

Clouds and Weather  
EPTP 2020-005  
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Session: 1 Time: 9:00 AM Date: 12/3/2012

**Session Title:** Clouds and Weather

**Learning Context/ Profile of Learners:**

Standard elementary fourth graders in a urban school. Used by either a full time teacher or a substitute teacher. To be used in a science class where the curriculum involves earth science, biology, and geography. The classroom consists of 30 students and one teachers aid. The school that the students attend is a kindergarten through eighth grade charter school with a focus on the sciences. None of the students in the class have disabilities and none of them require IEP's or adjusted lesson plans. There are many outside sources that the students have access to in order to help them with the assignment, these include computers, books, and a smart board. To obtain the desired outcome of this lab all of these materials will be used as well as the natural environment.

**Learning Hierarchy for this unit:** This is attached on a separate sheet.

**Intended Learning Outcomes for this session:**

In order to demonstrate an understanding of clouds and weather when asked the process; cumulus, cumulonimbus, cirrus, and stratus clouds. Also to be able to analyze weather changes that occur over a period of time by recording measurements, data formulated by observation, and cloud conditions. All of these must be performed without error.

**Pre- / Post-Assessment Items/Procedures:** Attached on a separate sheet

**Content to be learned:** Attached on a separate sheet

**Instructional Events and Timeframes**

**ILO:** In order to demonstrate an understanding of clouds and weather when asked the process; cumulus, cumulonimbus, cirrus, and stratus clouds. Also to be able to analyze weather changes that occur over a period of time by recording

measurements, data formulated by observation, and cloud conditions. All of these must be performed without error.

|              | Timeframe     | Teacher/Learner Activities   | Materials/Supplies   |
|--------------|---------------|--|--|
| Motivation   | 4-10 Minutes  | Show pictures of different type's of clouds during different weather conditions. Ask the students what differences they notice between each picture. Ask them if they have ever wondered why clouds look different and what it means. "After today you will be able to predict the weather based on what clouds you see!"  | -Computer and smart board<br>-Powerpoint of different pictures of clouds and weather conditions  |
| Presentation | 10-30 Minutes | Ask students about what they already know about clouds and weather conditions. See what similarities that they know of between clouds and weather. Ask the students what they know about cumulus, cirrus, stratus, and nimbus clouds. Introduce the different clouds and what each of them mean. Show examples of each form of cloud and discuss the conditions that each cloud causes. Make sure to go through multiple examples and show key identifying characteristics to look for. This will be done in a lecture/ powerpoint presentation. | -Computer and powerpoint<br>- Multiple examples of each of the clouds and the weather conditions<br>-Learning logs for each student                |
| Practice     | 30-45 Minutes | Students will independently work on a diagram of the different clouds. This diagram will be done on blue construction paper and the clouds will be formed with cotton balls. Each cloud type should be labeled and easily identifiable from the picture. The students can use the reference books if needed. The teacher will also be available to help the students who are having trouble. The teacher will answer any   | -Reference books<br>-Blue construction paper for each student<br>-Multiple cotton balls for each student<br>-Cloud journal<br>-Already constructed |

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|          |            | <p>questions the students have and will also have a premade example of the activity. After this activity is finished the students will be lead outside by the teacher to observe the clouds in the sky. Once the observations are done students return inside and are to write independently about what they observed. This journal should include what kind of clouds they saw, the weather condition, and any other important weather observations.</p>   | <p>cloud diagram (for teachers use)</p>  |
| Feedback | 10 Minutes | <p>Check students understanding of the different cloud formations by checking to see if they correctly formed each cloud and labeled it correctly. Discuss how the students went about forming the clouds and the findings that they discovered. The teacher will correct cloud formations and give the students a handout reviewing the cloud formations to study from and to help with their cloud journal. After review sheet is handed out give the students the homework sheet that provides a guideline for their cloud journals. This journal will be due in one week for the date handed out. Ask the students how they liked forming the clouds themselves and the hands on approach to this topic. Inform the students that the reference books will be available until their journal is due.</p> | <p>-Premade diagram of clouds (use as answer key)<br/>         -Homework sheet that gives guidelines for cloud journal<br/>         -Discussion Board (smart board)<br/>         -Review sheets for all students</p> |

Instructional Materials / Supplies Needed:

- 30+ Reference books about clouds and weather
- 1 Smart board and computer to give a presentation about clouds and weather
- 30 computers with internet access
- 30 12x18-inch construction paper (blue colors) and cotton balls
- 1 preconstructed diagram of the clouds

- 30 cloud journals
- 30 review sheets on the different cloud formations

**Facilities / Equipment Specifications / Arrangements:** Attached on separate sheet

**Evaluation of Instructional Materials / Activities / Techniques: Questions:**

1. Are all students in a comfortable and safe environment to learn?
2. Is the slide show and pre-assignment materials effective in providing students with enough background information?
3. Is the teacher demonstrating the material in a creative and informative way?
4. Is the teacher giving enough time for the students to develop meaningful thought on the topic?
5. Is every student working independently on the project?
6. Does every student understand the cloud types well enough to complete the assigned projects?
7. Did the students take away the intended meaning from this lesson plan?

**References and Resources:**

<http://ims.ode.state.oh.us/ODE/IMS/Lessons/>

[https://blackboard.utdl.edu/bbcswebdav/pid-1476276-dt-content-rid-7352673\\_1/courses/ETPT2020005201240/ETPT2020005201240\\_ImportedContent\\_20120815102635/Lesson%20Plan%20%26%20Docs%20%28Team%20Able%20-%20Spring%202012%29.pdf](https://blackboard.utdl.edu/bbcswebdav/pid-1476276-dt-content-rid-7352673_1/courses/ETPT2020005201240/ETPT2020005201240_ImportedContent_20120815102635/Lesson%20Plan%20%26%20Docs%20%28Team%20Able%20-%20Spring%202012%29.pdf)

[https://blackboard.utdl.edu/bbcswebdav/pid-1476280-dt-content-rid-7352582\\_1/courses/ETPT2020005201240/ETPT2020005201240\\_ImportedContent\\_20120815102635/ETPT2020008201210\\_ImportedContent\\_20111227015337/Lesson%20Planning%20Template%28%29.pdf](https://blackboard.utdl.edu/bbcswebdav/pid-1476280-dt-content-rid-7352582_1/courses/ETPT2020005201240/ETPT2020005201240_ImportedContent_20120815102635/ETPT2020008201210_ImportedContent_20111227015337/Lesson%20Planning%20Template%28%29.pdf)