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Water Everywhere!

Water Wonders

- I. ***Curriculum Area/Topic:*** The Water Cycle
- II. ***Date/Time Frame:*** October 19, 2009; one fifteen minute class period
- III. ***Rationale:*** The overall reason for teaching this lesson is to have the students understand and know what the water cycle is. The water cycle is all around them, it happens everyday. This lesson is age appropriate because the students are starting to realize the things around them and are starting to ask several questions, which is a big part of the learning process. The students need to learn this material because again, the water cycle is everywhere and happens every second of everyday. The content of this lesson is for the students to be able to name the three components of the water cycle, give a definition and be able to understand what each component does. This lesson also applies to the outside world because once again, the water cycle is all around us and it will always be constantly working.
- IV. ***Unifying Concepts:*** One unifying concept that this lesson portrays is constancy, change, and measurement. The water cycle is always consistent because it continues to do evaporation, condensation, and precipitation no matter what else is happening around the world. But then again, it is always changing in between those three components. If the water cycle did not change between these three components the water cycle would not exist. It also deals with measurement because there has to be enough evaporation to cause condensation to make precipitation take place.

V. ***Illinois Learning Standards:***

- **Standard 12.E.1a:** Identify components and describe diverse features of the earth's land, water and atmospheric systems.
- **Standard 12.E.1b:** Identify and describe patterns of weather and seasonal change.
- **Standard 12.E.2a:** Identify and explain natural cycles of the Earth's land, water and atmospheric systems (e.g., rock cycle, water cycle, weather patterns).

A.) English Language Arts:

- **Standard 3.A.2:** Write paragraphs that include a variety of sentence types; appropriate use of the eight parts of speech; and accurate spelling, capitalization and punctuation.
- **Standard 1.C.1f:** Use information presented in simple tables, maps and charts to form an interpretation.

B.) Mathematics:

- **Standard 6.C.1a:** Select and perform computational procedures to solve problems with whole numbers.

VI. ***Objectives/Skills:***

A.) ***Conceptual/Content Objectives:*** After completing this lesson the students should be able to name the three main components of the water cycle as well as give their definition. The students should also be able to recognize these components when we are not learning about them in the classroom, but outside the classroom when the weather is appropriate.

B.) **Science Process Skills:** When the students are finished completing this lesson, students should be able to take this information and apply it to their own lives. When they hear somewhere that there is going to be precipitation, they should understand that it is going to either rain or snow and be prepared for that kind of weather, by either dressing warmly or carrying an umbrella. Students should also be able to classify which part of the water cycle is taking place when they leave the classroom. For example, if it is wet out and a couple hours later it is dry, they should be able to say that evaporation has taken place.

C.) **Application:** After this lesson plan is finished the students will understand the importance of the water cycle and how it helps the earth circulate water throughout the world.

D.) **Attitude:** When this lesson is complete the students will appreciate the value of the water cycle and what it does for the earth. They will also be excited to be able to name what is happening outside every time the weather changes.

VII. **Materials:** The materials that will be needed for this lesson are the PowerPoint presentation that I have put together as well as the activity we will do in class. The activity consists of seven stations where each student will go through each station becoming a part of the water cycle, and for this there will need to be stations set up around the room with pieces of paper telling the students where they are in the water cycle process and where to go next. There needs to be at least three pieces of paper saying the same thing as well as several dice that several students can roll at the same time. And for this

activity the students will need the worksheet that allows them to record their place in the water cycle. There will need to be enough worksheets so each student can have their own.

VIII. **Management:** The one management concern that takes place in this lesson is how to set up the stations around the room and make the activity easy enough to flow well with no confusion or chaos. The stations will need to be in order, one through seven throughout the room so the students are moving about the room smoothly with no confusion. Since there are seven stations, there will need to be at least three cards at each station saying the same thing so not all the students are trying to read the same card all at once. This is also the same for the dice; there are five to six dice at each station so several students can roll at a time. Also, the students will need to be put into groups or numbered off by me so they know which station to begin with. One more management concern that needs to be taken care of is knowing that the PowerPoint works ahead of time to have everything run smoothly.

IX. **Background Information:** The background information I will have to know are the three main components of the water cycle, evaporation, condensation, and precipitation. I will need to be able to explain each component fully like giving each ones definition, as well as give examples when they are needed. I will also need to know the little things about the water cycle like runoff, groundwater, collection, and transpiration. All of these make the water cycle what it is and play an enormous part. I will also have to explain that the water cycle is consistent and is always happening as well as it does not have a clear starting point.

- X. **Key Question(s):** “Can anyone tell me what happens when it rains?” “Why are water and rain so important to us as humans but also to plants, animals, and the earth?”
- XI. **Teacher Procedures:** I will first introduce this lesson by asking questions to active prior knowledge. The first question will be along the lines of, “Have any of you been outside when it is raining?” and “Do any of you know what another word for rain is called?” And hopefully the students will come across precipitation and that will lead into the direction of the water cycle. From here I will teach the PowerPoint that I put together and go into a little more information on the three main components of the water cycle, evaporation, condensation, and precipitation. After the PowerPoint I will introduce the activity we will do around the room. I will hand out the worksheet that goes along with this activity and number off the students from one to seven and their number will reflect which station they will start at. From their station they will roll a dice and whichever number they roll they will go to that next station and read from their rolled number. The students will go through this process at least ten times visiting at least every station once. If the students need help I will guide them in the correct direction but still allow the students to figure the big information out on their own.
- XII. **Student Procedures:** During this lesson plan, the students will do one major activity, and that is the stations activity that deals with the water cycle. Once the students have been numbered off and know which station to start from, they will record on their worksheet, the station they stopped at, what happened at that station, and where they ended up, their destination. The students will do

this ten times and then describe their entire journey on the back of their worksheets.

- XIII. **Discussion Questions:** “What are the three main components of the water cycle that you learned from this lesson?” How can you use this information outside the classroom?” “What do you think we will be learning about next from discussing the water cycle?”
- XIV. **Assessment:** Assessment for the lesson will occur during and after the activity of the stations. The students will be graded on having gone around the stations at least ten times while visiting every station at least once. From there I will see if their station stop, what happens, and destination is correct on their worksheet from the pieces of paper that are provided at each station. I will also be grading on their journey that they went through that they will write about on the back of their scorecard. I will make this assessment worth at least twenty points, ten points for the station stops, one point for each stop, and five points for the written part about their journey. I will also be grading on participation during the activity of which will be five points as well.
- XV. **Accommodating Individual Learner:** One way to accommodate this lesson for learning disabled students is to pair them up with a partner as they do the lesson activity. This way they will not be completely on their own and there will be someone there to help them with the station changes as well as the reading. I think this will help these students be less stressed and will benefit them to get the full view of the water cycle. And as for gifted students, I will have them go into more depth about their written journey, by writing a poem about their journey, and if time allows they will share them with the class.

XVI. ***Extending the Lesson:*** One way to extend this lesson is to have the students do a play about the water cycle. These students can act out parts like being evaporated, or turning into a cloud, or falling from the sky. I observed a third grade class once and they were doing a play where one student was a drop of condensation on a soda pop can, while one was pondering what was taking place as he was being evaporated, as another was having fun falling from the sky at a rapid speed. With this extended lesson the students can get a real feel of what it is like to be in the water cycle and what actually happens as the water cycle process continues.

XVII. ***Integration with Two Other Subjects:*** The two subjects that will be integrated with this lesson are English language arts, and math. Language arts is integrated because the students will have to read from station to station to know where they will fall next in the water cycle, as well as write down their experience about their journey through the stations. Math will also take place because the students will have to roll and read the dice to see which station they will go to next.

XVIII. ***Sources:***

Environment Education Activity Guide. (2002). *Project Learning Tree*. Washington, D.C.: Author.

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