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Uncertainty in Everyday Situations

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CMST SCOLLARCITY Lesson Plan Template-Lesson Plan using **TI Technologies**
(Due Tuesday, July 27th)

Submit as hard copy AND electronically through ANGEL

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| Name: Kimberly Lombard |
| Grade level(s)/Subject taught: Grade 7 math |
| Objectives: (Remember... <i>How will the modeling tool help the student better learn the objective?</i>) <ul style="list-style-type: none">• The student will be able to collect and combine data.• The student will be able to show that a large number of trials will produce probability results close to theoretical probability.• The student will be able to successfully use the graphing calculator to demonstrate a basic knowledge of technology in mathematics.• The student will use simulation techniques to estimate probabilities.• The student will interpret probabilities in real-world situations. |
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Items to include in your TI Technologies lesson plan: (use *your* area/discipline/concepts).

For the math teacher:

1. **Write the Mathematical Concept or “key idea” that TI Technologies will be used to teach:** (e.g. Students use mathematical modeling/ multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships)

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| Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations. |
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For your **TI Technologies** lesson and using the following prompts, please provide a rich **one-page, single-spaced** description or a *vision* of your best thinking on a way or ways you might teach the planned lesson using the TI technology. Pay special attention to the modeling package in your description. Also, construct and submit a tentative rubric that you might use with your students. ** see example page 5

“...a rich **one-page, typed, single-spaced**, description or a *vision* of your best thinking...”

Prompts:

1. How will you assess the prior knowledge of the student?
2. How will you begin the lesson?
3. What are the teacher and students doing every 5-10 minutes? (Teacher Actions and Student Actions)
4. How will you assess the learning for the lesson?
5. How will TI be integrated into your teaching? (i.e. you may want to discuss a problem or describe how you might use the chosen modeling package in your plan. How does the model/tool help the concept(s) to be taught)?

Using the TI-84 Application/Probability Simulation, I plan on having my students collect data about real world math and probability. I would begin class by asking if anyone had ever flipped a coin to make a decision. I would give each group 2 post-it notes and ask them to write one thing they already know about flipping a coin on one post-it, write one thing that they want to know about flipping a coin on the second post-it note. One person from each group would then add their post-it to a large chart paper with a T-chart on it, one side stating, “know”, one side stating “want to know”. I would introduce a real life situation about my daughter wanting to only eat sugary Fruity Pebbles and I want her to eat healthy Cheerios. To determine which cereal my daughter will eat, every morning we will flip a coin to decide. If the coin lands on heads, she gets to eat Fruity Pebbles. We will discuss, as a whole group, if this seems fair or not. After discussions of the misconceptions about probability we will begin to flip coins. Day One – every group uses real coins for 50 flips. Note how long the student part of the lesson took after the experiment and charting the findings. Day Two – same lesson, only teacher models the probability simulation on the overhead using TI-84 and view screen. Students use one graphing calculator per person to conduct experiment and chart findings. Again, note how long using the technology took to conduct experiment and chart findings. I would assess the learning for the lesson by having each student fill out another post-it note, this time writing about one thing they learned. I would also give a writing assignment as an assessment with the following questions: Would you rather solve real-life probability questions with or without technology? Explain your answer. Will my daughter get to eat Fruity Pebbles or Cheerios more often? Prove your answer.

The rubric I would use to assess their understanding would look like the following:

- 5 – Assignment is complete, math is correct; work is neat and easy to follow.
- 4 – Assignment is mostly complete, most of the math is correct; work is neat and easy enough to follow.
- 3- Assignment has some missing pieces, some of the math is correct; it takes some effort by the teacher to follow the work.
- 2 – Assignment is missing some major parts, there are several problems with the math, and it takes extra effort on the teacher’s part to follow the work.
- 1 – Little to no significant work.
- 0 – No assignment turned in.



