group. Black 85 also prevents White from rescuing his/her right side stones that were in danger of capture. White 86 peeks at separating Black's groups. Black blocks with 87. White

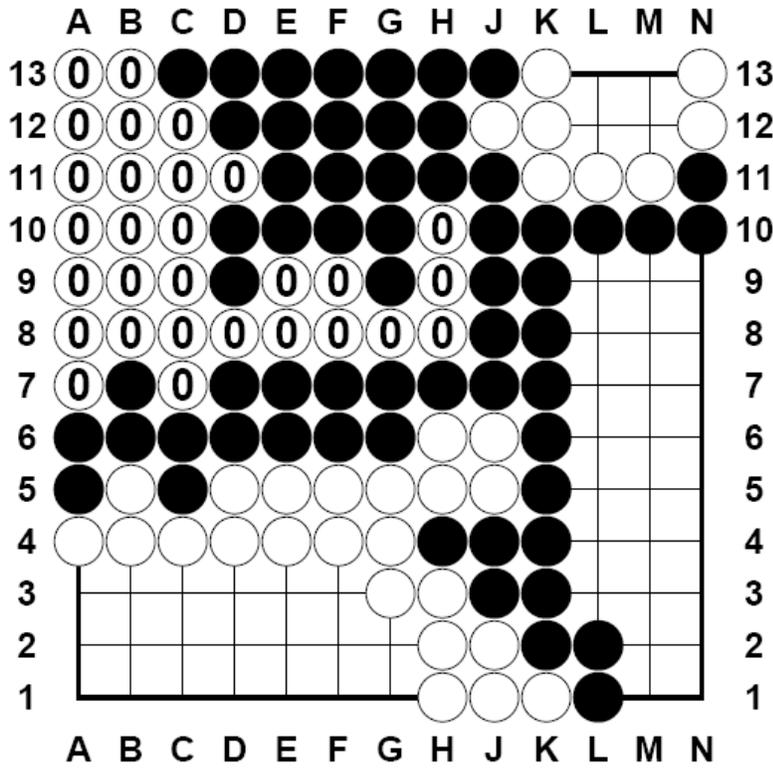
then looks to reduce Black's area with 88. Black now has a chance to reduce White's territory in the corner with 89. White blocks with 90 and Black connects with 91. White does not want Black coming into the corner to upset his/her eye-space, so he/she connects with 92. Next Black turn to the other side of the board and seeks to reduce White's territory in the upper corner with 93. White blocks with 94, which also connects his/her stones, and makes a "carpenter's square" formation in the corner, thus securing the two eyes. Black connects with 95. White 96 tries to reduce Black's territory as well as expand his/her own. Black extends with 97, making sure that White can make no new inroads into his/her territory. Similarly, White extends his/her wall on the left side with 98 in order to make his/her eye-space secure. Black plays 99 to relieve White of some territory. White Black with 100, and Black connects with 101.

Next White tries to penetrate into Black's territory with 102, and Black makes the connection with 103. Next White peeks with 104 and Black connects with 105. White now turns to the lower right corner to take a little territory away from Black with 106. Black block with 107, and White connects with 108.

Black puts White's B5 stone in atari, and White connects with 110. Next Black peeks with 111, and White connects with 112. This is the end of the game. Neither Black nor White can reduce or enlarge any more territory.



Diag. 20. Now it's time to count up the points to see which side won. First the neutral points (dame) are filled in (see the marked areas with the "X"). Each side takes turns filling in the neutral points (moves 1-8). Then each side proceeds to remove the "dead stones" (the Black stone is marked with a triangle, the White stones are marked with a circle in the center. White has a total of four prisoners, and Black has a total of 9.



Diag. 21. Black fills in White territory with his/her captured White stones. White fills in Black territory with his/her captured Black stones. Then the stones are moved around to “square-off” the territory. The result is that White has  $20 + 4 = 24$  points. Black has 25 points. Consequently, Black has one by one point.

## Lesson Plan 13

*Endgame***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.
2. The student will be able to use (*application*) his/her stones to finish off territorial boundaries at the edge of the board, so that when given an endgame sequence he/she will complete the boundaries 100% of the time.

**STUDENTS**

3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. In the previous lesson, the teacher exposed the students to the concepts of the opening (fuseki, joseki, shimari, and kakari). The teacher also demonstrated a “real” game and demonstrated the end-game activity of filling in the dame (neutral points), removing dead stones, filling in respective territory with prisoners, and then counting up the score. In this lesson, the teacher builds on the previous lesson’s end-game demonstration.

**CLASSROOM  
MANAGEMENT**

5. 13 x 13 demo board, class Go sets: bring in 13 x 13 sets (do not leave in the classroom), and lender sets (that the students can take home). The teacher will ask students to use their “game record sheets” to keep a record of the games the teacher will show them on the demo board.
6. The teacher will introduce the students to the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. The teacher will demonstrate to the students the proper way to greet the instructor and fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The student will set up his/her 13 x 13 lender set for his/her parent(s) and show them the development of a the end-game on a 13 x 13 board. He/she will explain to his/her parents that the end-game is the stage of finishing off the territorial boundaries. Even though the middle game is the time that each side stakes out his/her territories, they are not yet solidified.

## INTRODUCTION

### SET

8. In this lesson the teacher will demonstrate how the student(s) calculate the value of an end-game sequence: (1) what is the resulting territory if Black has sente, (2) what is the resulting territory if White has sente, (3) calculate the value of the sequence (1. the same set of boundaries must be used for Black and White, (2) there is no need to enclose areas of equal or about equal size, although that usually makes it easier to count, (3) include all of the area affected (see Diag. 1-4). The teacher will also introduce the concept of the “monkey jump,” the large knight’s extension” along the edge of the board.

### COMMUNICATION OF PURPOSE

9. If any of the sealing-off of territorial boundaries is left out, the opponent would have an entré into that position, and all of your efforts to secure the territories would be wasted. If these moves are played too early you might make a mistake, but at the end these moves are the best that can be made with the remaining points on the board.

## BODY OF THE LESSON

### PRESENTATION

10. The end of a game of Go occurs when neither side makes/loses no more territory. At that time, each player agrees that the game is over, and they begin to fill in the dame (neutral points) (see Diag. 5). The teacher will demonstrate the “monkey jump,” which is an end-game sequence that occurs on the first line. It amounts to a “large knight’s extension” to the edge of the board (see Diag. 9).

### PROCESSING

11. The teacher will give instructions, and then follow-up with guided practice, and then one-on-one independent practice. During the teacher’s demonstration of the end game in Diag. 5, he/she will ask the students to identify the incomplete walls of territory and ask a student to volunteer to come to the demo board and fill-in one of the boundary points.

12. The students will pair up, and they will hand out the Go sets. Have students solve two puzzle problems (see Diag. 6-8)

### MONITORING

13. The teacher will ask students to demonstrate to their partner the counting of the final score of a game, including filling-in the dame (neutral points) (see Diag. 9). Then his/her partner will demonstrate the counting of the end of a game, including dame (neutral points) (see Diag. 10).

14. The teacher will place a demonstration game (see Diag. 11) on the demo board and ask students to come to the demo board to show their peers how to count the score at the end of the game.. Teacher will place the stones of a demonstration game (Diag. 12), playing to the end, and asking students along the way about positions such as attachments, “geta,” etc.

15. The teacher will ask students to come to the demo board to set up

**MONITORING**

his/her own end-game scenarios and to count the score at the end of the game. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations.

**CLOSING**

**CLOSURE**

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

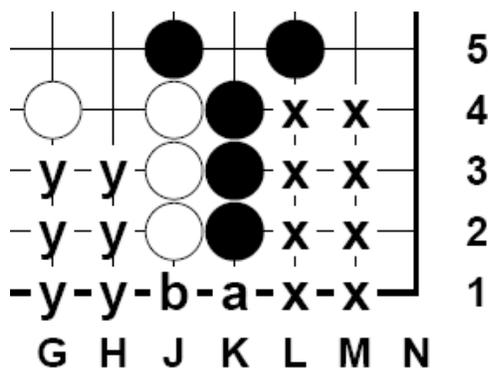
17. Play a demo game against the students. On a 13 x 13 board, give the “students’ team a three stone handicap. Ask the students to line up to take turns making moves on the demo board. Remind them not to comment on each others’ moves except to say, “good move!”

**FOLLOW-UP**

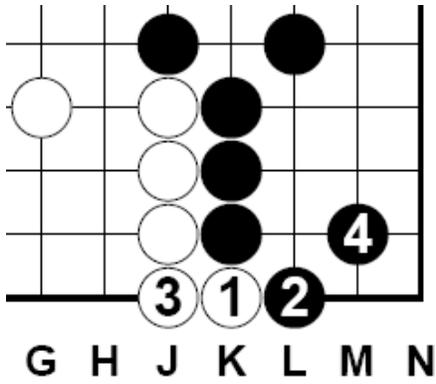
18. Vocabulary to learn: endgame (yose), life-and-death, sente, monkey jump, and gote. At home, the student will observe two games on the KGS or IGS servers between strong players. The student will report to the following class the observations they made of these players using sente, and gote.

**REFLECTION  
(after the lesson)**

- 19. What did you do that helped students learn and meet the objective?
- 20. What would you do differently if you taught this lesson again to make it more successful for students.
- 21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
- 22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G

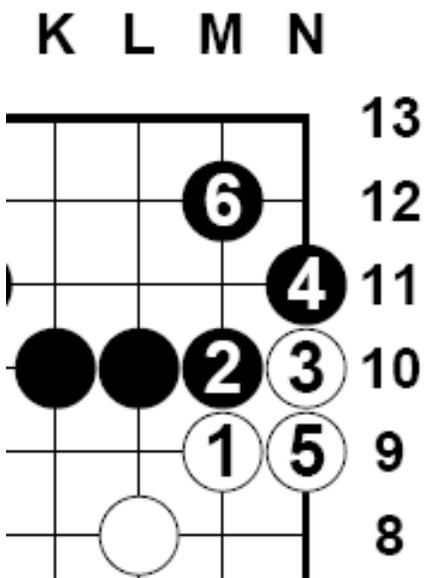


Diag. 1. There are eight points (marked with an “x”) in the imaginary boundaries for Black. There are six points (marked with a “y”) in the imaginary boundaries for White. However, if it is white’s turn, he she can play at “a,” forcing Black to respond.

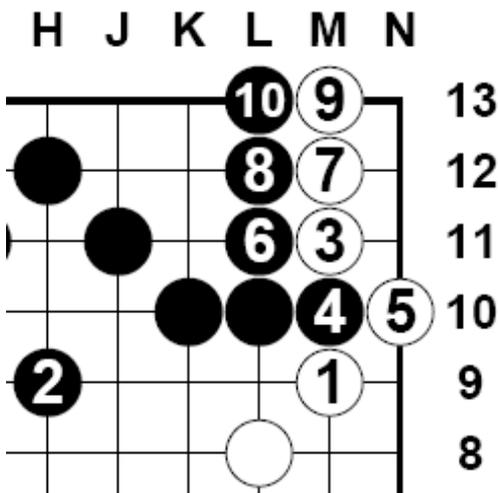


5  
4  
3  
2  
1

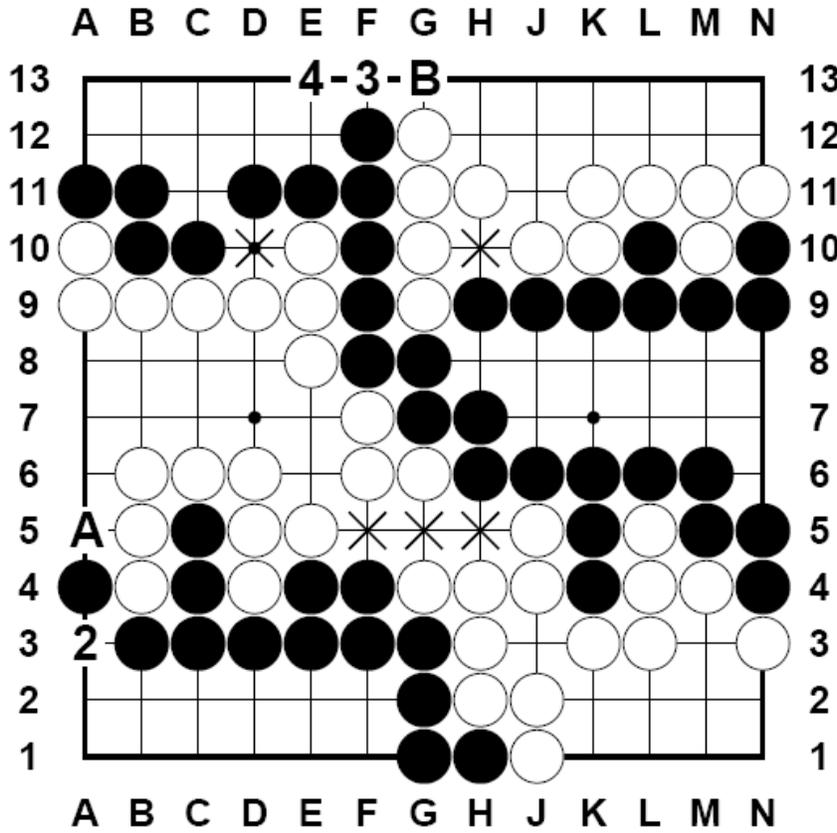
Diag. 2. When White plays 1, Black must respond with 2. White connects with 3 to prevent Black from capturing 1. The Black must respond with 4 to prevent White from putting 2 in atari and destroying even more Black territory. Now Black's territory is reduced by two points (to six), and White's territory remains the same (six). White having sente here has helped him/her reduce Black's territory by two points. Similarly, If Black had sente, then he/she would be able to reduce White's territory by two points.



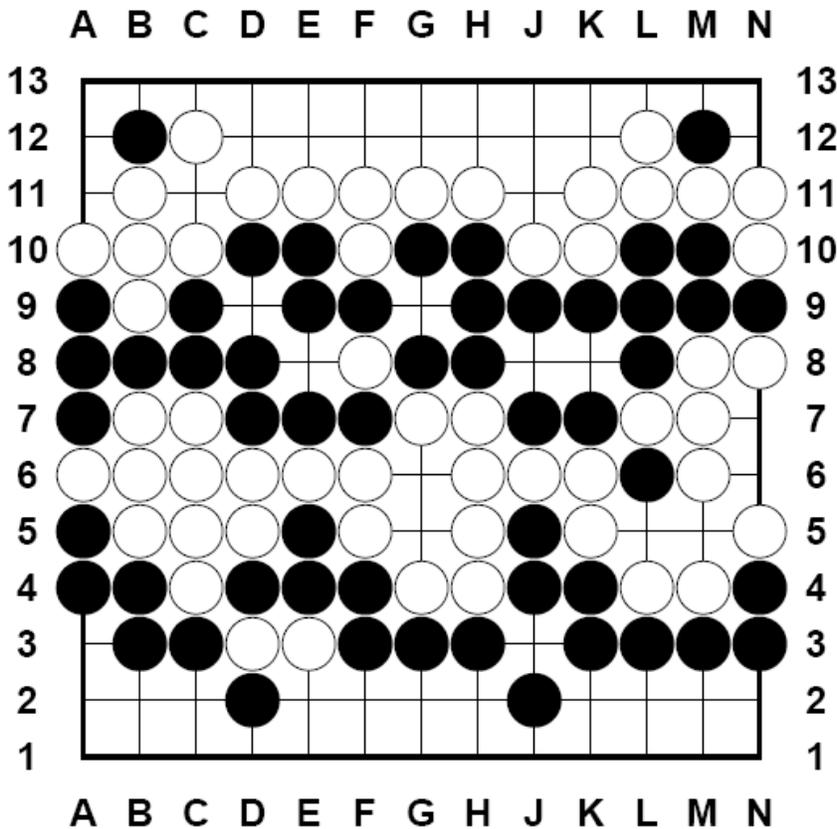
Diag. 3. When white plays 1, he/she has sente because Black is forced to play 2. Then White plays 3, Black responds with 4, and White connects with 5. Black is forced to play 6 in order to prevent White from getting more territory in the corner if he/she were to play at M11.



Diag. 4. Because the result of Diag. 3 is "gote" (meaning 6 makes no significant threat to White), Black may prefer to play 2 elsewhere on the board. The following sequence develops. However, Black has lost about eight points in the corner, and White has secured the corner for him/herself and also has sente.

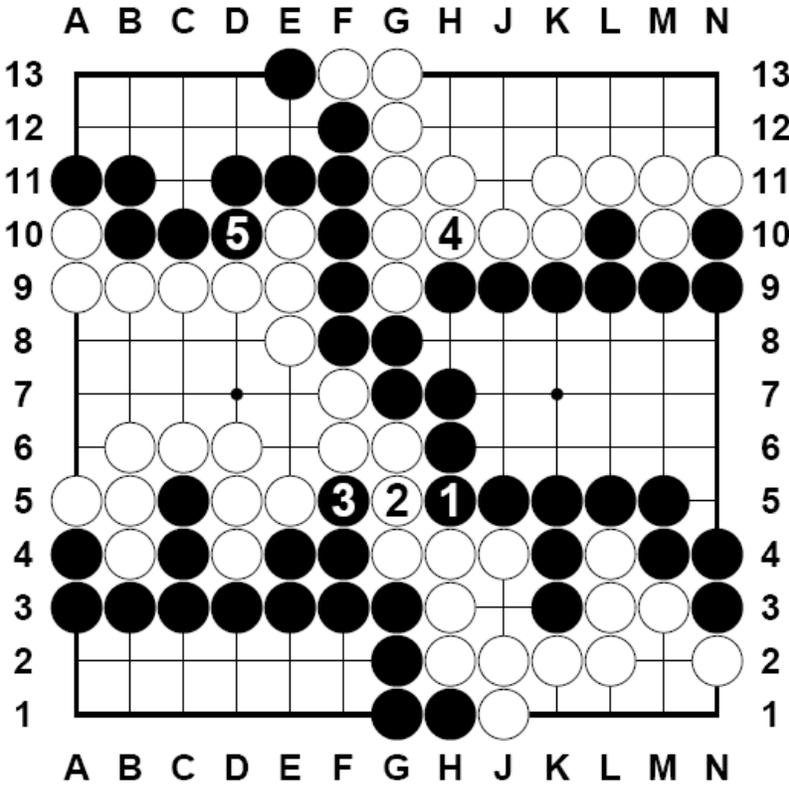


Diag. 5. This position is getting toward the end of a 13 x 13 game. If it is White's turn, where would he/she play to complete his/her wall(s) of territory? There are two spots where the walls are incomplete ("A," and "B"). If White blocks at A (1) then Black connects with 2. Now that boundary is taken care of. Next White plays at 3, Black blocks at 4, and White connects at B (5). Now this border is complete. Only the dame (marked with the "X") need to be filled in. Each side takes a turn filling them in.

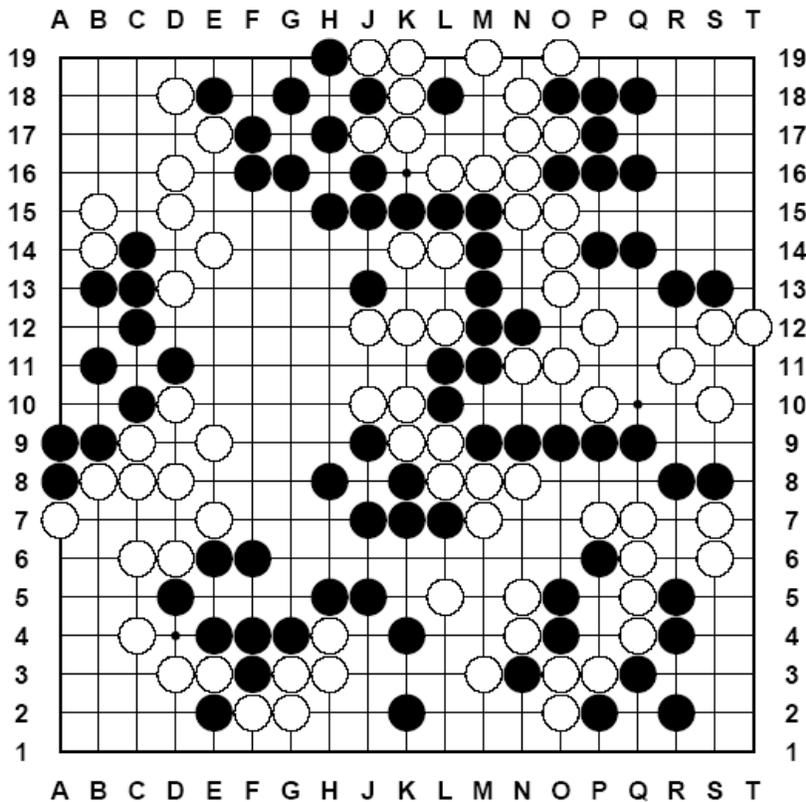


Diag. 6. Determining the score. The game is over. Both sides have taken three prisoners and both have three dead stones on the board. Determine the score. (You should arrange the territories so that the stones are disturbed as little as possible. Both Black and White have 28 points, so the result is a draw).

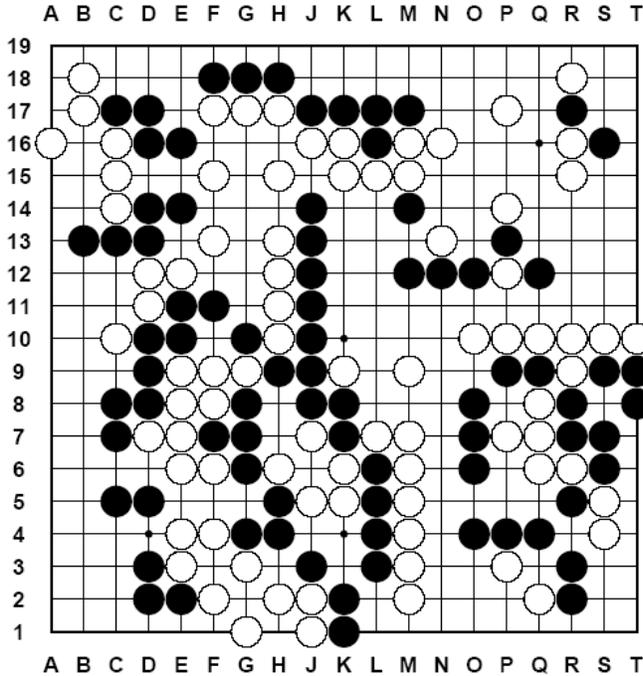




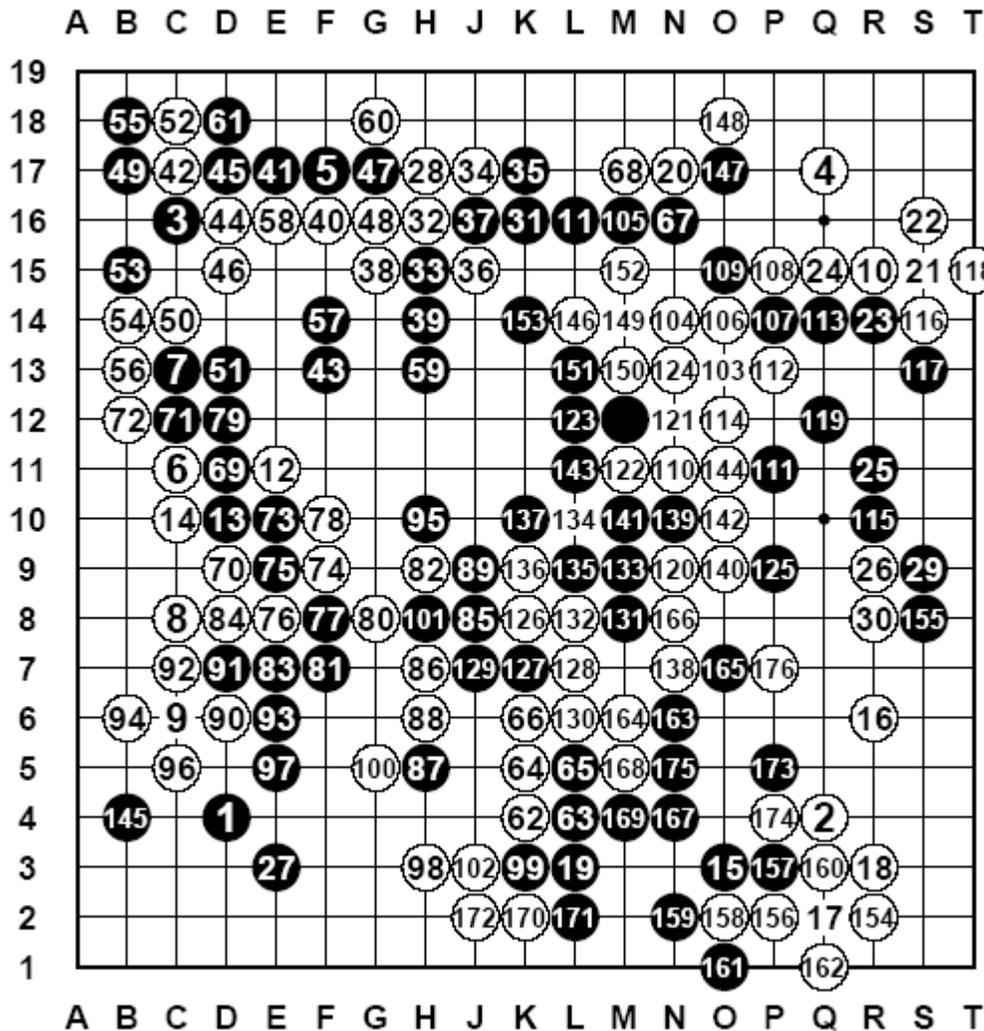
Diag. 9. The neutral points 1-5 are filled in alternating between both sides. Then the territories are “squared up,” and the empty points are counted.



Diag 10. This is the final position of the 8/1/04 Ing Amateur Round 1 game between Lui, I-han (B) and Li, Jie (W). Jie Li won the game after White resigned on the 168<sup>th</sup> move.



Diag. 11. This is the final position of the 8/2/04 Ing Amateur round 2 game between Yuan Zhou (W), and Jie Li (B). Jie Li won the game after White resigned on Black's 165<sup>th</sup> move.



Diag. 12. North American Amateur Ing Cup, Round 3, August 3, 2004, Rochester, NY  
 W: Jie Li 7d  
 B: Joey Hung 7d  
 Commentary by Jie Li 7d.  
 1. W6 is usually at C10; but I played here to destroy B's fuseki plan.  
 2. W12 is important because it makes W stronger and reduces B's moyo in the upper left. Without this, B can play at A (D9), W must block at

C9, then B can play at D11, making his moyo significantly bigger. **3.** W20 The game feels favorable for W because White has more territory and B's moyo on the left is incomplete and has some weak points. **4.** The exchange from B21 to W26 is even. Black destroyed White's moyo in sente, but this group is weak and could cost him later. **5.** White 32 could also be at E17. I think it would be better for white. **6.** W42 White could connect at F13 but I want to probe his response. **7.** I think Black 43 is an overplay, because he should just respond at D16. **8.** W50 is an escaping tesuji. **9.** B59 is a solid move but he's behind already. **10.** B61 is painful, if at F18 then J18 will be sente for White and later White can connect at L18. **11.** W74 could be at F8, to make a better connection and avoid a troublesome fight later. **12.** I didn't expect Black to cut at 75 and 77 because the exchange of W78 and B79 is very painful for Black. **13.** Black plays B85 to make the game more complicated because White is ahead, so Black needs to find an attack. **14.** W88 is a bad move; it should be at J9 first. **15.** B89 is a vital shape point. After this, H10 would be sente because of the cut at H8. **16.** W90 and 92 are probing moves. If Black responds with 93 at C5 for more territory, then white will gain sente at G7. And later White can play at J10 because of the cutting point. **17.** W94 is an overplay. It's big (30+ points) and hard to resist, but it really should be at H10. **18.** B97 Although W took a stone in sente and gained a lot of territory, there's a cutting point at H8 and the whole White group is now weak, with no eyes. **19.** W100 White is trying to live on the bottom. **20.** W102 White is now alive, but Black gained a lot of potential in the center in sente. The game is now very close. **21.** B103 could be called the losing move, because it misses the key point at N14 for sealing off the territory in the middle. **22.** W104 This is the key point. **23.** W110 is a good move. After this W has the option of either connecting back to 104 and 106 or cutting at Q14 and capturing the four stones on the side. W110 is asking Black to capture 104 and 106 (which are small). **24.** B125 is trying to cut White's connection, and if he can seal in the lower bottom group, then there is bad aji for White on the bottom. A ko can result. **25.** W126 is a connecting tesuji. **26.** B131 Black is not giving up. **27.** W138 is another tesuji. **28.** After W140 White is connected. **29.** B155 is an overplay, he's behind and trying to get as much as he can. Black does not realize that the marked stones on the lower side are in trouble. Black expects to only lose Q2 but White will take much more than that. The turn at R7 is very big, but not as big as the marked group, and he'll end with gote, so White will be able to block. **29.** W156 Black can live with the sequence beginning with b (O2), but... **30.** W158 is a key point. Black was expecting White to just take a Q2. **31.** B163 Black does not have enough space to make two eyes, and this is the last attempt to save the game. **32.** W172 White plays simply to reduce the eye space and Black just doesn't have enough room. **33.** W176 Black dies; White wins by resignation.

NOTES: 96 x 9; 118 x 21; 124 x 103; 143 x 134; 152 x 149; 163 x 17

## Lesson Plan 14

*Planning***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.
2. The student will be able to assess (*evaluation*) his/her plan using the criteria for a good plan, and a decision tree for determining his/her next move so that when given three positions on the board, he/she will correctly make the most efficient move 80% of the time.

**STUDENTS**

3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.

**CLASSROOM  
MANAGEMENT**

4. In Lesson 12, the teacher presented the fundamentals of the opening. In this lesson, the teacher gives the students two processes to determine the elements of a good plan, and how to decide on his/her next move given the moves of his/her opponent.
5. 19 x 19 demo board, class Go sets: bring in 19 x 19 sets (do not leave in the classroom), and lender sets (that the students can take home). The teacher will ask students to use their “game record sheets” to keep a record of the games the teacher will show them on the demo board.
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The student will set up his/her 19 x 19 lender set for his/her parent(s) and show them the elements of a good game plan. He/she will explain to his/her parents that the plan of a game needs to be flexible depending on the moves that his/her opponent makes, and that there is a decision tree for determining what his/her next move should be.

**INTRODUCTION****SET**

8. In this lesson the teacher will explain the aims of a good game plan: (1) Sketch out/expand/consolidate territories; (2) build

**SET**

influence; (3) create good shape; (4) establish or maintain solid connections; (5) defend his/her weak stones by (a) running to the center, and/or making eye-space; (5) attack his/her opponent's weak stones; (6) frustrate his/her opponent's similar plans. The teacher will also introduce the decision tree that the student should use to decide what his/her next move should be: (1) Evaluate the opponent's last move: (a) what threat does it make? (b) how effectively is the threat made? (c) what does he/she think the opponent's overall plan is? (d) does the opponent's move gain or retain sente?; (2) Decide what he/she wants to do; (3) Compare his/her plan with what he/she thinks the opponent's plan is: (a) if his/her opponent's plan is greater than his/her own, then he/she must revise his/her plan to counteract his/her opponent's; (b) if his/her plan is greater than that of his/her opponent's, then proceed with your plan; (4) make the move that best fulfills his/her plan: (a) do not play the first move that comes to mind that seems to accomplish his/her goal; (b) search for a move that does double duty.

**COMMUNICATION OF PURPOSE**

9. A game plan helps give one's moves direction and coordination. Without one, a player will surely lose. In addition to having a plan, you also need to be able to maintain flexibility in light of what your opponent does. His/her move will likely have an effect on how important his/her move is and also what is practical. Flexibility is paramount because if a player is determined to carry out his/her plan regardless of the changing dynamics of the game, he/she is doomed to lose. A player should also be aware that in the beginning of the game, there is more that he/she can gain when he/she focus on increasing the number of liberties for his/her stones, than on capturing his/her opponent's stones. However, just because a player has a plan does not mean that it is a sure-fire way to win. Each move changes the dynamics of the game. A good plan requires that the player exercise good judgment and timing, two attributes that can only come from playing a lot of games, learning from experience, and studying the game.

**BODY OF THE LESSON****PRESENTATION**

10. The teacher plays the first 12 moves of a game on a 19 x 19 board, and points out the elements of planning and decision making (see Diag. 1). Teacher continues to play the next 11 moves pointing out the back and forth change in plan as each side makes a move that affects the over-all board position.

**PROCESSING**

11. The teacher will give instructions, and then follow-up with guided practice, and then one-on-one independent practice. During the teacher's demonstration of another fuseki in Diag. 3, he/she will ask the students to identify the times when one side or the other needs to adjust his/her game plan, and ask a student to volunteer to

**PROCESSING**

come to the demo board and show how he/she will make a change in his/her plan

**MONITORING**

12. The students will pair up, and they will hand out the Go sets. Have students solve two puzzle problems (see Diags. 4-5).
13. The teacher will ask students to demonstrate to his/her partner the different changes to his/her game plan that would take place in the first 10 moves in Diag. 6. Then his/her partner will demonstrate to his/her partner the different changes to his/her game plan that would take place in the second 10 moves in Diag. 7.
14. The teacher will place a demonstration game (see Diag. 8) on the demo board and ask students to come to the demo board to show their peers when it would be necessary to change the game plan. Teacher will place the stones of a demonstration game (Diag. 8), playing to the end, and asking students along the way what decisions he/she makes to alter his/her game plan.
15. The teacher will ask students to come to the demo board to set up his/her own game scenarios and explain the changes in game plan he/she made during the game. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations as the situation warrants.

**CLOSING****CLOSURE**

16. Remind students of concepts exposed today, and guide the students' attention to the vocabulary words that the teacher used in today's class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

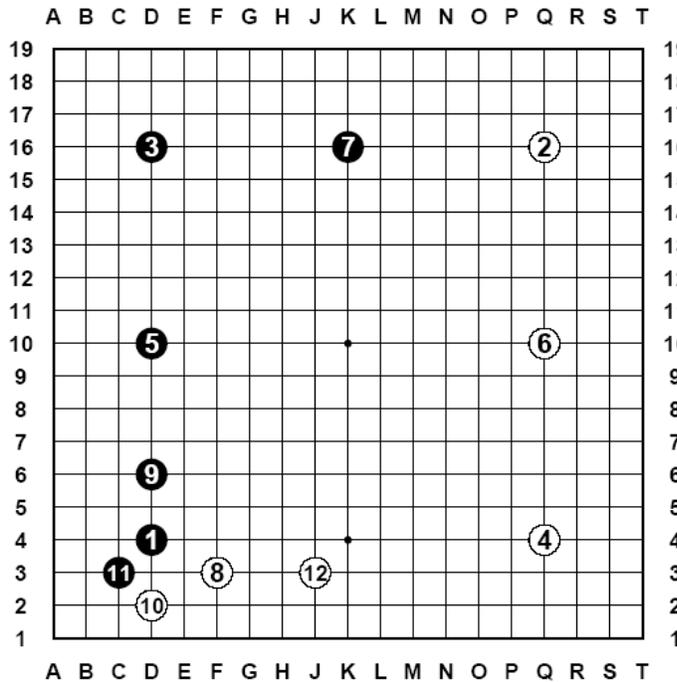
17. Play a demo game against the students. On a 19 x 19 board, give the "students' team a nine stone handicap. Ask the students to line up to take turns making moves on the demo board. Remind them not to comment on each others' moves except to say, "good move!"

**FOLLOW-UP**

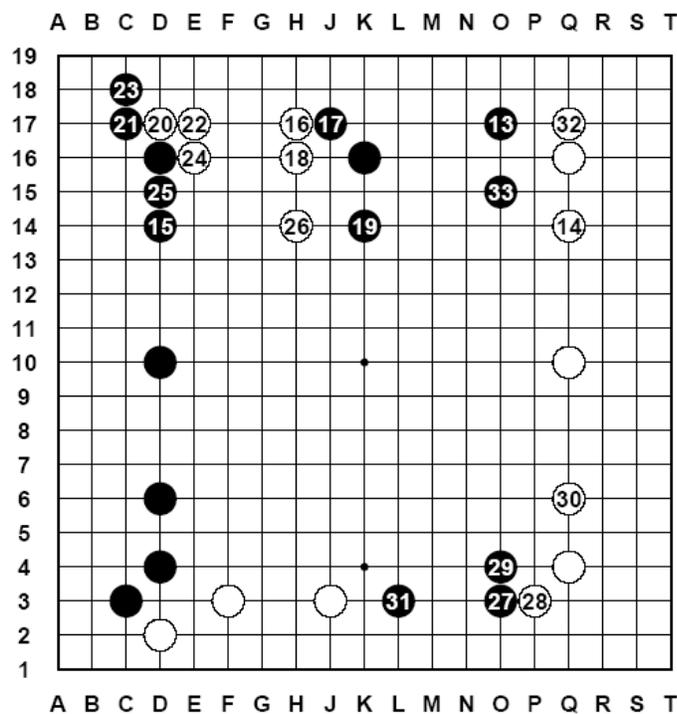
18. Vocabulary to learn: planning, shimari, kakari. How will students apply and extend the learning, and deal with real world problems?

**REFLECTION  
(after the lesson)**

19. What did you do that helped students learn and meet the objective?
20. What would you do differently if you taught this lesson again to make it more successful for students.
21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G



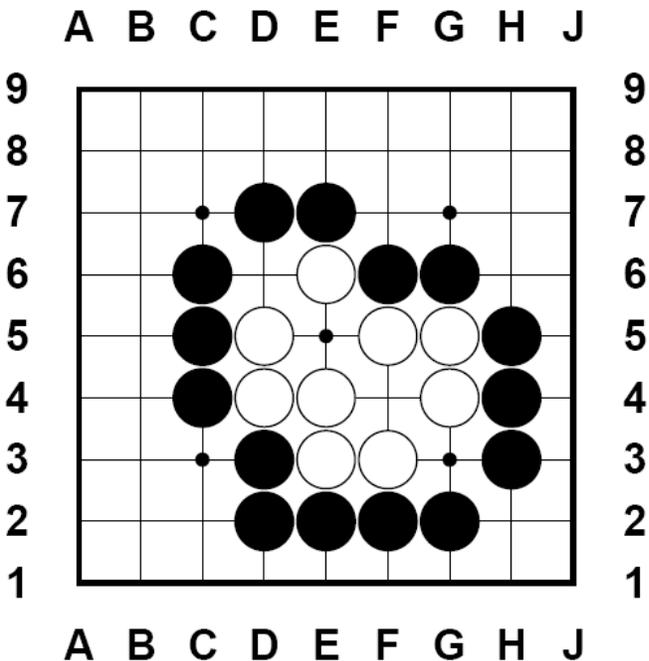
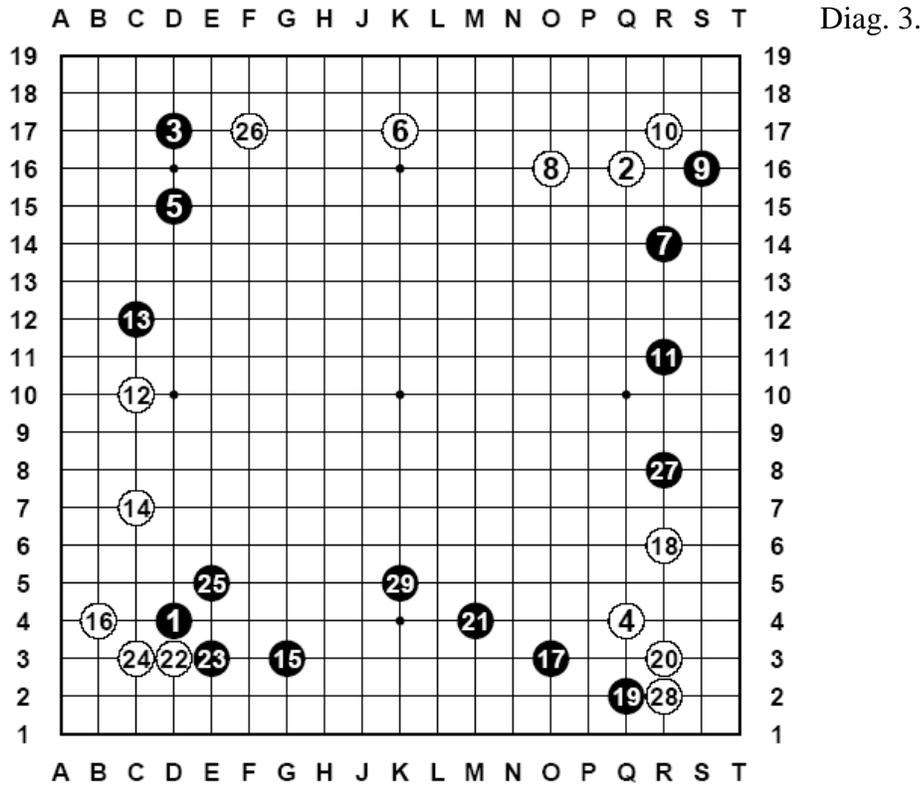
Diag. 1. It appears as though each side is planning to sketch out potential territories according to the “Corners, Sides, Center” principle (B1-B7). Note that B1 and W4, and W2 and B3 are each on the fourth line in one direction, and in an empty corner. Each player has also played the “san ren sei,” a fuseki opening in which each player plays on the three handicap points on each side. W8-B9, W10, B11, W12 is a standard joseki around Black’s lower left corner.



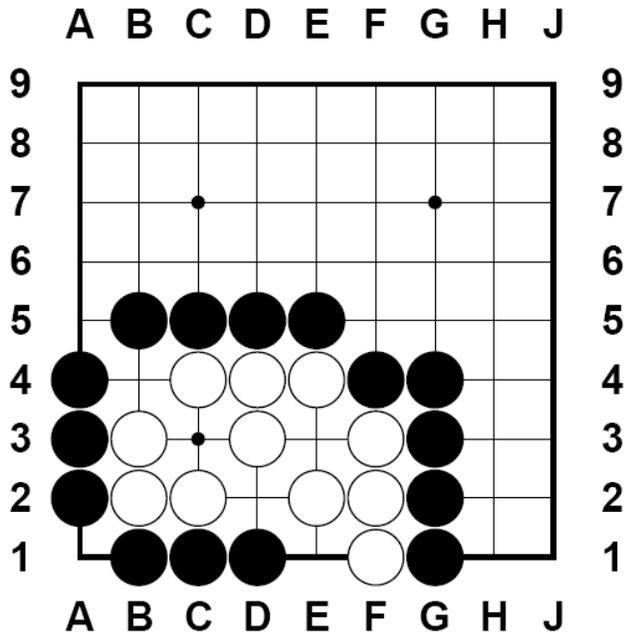
Diag. 2. White answers B13 (a kakari), with W14. Now Black’s plan is to secure as much territory on the left side as possible, and he/she tries to discourage White from invading and making his/her own territory and eye-space there. So W16 intends to invade the upper side. B17 blacks, so W18 connects, and B19 extends into the center. White’s new plan is to make eye-shape and live locally with at least a piece of the available corner territory with W20, which is a kakari for the corner, but Black’s plan is to keep as much corner territory as he/she can with B21, W22, B23, W24, and B25. White’s plan is now to secure as much territory and eye-space that he/she can on the upper left, so he/she makes a one-point extension to 26, and both sides have eye-space and “shape” in

this corner. Consequently, they are stable, so it isn’t necessary for either side to make any further moves here at this time. It would be inefficient. White now has sente, but the lower right corner is unstable. Black’s plan is now to make a kakari in the lower right corner with 27. W must devise a new plan to solve this problem. White’s new plan is to enclose the lower right corner with W28 to provide territory and eye-space there, while blocking Black’s expansion in that direction. Since W28 does not threaten B27, Black regains sente with 29. Black’s new plan is to

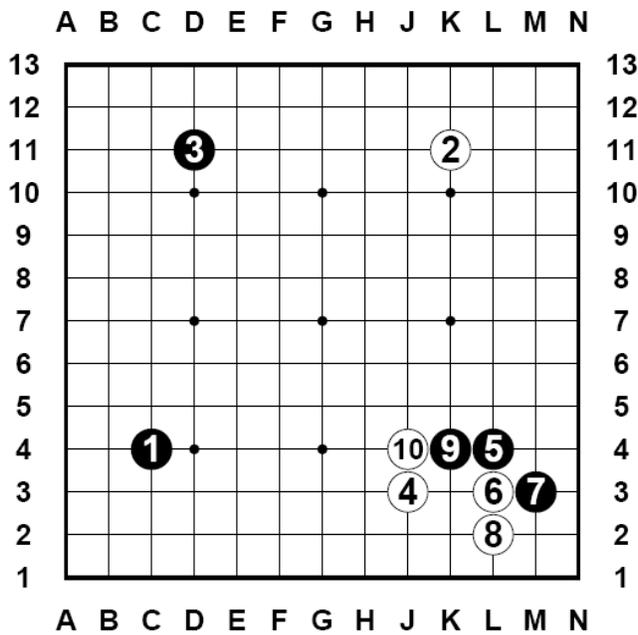
enclose territory along the lower side while restricting White's ability to do so by playing the two-point extension to B31, and Black has made a base on the lower side. White's new plan is W32 because if Black played there it would give Black too much corner territory and too good a position to allow.. White wants to secure his/her upper right corner with 32, and Black decides to run for the center with B33.



Diag. 4. Black to play and kill white. (1 move) How does Black play to kill the white stones? (B @ D6 puts W in atari and gives White a false eye.)



Diag. 5. Black to play and kill White (1 move). How does Black play to kill the white stones? (Black plays at D2).



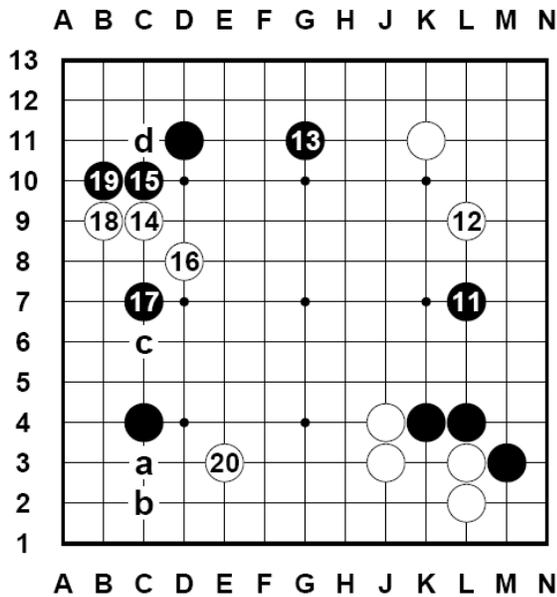
Diag. 6. Each side's initial plan: Begin to sketch out potential territories, according to the principle of "Corners first, Sides second, and then the Center." B1, W2, B3, and W4 are on the third line and they are in a corner. After W4 Black still has sente. Black decides to invade the lower right corner with B5.

**Black's new plan: Get a foothold in the lower right corner, and try to make it hard for White to make his/her own territory and eye-space there.**

In this fuseki it is considered to be of equal value for Black to make a shimari in one of the corners on the left or to foil White from making a shimari in the upper right corner. B5 seems to make for a more interesting game.

If White ignores B5, he/she is going to lose the corner. Consequently, White plays W6, and Black retains sente. **White's new plan: "Make shape" to live locally, with at least a piece of the lower right corner territory.** W6 on the key 3-3 corner point is not designed to engage Black in a fight. Rather it is a well-known tesuji by which White is "making shape."

Each side's game plan seems to be holding up. What will change the dynamics is when one side's stones become (at least temporarily) stable. B7 and W8 are good moves, even though both are on the second line. Black's next move accomplished two tasks: (1) B9 is on White's "shape" point (to make it harder for White to make eyes), and (2) it moves out toward the center. W10 blocks Black's expansion in that direction.



Diag. 7. B11 is a two point jump extension which creates a base for two eyes. Ordinarily B11 would be played one point further up, but that would be going a little too far, and would invite White to invade. The closer space of B11 also has the advantage that after the expected answer of W12, Black doesn't have to defend here, so he/she can retain sente to play elsewhere. With B11 both sides have eye-space and "shape" in this corner (i.e. are stable), so any more moves there would be inefficient at this time. White has sente, but he/she must do something about B11 that has weakened his/her upper right corner stone, so he/she must devise a new plan to solve this problem. **White's new plan: Enclose the upper right corner with W12 to provide both territory and eye-space**

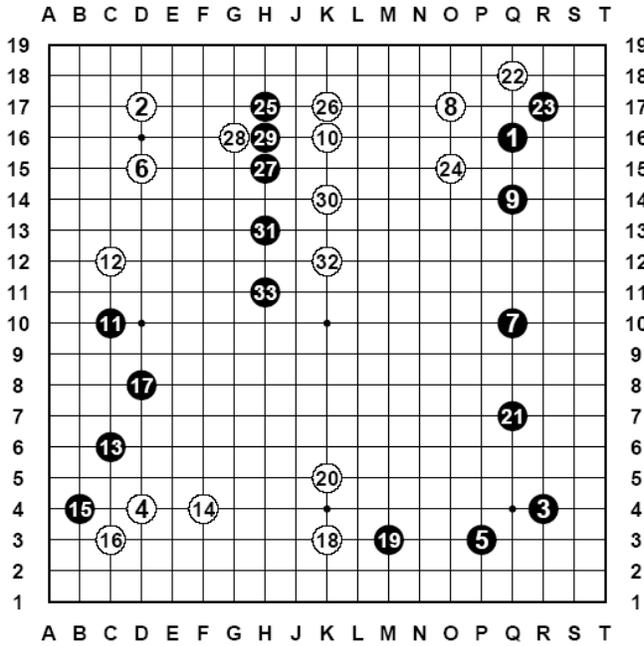
**potential, and also blocking Black's expansion in that direction.** This also looks toward expanding along the lower left side later. Since Black (B11) did not push too far up the right side W12 does not pose a strong threat to Black's strong position below, so Black regains sente.

**Black's new plan: Begin to enclose territory on the upper side while curbing White's ability to do the same.** Playing B13 at 14 to enclose (shimari) the upper left corner would produce a bit more territory, but it would make it easy for White to play there instead with a two-point extension along the upper side. So B13 was preferred. But this doesn't threaten White's upper right shimari very seriously, so White takes sente. **White's new plan: Play W14 because a Black stone at 14 gives Black too much corner territory and too good a left side position to allow.** But in so doing W14 is a weak stone which Black can safely attack, so Black retakes sente.

**Black's new plan is dual-purpose: (1) Take advantage of the isolated W14 by using B15 to block it from obtaining eye-space in the corner, and (2) secure that corner territory for him/herself.** (Note that B15 attaches to W14, but not with the intention of trying to capture it). Because W14 is weak White must respond to the Black attack, so Black retains sente. **White's new plan: Run out into the open center via W16 to assure that W14 isn't captured or confined to a small space on the edge.**

**Black's new plan is dual-purpose: (1) Use B17 to squeeze W14, 16 from below, and (2) sketch out some territory on the lower left side.** B17 occupies one of the White stone's key "shape" points while threatening to connect to B15 underneath by playing next at 18, so Black retains sente. **White's new plan: Although W18 is forced (to prevent Black's connection underneath), it threatens to steal some of the Black corner territory.** **Black's new plan: Use B19 to block off the lower right corner to preserve his/her territory there.** But White need not answer B19 immediately. So White gets sente.

**White's new plan has three purposes: (1) W20 expands his/her small lower right corner position, (2) it creates White territory along the bottom side, and (3) it prevents Black from enclosing the lower left corner by a play at this same point.** W20 also threatens next to move into and "steal" much of the lower left corner at "a," or "b," so it's another ideal multi-purpose move which Black must answer. Thus White to retains sente.



Diag. 8. The key thing to remember is that it is not advisable to impose your plan on an unwilling opponent of equal strength. Before making a decision what to play next, you must assess the threats that your opponent makes. If you ignore this step you will almost always lose against a skilled opponent.

**At each turn, your desire to attack must be balanced against the need to defend.**

## Lesson Plan 15

*Fighting***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.

**STUDENTS**

2. The student will be able to assess (*evaluation*) whether or not he/she should engage his/her opponent in a fight so that when given a local position, he/she will determine the appropriateness for fighting 100% of the time.
3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. In the previous lesson, the teacher introduced the fundamentals of good planning as they relate to decision making. In this lesson, the teacher reveals more decision-making techniques that relate to the principles of fighting.

**CLASSROOM MANAGEMENT**

5. 19 x 19 demo board, class Go sets: bring in 19 x 19 sets (do not leave in the classroom), and lender sets (that the students can take home). The teacher will ask students to use their “game record sheets” to keep a record of the games the teacher will show them on the demo board.
6. The teacher will introduce the students to the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. The teacher will demonstrate to the students the proper way to greet the instructor and fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The student will set up his/her 19 x 19 lender set for his/her parent(s) and show them the elements of a decision to engage his/her opponent in a fight. He/she will explain to his/her parents when a player must engage in a fight.

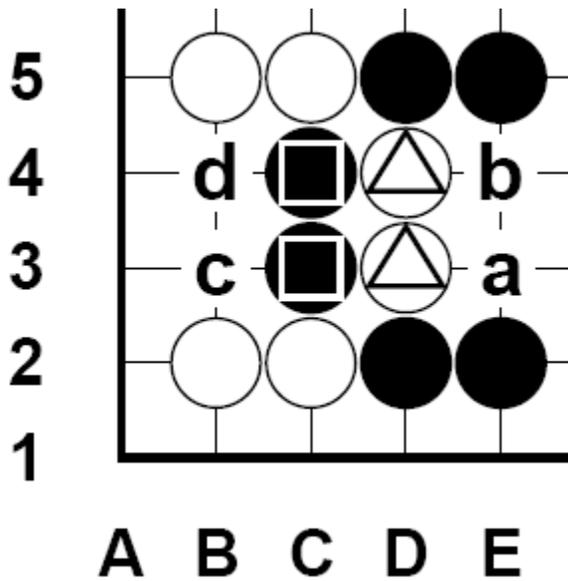
**INTRODUCTION****SET**

8. The teacher will explain the decision tree to use when one is faced with the prospect of a fight: (1) one gains more in the local situation than he/she could by playing some where else on the board; (2) he/she cannot achieve his/her goals any other way, (3) he/she is already losing, but he/she may win if his/her opponent

- SET** makes a mistake in engaging in the fight, (4) his/her opponent gives him/her no choice.
- COMMUNICATION OF PURPOSE** 9. Learning when and how to engage in fights is necessary because the final result of most games is the result of fights, but the trick is to learn to fight only when and as much as necessary.
- BODY OF THE LESSON**
- PRESENTATION** 10. The teacher discusses with the students that in conducting a fight each one should: (1) identify his/her own and his/her opponent's groups that lack two secure eyes, or he/she is not certain he/she can make then, and that he/she cannot run away to safety; (2) for each separate unit, he/she must determine (a) the number of the unit's unshared liberties, (b) the number of liberties that both sides share, and (c) which side will win the fight if each side has sente; (3) begin/continue the fight only if he/she can win, unless it is advantageous for him/her to use them for advantage elsewhere on the board.
- PROCESSING** 11. The teacher sets up positions on the demo board (see Diags. 1-4) and asks the student to follow the fight decision process above to determine: (1) which units are at risk of capture, (2) what are the units' liberty counts, (3) what should each side do if he/she has sente?
12. The students will pair up, and they will hand out the Go sets. Have students solve three puzzle problems (see Diags. 5-7).
- MONITORING** 13. The teacher will ask students to demonstrate to his/her partner the use of the fighting decision tree as it applies to Diag. 8.
14. Ask the students to predict what would happen if Black "hits the head" of the two White stones (see Diags. 9-10)?
15. The teacher will ask students to come to the demo board to solve a problem (see Diag. 11) using the fighting decision tree. If there are students with disabilities in the classroom, the teacher will make the appropriate accommodations as the situation warrants.
- CLOSING**
- CLOSURE** 16. Remind students of concepts exposed today, and guide the students' attention to the vocabulary words that the teacher used in today's class. Ask students to repeat the concepts and to define them for their colleagues.
- ASSESSMENT** 17. Play a demo game against the students. On a 19 x 19 board, give the "students' team a nine stone handicap. Ask the students to line up to take turns making moves on the demo board. Remind them not to comment on each others' moves except to say, "good move!"
- FOLLOW-UP** 18. Vocabulary to learn: Liberties (Mei); fighting decision tree, and virtual liberty. How will students apply and extend the learning, and deal with real world problems?

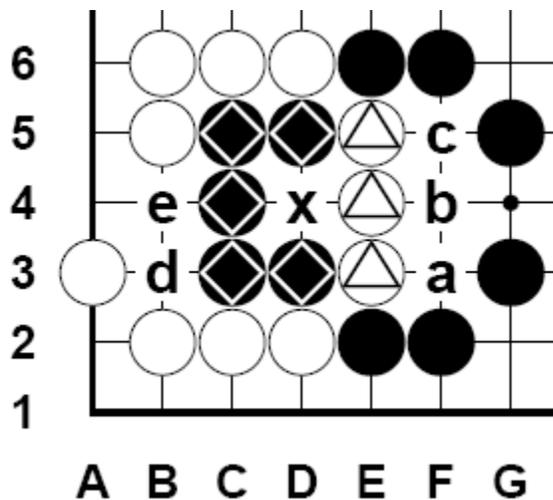
**REFLECTION**  
(after the lesson)

19. What did you do that helped students learn and meet the objective?
20. What would you do differently if you taught this lesson again to make it more successful for students.
21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G



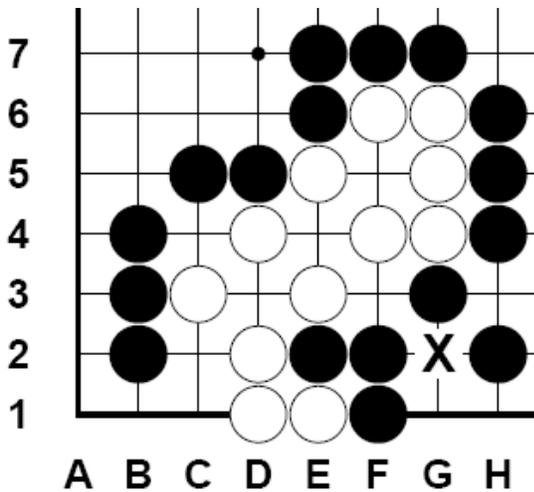
Diag. 1. (1) Identify which units are at risk of being captured, (2) What are the respective liberty counts? (3) How should Black continue if he/she had sente? how should White proceed if he/she had sente?

The marked White and Black two-stone units are the ones that are at risk of capture. Each unit has two liberties on the outside. There are no shared liberties. Which ever side has the first move can capture his/her opponent's stones. He/she will connect his/her own stones, and make a two-point eye.

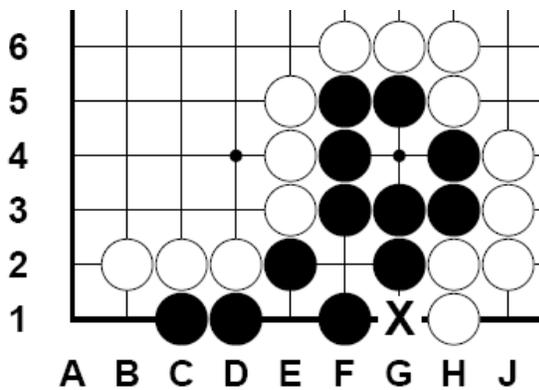


Diag 2. This is a similar situation. One should ask the same questions as above. The marked White and Black units are the ones that are at risk. Liberty count: White has three outside liberties ("a," "b," and "c"); Black has two outside liberties ("d," and "e"). There is one shared liberty at "x." Since White is ahead on the liberty count (4 to 3), that gives White sente, and he/she can make one move elsewhere on the board, before coming back to this position.

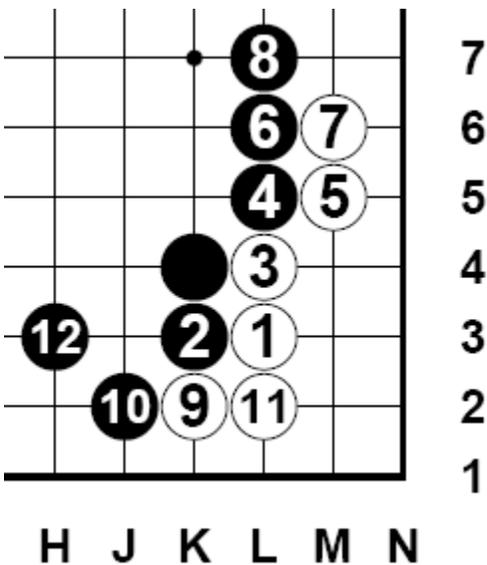




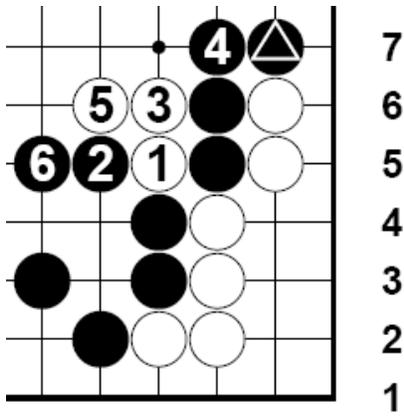
Diag. 6. Black to play and kill White (1 move).  
What move does Black make to kill the White stones?



Diag. 7. White to play and kill Black (1 move), How  
does White kill all the Black stones?

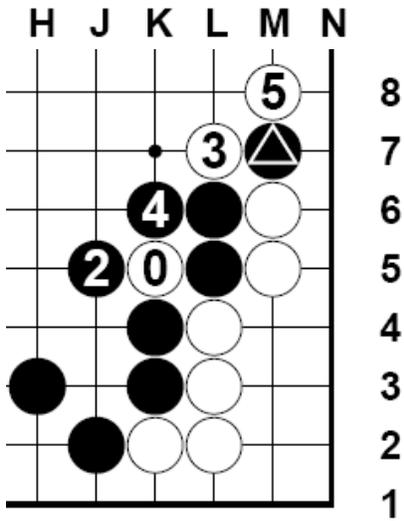


Diag. 8. This joseki demonstrates the “Five-liberty  
count principle,” a unit is stable when (1) it can make  
two eyes, or it has at least five liberties and is not  
enclosed. This is a standard joseki, but why is B8  
necessary? Because if Black makes a mistake and  
plays 8 at M7, the B4, 6 unit only has three liberties  
and is unstable, and then White can play at K5 and  
cuts Black’s units (see Diags. 9, and 10)



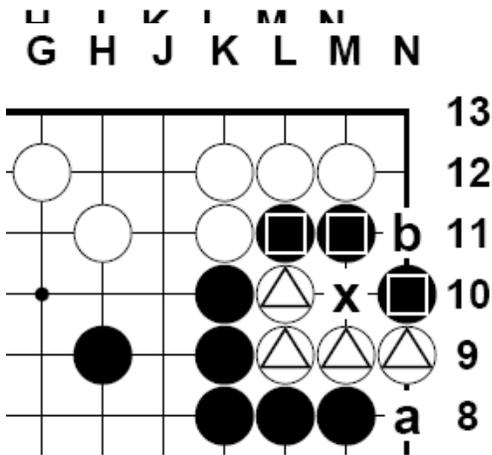
7  
6  
5  
4  
3  
2  
1

Diag. 9. Black plays 8 at the marked stone. Then W1, B2, W3 puts Black in atari. B4 connects. W5 connects and White's stones escape as well as cut Black's units in two.



8  
7  
6  
5  
4  
3  
2  
1

Diag. 10. Here is a variation on the above Black mistake of playing the marked stone. White opts to both attach the marked stone as well as put Black in atari. Black captures with 4, but White puts the marked stone in atari. The result is that while Black's stones have good eye-space and are solidly connected, White has succeeded in breaking out of the corner and is well on his/her way to securing the right side.



13  
12  
11  
10  
9  
8

Diag. 11. This is a fight to capture between the marked units. White has only one outside liberty at "a." Black has only one outside liberty at "b." The shared liberty is at "x." Does winning the capturing race depend on who moves first? No it doesn't because Black can atari White, but White cannot atari Black. White would have to make a move at N12 in preparation for playing at "b." Consequently, since white has to make an extra move, Black's liberty count is virtually three instead of two. Never the less, Black would win in any case, even if White moved first.

## Lesson Plan 16

*Connecting to the Go World***PREPARATION****OBJECTIVE**

1. **EALRs:** CO 1 1.1, 1.2; 2 2.1, 2.2, 2.4; 3 3.1, 3.2; 4 4.1, 4.2; R 1 1.3; 2 2.3, 2.4; 3 3.1., 3.2, 3.4; W 1 1.3; 2 2.1, 2.2, 2.3; 3; 4 4.1, 4.2; M 1 1.2, 1.3, 1.5; 2 2.1; 3 3.1; 5 5.2, 5.3; SSG 1 1.1; 2; 3 3.3; SSIIS 1.1a; 1.1b; SSIGPS 2.1, 2.1a; 2.1b; SSCTS 3.1, 3.1.1a - 3.1.1d. **AKCSs:** ELA A 1 – 8; B 1 -3; C 1 – 3, 5; D 1, 2, 4; E 1-4. R A 1-3; B 1-2; C 1, 4; WL A 1, 4; B 1, 4, 6; C 1, 2, 4; M A 1, 4, 5; B 1, 2, 4, 6, 7; C 1; D 1 – 5; E 1; T A 1 – 3; B 1-2; C 1-3; D 1-3; E 7.
2. The student will be able to practice (*application*) his/her go skills so that when he/she is ready to play he/she can use the Internet to find games/"cyber" opponents/computer programs 100% of the time.

**STUDENTS**

3. The students are Upper Elementary (gr. 4-6) students attending a Montessori School that the American Montessori Association has accredited.
4. By this time, the students have gone through the previous 15 lessons, and they are ready to expand their go playing to others in the community, region, state, country, and world.

**CLASSROOM MANAGEMENT**

5. AGA yearbooks, AGA E-Journals, 9 x 9 demo board, class Go sets. If the school/organization has computers with Internet access, the teacher should make arrangements with the school officials to get permission to use the computers for showing the students the various Go web servers. It would be a good idea if the teacher could invite another Go player, preferably a student who is familiar with playing games over the Internet, to assist him/her during this lesson.
6. The teacher will ask the students to use the procedure of obtaining the Go sets from the storage box and setting up the boards, tables, and chairs. Students will demonstrate to the teacher the proper way to greet the instructor, fellow students, and opponents. The teacher expects that the students will follow all the behavioral expectations of the school as appropriate for this lesson.
7. The student will demonstrate to his/her parents how to set up a game on the Internet using the International Go Server (IGS), the Kiseido Go Server (KGS), or on Yahoo.com's game page. He/she will explain to his/her parents the value of having a virus detection software (e.g Norton's Internet Security), Black Ice Firewall software, and STOPzilla, to intercept and isolate his/her home computer from computer virus attacks that, if left un-detected, and un-deleted, could seriously damage his/her computer.

## INTRODUCTION

**SET**

8. Go has profited immensely due to the computer, and the Internet. Through CD-ROM based teaching programs, Internet downloads of teaching software, and Internet-based Go servers, not only has

**SET**

the popularity of the game increased, but also the enjoyment of the game with others has improved. The Internet has brought the techniques and strategies of Go to hundreds of thousand of players who would heretofore have had to spend countless hours trying to track down even the most elementary of Go texts.

**COMMUNICATION  
OF PURPOSE**

9. When the student uses the resources of the Internet, and Go software, he she has access to resources such as games at all levels of skill to match that of the student, computer teaching games, high –level dan players who give lessons over the Internet, go lectures, and Go tournaments. These features are especially important for shut-ins and those who find that they have a few spare moments to invite someone to play over the Internet without having to wait for someone to show up at his/her doorstep.

### BODY OF THE LESSON

**PRESENTATION**

10. The Internet Go Server (IGS), IGS Pandanet (<http://www.pandanet.co.jp/English/>) links together people who want to play Go from all over the world. You can play 24 hours a day. Except for those times when the IGS Pandanet is down for maintenance, it never goes to sleep. You can play or view games throughout the whole year, whenever you feel like it. The IGS has over 40,000 members who live in about 100 countries. The skill levels range from the beginner to the expert. Consequently, you can easily choose opponents whose skill-level is close to your own.

The Kiseido Go Server (KGS) is also a popular web site (<http://kgs.kiseido.com/>). At this site, one can play against the computer, or play anyone who wants to play you in a number of different “rooms” (“Beginners,” “English Game room,” etc. Occasionally the KGS hosts a guest lecturer who gives lectures over the Internet for free. One must be able to receive audio on his/her computer in order to listen to these lectures.

Yahoo hosts an active Go server (<http://games.yahoo.com/>) which has about six “Beginners” rooms, and several rooms for advanced players. It is basically for playing others. It does not have a computer program to practice with, but it does have some beginning instructions on how to play Go.

The American Go Association’s web page (<http://www.usgo.org/index.asp>) has a lot of information about Go for the novice as well as the advanced player. One can even subscribe to the on-line AGA E-Journal. It comes out once a week. In addition to national and international Go news, it also

**PRESENTATION**

contains information about tournaments, and presents problems and lessons from top players and teachers. It has a “problems archive” (<http://www.usgo.org/problems/index.asp>) for those who want to study Go problems to improve their game.

The teacher must explain to his/her students the conventions of playing over the Internet. The teacher must remind students that playing on the Internet has a lot of the features of being on the telephone: (1) unless he/she is playing a computer (“robot”), remember that there is a real human being on the other computer; (2) it is standard courtesy to tell is/her opponent if he/she needs to leave the game for any reason. Do not leave the person wondering what happened. (3) Quite often he/she will play a person from another country/culture. In many cultures, it is not considered polite to ask a person’s age, political beliefs, religion, etc. (4) He/she may chat with his/her opponent a little, and ask him/her where he/she is from, and answer such questions from his/her opponent. (5) He/she must always thank his/her opponent for the game. (6) Ask his/her opponent’s permission, or resign if he/she needs to leave the game for any reason. An excellent resource for beginner and advanced player alike is the “Sensei Library” (<http://senseis.xmp.net/>). It is a web site that accumulates information from many other go players. It has an excellent beginner’s section in which you can discuss a particular problem. The “Beginner Study Section” is an excellent resource for students to use in between weekly lessons. The “Reference” section contains a lot of useful information for every level of player. Sensei’s library is a must for those who need to understand, or review, the basics.

**PROCESSING**

11. Along with his/her assistant, the teacher will demonstrate to the students how to log on to two or three of the Go servers, how to set up an account (including keeping a password). The teacher will guide students to either the Go server’s game program, or how to engage another player in a game of Go for a limited time.
12. The students will pair up, and they will play a game on-line with each other with an appropriate time-limit depending on the amount of time available..

**MONITORING**

13. The teacher will move around the class and check students’ understanding, and to offer assistance to students who are encountering some difficulty getting their game set up on the Go server.
14. Ask students to explain to another student how to log on to a Go server and to set up an account, including entering a password.
15. The teacher will ask students to come to the demo board to show the other students one of is/her games from a Go server, for which he/she kept a game record. If there are students with disabilities in

**MONITORING**

the classroom, the teacher will make the appropriate accommodations as the situation warrants

**CLOSING**

**CLOSURE**

16. Remind students of concepts exposed today, and guide the students’ attention to the vocabulary words that the teacher used in today’s class. Ask students to repeat the concepts and to define them for their colleagues.

**ASSESSMENT**

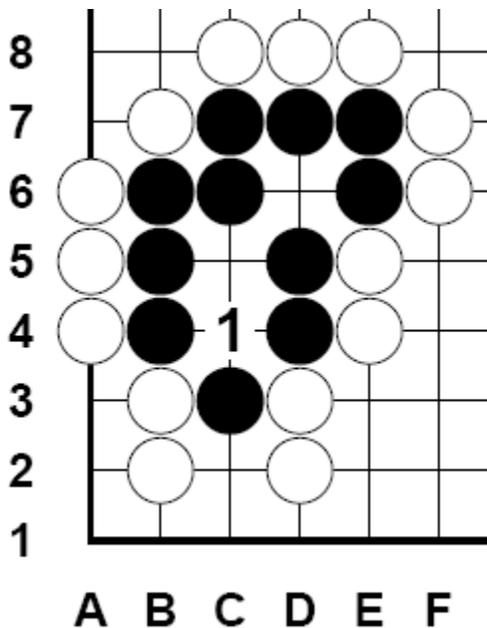
17. Teacher will set up six Go problems (see Diags. 1-6) on the demo board, and he/she will ask students to form teams. The teams will select a “captain.” The “captains” will select which team goes first in trying to solve the problem within a specific time limit. If the team exceeds the time limit, the other team will have a similar amount of time to work out the solution.

**FOLLOW-UP**

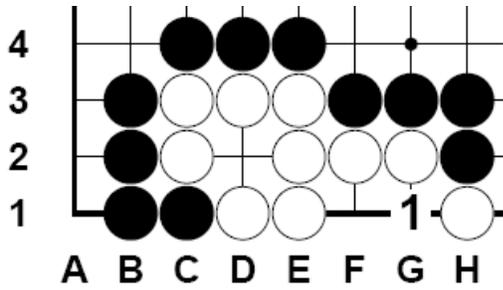
18. The teacher may consider assembling a “How To Sign-Up For Internet Go” handbook for students to use in between class sessions. It is suggested that the teacher confine students to one Go server in the beginning.

**REFLECTION  
(after the lesson)**

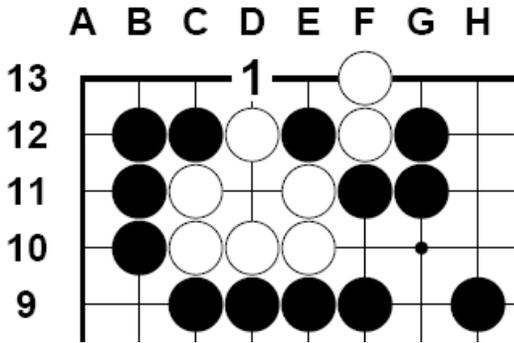
- 19. What did you do that helped students learn and meet the objective?
- 20. What would you do differently if you taught this lesson again to make it more successful for students.
- 21. **SAKT** 1-8; **SAKS** 1 – 14; **AKSCRS** Cultural Standards for Students: B – F; Cultural Standards for Educators: B – E; Cultural Standards for Curriculum: A, B, D, E; Cultural Standards for Schools: B, C.
- 22. **PA** 1. A – E; 2 A – F; 3 A – D; 4 A – E; 5 A – I; 6 A E; 7 A – F; 8 A – E; 9 A – E; 10 A - G



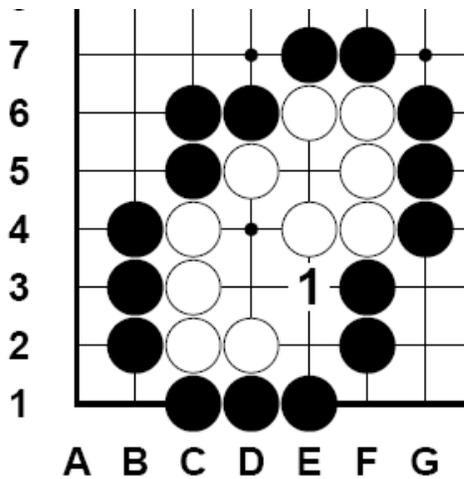
Diag. 1. White to play and kill Black (1 move). What move does White make to kill the Black stones? If White plays at 1, then he/she has two units of Black’s stones in atari. If Black captures by playing at C5, then White answers with C2, putting Black (C3) in atari. This is a classic “snap back” tactic.



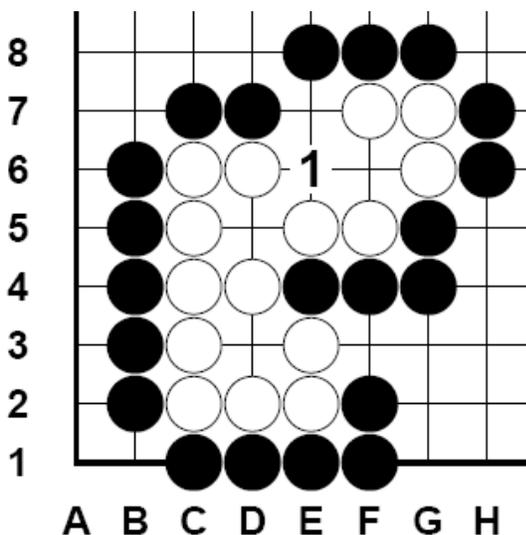
Diag. 2. Black to play and kill White (1 move). What move does Black make to kill the White stones? If Black plays at 1, then it activates the classic “snap back?” maneuver.



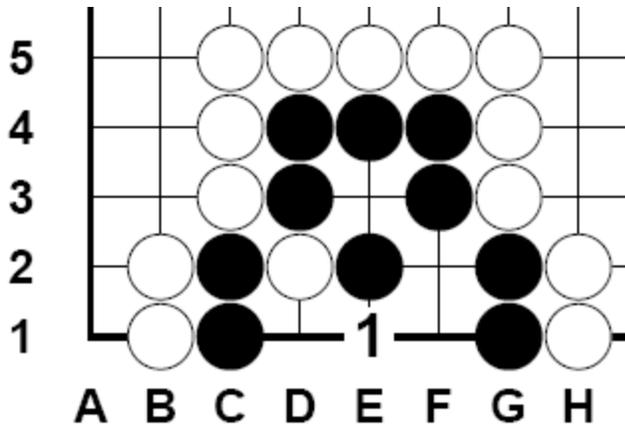
Diag. 3. Black to play and kill white (1 move). How does Black kill all the White stones? Black plays at 1. If white captures the Black stone at E12, then Black connects at C13.



Diag. 4. Black to play and kill White (1 move) How does Black play to kill the White stones? Black plays at 1, thus making it impossible for White to make two eyes.



Diag. 5. Black to play and kill White (1 move). It is not enough just to capture three stones. You have to capture all the White stones for the correct solution. Black plays at 1, thus making it impossible for White to make two eyes.



Diag. 6. White to play and kill Black (1 move). It is not enough to take just two stones. You have to capture the whole Black group. White plays at 1, thus making it impossible for Black to make two yes.

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