LESSON 13 What are spores?

Have you sever seen "fuzz" growing on stale bread? If you have, you have probably seen bread mold. Mold is a many-celled organism. In some ways, molds are like yeasts. But molds do not reproduce by budding like yeasts do. Molds reproduce by special reproductive cells called **spores**.

The cells of a mold form many thread-like branches. Some of the threads are similar to roots. They grow down into the food the mold takes in.

Other thread-like branches grow straight up. At the top of each of these threads is a tiny ball. The ball, or **spore case**, contains thousands of spores. Spores are reproductive cells. A mold spore is a special cell that can reproduce other mold plants. (Remember, living things reproduce their own kind.)

When a spore case grows to full size, it bursts open. The spores fly into the air. They are very light in weight and are carried by the slightest air movement. Spores fall on everything. They are on you and everything around you.

Spores land on bread and other foods. If the temperature and moisture are right, the spores grow. They grow into new mold plants.

Other organisms, such as mushrooms and some plants, reproduce by spores. Reproduction by spores is still another form of asexual reproduction. It is the simplest kind of reproduction that uses special reproductive cells.

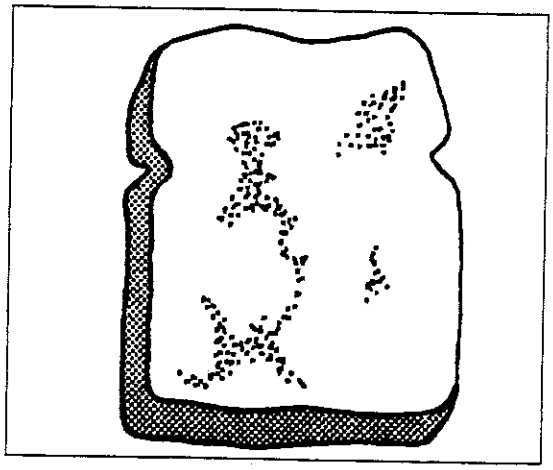


Figure A *Bread mold looks like this.*

Bread mold is fuzzy. At first it is white. Then it changes to gray and then to black. Mold often gives off a bad odor.

Figure B *This is what mold looks like under a microscope.*

Mold is thread-like. Some threads grow into the bread and take in food. The other threads grow straight up.

At the end of each upright thread is a spore case. A spore case holds thousands of special cells called spores. Each spore can reproduce into a new mold plant.

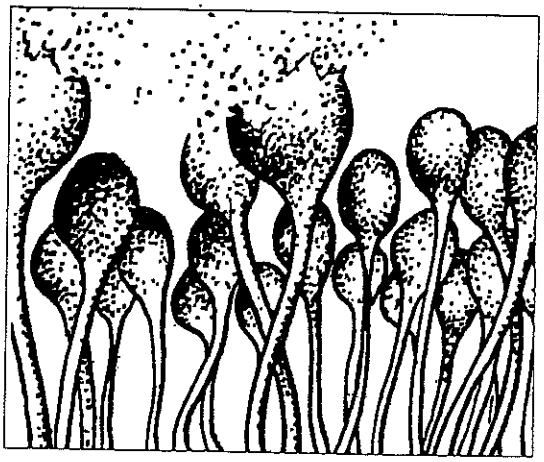


Figure C *When a spore case grows to full size it bursts open.*

The spores travel through the air. They land on everything.

The spores that land on food can reproduce into new mold plants. They reproduce if the temperature and moisture are right.

FILL IN THE BLANK

Complete each statement using a term or terms from the list below. Write your answers in the spaces provided. Some words may be used more than once.

budding	fuzzy	binary fission
mold	moisture	temperature
many	food	thread-like
spore case	spores	

1. Three kinds of asexual reproduction are _____, _____, and reproduction by _____.
2. The simplest kind of reproduction that uses special reproductive cells is reproduction by _____.
3. A mold is a simple _____-celled organism.
4. Without a microscope, a mold looks _____.
5. Under a microscope we see that a mold is made up of many _____ branches.
6. The thread-like branches of a mold that grow down take in _____.
7. Each branch that grows upward has a _____ on the top.
8. A spore case contains thousands of _____.
9. A single mold spore can reproduce into a new _____.
10. A mold spore can reproduce into a new mold plant if it lands on _____, and if the _____ and _____ are right.

IS A SPORE A SEED?

A spore is not a seed. A seed is made by two parent cells—one male and one female. Seeds are produced through sexual reproduction.

A spore is made by one parent cell. Spores are produced by asexual reproduction.

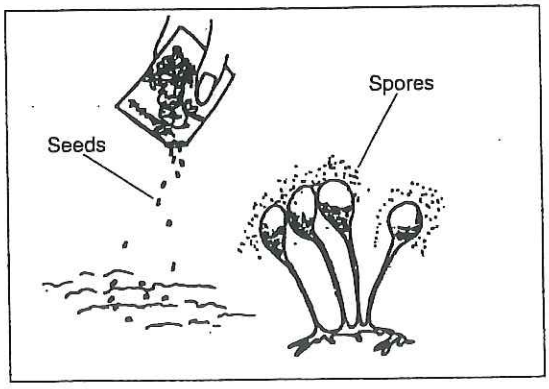


Figure D

GROWING YOUR OWN MOLD

What You Need (Materials)

a small piece of bread
paper towel
small jar with cap
water

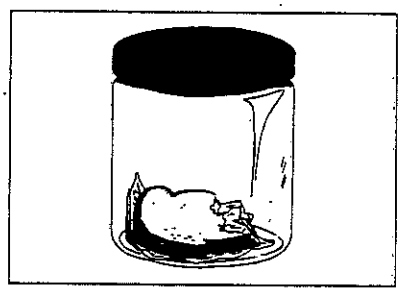


Figure E

How To Do It (Steps)

I. Prepare The Jar

1. Fold the paper towel in half, and in half again.
2. Cut a piece of the towel to fit the bottom of the jar.
3. Pour a small amount of water into the jar—just enough to wet the towel completely. Pour off the extra water.

II. Gathering The Spores

4. Wipe the bread across dust. (Every house has dust.) Try the top of a closet—the top of a door—any open place that you do not get to often.
5. Place the bread on the moist paper in the jar—dust side up.
6. Cap the jar loosely. Air must be able to get in. This is very important!
7. Place the jar in a dark place where it is not cold.
8. Look at it every day for a week.

Draw pictures in the boxes below showing how your mold looked as it was growing.

After 2 days

After 4 days

After 6 days

After 8 days

TRUE OR FALSE

In the space provided, write "true" if the sentence is true. Write "false" if the sentence is false.

_____ 1. Reproduction by spores is a form of asexual reproduction.

_____ 2. Molds reproduce by spores.

_____ 3. A mold is a green one-celled animal.

_____ 4. A mold makes it own food.

_____ 5. A mold has many thread-like branches.

_____ 6. Mold branches that grow downward feed the mold.

_____ 7. A spore case contains seeds.

_____ 8. Mold spores can reproduce yeast cells.

_____ 9. Spores are very tiny.

_____ 10. Every mold spore grows into a mold plant. (Think about this carefully!)

WORD SCRAMBLE

Below are several scrambled words you have used in this Lesson. Unscramble the words and write your answers in the spaces provided.

1. ROSEP _____
2. DOLM _____
3. ZYFUZ _____
4. ARDEB _____
5. UALSAEX _____

REACHING OUT

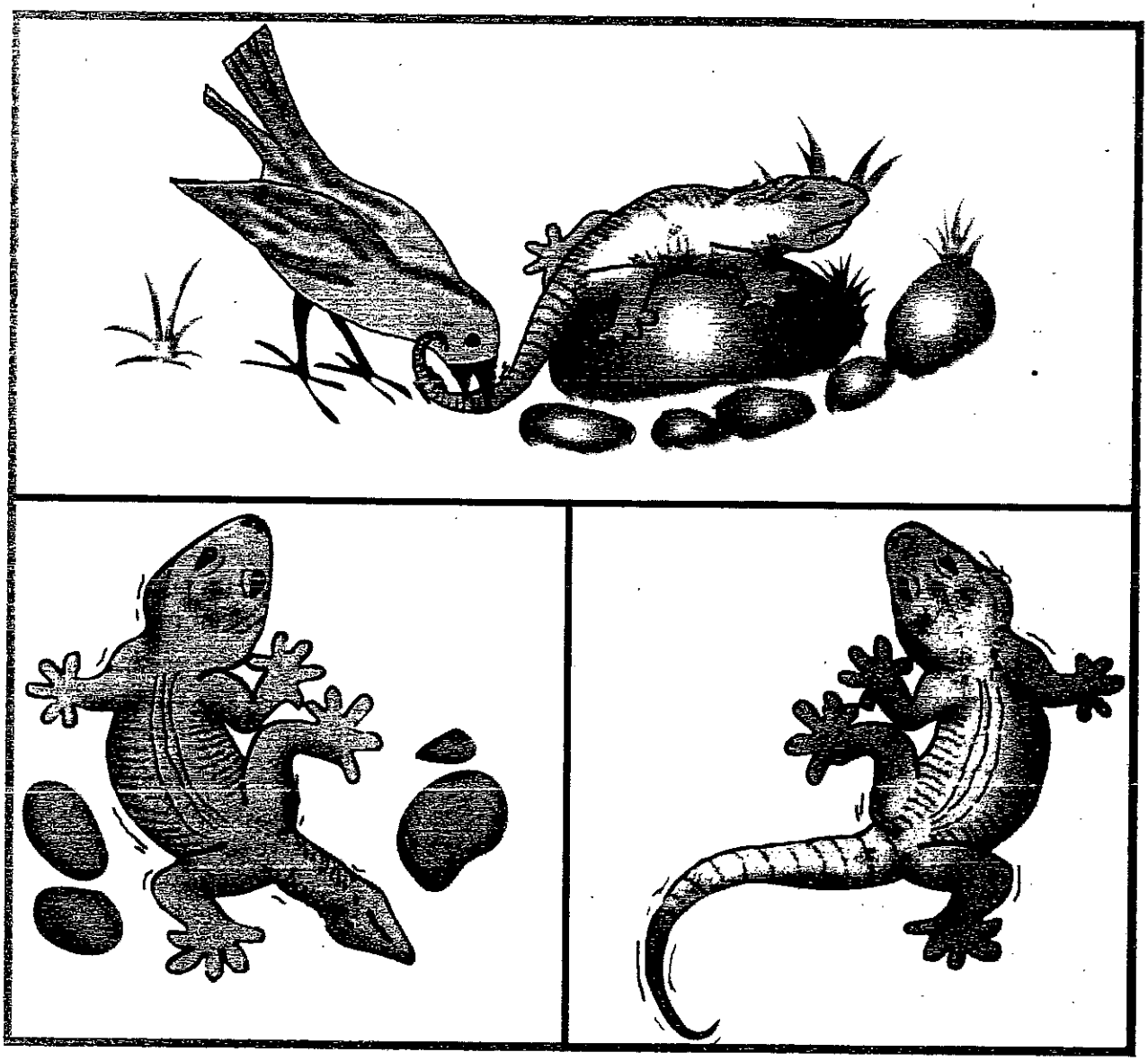
1. Name three things that a spore needs to grow.

   _____ _____ _____

2. Do you think a seed needs the same things to grow? _____

Lesson 14

What is regeneration?



KEY TERM

regeneration: ability of an animal to regrow lost body parts