

# \* MITEP Share-a-thon

Kalamazoo Public Schools - Claudia, Kari,  
Brytt, Jim and Kevin

Jackson Public Schools - Leah and Tim

\*Water,  
water, everywhere?  
An Environmental  
Science mini-unit

Kari Lockett and Claudia Witt

\*Students will...

- Assess prior knowledge on how water relates to health, hunger, poverty, and education
- Investigate water related issues
- Prepare a poster
- Make connections of water related issues between the United States and third world countries
- Reflect on other human privileges and connect them to the global freshwater crisis

## \* Learning Objectives

- \* Elicit: Prior knowledge via anticipation guide
- \* Engage: Anticipation guide answers and cholera video
- \* Explore: Jigsaw Activity (health, hunger, poverty, and education)
- \* Explain: Poster with anticipation guide facts
- \* Elaborate: Powerpoint connections
- \* Evaluate: Poster (see rubric)
- \* Extend: Ecojournal article reflection

\* 7 E Model

## \* ECOJOURNAL PART ONE...

\* Welfare, free healthcare, minimum wage, and subsidized housing are all programs put into place by the government to help those in need. Many people who are more well off resent those less fortunate for “taking” from them in the form of taxes and extra “benefits”. How do you feel about these programs? Do you feel that they are helpful and good for society? Do you believe that some people in society should have to contribute money (via taxes) for the misfortune of others? Why or why not? Fill at least half of a page in your ecojournal.

\* DRAW A HORIZONTAL LINE AND LABEL THE FOLLOWING AS PART TWO...

\* Our society relies heavily on water. We use water on a regular basis for drinking, cooking, cleaning, watering our lawns, gardens, and crops, doing our laundry, etc. Reflect on the concepts you’ve discussed in your groups today. Do you believe that society should be limited on the amount of water we use so people who are less fortunate can have what we have? Why or why not? What can you do about this? How does this relate to part one? Fill at least half of a page in your ecojournal.

# \* Ecojournal reflection

\* Michigan's Natural  
Gas Play: an Earth  
Science mini-unit

Jim Wright

- \* Write an opinion letter using supportive information on the issue of shale gas development and production in Michigan supported by data and lesson information.
- \* Explain the process of natural gas formation and its relationship to the geology of the Michigan Basin.
- \* Explain the processes of hydraulic fracturing and directional drilling needed to develop shale gas formations.
- \* Describe 3 issues of concern related to shale gas development.

## \* Learning Objectives



- \* Thought: “Nothing comes for Free” .
- \* Question: How could a gas well make you richer, yet poorer at the same time?
- \* Written Response: What do you think? (Share & Discuss)

\* Day one wrapup

\* How Earth changes  
change life?: A  
Biology Lesson

Brytt Ergang

\*HS-LS4-5.

Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.

\*Common Core  
Standard

- \* Engage - Students make a personal time line.
- \* Elicit - Write how have events in your life changed/affected you
- \* Explore - Earth time line & Period Presentation
- \* Explain - Students write a summary of some of the major events that happened and how it effected Earth species
- \* Extend - are things happening today that may effect population of animals?  
(Global Warming??)

## \* The 5 E Model

\*Wind and Weather:  
A middle school  
lesson

Kevin Koch

- \* Make observations of natural phenomenon to make claims and predictions.
- \* Describe what happens to the energy Earth receives from the sun.
- \* Explain how solar heating and water vapor in the atmosphere affect weather.

# \* Learning Objectives

- \* **ELICIT**: Show video clip of windy day or storm and ask students: “What causes wind?”
- \* **ENGAGE**: Show students online wind map (see attached) and ask them, “Why do you think...”
  - wind is moving faster/slower in some places.
  - wind is going in different directions in different places.
  - there are any patterns or trends in the wind.
- \* **EXPLORE**: Students will examine several wind maps and compare them to the daily weather map to find sources of wind and influences on regional weather patterns. They will record data on a map and data table to help organize their findings. This data will include wind speed and direction, low and high pressure, and frontal boundaries.
  - \* Wind Map Link: <http://hint.fm/wind/>
  - \* Weather Map Link: [http://www.weather.com/maps/maptype/currentweatherusnational/uscurentweather\\_large.html](http://www.weather.com/maps/maptype/currentweatherusnational/uscurentweather_large.html)
- \* **EXPLAIN**: Students will summarize their findings and share their results with other teams. They should include the relationship between wind, pressure systems and weather patterns.
- \* **ELABORATE**: Students will use their “model” and findings to make predictions about wind and weather patterns for the next day. They will reexamine new maps the next class period.
- \* **EVALUATE**: Students will then compare, evaluate and modify their predictions and claims from the first day. They will compare their “forecast” with a professional forecast.
- \* **EXTEND**: Students will be challenged to focus on smaller scale wind patterns (using the zoom function) to look for local changes in wind patterns as high and low pressure systems move through the region. They will also be challenged to make longer range forecasts (3-5 days) and monitor their accuracy.

\* 7 E Model

http://hint.fm/wind/ Novell GroupWise (Kari Lockett) Wind Map

# wind map

March 6, 2014  
7:55 pm EST  
(time of forecast, download)

top speed: 36.5 mph  
average: 9.7 mph

1 mph  
3 mph  
5 mph  
10 mph  
15 mph  
30 mph

Gallery

An invisible, ancient source of energy surrounds us—energy that powered the first explorations of the world, and that may be a key to the future. This map shows you the delicate tracery of wind flowing over the US.

Wind map prints are available from [Point.B Studio](#).

Read more about [wind](#) and about [wind power](#).

The wind map is a personal art project, not associated with any company. We've done our best to make this as accurate as possible, but can't make any guarantees about the correctness of the data or our software. Please do not use

9:02 PM  
3/6/2014

\* Wind map

\* More lessons!

\* <http://mitep.mtu.edu/conferences.php>

\* Lots of lesson to  
share!