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**Living vs. Non-Living**

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| **Estimated Time:** 45 minutes – 1 hour |
| **GSE Standard(s) and Element(s):****SKL1.**  **Obtain, evaluate, and communicate information about how organisms (alive and not alive) and non-living objects are grouped.**1. Construct an explanation based on observations to recognize the differences between organisms and nonliving objects.
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| **Science and Engineering Practices:****Analyzing and Interpreting Data**Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. | **Disciplinary Core Idea:****Organization for Matter and Energy Flow in Organisms**All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.  |
| **Crosscutting Concepts:****Patterns**Patterns in the natural and human designed world can be observed and used as evidence. |
| **Authentic Scenario (Phenomena):**Show students a pet rock. | **Vocabulary:*** living
* energy
* non-living
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| **Guiding Questions:**What makes something living?What makes something non-living? |
| **Materials Needed:*** Pet rock
* Construction paper (1 piece per student)
* 2 address size labels (preprinted to say living things and non-living things)
* Set of pictures of living and non-living things (1 set per student)
* Living or Nonliving? by Kelli Hicks on [www.getepic.com](http://www.getepic.com)

Students will also need:* Scissors
 | **Safety Considerations:*** Students should use caution when working with sharp objects.
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|  **Technology Integration:*** Device with Internet access for [www.getepic.com](https://www.getepic.com/) or Epic! App (free for educators)
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| **5E Stage** | **Student Activities**How will students engage actively in the three dimensions throughout the lesson?**Teacher Activities**How will the teacher facilitate and monitor student learning? |
| **Engage** | Show students a pet rock. Tell them his/her name and that you have a little bed for him/her in a box. Ask students, “What do you think I should feed my pet rock?” or “Does my pet rock need food to survive?” This will hopefully lead to the idea that the rock is not actually alive; it’s just a pretend pet.  |
| **Explore** | The teacher will review the materials sent to the students. Explain to the students that today they will be exploring the differences between living and nonliving things by classifying pictures into the groups living or nonliving.Procedure: 1. Begin by having the students fold their piece of construction paper in half on the long side.
2. Have them use the labels to label one side “living things” and the other side “non-living things.”
3. Next, have the students carefully cut out the set of pictures of living and non-living things.
4. Have each student place their pictures inside their paper on what they believe is the correct side.
5. Ask students to volunteer an answer with an explanation without verifying whether it is right or wrong at this point.
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| **Explain** | The teacher will read Living or Nonliving? by Kelli Hicks on [www.getepic.com](http://www.getepic.com). Important concepts: living things need food, water, and air to survive; living things use food to make energy to survive; animals and plants are living things; living things can move.Ask students to take another look at their living and nonliving sort. Do any of their pictures need to be switched to a different location? If so, have them explain what needs to be switched and why.The teacher will introduce the STEM career of biologist. Biologists are scientists that study living things, how they grow, and how they live in their environment. Biologists look for answers to questions like how do fireflies create light? How do plants respond to UV light? Beyond researching for answers to their questions, biologists can use their research to create new technology to help living things. To become a biologist, you need a bachelor’s degree from a college, so study lots of science and math in school. You will also need to be able to communicate well so English and computer science classes are also recommended.**Differentiation:**Preferential seating; Lower or higher leveled texts; Flexible grouping |
| **Elaborate** | Show students the following video: Is It Alive?<https://gpb.pbslearningmedia.org/resource/tdc02.sci.life.colt.alive/is-it-alive/?student=true> How is the movement of living things different from the movement of nonliving things? |
| **Evaluate** | Students should pick an object (living or non-living) and list or orally tell the teacher why it is living or non-living. |