

TITLE:	<i>"Using Twitter to Learn Estimation Skills"</i>
LESSON DEVELOPER:	The LearningFront Team
CONTENT AREA AND GRADE:	Mathematics - Grade 5
PURPOSE:	Work in Progress: Please add your suggestions to this WikiTask for improvement. Thank you.

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STANDARDS:

Mathematics Content Standard: Number Relationships and Computation – Students will describe, represent and apply numbers and their relationships and will estimate and compute using mental strategies and social networking tools.

Indicator: Students will use estimation to solve real world problems with fractions and decimals.

PERFORMANCES:

The students will demonstrate estimation skills by entering tweets in a Twitter timeline to solve a real world problem.

SETTING:

Real World Setting: Student Council Fund-Raiser

The student council has asked students to suggest ways to raise \$200.00 for a school banner. The fund-raising drive will last 6 weeks. You want to figure out if \$200.00 can be raised in 6 weeks by recycling the aluminum cans that the students' families use. If the answer is "yes," you will present this plan to the student council. If the answer is "no," you will not present this plan.

LEARNING:

"Using the Twitter Timeline to Format a Mathematics Performance Task"

Note: The following performance task template and sample teacher tweets are offered as a "Work in Progress" to explore how mathematics might be integrated into the Twitter timeline. We recognize that additional tweets will be necessary when the task is activated and students respond. Please adjust the teacher tweets to meet the differentiated needs of your students prior to and as this task

is taught through online or blended online and classroom settings. *Copy and paste your customized tweets into the Twitter timeline as instruction evolves with your students.*

Teacher Tweet 1: The Task

Compose new Tweet...

Read the real world setting for this "Recycling" performance task [Enter Tiny URL].

Content for Tiny URL:

The Task!
<i>"The student council has asked students to suggest ways to raise \$200.00 for a school banner. The fund-raising drive will last 6 weeks. You want to figure out if \$200.00 can be raised in 6 weeks by recycling the aluminum cans that the students' families use. If the answer is "yes," you will present this plan to the student council. If the answer is "no," you will not present this plan."</i>
Close and Return

Teacher Tweet 2: Getting Organized

Compose new Tweet...

You ask your family and some neighbors to save their aluminum cans for one week. Each day you collect and count the cans.

Teacher Tweet 3: Collecting Data

Compose new Tweet...

Make a table to show how many cans each family saved. [Enter Tiny URL]

Content for Tiny URL:

Aluminum Cans Collected								
Family	Mon	Tue	Wed	Thur	Fri	Sat	Sun	Total
Yours	6	9	6	4	5	14	10	—
Smith	4	5	4	6	9	10	14	—
Chen	8	9	6	3	12	7	10	—
McCoy	4	5	3	8	6	1	2	—
Gonzo	3	3	3	2	4	2	8	—
Close and Return								

Teacher Tweet 4: Collecting Data

Compose new Tweet...

Complete the table to find out the total number of cans collected in one week by each family.

Teacher Tweet 5: Averaging

Compose new Tweet...

Now you know how many cans each of the families collected in a week. Find the average number of cans that a family will collect in one week.

Teacher Tweet 6: Explaining

Compose new Tweet...

Explain how to find the average number of cans that a family will collect in one week.

Teacher Tweet 7: Determining the Average

Compose new Tweet...

What is the average number of cans that a family will collect in one week?

Teacher Tweet 8: Reasoning

Compose new Tweet...

Explain why it is important for you to know the average number of cans that a family will collect in one week.

Teacher Tweet 9: Collecting Data

Compose new Tweet...

You know that some families will not participate in an aluminum can recycling project.

Teacher Tweet 10: Collecting Data

Compose new Tweet...

The principal says 4 out of 5 families will probably collect aluminum cans.

Teacher Tweet 11: Converting

Compose new Tweet...

Write 4 out of 5, both as a fraction and as a decimal, so that you can use it more easily.

Teacher Tweet 12: Estimating

Compose new Tweet...

Now you can estimate how many cans will be collected.

Teacher Tweet 13: Problem Solving

Compose new Tweet...

There are 200 families with students in your school. If 4 out of 5 families collect cans, how many families will collect cans?

Teacher Tweet 14: Estimating

Compose new Tweet...

Estimate how many aluminum cans your school could collect in six weeks.

Teacher Tweet 15: Collecting Data

Compose new Tweet...

Check out this flyer from the recycling center [Enter tiny URL].

Content for Tiny URL:

Recycling Center
150 Aluminum Cans = One Pound You will be paid \$.32 for each pound of Aluminum Cans
Close and Return

Teacher Tweet 16: Problem Solving

Compose new Tweet...

Use the information on the flyer to figure out how many pounds of aluminum cans the school could collect in 6 weeks.

Teacher Tweet 17: Making a Data-Based Decision

Compose new Tweet...

Should you present your fund-raising plan to the student council? Tell why you should or why you should not present your plan.

Teacher Tweet 18: Summarizing

Compose new Tweet...

Thanks for helping to solve this task! I liked the way [enter text]. We need to improve [enter text]. Our next task is [enter text].

SCORING:

Mathematics – Brief *Constructed* Response Rubric – Grades 3–8

Score 2	<p>The response demonstrates a complete understanding and analysis of a problem.</p> <ul style="list-style-type: none">• Application of a reasonable strategy in the context of the problem is indicated.• Explanation of and/or justification for the mathematical process(es) used to solve a problem is clear, developed, and logical.• Connections and/or extensions made within mathematics or outside of mathematics are clear.• Supportive information and/or numbers are provided as appropriate.
	<p>The response demonstrates a minimal understanding and analysis of a problem.</p> <ul style="list-style-type: none">• Partial application of a strategy in the context of the problem is indicated.

Score 1	<ul style="list-style-type: none"> • Explanation of and/or justification for the mathematical process(es) used to solve a problem is partially developed, logically flawed, or missing. • Connections and/or extensions made within mathematics or outside of mathematics are partial or overly general, or flawed. • Supportive information and/or numbers may or may not be provided as appropriate.
Score 0	The response is completely incorrect, irrelevant to the problem, or missing.
Notes:	
<ol style="list-style-type: none"> 1. Explanation refers to students' ability to communicate how they arrived at the solution for an item using the language of mathematics. 2. Justification refers to students' ability to support the reasoning used to solve a problem, or to demonstrate why the solution is correct using mathematical concepts and principles. 3. Students need to complete rubric criteria for explanation, justification, connections, and/or extensions as cued for in a given problem. 4. Merely an exact copy or paraphrase of the problem will receive a score of "0." 	
Source: http://mdk12.org/assessments/k_8/mathscoring_bcr.html	

RESULTS:

Organize: I will use the following chart to display student data for each time that I assess and score the same content standard:

Data-Driven Results Disaggregated by All Students and AYP Sub Groups

Directions: Complete this chart for each content standard and aligned scoring tool used to measure student performance in classrooms. In order to judge student growth across assessments, record data from only one scoring tool on one chart. Then, follow these steps:

1. For each student's performance on your scoring tool, enter his or her score in the appropriate cell under the headings for Scoring Results, e.g., 3, 2, 1, or 0 on a four-point rubric. The first example below shows that Jason Anderson scored a 3. His score is entered under the "All Students" heading and under "Black" students.
2. Enter the summary data at the bottom of each assessment column for all students and each sub group.
3. Analyze the results and relate them to the instructional processes used to teach the standards-based lesson to all students, to white students, to black students and so forth, e.g., what worked well, what needs improvement, what was learned for improving instruction and student learning?
4. Edit this table on the TaskBuilderOnline Design Page to add student names, to rename disaggregated groups, or to make other modifications. Also, you may delete these directions from this table after you become familiar with this data analysis process.

Content Standard: *Students will use estimation to solve real world problems with fractions and decimals.*

Students

Scoring Results

Last Name and First Name	All Ss	White	Black	Latino	IEP	EcDis
1. Example: Anderson, Jason	2		2			
2. Example: Anderson, Susan	1				1	
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
# Of students at the Advanced Performance Level						
# Of students at the Proficient Performance Level						
# Of students at the Basic Performance Level						
% of Students equal to or greater than the Proficient Level (Total # of students at the proficient and advanced levels divided by the total number of students)						
% Distance above or below school Annual Measurable Objective (AMO)						

Analyze: I will examine the data in the chart to look for contributing factors over a series of assessments of the same learning standard.

Contributing factors:

Reflect: I will consider the following stems to reflect on the results and instructional strategies I used and others I might benchmark and apply in the future.

As I relate my students' results with my lesson activities, I noticed that...

- (Enter short strategy description) had the most influence on student achievement because:
- (Enter short strategy description) had the least influence on student achievement because:
- (Enter short strategy description) has the most promise for becoming a best practice in my classroom because:

As a follow up I will...

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