

ME/SLED Project Design Write-Up

Virgine Rodrigues, John Stevens, Claire Guzinski, Abby Hughes, Elisabeth Drechsel

SOL(s) 6.1

The student will describe and compare data, using ratios, and will use appropriate notations, such as $\frac{a}{b}$, a to b , and $a:b$.

6.2a student will investigate and describe fractions, decimals, and percents as ratios.

WIDA Can-Do descriptors

Level 1 students will be able to...

Match oral statements to illustrations in the book.

Follow one step oral directions to "scale-down"

Answer leading WH questions about the reading

Match words to illustrations while reading

Draw in response to the prompt.

Reproduce the drawing according to the directions.

Level 2 students will be able to...

Follow two step oral instructions to "scale-down"

Match information from oral descriptions to the drawing and illustrations in the text

Describe pictures, objects that are "scaled-down" or "scaled-up" in real life

Locate and classify information and instructions in the text

Identify facts and explicit messages about the process in the text/instructions

Reproduce the drawing from oral/written instructions

Level 3 students should be able to...

Select and order information from oral instructions

Follow multi-step oral instructions on how to "scale-down"

Make predictions about what it will mean to "scale-down" based on the text

Describe the process involved in "scaling-down" based on the instructions given orally or in the text

Identify the main ideas from the text associated with the activity

Use context clues to determine the meanings of some of the more confusing words in the text or instructions

Level 4 students should be able to....

Analyze and apply the instructions given orally

Discuss the concept of scaling and come up with every-day examples

Offer creative solutions and predictions as to what it means to scale and give some examples

Interpret the instructions and hidden meaning in the text

Find details/examples that support the main idea of scaling in the text

Identify the figures of speech used in the text

Create original ideas based on the text or discussion

Level 5 students should be able to...

Construct drawing based on oral directions/discourse

Make connections to everyday situations based on oral discourse about scaling

Draw conclusions about the explicit and implicit meaning of the book

Apply information about scaling to new contexts

Materials

Book: Cut Down to Size at High Noon by Scott Sundby

Copies of pages 1-11 of Cut Down to Size at High Noon (1 per student)

Whiteboard/chalkboard (for instructors to conduct examples)

Copies of written activity directions including a sketch (1 per student)

Posterboard with grid lines that are 1 inch x 1 inch (1/2 a posterboard per student)

Cartoons superimposed over 8 ½ x 11 inch grid paper (at least one per student)

Regular pencils and erasers

Colored pencils, markers, crayons, etc.

Activity

(1) Read Cut Down to Size at High Noon to page 11. We will read the story out loud while the students follow along with their copies. We will pause every so often to give explanations of words and concepts as well as to check for comprehension. Key words will be written on the board. This will allow students to experience the story by hearing the words, reading the texts,

and looking at the pictures, thus maximizing understanding.

(2) All examples given in Cut Down to Size are of objects that have are scaled down (big objects made small). We will discuss how the scale factor for these examples can be calculated using ratios. We will write the examples on the board so that the students can follow along with the explanation. This will allow the students to read the explanation, listen to the explanation, and follow along with the examples.

(3) Ask students to brainstorm what it would mean to “scale up” a drawing and ways for doing that. Ask the students to brainstorm objects that might need to be scaled up. Using one of these student-generated objects, we will then work through an example of “scaling up on the board. This will allow the students to see an example instead.

(4) Have students select their small cartoon from those created by us. During this time, also distribute pencils, erasers and posterboards for students to create scaled-up drawings of the cartoon characters. Students will need to look at the design in each $\frac{1}{2}$ inch x $\frac{1}{2}$ inch square of the small cartoon and copy that square in the corresponding square on the posterboard. Only regular pencils and erasers should be used at this point. Students will be given written instructions for this part of the project and a diagram to illustrate these directions. This will allow students to create their own visual representation of the concept that was explained earlier. They will hear the instructions verbally, watch and example, and be provided with the opportunity to read and re-read the directions as needed.

(5) While they are working, have students calculate the scale factor of their drawings.

(6) If time allows and once the pencil sketches have been checked, the kids may color their posters.