Student: Kaleigh Narracci Date: 1/31/12

Grade: 6 & 7 Topic: Air Masses Content Area: Science

**Instructional Objective**

Objective: After the completion of a Word Splash activity on air masses, the students will demonstrate their understanding of the content by labeling and explaining the different air masses that affect weather in the United States, by labeling and explaining at least four out of six air masses correctly.

**Standards and Indicators**

NYS Science Learning Standard #4:

The Physical Setting: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Key Idea #2.2l/ P.S. 2.2l:

Students should develop an understanding of Earth as a set of closely coupled systems. The concept of systems provides a framework in which students can investigate three major interacting components: lithosphere, hydrosphere, and atmosphere. Processes act within and among the three components on a wide range of time scales to bring about continuous change in Earth’s crust, oceans, and atmosphere.

Air masses form when air remains nearly stationary over a large section of Earth’s surface and takes on the conditions of temperature and humidity from that location. Weather conditions at a location are determined primarily by temperature, humidity, and pressure of air masses over that location.

Indicator:

This will be evident when the students demonstrate their understanding of the content by labeling and explaining the different air masses that affect weather in the United States.

General Skills:

Students will follow safety procedures in the classroom and laboratory.

Indicator:

This will be evident when the students demonstrate their understanding of the content by labeling and explaining the different air masses that affect weather in the United States.

**Motivation**

The students will create two sentences using one of the following words in each one: air mass, low pressure, high pressure, cyclone, or anti-cyclone.

**Materials**

* SMART Board
* Laptop
* Magnets
* Vocabulary words displayed on movable cut outs
* Word Splash reading
* Sheet with map of the United States on which they will label the air masses
* Crayons
* White Board

**Strategies**

Cooperative Learning: the students will work in groups to discuss the meaning of the vocabulary words and to choose the sentence with the best understanding of the vocabulary words after the Word Splash Activity.

Word Splash: is a collection of key words or concepts chosen from a passage or chapter that students are about to read. This strategy gives students a chance to relate the new words or concepts to the main topic of the reading.

**Adaptations**

The children with severe learning disabilities will have highlighted Word Splash reading passages on air masses.

Word Splash passage will also have visuals within the text for visual learners.

**Differentiation of Instruction**

Tier 1: The students will demonstrate their understanding of the content by labeling and explaining the different air masses that affect weather in the United States using a map that shows which regions produce certain air masses.

Tier 2: The students will demonstrate their understanding of the content by labeling and explaining the different air masses that affect weather in the United States.

Tier 3: The students will demonstrate their understanding of the content by labeling and explaining the different air masses that affect weather in the United States and identify the air mass that affects New York.

**Developmental Procedures**

* The students will discuss the vocabulary words and create a word map of how they believe the words are related. *(How do you think the words are related? Why? Out of these models which do you think is correct?)*
* The students will read the passage on air masses with the teacher. *(Why are certain words bolded? Do you recognize those words? Any questions about the reading?)*
* The students will create two new sentences using their new knowledge gained from the passage. *(What words did you choose? What’s your sentence?)*
* The students will work in groups and determine who created the best sentence out of the group. Then they will write that sentence on the board. *(Whose sentence did you choose? Why? Why did this show the best understanding? Does anyone have any other sentences they’d like to share?)*

**Assessment**

The students will demonstrate their understanding of the content by labeling and explaining the different air masses that affect weather in the United States, by labeling and explaining at least four out of six air masses correctly.

**Independent Practice**

The students will label and explain the different air masses that affect weather in the United States.

**Follow-Up: Direct Teacher Intervention and Academic Enrichment**

Direct Teacher Intervention: The student, under direct intervention with the teacher, will label air masses on different maps that will affect different areas around the world.

Academic Enrichment: The student will complete a crossword puzzle on the vocabulary words used in the lesson.

**Teacher References**

*Air masses*. [Web Map]. Retrieved from <http://www.aps.k12.co.us/gateway/academics/science_dept_pages/votodian/10-> 11/AirMassesFronts.html

Bunch, B., & Branca, B. (1987). *Globe earth science*. (2nd ed.). Englewood Cliffs, NJ: Globe Book Company.

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