

## **Goals for Session 6**

- Describe and give examples of questions for different purposes
- Examine use of questions in conversations between a teacher and students
- Write sample questions for different purposes

## Links to Previous Work

- Students' responses to questions are a window into students' thinking.
- Sometimes teachers are not confident about the inferences they make from written work and want further information to help make instructional decisions.
- Teachers' questions serve many different purposes, but they all are ultimately designed to promote student learning.

# **Control of Information**

Teachers' questions effectively control the flow of information in a classroom.

It is important to examine different purposes of teachers' questions.

## Ways I Asked for Information

Think about the kinds of questions you typically ask students.

- How would you categorize those questions?
- When do you tend to ask the most questions?

Write four or five examples of questions that are as different as possible from each other.

- What was happening when you asked those questions?

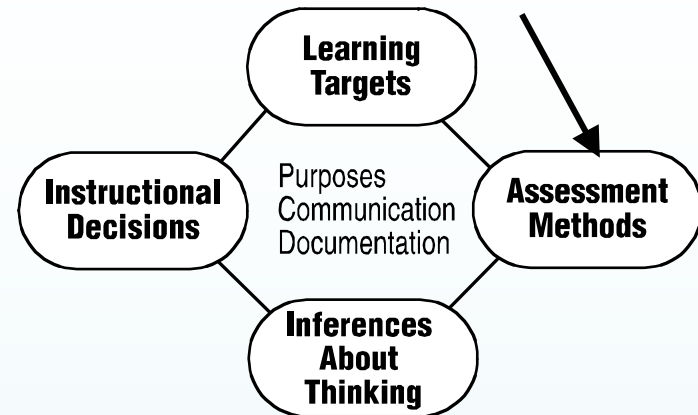
For each question, write one or two words that describe your purpose for asking that question.

# What Is the Purpose?

- There are many ways to categorize questions, but in the context of classroom assessment, an important part of questioning is the teacher's purpose for asking questions.
- That is, what is a teacher trying to accomplish?

# Assessment Methods

**Questioning is at the heart of oral assessment.**

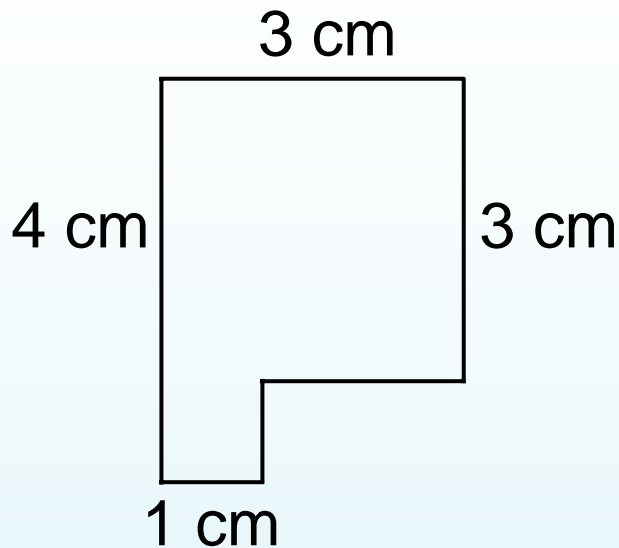


- Selected-response: multiple-choice, matching, true-false
- Constructed-response: short answer, open-ended questions
- Observation: individual work, group work, presentations
- Conversation: questions and class discussions, interviews

# Grouping Questions by Teacher's Purpose

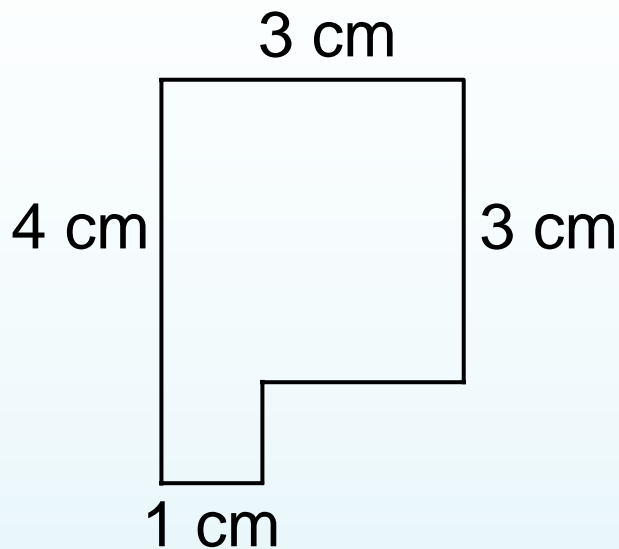
- Engaging:** invite students into a discussion, keep them engaged in conversation, invite them to share their work, or get answers “on the table”
- Refocusing:** help students get back on track or move away from a dead-end strategy
- Clarifying:** help students explain their thinking or help you understand their thinking

# Engaging Questions



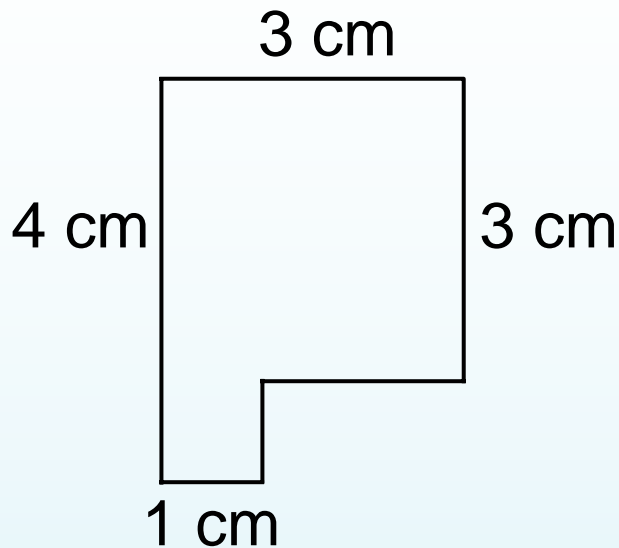
- Engaging questions invite students into a discussion, keep them engaged in conversation, invite them to share their work, or get answers “on the table.”
- These are “open” questions that invite students into a conversation.
- **“How can we find the missing measurements?”**

## Refocusing Questions



- Refocusing questions help students get back on track or move away from a dead-end strategy.
- These questions respond to thinking that seems “dead end.”
- **“If the figure is a large rectangle with a piece cut out, what do you know about the large rectangle?”**

# Clarifying Questions



- Clarifying questions help students explain their thinking or help you understand their thinking.
- Bob says that the missing measurements are 1 cm and 2 cm, and the teacher asks, **“How did you find those?”**

# Integrating the Purposes for Questions

- Engaging questions can help “thread” a discussion by involving many students in the conversation.
- Refocusing questions can help keep a discussion from going off on a tangent.
- Clarifying questions can help students self-check whether their contributions “fit.”

# Questions in One Class

Now that we have a sense of several purposes of questions, let's see how they play out in one classroom.

# Identifying Purposes of Questions

- For each question, identify what you think is the teacher's purpose:
  - Engaging
  - Refocusing
  - Clarifying

## Conversation with Students

Teacher **How can you can move your pieces across to the other side if our card was  $\frac{8}{10}$  ?**

Sue Instead of  $\frac{8}{10}$ , you could use  $\frac{2}{5}$  —not  $\frac{4}{5}$ —and you could go to  $\frac{4}{5}$  or  $\frac{8}{10}$  .

Teacher **Could you go  $\frac{4}{5}$  and then go  $\frac{8}{10}$  ?**

Sue No. Only one of them.

Teacher **Why can you go  $\frac{4}{5}$  ?**

Sue Because  $\frac{8}{10}$  and  $\frac{4}{5}$  are the same. Both of them would work. Just use the row you need to finish.

## Conversation with Students, continued

Teacher **Is there a way I could move two pieces rather than one?**

Joe You can first go to  $\frac{4}{10}$ . That would be half way, and then you can go to  $\frac{4}{5}$ .

Teacher **Tell me how you're thinking about that.**

Joe They're both equivalent so when you go halfway ... (hesitates)

Teacher **Where did you move to first?**

Joe  $\frac{4}{10}$ .

## Conversation with Students, continued

Teacher **Okay. Can I move the whole  $\frac{4}{5}$  now?**

Joe  $\frac{2}{5}$  ?

Teacher **Does  $\frac{2}{5}$  work?**

Joe  $\frac{2}{5}$  plus  $\frac{4}{10}$  would equal  $\frac{8}{10}$ .

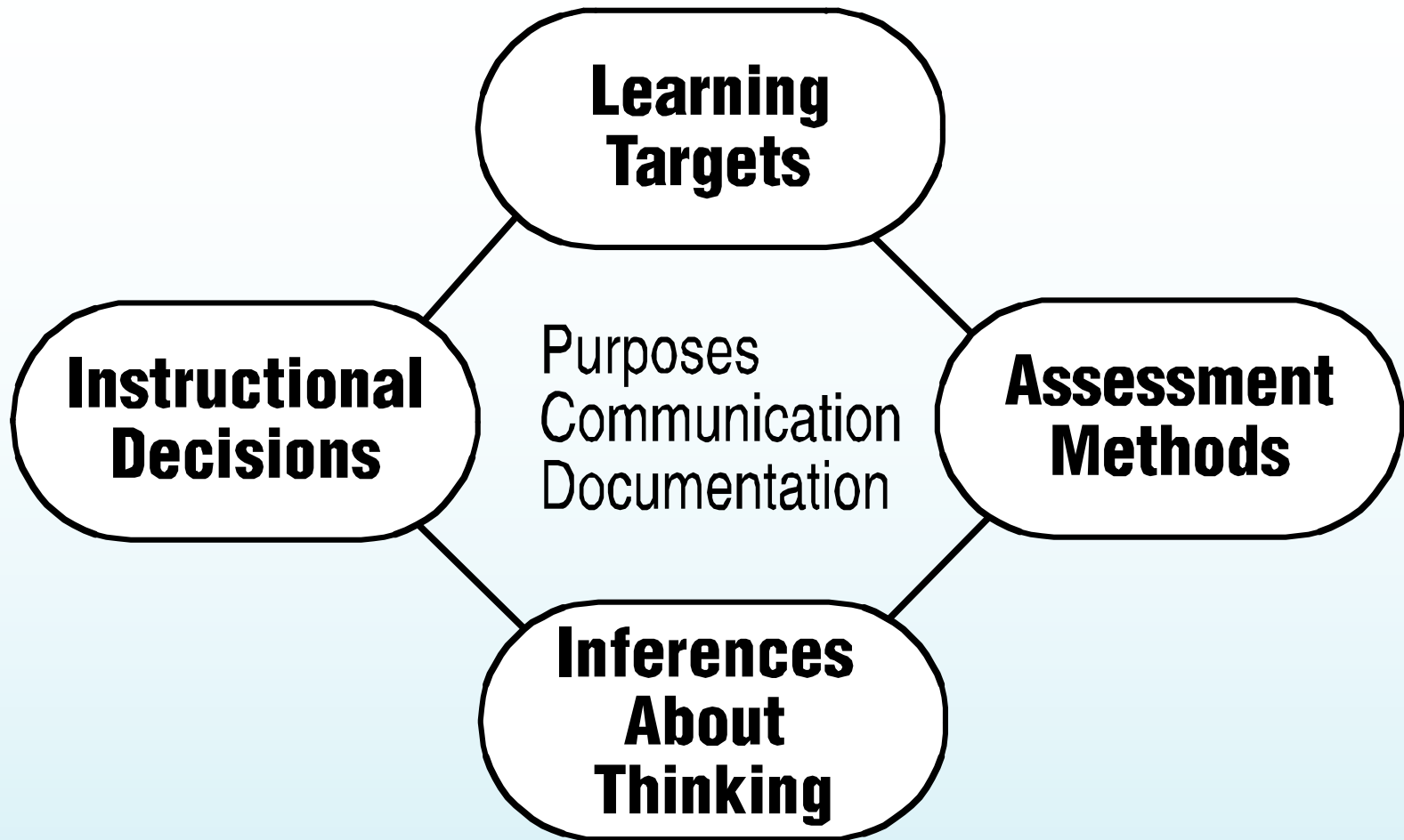
Teacher **How do you know?**

Joe  $\frac{2}{5}$  equals  $\frac{4}{10}$  and  $\frac{4}{10}$  plus  $\frac{4}{10}$  is  $\frac{8}{10}$ .

# Planning for Questioning

One way to apply what we have discussed about questions is to choose something we teach and prepare questions that will reveal different kinds of thinking.

# Model for Classroom Assessment



# Stumbling Blocks, Part 1

Think about how you could help students understand the concept of fractions.

1. What are the learning targets for your grade related to fractions?
2. What kinds of thinking about fractions do you want students to be able to demonstrate?

## Stumbling Blocks, Part 2

3. What are major stumbling blocks for students related to understanding fractions?
4. Write a sample problem you might use.

## **Stumbling Blocks, Part 3**

5. Write two questions that might reveal each kind of thinking.

## Homework for Session 6

- Put a tape recorder on your chair (so it is not obvious) and record lessons from two different days. Turn the recorder on and let the tape run.
- Listen to the tapes and tally the purpose of each question you ask. If you have trouble classifying some questions, describe what was happening in the class at that time.
- What do you notice about the pattern of tallies?

# **Literature Connections: Problem Solving**

Knowing a variety of ways to approach a problem is one characteristic of efficient problem solvers.

Riddles are a way to help students think about multiple approaches to a situation.

## Summary of Session 6

- Recognizing different purposes for questions can help teachers become more skilled in asking effective questions.
- Analyzing questions in transcripts is one way to reflect on effective and ineffective questions.
- Instructional planning should include designing clarifying and probing questions that can reveal students' thinking.