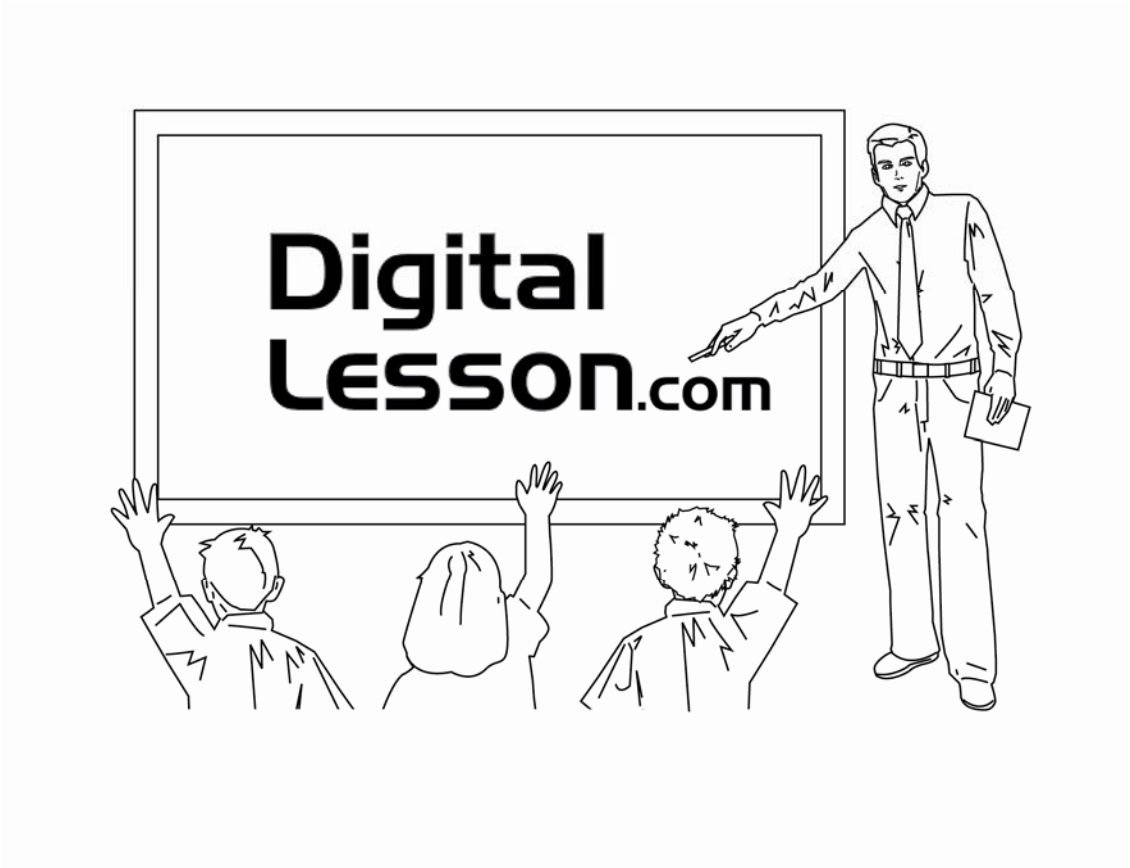
Cereal Box



Surface Area

Cereal Box Surface Area

Cereal Box Surface Area

Directions:

1. Calculate the area of each section of the box using the data on your cereal box net drawing and the table below. Let the longest side equal length. (Round area answers to the nearest hundredth.)
2. Label the area of each section on your cereal box and on the net on your worksheet.
3. Find the surface area of the entire box.

Section Number	Section Length	Section Width	Section Area
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
		Cereal Box Surface Area:	

Cereal Box Surface Area

_____

_____

_____

Cereal Box Volume and Weight

Cereal Box Volume

To find the volume of a box of cereal (also known as a rectangular prism) just multiply the area of the base (length times width) by the height. The formula is $V = l \cdot w \cdot h$.

Use your cereal box dimensions to find its volume. (Round the volume to the nearest hundredth.)

Length: _____ Width: _____ Height: _____ Volume = _____

Cereal Box Weight

Look on the cereal box to find the weight of the cereal in ounces. Weight = _____

Ratio of Cereal Weight to Volume in Comparison to Other Brands

	Cereal Brand	Weight	Volume	Ratio (weight/volume)
You	_____	_____	_____	_____

Now compare the data with that of four other groups in your classroom.

1)	_____	_____	_____	_____
2)	_____	_____	_____	_____
3)	_____	_____	_____	_____
4)	_____	_____	_____	_____

Cereal Box Mathematics Scavenger Hunt

Find at least three **other** examples of mathematics on your cereal box.

1. _____

2. _____

3. _____

Cereal Box Surface Area

Teacher Tips

(1 of 2)

Lesson Description: Cereal Box Surface Area is a group project in which students create a net of a rectangular prism from a cereal box and then use it to determine the surface area and volume of the box. Students also find the weight of the cereal and use it to determine weight to volume ratios. Finally, students complete a quick mathematical scavenger hunt on their cereal box. The finished cereal box projects are perfect for classroom display.

Math Content: Surface Area, Volume, Measurement, Ratios, Rectangular Prism, Fractions, Decimals, Net of a Rectangular Prism, Converting Fractions to Decimals

Time Required: 1-2 Class Periods

Cereal Box Surface Area includes:

* 3 Cereal Box Surface Area student worksheets
* 3 Cereal Box Surface Area student worksheet Answer Keys
* 2 Cereal Box Surface Area Teacher Tips pages
* 1 Cereal Box Surface Area Cover Sheet **9 pages in all!**

Materials Needed: Empty cereal boxes (one for each group), rulers, markers

Suggested Grade Level: 5th - 8th

Teacher Testimonial:

Cereal Box Surface Area is a group project that puts surface area and volume into a context that students can relate to. Whether it's Lucky Charms or Raisin Bran, virtually all students eat cereal. Breakfast will never be the same again! This project will help students see mathematics everywhere in the world around them. The project itself is packed with powerful math and will make the concepts of surface area and volume tangible for your students.

Teacher Tips:

* Have students display their work on the cereal box as well as their worksheets. One way to do this is shown on the answer key for the cereal box net. To show students the format you prefer you can either draw a diagram on the board or (if you like the model given) hand out the answer key as a sample page.
* If the inside of the box is printed, you can attach a sheet of paper with student work to the net.
* All flaps on the cereal box will not be perfect rectangles. Have students estimate the area of these sections by using a reasonable value for each length and width.
* As the teacher, you may choose to only complete the cereal box and the first two worksheets on calculating the surface area of the box. The third worksheet is optional.
* Cereal is not sold by volume but by weight. On the volume worksheet students find the ratio of weight to volume. Students can discuss what this ratio tells us. What factors might determine the weight to volume ratio? (one cereal is lighter, one box is smaller, etc.)