Families of graph

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# Generic Lesson Plan Template

You should submit this form in addition to any computer generated files/documents/models to your group folder on Angel. Please create a .zip file and upload the group of files as a single archive.

<table>
<thead>
<tr>
<th>Name: Pablo Lopez</th>
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<tbody>
<tr>
<td>Grade level(s)/Subject taught: 9 Algebra A</td>
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## Objectives:
Student will be able to identify families of graph.

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. (approximately ½ page for the teacher role, ½ page for the student role). Also, construct a tentative rubric that you might use with your students (see example)

## Items to include in your lesson plan: (Choose your discipline/concepts from your own area).

1. Write the **Mathematical Concept** or "key idea" that modeling 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)

   Student use mathematical modeling/multiple representation to provide a mean of presenting, interpreting, communicating, and connecting mathematical information and relationship.

   and/or…

1b. Write the **Science Concept** or "key idea" that modeling will be used to teach: (e.g. Organisms maintain a dynamic equilibrium that sustains life).

## Materials:
- Graphic Calculator
- Grid Paper
- Pencils.
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?

Using Graphic Calculator TI 84 I plan on having my students…

Warming up plotting point in grid paper and connecting them to form lines, with this I will make sure they know how to locate points and draw lines in the coordinate plane.

After that I will give them a worksheet with different line equations and some question included, then I will ask them to use their graphic calculators to graph the first set of equations: \( y = x, y = 2x, y = 3x \) and \( y = 4x \), I will walk in the classroom to see if the student are working appropriately and check for understanding, I will use the LCD projector to graph the same equations (modeling) using the TI smart view and then I will ask to write in their worksheet the similarities and differences among the lines, I will ask some students to share their finding and I will write it in the overhead. Then the student will be asked to write a description of this family of lines as well as the characteristics that the lines have in common and to state how the lines are different.

I will explain the students that this lines are of the form \( y = mx \). Then I will ask the student to graph in their graphic calculator steeper lines and I will ask the students to write what happen when the absolute value of \( m \) increase or decrease.

Next I will ask the student to graph the second set of lines: \( y = -x, y = -2x, y = -3x \) and \( y = -4x \). The students will respond the same questions asked for the first set of equations in their worksheet.

I will use the second set equations and questions to check for understanding. Worksheet will be turned in at he end of the class.

RUBRICS

Subject: Algebra A
Grade: 9
Scale: 3

2  Student fully understands the concept and graphs the lines in the graphic calculator correctly.
1  Student has some misconceptions and some difficulty graphing the lines in the calculator.
0  Student shown no work and have many problems graphing the lines in the graphing calculator.
ample: “I was thinking about beginning the class on [modeling X] by using the overhead to ask students what know about X. From this brainstorming session, I might ask them to get into groups and discuss one or more of feas they gave me. After about ten minutes, I would have the students give their ideas on X and write them down transparency so they would be able to see them for the entire hour. From here, I would provide a 10 to 15 minute onstration of the basics of using ________________modeling software. I would use an conceptual example hey would find familiar with such as getting a cold and how it is transmitted. From here, I would have students at computer stations using a prepared guide or tutorial to get them started on basic software usage. I expect that is a time a number of students would “catch on” rather quickly and be able to help others. ................ By the third n, I suspect that most would be well on their way to development of their own or small group models using the ______________ software. My plan of assessment would probably be a group model so they would gain more dence in using the software in a meaningful way. After the second or third lesson, I would ask them to choose a list of thematic or topic areas that fit the software nice and develop a model using the technology. As a product, I have partners share their model and describe to other small groups how it works. The rubric I design would be ral at first so that I might see what kinds of the products the student were capable of creating. From the types, I would hone my rubric to make the modeling product as challenging as possible without making it too ult.” Etc…