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**TEKS 1.9 Organisms and environments. The student knows that the living environment is composed of relationships between organisms and the life cycles that occur. The student is expected to:**

(A) sort and classify living and nonliving things based upon whether or not they have basic needs and produce offspring.

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### **Background Knowledge**

Things can be classified as living or nonliving. Living organisms can be identified by specific characteristics, including having basic needs. Living organisms have basic needs that must be met in order to survive and produce offspring. Basic needs can be met through interactions with living and nonliving parts of the environment. Nonliving objects do not have basic needs but can be identified by their physical properties. Students are confused by living things that were once alive but are now dead and objects that have been made of living things. Organisms that have died are still considered living things. Objects that have been made from living things are not considered living since they cannot reproduce themselves and never could.

### **Essential Questions**

What are living organisms?

(Living organisms are those that have basic needs that must be met in order to grow and reproduce. Animals need water, food, air, and shelter. Plants need water, food, air, and space to grow.)

What are nonliving things?

(Nonliving things do not grow and cannot reproduce. They do not have basic needs that must be met in order for them to exist. Nonliving things include water, soil, and air.)

How do living things depend on their environments and their structures to stay alive?

(Living things are adapted to survive in their environments. They have structures and behaviors that help them use the living and nonliving parts of their environment to survive and reproduce.)

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### **Stick It To Me!**

#### **Objective:**

To sort and classify living organisms and nonliving things based upon whether or not they have basic needs and produce offspring.

#### **Materials:**

- Two different colored pads of sticky notes

#### **How to Conduct:**

- Working in groups of three, give each group 3 sticky notes of one color and 3 sticky notes of another color. All groups should have the same two colors of sticky notes.
- Number the groups and have the students write their number on each sticky note.
- On the board, write “Living Organisms” and paste one of the colored sticky notes beside it.
- Then write “Nonliving Things” on the board and paste a sticky note of a different color beside it.
- Have groups go around the classroom and identify 3 living organisms and 3 nonliving things by sticking the appropriate colored sticky notes to them.
- Walk around the room to each identified item and have students give a thumbs up or thumbs down indicating whether they agree or disagree. Whether students agree or disagree, call on them and ask what makes the object living or nonliving. The students should justify their responses by stating at least one of the basic needs of a living thing that must be met (i.e., grow), or at least one basic need the nonliving thing cannot meet (i.e., reproduce).

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## **When I Grow Up, What Will I Be?**

### **Objective:**

To sort and classify living and nonliving things based on whether or not they have basic needs, and produce offspring;

### **Materials:**

- Large pictures of young organisms and corresponding adult organisms.
- Large pictures of a toy baby doll and a stuffed toy baby animal.

### **How to Conduct:**

- In two separate columns on the board, stick pictures of young plants and animals (such as a chick, a colt, a tadpole, a caterpillar, an acorn, a kernel of corn, a human baby) and corresponding adult organisms, but in random order so they do not match. Also, have in the column of young organisms, pictures of nonliving things such as a toy baby doll and a stuffed toy baby animal. These must obviously be toys.
- Point to one of the young organisms and say, “When I grow up, what will I be?” Then, have students answer, “I will be a \_\_\_\_\_.”
- When you point to the toys, students should not be able to tell you what they will be. This is a great opportunity to recognize students who have misconceptions about living and nonliving things and the basic need of living organisms to grow and reproduce.
- Discuss why the toys cannot be matched with any of the adult organisms. This is also a great opportunity to talk about how some young organisms (tadpoles, caterpillars) do not look like their parents, but will when they grow up.

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**Click, Living Paparazzi!**

**Objective:**

To sort and classify living and nonliving things based upon whether or not they have basic needs and produce offspring.

**Materials:**

- Digital camera or Internet
- Classroom computer

**How to Conduct:**

- Tell students to look around then ask; “What do you see?” (The board, the door, other students, etc). The teacher should then say that everything we see around us, inside or outside, can be classified into two groups; living organisms and nonliving things.
- Working in groups, allow each group to use a digital camera around the school to take pictures of both a nonliving object and a living organism.
- Import these into a PowerPoint. Students should be able to sort and classify the pictures, and justify their choices based upon whether the item has basic needs and produces offspring. If a digital camera is not available, students can find pictures on the Internet that can be copied and pasted into a PowerPoint.