

## Nitrogen Cycle Activity

### Background:

Nitrogen is an element that is found in both the living portion of our planet and the inorganic parts of the Earth system. The nitrogen cycle is one of the biogeochemical cycles and is very important for ecosystems. Nitrogen moves slowly through the cycle and is stored in reservoirs such as the atmosphere, living organisms, soils, and oceans along its way.

### Procedure:

Students read the [The Nitrogen Cycle](#).

1. Where is nitrogen found on Earth? Does it move from place to place or stay still? Why is it important? Nitrogen travels with the help of bacteria, water, lightning, plants and animals and today you will discover how nitrogen travels.
2. Nitrogen reservoir signs are around the room. These are the places to which nitrogen can travel. These places are called reservoirs.
3. In this activity you are a nitrogen atom. You will travel through the nitrogen cycle (i.e., to different stations around the room) based on rolling dice. You will each carry a nitrogen passport with them and stamp it each time they get to a nitrogen reservoir station. Then toss the die at the reservoir to find out what your next destination will be. Write a note in the passport to indicate how you are getting from one place to another based on what the die says.

### Questions:

1. How many stops *can* you make on your trip? Will your journey ever end?
2. Was everyone's journey the same? Why not?
3. What would happen if a farmer used too much fertilizer? (In this game, that would mean that everyone started from the fertilizer station at the same time.)
4. What would happen if we burnt too many fossil fuels?
5. Livestock farming creates a large amount of animal waste. How would this affect the nitrogen cycle?

### Conclusion:

Students write two paragraphs about their trip through the nitrogen cycle. Include information about (1) where they went, and (2) how they got to each destination.

Students will draw a diagram of their journey through the nitrogen cycle.