



LEAP FORWARD! THIRD GRADE

Thank you for choosing to share your students with sweetFrog. We are pleased to offer our Leap Forward Field Trips to teachers and their students as a fun way to practice fundamental lessons being taught in school. Each lesson plan has been carefully designed by teachers to match skill levels for each grade. Every sweetFrog field trip ends in a sweet reward (a delicious cup of frozen yogurt + one topping of your choice) — making this excursion something both students and teachers can get excited about.



TEACHER'S LESSON *Follow the green to correlate with the student worksheet.*

Welcome time: Have students come in, sit at tables, and fill out name tags.

Welcome students! What do we do here? (make yogurt!) Who has been here before? How does **sweetFrog** relate to math? (weighing yogurt, purchasing yogurt, making yogurt)

What do you notice about the cups? (sizes) Does it make a difference which cup I use? (Yes, because different sizes mean different amounts. The cost of yogurt would differ if I have a bigger or smaller cup)

Demo:

Ask the students "how do we measure the yogurt"? (Put yogurt in a cup and weigh on the scale.) Ask, "What type of scale is this?" Show the small cup to the students. Small = 12 oz.

a. If I fill this up to the top, how much should I have in here? (12 oz) **question 1**

b. Ask the students **question 2** on their worksheet. "If the cup is filled with water to the top of the cup, will it weigh the same as the frozen yogurt?" This is a thinking question for them. They will make their best guess and then you will demonstrate. Fill one cup to the top with the frozen yogurt (you will have to pack in the frozen yogurt to get to 12 oz.) and one with water (the water fill line is the lower line in the 12 oz. cup). Weigh each of the cups on your scale and ask the students to answer. **question 3, 4** ("Record the weight of the frozen yogurt and the weight of the water")

c. Show the difference between liquid and solid volume/mass. Ask the students to answer **question 5** ("Did it make a difference if the cup is filled with a liquid or a solid?")

Next, you will have a sample of frozen yogurt and melted yogurt. Use the thermometer and measure the temperature of the melted yogurt and have the students record the data on their worksheet. **Question 6** Do the same with the frozen yogurt. **Question 7** Ask the students, "Which yogurt would they like to eat?" "Does temperature make a difference in the weight of the yogurt?" **Question 8** (This is another thinking question.)

Fill another 12 oz. cup to the top with melted yogurt mix. Weigh the melted yogurt and ask the students to answer **Question 9** "What is the weight of the melted yogurt mix?" Show the two samples of frozen and liquid yogurt so the students will again see the difference between liquid/solid weight, mass, volume.




Ask the students how much of the ingredients would you need to fill the machine? Would we measure with our ounces or should we use something bigger? Show the students the gallon sizes of product and compare to smaller ounce cups.

Draw Scoop and Cookie/get froyo! Instruct students to turn their worksheet over for step by step instructions showing how to draw **sweetFrog's** fun mascots. While the students are drawing, have one table at a time come up, get their small yogurt, and follow the **Hands On** section of their worksheet. They will: weigh yogurt, weigh yogurt with one topping, and calculate the cost of their yogurt with one topping. (They can practice at the tables with the play money.) **questions 10, 11, 12, 13, 14**

The **Hands On** section of the student worksheet is designed to help collect data for graphing. Please make sure they answer all questions in the hands on section for further problem solving and graphing back at school.



Name: _____

1. How much should the cup hold when filled to the top with frozen yogurt? _____
2. If the cup is filled with water to the top, will it weigh the same as the frozen yogurt? Circle: **Yes** or **No**
3. Record the weight of the frozen yogurt. _____
4. Record the weight of the water. _____
5. Did it make a difference if the cup is filled with a liquid or a solid? Circle: **Yes** or **No**
6. What is the temperature of the melted yogurt mix? _____ 
7. What is the temperature of the frozen yogurt mix? _____ 
8. Does temperature make a difference in the weight of the yogurt? Circle: **Yes** or **No**
9. What is the weight of the melted yogurt mix? _____ 

When instructed, turn your sheet over and draw Scoop and Cookie!

Hands On for graphing at school.

Wait until your table is called, then get a small cup, carefully follow the steps below, and record your answers. Keep in mind that different sizes equal different costs.

Weigh your frozen yogurt: _____

Add one topping and weigh again: _____

What topping did you get: _____

What flavor(s) of frozen yogurt did you get: _____

How much does your frozen yogurt + one topping cost? Multiply the weight by .52 on your calculator: _____

Count out your money and hand to the cashier.

Eat and Enjoy!





HOW TO DRAW SCOOP & COOKIE

Look for the shapes on the right.
Practice at the bottom of the page!



1. A large circle representing the head.

2. Two smaller circles added to the top of the head for eyes.

3. Two small circles added inside the eye circles for pupils.

4. A wide, curved line added to the bottom of the face for a smile.

5. Two small circles added to the sides of the face for cheeks.

6. The final colored frog character with a green body, orange mouth, yellow cheeks, and large white eyes with black pupils.

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2. Two smaller circles added to the top of the head for eyes.

3. Two small circles added inside the eye circles for pupils.

4. A wide, curved line added to the bottom of the face for a smile.

5. Two small circles added to the sides of the face for cheeks.

6. A crown shape added to the top of the head.

7. The final colored frog character with a green body, orange mouth, yellow cheeks, large white eyes with black pupils, and a pink crown.

8. The final colored frog character with a green body, orange mouth, pink cheeks, large white eyes with black pupils, and a pink crown.



TEACHER'S LESSON *SOL strands apply to Virginia schools.*

This lesson plan is designed to target SOL math strains:

3.8: The student will determine, by counting, the value of a collection of bills and coins whose total value is \$5.00 or less, compare the value of the bills and coins, and make change.

3.9: The student will estimate and use U.S. Customary and metric units to measure:

- b. liquid volume in cups, pints, quarts, gallons, and liters;
- c. weight/mass in ounces, pounds, grams, and kilograms:

3.13: The student will read temperature to the nearest degree from a Celsius thermometer and a Fahrenheit thermometer. Real thermometers and physical models of thermometers will be used.

For further discussion and review at school after your visit to **sweetFrog**:

3.17: The student will

- a. collect and organize data, using observations, measurements, surveys, or experiments;
- b. construct a line plot, a picture graph, or a bar graph to represent the data; and
- c. read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

Set Up Instructions

Each table will be a station with students and a chaperone.

Set up on each table:

- name tags, **sweetFrog** coloring sheet, worksheet, pencils, colored pencils/crayons
- play money bag with coins (pennies, nickels, dimes, quarters and dollars)
- wipes
- calculator

Demonstration cart:

- a scale, thermometer
- all 3 cup sizes offered at **sweetFrog**
- 12 oz cup filled to the top with frozen yogurt, 12 oz cup to fill at bottom line with water
- melted yogurt
- gallon jugs, $\frac{1}{2}$ gallon jugs (to show size differences)