

Name _____

Invasive Species Science Experiment

Introduction

Invasive species may be plants, insects, mammals, birds, and any other type of living organism that moves from its native, or home, area to another area. These species quickly adapt to their new conditions and grow and spread throughout the new area. When this happens, there are often problems that result. The native species sometimes cannot find enough food or space or other important resources to survive, and the native species dies out. Sometimes invasive species are transported by people to new areas, and sometime they disperse on their own. For example, when a canal is built between two rivers, the fish from one river may move to the new river. This is how human activity can greatly affect the dispersal of invasive species. In this experiment, we will learn ways that species can use to invade new areas.

Materials

plastic bag

1 slice of white bread

paper towel

Methods

Place the bread in the bag. Tear a small section of paper towel and wet it with water. Place the damp (not wet) paper in the bag with the bread and leave it on a table or somewhere undisturbed for a few days and observe. Draw a picture of your experiment.



Observations

What do you see happening to the bread? Describe the changes each day. Finally, throw it away!

Results

This is an extremely simple experiment that demonstrates the dispersal of bread mold spores. When the bread was placed in the bag, there were no apparent spores. These spores are in the air and are microscopic.

Analysis

This experiment shows the students that species can move and disperse in very subtle ways. Spores are one way some organisms reproduce. Spores are produced by the organism and dispersed many different ways. They can lie dormant for decades before the

conditions change that allow them to grow. Sometimes diseases, like anthrax, are maintained in certain areas for centuries because spores are still viable and conditions, like moisture and temperature, can trigger the growth of the organism.

Extension

Bread molds are interesting organisms. They belong to the same Kingdom, Fungi, as yeasts and mushrooms. There are five Kingdoms that include all living things. Unlike plants, fungi does not have chlorophyll and can not make food from sunlight. They depend really on chemosynthesis instead of photosynthesis. They are very important for breaking down wood, debris, and all sorts of things that would “pile up” if these organisms didn’t “eat” them. Have your students try the bread experiment in the light versus the dark and with moisture and under dry conditions. Have them hypothesize how quickly the mold will form or even if it will form at all.

Teacher’s Note:

This is a rather simple experiment, but it shows that organisms can move easily without us even knowing they are present. Molds are interesting organisms and you can discuss penicillin and how it is derived from mold. Mushrooms are an important economic food and

belong to the same Kingdom as molds. Russian love mushrooms and love to hunt them. Many Russians have a summer house, called a Dacha, and one of the main activities people do at their Dacha is to hunt and prepare mushrooms that provide food throughout the long Russian winter.