**WEEK 16 – Interpreting Graphs**

**Grade:** Intermediate (9)

**Unit:** Linear relations

**Curriculum Expectations**  
**MPM 1D/MFM 1P:** describe the effects on a linear graph and make the corresponding changes to the linear equation when the conditions of the situation they represent are varied

**SEL:** make connections between math and everyday contexts to help them make informed judgements and decisions

**Activity  
1)** For this activity, you will be given a series of graphs, and your task is to match the graphs with what they represent in their real-world representations.  **2)** First, you will analyze the graph presented to you. Using the formula below, you will calculate the slope of your line  
**3)** You will, pick two points that your line touches and label them (x1, y1) for your first point and (x2, y2) for your second. Then, using the equation (x2 – x1)/(y2 – y1) determine the slope of your line  
**4)** You then choose the appropriate definition from the definition list that correlates to the graph that you are analyzing. Pay particular attention to the slope, y-intercept etc.   
**5)** Lastly you will make one change to the graph. This change can be a change in the y-intercept, the direction of the graph, or a change to the slope of the graph. You will change the definition that you chose to correspond to your changed graph.

**Check for Understanding**   
I understand how linear relations represent real life relationships  
I can calculate the slope of a linear relationship by using the rise/run relationship  
I understand the relevance of graphs in my everyday life

**Materials**   
Recording sheet (attached below), pencil, information sheet below or internet access, calculator

Definition List

The cost of a cell phone plan per month on a bring your own phone plan

The rate of interest on a Guaranteed Investment Certificate (GIC) per 4 months

The rate of the cost of a cell phone plan per month with a free phone

The amount of money in a chequing account after hours in a mall

The height of a thrown ball in feet from the ground per second

Heat of water in 0C in a pot on the stove in minutes

50

15

1

0.5

1

4

1

10

3

200

2

100