

(2.9) Measurement. The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric, and customary systems) of length, weight/mass, capacity, and time.

(2.9.a) Measurement. The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric, and customary systems) of length, weight/mass, capacity, and time. The student is expected to identify concrete models that approximate standard units of length and use them to measure length.

Clarifying Activity with Assessment Connections

Students use models of approximate standard units (for example, decimeter craft sticks, centimeter cubes, inch tiles, or meter strings) and work in pairs to measure objects. For example, the students use craft sticks to measure the length of books.

Assessment Connections

Questioning . . .

Open with . . .

- How did you measure the length of your book?

Probe further with . . .

- How many craft sticks did you use to get your answer?
- Did your craft stick train end exactly with the end of your book?
- If not, how did you decide to report the total number of sticks to measure the book?

Listen for . . .

- Does the student's work match his or her explanation?
- Does the student use mathematical vocabulary to explain his or her answer?
- Does the student use a number and a unit to report the measurement?
- Is the student's explanation logical and reasonable?

Look for . . .

- Do the sticks begin at the start of the book?
- Does the student line up the sticks end to end?
- Does the student report the length to the nearest whole unit?

Future TEKS Connection

- Grade 3 TEKS Connection 3.11

(2.9.b) Measurement. The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric, and customary systems) of length, weight/mass, capacity, and time. The student is expected to select a non-standard unit of measure such as square tiles to determine the area of a two-dimensional surface.

(2.9.c) Measurement. The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric, and customary systems) of length, weight/mass, capacity, and time. The student is expected to select a non-standard unit of measure such as a bathroom cup or a jar to determine the capacity of a given container.

Clarifying Activity with Assessment Connections

Students are given a concrete model that approximates a particular standard unit. The students find other objects that approximate that same measure. For example, after filling a one-cup measuring cup with rice, students select from a variety of containers the ones that hold about one-cup. Students check their predictions.

Assessment Connections

Questioning . . .

Open with . . .

- How did you decide which containers hold about one cup?

Probe further with . . .

- How do you know you have one cup of rice? (I filled it to the line without going over.)
- How did you choose the containers that you predicted would hold about one cup?
- How did you find out whether a container holds more than, less than, or approximately one cup?
- How can you use the rice to determine if the container holds approximately one cup?
- What does it mean if the rice overflows and does not all fit in the container? Does the container hold more than, less than, or approximately one-cup?

- What would happen if instead of rice, I had one-cup of water? Which containers would hold approximately one-cup of water? Why? How do you know?

Listen for . . .

- Can the student determine and explain whether a container holds more than, less than, or approximately one-cup? (For example, does the student know if the rice is spilling over the container, the container holds less than one-cup?)
- Are the student's justifications reasonable?

Look for . . .

- Does the student randomly pick containers or does the student use a systematic approach to deciding which containers hold approximately one cup?
- Does the student fill the one-cup container with rice to the line without overfilling?
- Does the student independently use the rice to check predictions?
- Does the student demonstrate conservation of measurement? (That is, a cup is a cup.)
- Does the student check his or her prediction?

Future TEKS Connection

- Grade 3 TEKS Connection 3.11

(2.9.d) Measurement. The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric, and customary systems) of length, weight/mass, capacity, and time. The student is expected to select a non-standard unit of measure such as beans or marbles to determine the weight/mass a given object.