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Reporting and Predicting the Weather

April McGivern

The College at Brockport

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INTERACTIVE LESSON, CMST SUMMER INSTITUTE 2006
REPORTING AND PREDICITING THE WEATHER
"MOVE OVER GLEN JOHNSON!!!"

Name: April McGivern
Grade level(s)/Subject taught: grade 7,8, and Living Environment
This lesson will fulfill a requirement for grade 8 science students.
Objectives: *Students will use the Edheads website (weather section) to apply the material they learned in a class to a simulated model. *This model will allow students to create weather reports. *This model will also allow students to predict weather across the United States based on current conditions and their knowledge of weather patterns in the country.

Write the Science Concept or "key idea" that modeling will be used to teach: (e.g. Organisms maintain a dynamic equilibrium that sustains life).

NYS Intermediate Science Core Curriculum

Physical Setting Standard 4

Performance Indicator(s)

- 2.2m Most local weather condition changes are caused by movements of air masses.
- 2.2n The movement of air masses is determined by prevailing winds and upper air currents.
- 2.2o Fronts are boundaries between air masses. Precipitation is likely to occur at these boundaries.
- 2.2 p High pressure systems generally bring fair weather. Low pressure systems usually bring cloudy, unstable conditions. The general movement of highs and lows is from west to east across the United States.

NOTE: It is not expected that all of these concepts will be learned by using this activity. For the three lessons prior to this students will be seeing, reading, and writing about the above performance indicators. (Textbooks, video, newspaper, and worksheets will be the medium for these lessons.) This interactive lesson is meant to engage the students and have them apply what they have learned. It will also reinforce the above performance indicators. There are three levels for the students to experience. When they master the first level they move to the next level.

WEBSITE: <http://www.edheads.org/activities/weather/index.htm>

Materials:

1. Computers with internet access.
2. Worksheet to accompany interactive model. (Students will turn in for a grade upon completion of assignment.)

“...a rich **one-page, single-spaced**, description or a *vision* of your best thinking...”

Prompts:

1. How will you assess the prior knowledge of the student?
2. How will you begin the lesson?
3. What are the teacher and students doing every 5-10 minutes? (Teacher Actions and Student Actions)
4. How will you assess the learning for the lesson?

ANSWERS TO PROMPTS:

1. Before entering the library I can use the “warm up”/“do now” activity as a way to check on student understanding. (They will have had three days of instruction on the topic prior to today.)

*I will begin the lesson by having students answer the questions on their “warm up” activity.

*Then we will review the answers as a group.

*I will ask the students if they have ever seen the weather report on TV?

*What channel do they watch?

*Do they know who the weatherperson is?

*I will tell them that today they will be doing the same type of work as the weatherperson on TV

*I will then hand out the sheets they will need for the library.

*I will review the guidelines for library behavior. (We will use the computers in the library.)

*I will have the website they will be using displayed on the TV monitor in our classroom.

*I will walk them through the steps they will need to complete. (A brief showing.) Perhaps two examples from the weather report and two examples from the weather prediction portion.

* At this point I expect to have approximately half of the class period remaining. The class will then walk across the hall to the library. Sheets will be handed in to me before students are dismissed.

*I expect to work on this activity the next class day as well. Only this time after students arrive to class, we will walk right over to the library.
3. As students are working on their weather reports and predictions I will be circulating around the library to check on their work and answer questions.
4. Learning will be assessed by grading their worksheets. They will also have a written assessment in class at the start of the following week. The materials for the assessment will come from the same Edheads website so it aligns with students activities for the week and is in a familiar format.

WORKSHEET FOR INTERACTIVE LESSON ON WEATHER REPORTING AND PREDICTING.

- sheets students will receive will have blank lines to place their answers on and of coarse....more clip art. This is the “rough copy”

NAME _____ DATE _____ PERIOD _____

DIRECTIONS TO FOLLOW: To begin our assignment today please access the following website: <http://www.edheads.org/activities/weather/index.htm>



PART I: REPORTING THE WEATHER.

1. Look at the green word box that says “click here to start” and click on it.
2. Click on the “report the weather” option.
3. Listen to the directions given.
4. Click on “Start Level 1”.
5. Click “start” and follow the prompts you are given.
6. Answer the following questions.

Level 1

What kind of system is moving over Cleveland? high
What are the skies like over Cleveland? sunny
What kind of weather besides a warm front was over Toledo? rain

Level 2

What is the warm front over Detroit causing? thunderstorms
What kind of pressure system is over lake Michigan? low

Level 3

What kind of pressure area is over both Springfield and St. Louis? low

NEXT:

When you are done with the weather reports, click on the blue box that says **WEATHER PREDICTING.**

PART II: WEATHER PREDICTING

1. Click on the blue box at the bottom right of the screen that says “weather predicting”.
2. Listen to the directions given.
3. Click on “Start Level 1”.

Level 1

What was the temperature in Springfield Illinois? 40 degrees F
What is the best way to predict weather? Watching the fronts (cold and warm)
Warm and cold fronts cause weather in front of them to do what? Change

Level 2

What is a “wind barb”? show direction the wind will be blowing
Weather generally travels in what direction across our country? West to east

Complete the following chart for your Level 2 weather predictions.....

Weather conditions	Monday	Tuesday	Wednesday
Temperature	Actual:	Actual:	Actual:
	Predicted:	Predicted:	Predicted:
Precipitation	Actual:	Actual:	Actual:
	Predicted:	Predicted:	Predicted:
Cloud cover	Actual:	Actual:	Actual:
	Predicted:	Predicted:	Predicted:

Level 3

Level three has some items that may be a bit challenging.

Therefore at this level there will be no questions. (Yea!)

However you can still play this level. (Yea!)