Joyce Lee

See also:

- **ICCARS Unit #3: Exploring Climate Change through Math** (.docx)
- **ICCARS Unit #4: Exploring the Key Indicators**
- **Outline for Math 8 course (Algebra 1 using Prentice Hall text)** 

Cover of Glencoe textbook

Course Outline

2012-2013: Algebra 1

Academy of the Sacred Heart

Bloomfield Hills, Michigan

Textbook: Algebra 1, Glencoe © 2012

TopicsCovered:

Textbook Unit #1: Relationships betweenQuantities

- Chapter 1: Expressions, Equations, and Functions
- Chapter 2: Linear Equations

Textbook Unit #2: Linear Relationships

- Chapter 3: Linear Functions
- ***Chapter 4: Equations of Linear Functions***
  - 4-1: Graphing Equations in Slope-Intercept Form
  - 4-2: Writing Equations in Slope-Intercept Form
  - 4-3: Writing Equations in Point-Slope Form
  - 4-4: Parallel and Perpendicular Lines
  - 4-5: Scatter Plots and Lines of Fit
  - 4-6: Regression and Median-Fit Lines
  - ***Climate Change Unit (will need to understand sections 4-1, 4-2, 4-5, 4-6)**
  - 4-7: Inverse Linear Functions
- Chapter 5: Linear Inequalities
- Chapter 6: Systems of Linear equations and Inequalities

Textbook Unit #3: Exponential andQuadratic Relationships

- Chapter 7: Exponents and Exponential Functions
- Chapter 8: Quadratic Expressions and Equations
- Chapter 9: Quadratic Functions and Equations

Textbook Unit #4: Advanced Functionsand Equations

- Chapter 10: Radical Functions and Geometry
- Chapter 11: Rational Functions and Equations

Resourcesused for our Climate Change Unit #3: Investigating Climate Change through Math

Taught in their Math Class

Slope, or rate of change, is new forstudents this year. They learn themeaning of slope and how to put it

in the context of these climate changegraphs 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-inequalitie/v/algebra--slope
- http://www.khanacademy.org/math/algebra/linear-equations-and-inequalitie/v/slope-and-rate-of-change
- http://www.khanacademy.org/math/algebra/linear-equations-and-inequalitie/v/linear-equations-in-slope-intercept-form

Specificallyfor 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

Greatintroduction to the reasoning and impact of these indicators on a globalscale. Good for middle school kids tounderstand.

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

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

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

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

AnEVIDENCE page that has pictures and more explanations

Resourcesused 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_QuI3Ix1c3i3uXw?docId=CNG.dca855da9e6c393c07dda475a1590504.e41
- http://climate.nasa.gov/evidence/
- www.Prezi.com