Using the Motion Detectors:

Match the Graph

1. Turn on the Calculator
2. Press **Program**
3. Scroll down on the Screen until "**Ranger**" is highlighted
4. **Press Enter 3 times**
5. From Main Menu choose **Applications**
6. Choose **Meters**
7. Choose **Distance Match**
8. Press **Enter** to display the graph to match
9. Press **Enter** when you are ready to begin
10. When you have matched a graph pretty well, call me over and I will stamp your paper.
11. In order to get to the next graph, Press **Enter**
12. Choose **Same Match** if you want to practice the same graph again or **New Match** to try a different one.
13. Answer the questions.

Graph Predictions (Position v Time)

1. Turn on the Calculator
2. Press **Program**
3. Scroll down on the Screen until "**Ranger**" is highlighted
4. **Press Enter 3 times**
5. From Main Menu choose **Set up/Sample**
6. Real Time: Select **No**
7. Time: Select **8**
8. Scroll up to **Start Now**
9. Press **Enter**
10. Press **Enter** when you are ready to begin
11. Wait for the graph to display and check to see how well it matched, call me over for a stamp
12. When you are done with the graph, hit **Enter**
13. Select 5: **Repeat Sample** to try to match your next graph
14. Hit **Enter** when you are ready

Match the Graph: Position v Time

Name _____ Date _____ Class _____ EN _____

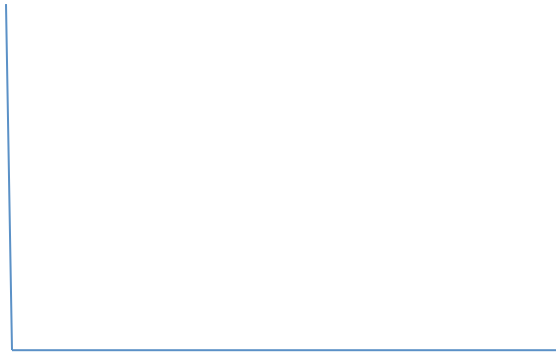
In this activity you will look at a Position v Time graph and then try to move your body to match that graph.

Match the Graph Instructions

1. Turn on the Calculator
2. Press **Program**
3. Scroll down on the Screen until "**Ranger**" is highlighted
4. **Press Enter 3 times**
5. From Main Menu choose **Applications**
6. Choose **Meters**
7. Choose **Distance Match**
8. Press **Enter** to display the graph to match
9. Press **Enter** when you are ready to begin
10. When you have matched a graph pretty well, call me over and I will stamp your paper.
11. In order to get to the next graph, Press **Enter**
12. Choose **Same Match** if you want to practice the same graph again or **New Match** to try a different one.
13. Answer the questions.

Matching the Graph Questions:

1. Draw and label the graph that you were trying to match:



Over ->

2. What was your total distance? _____

3. What was your total displacement? _____

4. If the graph slopes upward, should you walk forward or backward? _____

5. If the graph slopes downward, should you walk forward or backward?

   _____

6. What must you do for a flat section of the graph? _____

7. How could you tell the difference between fast forward motion and slow forward motion?

   _____

8. What does the slope of a position time graph indicate? _____