

Characteristics of Living Things

When you see a bird fly across the sky, you know it is alive. When you see a pile of rocks, you know it is not alive. How do you know? Living things do many things that nonliving things cannot do. In this lesson, you will learn how to tell what is alive and what is not.

What Makes Something Alive?

Flying is one way that a bird can move. Birds also walk, and some can even swim. Now think of other living things. Worms, fish, crickets, and puppies are all able to move. Even plants can move in certain ways. Sunflowers move to face the sun. New leaves and flowers move when they unfold. Every living thing has at least some parts that can move. Being able to move is one way you can tell something is alive.

Have you ever seen a baby bird that has just hatched? Baby birds are much smaller than their parents. Some do not even have feathers. As a baby bird gets older, it grows in size. It gets new feathers. Its mouth changes shape. Its wings get longer and stronger. The picture shows a bird bringing food to its baby birds.



When you were born, you were much smaller, too. You most likely had no teeth, and you probably did not have much hair. You have grown and changed in many ways. Like you, things that are alive grow and develop as they get older.

You may have watched birds eating seeds or insects. The seeds and insects are food for the birds. In order to grow, living things must take in water and **nutrients**, substances that provide energy for growth. All animals get the nutrients they need by eating food. They also breathe air, which helps them use their food. Plants do not eat food. They take in sunlight, air, and water to make the nutrients they need to grow. Part of what plants make may become food for animals.

Birds leave droppings on the ground below them. This is another way to tell they are alive. A living thing does not use everything it takes in. Some of the food, air, and water are left over. The unused material is called waste. All living things make wastes and then get rid of them.

When a bird sees a cat, the bird may fly away. You get hungry when you smell something good to eat. Each of these actions is called a response. A response is what a living thing does after it learns something about its surroundings.

Often, living things respond right away. If an animal learns danger is near, it may respond by running away. If it smells food, it responds by getting hungry. Plants have responses, too. A plant growing toward a light is a response to the light. So is a flower opening in spring. A sunflower responds to the sun by turning to face it.

Birds hatch from eggs. A mother bird lays the eggs, and the mother and father birds bring back food so the baby birds can grow. Like birds, all living things **reproduce**, or have young called offspring. The offspring are the same kind of living thing as their parents. Sparrows make more sparrows. People make more people. Oak trees make more oak trees.

Sometimes, nonliving things can seem like living things. Think about that pile of rocks. At times, a rock may fall down the pile. The rock moves. But is it alive? Now think about a cloud. A cloud can move and grow. But a cloud does not make more clouds. Clouds do not take in food. New clouds form from water in the air. What about soil? More soil is made when rocks break down. The soil cannot make more of itself.

Rocks, clouds, and soil are not alive. To be alive, something must be able to do all the things that plants and animals can do. Look at the table below to see the difference.

What Is Alive?

| Things You See | What They Do | Are They Alive? |
|----------------|--|-----------------|
| Animals | Move, grow, and change, take in food and air, get rid of wastes, respond, have young | Yes |
| Clouds | Move, grow, and change, respond to wind | No |
| Plants | Move, grow, and change, take in sunlight and air, get rid of wastes, respond, have young | Yes |
| Rocks | Move and change, respond to gravity | No |