Fifth Grade
Problem Solving Tasks – Real World Projects
Teacher Materials

Summer Dreamers 2013
By the end of this project each student should have real-world knowledge of figuring out portion sizes using fractions, decimals and percents. This project will focus on the following concepts previously learned:

- Fractions
- Decimals
- Percents

MATERIALS:

For each student:

- Fraction Sundae Pattern
- Crayons
- Tape or glue Stick
- Index Cards
- White Chart Paper
- Scissors

Each student will display his/her poster of all of the necessary information. It is suggested that students present results to the class.
FRACTION SUNDAE PROJECT

1. Cut out the dish and set it aside.
2. Cut out the ice cream pattern. Trace the pattern between 12 and 15 times on white paper.
3. Cut out each scoop of ice cream and a paper cherry.
4. Color the scoops to make between 4 and 6 flavors of ice cream.
   Ex: chocolate, strawberry, rocky road, mint, etc.
5. Describe your sundae in fractions. How many scoops of ice cream does it have in all? That will be the denominator of your fractions. How many scoops of each flavor does your sundae have? Those numbers will be the numerators of your fractions.
   Ex: 1/8 chocolate, 3/8 strawberry, 2/8 rocky road, etc.
6. Make sure to simplify your fractions if they can be!
7. On an index card, create a table with a column for FLAVOR, FRACTION, DECIMAL, AND PERCENT (4 columns) and a row for each flavor of ice cream (between 4 and 6).
8. Fill in each flavor of ice cream that makes up your fraction sundae.
9. Fill in each fraction that represents the ice cream flavors (next to the appropriate flavor). Ex: strawberry ½
10. Convert the fraction to an equivalent decimal. Put your answer in the appropriate column, next to the appropriate fraction. Ex: strawberry ½, 0.5
11. Convert each decimal into a percent. Put your answer in the appropriate column next to the appropriate decimal. Ex: strawberry ½, 0.5, 50%
12. Glue your final table to the front of the Fraction Sundae (on the bowl or next to it).
13. Finish by decorating the background paper where your project is attached (see example picture).
FRACTION SUNDAE TEMPLATE

Ice Cream Scoop

Sundae Dish
FRACTION SUNDAE PROJECT EXAMPLE
By the end of this project each student should have real-world knowledge of what is required to increase the size of a recipe to accommodate a larger group of people using what they know about equivalent fractions, ratios, and proportions. This project will focus on the following concepts previously learned:

- Operations involving Fractions
- Equivalent Fractions
- Proportional Relationships

MATERIALS:

For each student:

- Project Worksheet: “Adjusting a Recipe”
- Computer/Internet Access
- Poster Paper/Chart Paper (Optional)
- Markers
- Calculators

Each student will display his/her poster of all of the necessary information. Students can work with a partner or individually. It is suggested that students present results to the class.
Adjusting a Recipe


2. Rewrite the recipe for twice as many people. Show your work and explain your strategies.

3. Rewrite the recipe for half as many people. Show your work and explain your strategies.

4. Rewrite the recipe to accommodate the number of students in your class and your teacher. Show your work and explain your strategies.

5. Explain how you would adjust your recipe to feed everyone in your class and don't forget your teacher!

Be certain to use correct spelling! Present your information on chart paper in a CREATIVE way. Make certain that all information is included.
<table>
<thead>
<tr>
<th>Category</th>
<th>Kitchen Assistant</th>
<th>Line Cook</th>
<th>Sous Chef</th>
<th>Executive Chef</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Show your work</strong></td>
<td>Work is not shown or calculations include more than 3 mathematical errors.</td>
<td>Some work is shown or calculations include 2-3 mathematical errors.</td>
<td>All calculations are shown but include 1-2 mathematical errors.</td>
<td>All calculations are shown and completed accurately.</td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td>Inappropriate strategy used.</td>
<td>Used strategy that was partially useful, but did not lead to full solution.</td>
<td>Problem solved using appropriate strategy.</td>
<td>Problem solved using efficient strategy.</td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>Explanation is unclear.</td>
<td>Some parts of explanation are clear.</td>
<td>Explanation is reasonably clear.</td>
<td>Explanation is very clear.</td>
</tr>
<tr>
<td><strong>Spelling</strong></td>
<td>Project contains more than 5 spelling errors.</td>
<td>Project contains 4-5 spelling errors.</td>
<td>Project contains 1-3 spelling errors.</td>
<td>Project contains no spelling errors.</td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
<td>Project is not presented in a creative or effective way.</td>
<td>Some parts of the project are presented in a creative or effective way.</td>
<td>Project is presented in a creative and effective way.</td>
<td>Project is presented in a very creative and effective way.</td>
</tr>
</tbody>
</table>