# Lesson 3: Cloud Coverings

## Objective:

Students will recognize characteristics of different cloud types. Using this knowledge, students will record patterns and make predictions about weather conditions.

## NGSS:

Grade 3: Weather and Climate

ESS2.D. Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next (3-ESS2-1).

## Essential Questions:

* What is a cloud?
* How do words help us identify and describe clouds?
* Cirrus
* Cumulus
* Stratus
* What does a cloud feel like?
* What are the different types of clouds?
* What are the differences between cirrus, cumulus, and stratus clouds?
* What are descriptive words associated with each type of cloud?
* What types of weather are associated with each type of cloud?

## Materials:

* The Cloud Book by Tomie dePaola
* Feather
* Cauliflower
* Silky strips of fabric
* Mason jar with lid
* Boiling water
* Hairspray (aerosol can)
* Ice

## Directions:

This is an introductory lesson to the concept of clouds; as discussed in the chapter, students with visual impairments learn in a part-to-whole manner; therefore, prior to completing lessons about data collection and weather predictions, students must first understand clouds. Once students have background knowledge, next steps in learning can include an introduction to observations, association of cloud types with weather predictions, and data collection to document weather predictions.

1. Begin the by asking essential questions—students may respond verbally, in written form, using a drawing, or acting out their responses.
2. Discuss the concept of clouds and how they are formed. Use curriculum materials to provide information about clouds. Discuss that there are different types of clouds.
3. Read the book *The Cloud Book* by Tomie dePaola. As an interactive activity with the book, use the lesson materials (cauliflower, feather, and silky fabric strips) to provide tactile reinforcement of the clouds described in the book.
4. Create a cloud using the materials. Predict how the actual cloud will feel compared to the materials shared with the presentation of the book.
5. Watch the video, “How to Make a Cloud Science Experiment,” at: <https://www.youtube.com/watch?v=4KdH--dZhlc>.
6. Create your own cloud, following the instructions in the video. For students who are unable to see the cloud in the jar, allow them to feel the contrast between the hot water at the bottom of the jar and the ice on top of the lid; allow them to feel the cloud escape when the lid is removed.
7. Discuss the different types of clouds and weather associated with each type.

## Extension Activities:

* Compare and contrast cotton balls with the cloud created in a jar.
* Use a humidifier to explore water vapor and discuss how it is associated with clouds. (Clouds are made from tiny droplets of water.)
* Visit the freezer section of the grocery store. What happens when you open the freezer door?
* Experience different weather days. Can you tell whether there are clouds in the sky, even if you can’t see them? How?