

## Math 8 - Joyce Lee

2012-2013: Math 8

Academy of the Sacred Heart  
Bloomfield Hills, Michigan



**Textbook:** *Algebra 1*, Prentice Hall © 2011

### Topics Covered:

- Chapter 1: Foundations for Algebra
- Chapter 2: Solving Equations
- Chapter 3: Solving Inequalities
- Chapter 4: An Introduction to Functions
- **\*Chapter 5: Linear Functions\***
  - 5-1: Rate of Change and Slope
  - 5-2 Direct Variation
  - 5-3: Slope-Intercept Form
  - 5-4: Point-Slope Form
  - 5-5: Standard Form
  - 5-6: Parallel and Perpendicular Lines
  - 5-7: Scatter Plots and Trend Lines
  - **\*Climate Change Units #3 & 4 (Will need to understand sections 5-1, 5-3, 5-7)**
  - 5-8: Graphing Absolute Value Functions
- Chapter 6: Systems of Equations and Inequalities
- Chapter 7: Exponents and Exponential Functions

### Resources used for our Climate Change Unit #3: Investigating Climate Change through Math

#### Taught in their Math Class

Slope, or rate of change, is new for students this year. They learn the meaning of slope and how to put it in the context of these climate change graphs provided by NASA in their Key Indicators site.

#### Slope

- <http://www.purplemath.com/modules/slope.htm>
- <http://www.khanacademy.org/math/algebra/linear-equations-and-inequalities/v/algebra--slope>
- <http://www.khanacademy.org/math/algebra/linear-equations-and-inequalities/v/slope-and-rate-of-change>
- <http://www.khanacademy.org/math/algebra/linear-equations-and-inequalities/v/linear-equations-in-slope-intercept-form>

Specifically for the unit

<http://www.youtube.com/watch?v=QaifzeGAvB8>

<http://climate.nasa.gov/keyIndicators/>

Climate Kids: NASA's Eyes on the Earth – <http://climate.nasa.gov/kids/bigQuestions/climateChanging/#bg4>

Great introduction to the reasoning and impact of these indicators on a global scale. Good for middle school kids to understand.

<http://climate.nasa.gov/keyIndicators/#globalTemp>

NASA: Global Climate Change; Vital Signs of the Planet <http://climate.nasa.gov/keyIndicators/#globalTemp>

The graphs used in this activity were taken off this page. NASA also provided their own explanations for each graph. This page also has helpful Time Series visuals to help students see the changes on our earth over time. (Slide the bar to see changes over time)

bar to see changes overtime).

NASA: Global Climate Change; Vital Signs of the Planet <http://climate.nasa.gov/evidence/>

An EVIDENCE page that has pictures and more explanations

#### **Resources used in Climate Change Unit #4: Key Indicators**

Taught in their Science Class

- <http://climate.nasa.gov/keyIndicators/>
- <http://www.naharnet.com/stories/en/13406>
- <http://scienceinthetriangle.org/2010/04/rtp-researchers-help-track-diseases-linked-to-climate-change/>
- [http://www.google.com/hostednews/afp/article/ALeqM5hXv72I7nx7ZTg\\_Qul3Ix1c3i3uXw?docId=CNG.dca855da9e6c393c07dda475a1590504.e41](http://www.google.com/hostednews/afp/article/ALeqM5hXv72I7nx7ZTg_Qul3Ix1c3i3uXw?docId=CNG.dca855da9e6c393c07dda475a1590504.e41)
- <http://climate.nasa.gov/evidence/>
- www.Prezi.com