

Nitrogen Game

Summary

Students will use a set of dice to model the movement of a nitrogen atom through the nitrogen cycle.

Main Core Tie

Science - Biology

[Standard 1 Objective 2](#)

Time Frame

1 class periods of 60 minutes each

Group Size

Small Groups

Materials

- [nitrogen dice templates](#)
(attached) (best made from cardstock, laminated ahead of construction)
 - [station signs](#)
(attached)
 - [student worksheet](#)
(attached)
 - [Passport document](#)
(attached)
- optional: stamp pad and different stamps for each location.

Instructional Procedures

Copy, laminate and construct the dice. Copy the station signs and tape or fold at each station. Spread the stations throughout the room. If you are using the stamps, distribute them at each station.

If this is an introductory activity, you may need to discuss the various nitrogen reservoirs and that nitrogen is not available to most living things from the atmosphere.

Read the introduction and directions with the students and allow them time to work.

You may need to provide additional paper for students to draw their cycle on.

Assessment Plan

Scoring guide:

1. Students participate and fill out their passports.....4
2. Students answer analysis questions correctly.....4

Answers:

When does nitrogen leave the air? When nitrogen fixing bacteria get it or it dissolves in water.

When does water carry nitrogen? When it is dissolved in oceans or streams.

How do people affect the nitrogen cycle? By adding fertilizer, growing legume crops, and decomposing.

When do animals lose nitrogen? When they die or eliminate wastes.

What is the value of decomposing organisms and wastes in the soil? They provide nitrogen for

plants.

How do animals get nitrogen? By eating plants.

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)