



FALL | Air What Is a Cloud?

Summary:

We have all seen clouds, but do you know how a cloud is created? Today we will explore what makes a cloud and work to help keep our clouds clean by taking care of the ground water in our garden.

Before Visiting the Garden:

Gather: Images of clouds, garbage bag, and garden gloves

Explore: “Clouds #2” by Matthys Gerber: Can you describe this cloud?

Read: *The Cloud Book* by Tomie dePaol

In the Garden:

Clouds are accumulations of water droplets that are so small and light they are pulled upward as hot air rises. As they float up into the cooler sky, the little water droplets attach onto dust particles floating in the air. Put billions of these floating blobs together and you make visible clouds.

Questions to Explore:

- Do you see any clouds today?
- What do they look like?
- Do you see water anywhere else in the garden?
- Compare, if present, fog, dew (check plant leaves), or puddles to the clouds above. They all are made of water; do you notice any similarities or differences?

We know the water on the ground will eventually make its way into the sky in the form of clouds, rain and/or snow. Knowing this it is important that we take care of the water around us so that we can ensure that the water coming out of the sky nourishes our plants and stays clean.

Activity:

Grab your two trash bags, put on your gloves, and take care of the water sources around your garden:

1. Start in the area immediately around you. Is there any trash that needs to be cleaned up? Use one bag for recycling and one bag for trash.
2. Move to the area around the garden. Are the storm gutters clean? Do you see any pools or puddles that have trash floating in them?
3. Keep your eyes open as you walk or drive home. Loose trash has a tendency to travel the same routes as water—along curbs, clogged in front of storm drains, and floating along the edge of the shore.
4. Remember, the water that sits around your neighborhood will eventually make its way through the water cycle and end up floating in a cloud above you so taking care of the water on the ground means taking care of clouds!

Beyond the Garden | Create a Cloud:

Try this experiment at home:

- Gather a clear jar with lid (such as a Mason jar), aerosol spray (such as hairspray), ice cubes and hot water
- Fill your jar two thirds full with hot to very hot water—does not need to be boiling, but should be quite warm
- Spray a few squirts of your aerosol spray into the jar
- Invert the lid on the top of the jar and place the ice cubes inside the lid
- Allow the condensation to build up in the jar then lift the lid to release your cloud!

Continue Exploring | Supporting Materials

Cloud information and observations from NASA:

<http://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what-are-clouds-k4.html>