**CheMystery**

The Environment

Thursday | August 11, 2016

Unit: The Earth

Lesson: The Atmosphere

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| **Standard(s)** North Carolina Essential Standards Science Education—Grades 3-5 | 1. 5.E.1: Understand weather patterns and phenomena, making connections to the weather in a particular place and time.
2. 5.P.2: Understand the interactions of matter and energy and the changes that occur.
3. 3.E.1: Recognize the major components and patterns observed in the earth/moon/sun system.
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| **Objective(s)** | 1. Inform students the purpose of Earth’s atmosphere and the layers.
2. Inform students about the purpose of weather and climate.
3. Explain the importance of the ozone layer and its impact on climate change.
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| **Materials** | **Atmosphere in a Beaker**<https://s-media-cache-ak0.pinimg.com/originals/78/b6/7d/78b67ddeb3628cfdad94fa1eb96c7c9c.jpg>**Layers of the Atmosphere**<http://www.starhop.com/library/pdf/studyguide/elementary/brsp-4layers.pdf>**Water Cycle and Weather Picture**<http://www.weatherwizkids.com/wp-content/uploads/2015/02/watercycle2.jpg>**Weather for Kids Video**<https://www.youtube.com/watch?v=v1-Khi9i3UU>**Ozone Layer Instruction**<http://www.theozonehole.com/ozonelayer.htm>**Bill Nye and Climate Change**<https://www.youtube.com/watch?v=EtW2rrLHs08> |
| **Instructional Strategy** | 1. Explain the concept of atmosphere and use Earth model. \*layer a 1000 ml graduated cylinder with colored aquarium gravel in order to make the layers of the atmosphere to scale. The students cannot grasp the idea how big each layer is, but when scaled it becomes easy to visualize. Troposphere - 15 ml; Stratosphere - 45 ml; Mesosphere - 45 ml; Thermosphere – 895 total.\*
2. Show any related web materials (Pictures and Video Links).
3. Composition of Atmosphere Activity (Paper Plate Activity).
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| **Assessments** | 1. Instructor-led discussion of understanding.
2. Student interaction.
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| **Reflection** | * Teaching kids about climate, weather, and the atmosphere is integral to scientific understanding of the Earth itself. Although there is a focus on environment preservation in this section, this is supplemented to lesson understanding.
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