

## Is It Alive?

Kindergarten Science Lesson – Madelon Cheatham, Science Specialist

**Objective:** Students will distinguish between living and nonliving things.  
Students will recognize characteristics that all living things must have.  
Students will know that organisms that have died are considered living things.

**Time:** One Class Period

**Materials:**

QuickTime Video- "Is It Alive?" Available at Teacher Domain

<http://www.teachersdomain.org/resource/tdc02.sci.life.colt.alive/>

Two worksheets attached

Green leaves or a plant; brown leaves or dead plant (extensions require other materials)

**Background Information:**

It is clear to most people, even very small children, that icicles are not alive. They are cold, they don't move, except to drip or to fall to the ground when they break; they don't reproduce. It is also clear that household pets and people are alive, especially when you see them run, jump, or respond to you. Those are fairly easy examples. But how can you determine if a clock or a seed is living or nonliving?

A clock is nonliving, but its hands move, it makes noise, and it responds when you turn its dials or press its buttons. That's more lifelike than an icicle. What about a seed? Even though we're told that it holds the potential for life, it looks about as lively as a stone. As you can see, the distinction between living and nonliving is not always clear-cut. Some inanimate objects have characteristics of living organisms, while many living organisms, on the face of it, seem utterly lifeless, and this can be confusing to young children.

**How does one distinguish between living and nonliving things?**

The scientific definition of *living* includes those things that are alive or have ever been alive -- including what's left of a tree that died years before. Likewise, the seed, which appears lifeless and may remain dormant for years before finally germinating, qualifies as living. In contrast, *nonliving* things are not alive, nor have they ever been.

**What does it mean to be alive?**

According to biologists living organisms are characterized by seven "signs of life": 1) living things have highly organized, complex structures; 2) living things maintain a chemical composition that is quite different from their surroundings; 3) living things have the capacity to take in, transform, and use energy from the environment; 4) living things can respond to stimuli; 5) living things have the capacity to reproduce themselves; 6) living things grow and develop; and 7) living things are well-suited to their environment.