

5. Teacher's Comments (English)

00:00:15 In Japan, "We begin with a bow, end with a bow."

00:00:27 Review of the last class: This is done to help accomplish the goal of the current lesson, but I make a point of not taking too much time. To have the students visually grasp the many possibilities, I explain using a computer with a moving image on the screen.

00:01:33 I have the students keep their textbooks closed to make them think independently.

00:02:17 To arouse the students' interest and connection to the problem, I set up the opening of the lesson by using two student names. This also makes the class atmosphere cheerful.

00:03:44 To be sure that each and every student has a comprehension of the problem, I make certain that everyone makes a prediction.

00:04:08 I have the students tackle the problem with focus by limiting the time they are allotted to think about it.

00:05:00 Instructional Class Rounds: With two teachers (T1 and T2), we support and assist the students who are not able to come up with a solution idea.

- We have them recollect the previous lesson.
- We encourage and praise them.

00:07:10 Transition from Individual Learning to Small Group Learning.
Guidance based on individual learning styles

1. Students who want to learn from a teacher.
 - Students who solved the problem go to T2
 - Students who have difficulty go to T1 .
2. Students who want to discuss the problem with friends.
3. Students who want to solve the problem on their own. (Using Hint Cards)

00:09:45 By looking at the figure from a different angle (by tilting one's head to the right or by turning one's notebook to the left), I have them notice that they can apply what they learned from the previous lesson.

00:12:22 By looking at the figure from a different angle (by tilting one's head to the right or by turning one's notebook to the left), I have them notice that they can apply elements from the previous lesson.

- 00:13:35 I have a student, who solved the problem, write the solution on the chalkboard and prepare for a presentation.
- 00:14:22 By looking at the figure from a different angle (by tilting one's head to the right or by turning one's notebook to the left), I have them notice that they can apply elements from the previous lesson.
- 00:19:40 Transition from Small Group Learning to Whole Class Learning: It is time to listen to the presentations. I have them stop working and pay attention to the presenter. I make them make a clear transition. I support and assist the presenters to give them confidence.
- 00:21:06 The whole class praises and acknowledges the presenter with applause.
- 00:22:27 The whole class praises and acknowledges the presenter with applause.
- 00:22:57 We acknowledge the different methods each person thought of using and praise each other for solving the problem and working hard on it.
- 00:23:45 I support and assist the students to come up with their own ideas.

The Goal of Instructional Classroom Rounds:

1. Students who are not able to solve the problem
 - First, I have them divide the quadrilateral into two triangles.
 - I have them draw a straight line that is parallel to the base of the triangles (a diagonal line through the quadrilateral) and hits the vertex.
2. Students who are able to, solve the problem.
 - I have them think about whether other methods exist.

- 00:26:50 Transition from Individual Learning to Small Group Learning.

Guidance based on individual learning styles:

- Students who solved the problem go to T2.
- Students who have difficulty go to T1.

I want the students to find more than one answer, as many different solution methods as possible. Furthermore, I want the able students to think about how many ways there actually are to solve the problem.

- 00:31:50 I ask a student who found all eight solutions to write the answers on the chalkboard.
- 00:36:40 I also support and assist the student who is writing the solutions on the chalkboard.
- 00:44:46 As a more challenging application, I ask the student, who found all eight solutions, to think about whether a pentagon can be changed into a triangle with the same area.

- 00:46:54 I have the students notice the usefulness of assigning symbols to each angle of the quadrilateral.
- 00:47:33 I have the students raise their hands to confirm the methods they used and give them a sense of satisfaction and accomplishment.
- 00:48:40 I have the students reconfirm the content of the day's lesson visually on the computer.
- 00:50:00 I pose a developmental problem to the students who show interest. I assign it as homework and make it open-ended.
- 00:50:25 I praise the students for participating enthusiastically in the problem solving during class.
- 00:50:48 I make sure students do the ritual closings properly.
- 00:50:50 Presently at this school, we are employing a learning model of team teaching with a "main" and "sub" teacher which allows class organization based on students' mastery levels.