

Activity 2.11A

Connections to the mathematics TEKS

(2.11) The student organizes data to make it useful for interpreting information.

The student is expected to:

- (A) construct picture graphs and bar-type graphs.

Students use sticky notes to draw pictures of ways they came to school today (e.g., walk, bike, car, bus). Students create a pictograph using the sticky notes with one picture representing one student's mode of transportation that day. Using the transportation graphs, students answer questions such as "What can we tell about today's weather by looking at the ways students came to school?" and "How many more people rode the bus than walked today?"

ASSESSMENT CONNECTIONS

Questioning . . .

Open with . . .

- Tell me about your graph.

Probe further with . . .

- How did you organize the information for your graph?
- How did you decide how to set up your graphs?
- Which way did most students come to school today?
- Which way did the least number of students come?
- What does each picture represent?
- Can you create a bar-type graph in your math journal that shows the same information?
- How did you change your data display from the pictograph to a bar-type graph?
- How are your graphs alike? How are they different?
- Did more students come to school by bus or did more come by car? How many more? How do you know? How did you use the graph to answer this question?

- Can you generate other questions that can be answered using the graph that we made?
- How can you use the graph to answer these questions? Can you read the answer to the questions right from the graph? Do you need more than one part of the graph to answer the questions?
- What can we tell about today's weather by looking at the ways students came to school? Why? Would you expect the graph to look different if the weather was different? How? Why?

Listen for . . .

- Does the student accurately interpret the graphs?
- Do the student's explanations match the written work?
- Is the student talking about the information in the graph?
- Are the student's explanations reasonable?

Look for . . .

- Can the student accurately collect, organize, and display data?
- Can the student locate information on a graph?
- Does the student accurately translate the information in a pictograph to a bar-type graph?
- Does the student label the graphs?
- Can the student generate and answer problem-solving questions from the graph?