



# *Let's Do* **SCIENCE**

Primary 6

Activity Book

**A**



# Let's Do Science

Let's Do Science is based on the United States Next Generation Science Standards (NGSS). The series consists of full-color textbooks and full-color activity books for Grades K to 6.

Let's Do Science engages students with a highly visual presentation of the disciplinary core ideas in the textbooks and places an emphasis on applying scientific knowledge using NGSS practices through numerous scientific investigations. Let's Do Science sees engineering as an essential element of science education and as such is tightly integrated into both the textbooks and activity books.

The Let's Do Science activity books include the following features:

## AB Activity

Activities and investigations related to concepts and topics covered in the Let's Do Science Textbook.

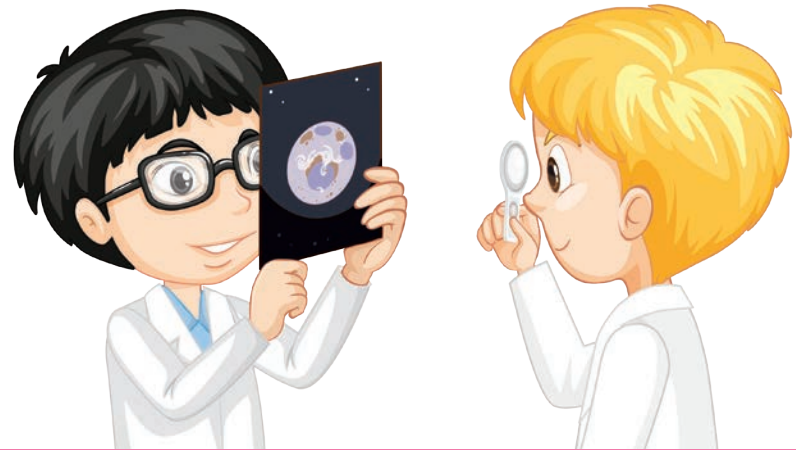
## Engineer It!

Goes beyond inquiry by encouraging students to design, model and build to engineer solutions to defined problems.

## Review

Topical questions at the end of each chapter for formative assessment.





# Contents

Unit 1 - Life on Earth

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Unit 2 - Plants

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Unit 3 - Animals

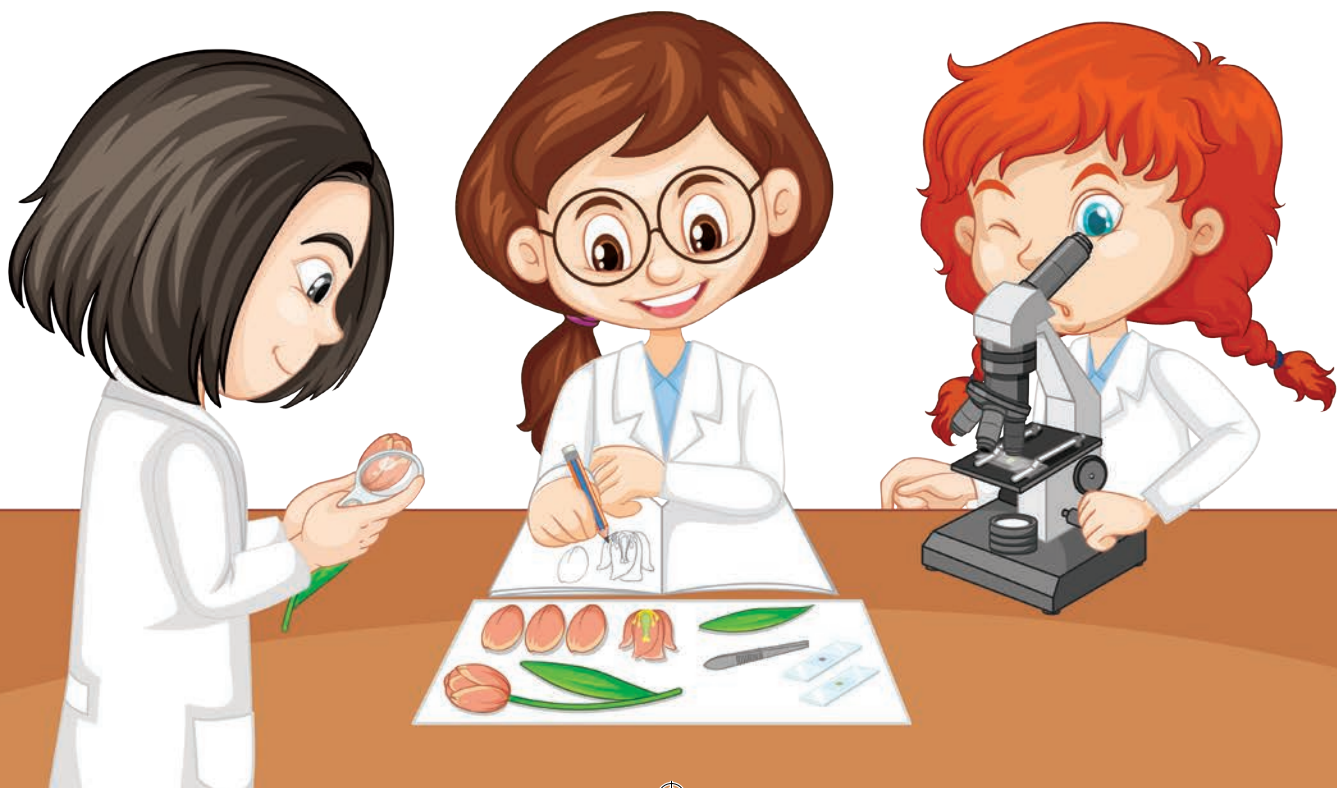
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Unit 4 - Plant and Animal Adaptations

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Unit 5 - Ecosystem Interactions

120



## Activity 1.1



# The Six Kingdoms of Life

Use your textbook to help you complete the fact cards about each kingdom of life. Search online for a photograph or illustration of each kingdom. Print them out and paste them in the space provided.

Archaea	<input type="checkbox"/> unicellular	<input type="checkbox"/> multicellular	
	<input type="checkbox"/> producer	<input type="checkbox"/> consumer	<input type="checkbox"/> decomposer
	Characteristics:		
	<hr/> <hr/> <hr/>		

Eubacteria	<input type="checkbox"/> unicellular	<input type="checkbox"/> multicellular	
	<input type="checkbox"/> producer	<input type="checkbox"/> consumer	<input type="checkbox"/> decomposer
	Characteristics:		
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## Protists

unicellular

multicellular

producer

consumer

decomposer

Characteristics:

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## Fungi

unicellular

multicellular

producer

consumer

decomposer

Characteristics:

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**Plants**

unicellular       multicellular

producer    consumer    decomposer

Characteristics:

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**Animals**

unicellular       multicellular

producer    consumer    decomposer

Characteristics:

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## Activity 1.2



# Bacteria, Protists and Fungi – Comprehension

1. Use your textbook to help you fill in the blanks.
  - (a) All bacteria are \_\_\_\_\_ organisms. They can be divided into two kingdoms – \_\_\_\_\_ and \_\_\_\_\_.
  - (b) \_\_\_\_\_ live in extreme environments such as the \_\_\_\_\_ ocean floor, \_\_\_\_\_ vents, hot \_\_\_\_\_ and the \_\_\_\_\_ of animals.
  - (c) \_\_\_\_\_ are called true bacteria and can be found in all natural \_\_\_\_\_.
  - (d) Bacteria reproduce \_\_\_\_\_ whereby an individual bacterium divides to form two identical \_\_\_\_\_ bacteria. Reproducing in this way allows bacteria to reproduce \_\_\_\_\_.
  - (e) Bacteria are often classified by the shapes of their unicellular bodies such as \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.

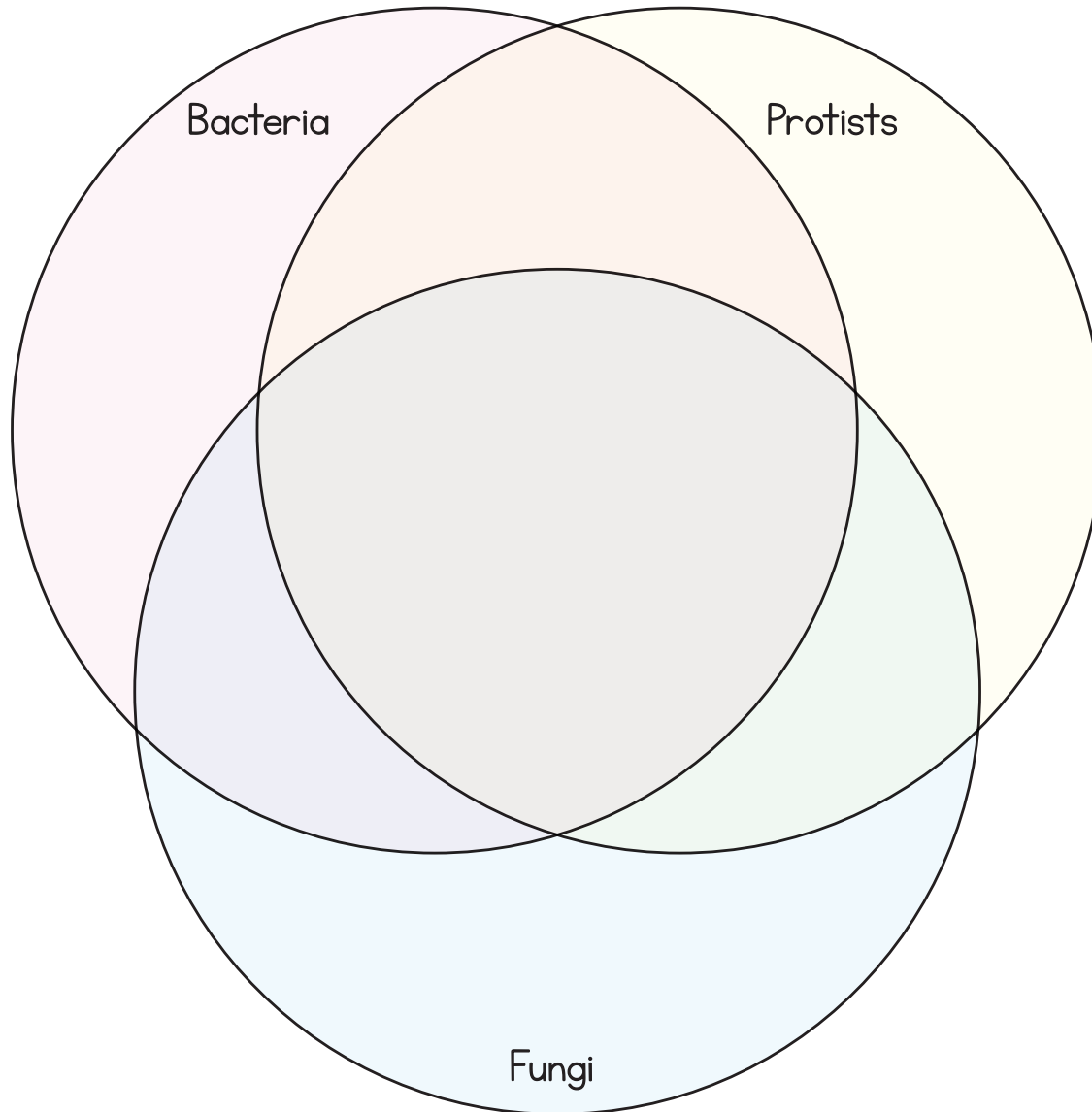


- (f) \_\_\_\_\_ are organisms that belong to the kingdom Protista. They come in a diverse range of shapes and sizes and can be unicellular or \_\_\_\_\_.
- (g) Examples of \_\_\_\_\_ protists include slime molds and giant \_\_\_\_\_.
- (h) \_\_\_\_\_ include organisms such as \_\_\_\_\_, puffballs and \_\_\_\_\_.
- (i) Most fungi are \_\_\_\_\_ and \_\_\_\_\_ by releasing \_\_\_\_\_ spores into the air.
- (j) Fungi are \_\_\_\_\_ – they get the energy they need by breaking down the remains of other \_\_\_\_\_ and \_\_\_\_\_ the organic matter. You can see this when \_\_\_\_\_ forms on spoiled food.
- (k) Fungi can be helpful to people. Many \_\_\_\_\_ are important food sources. \_\_\_\_\_ is used in the preparation of bread and cheese.





2. Use the Venn diagram to compare and contrast bacteria, protists and fungi in terms of their parts, how they get their energy and how they reproduce.





## Review



## Life on Earth

1. Why is it useful to classify organisms into groups?

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2. Describe the similarities of the animals in each classification level.

(a) Class Mammalia

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(b) Family Felidae

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(c) Species *Panthera leo*

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3. Where can archaea bacteria be found?

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4. Why are protists classified into the same kingdom?

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5. What role do fungi play in the functioning of a healthy ecosystem?

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6. Describe two different ways plants can be classified.

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7. Briefly describe the two main groups of animals.

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8. What are multicellular organisms? Provide two examples.

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9. What is the function of the cell membrane?

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10. What is the function of chloroplasts?

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11. Which plant cell organelle provides the plant cell with support and protection?

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12. Using the human body as an example, provide an example of the following:

(a) tissue \_\_\_\_\_

(b) organ \_\_\_\_\_

(c) organ system \_\_\_\_\_

## Activity 4.1



# Animal Adaptations Research Project

Conduct research about your favorite animal and its unique adaptations that help it to survive in its environment. You can use your textbook, books in the library or websites suggested by your teacher.

Animal name: \_\_\_\_\_

Which group does the animal belong to? \_\_\_\_\_

Paste a photograph or draw a picture of the animal.  
Label its parts and adaptations.

Description of the animal (include its size, body parts and symmetry):

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Habitat:

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Diet:

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Reproduction:

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Adaptation 1:

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Adaptation 2:

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Fun facts:

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Why is this your favorite animal?

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## Activity 4.2



# Desert Adaptations

List and describe the adaptations each organism has which help it to survive in a desert.

(a)



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(b)



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(c)



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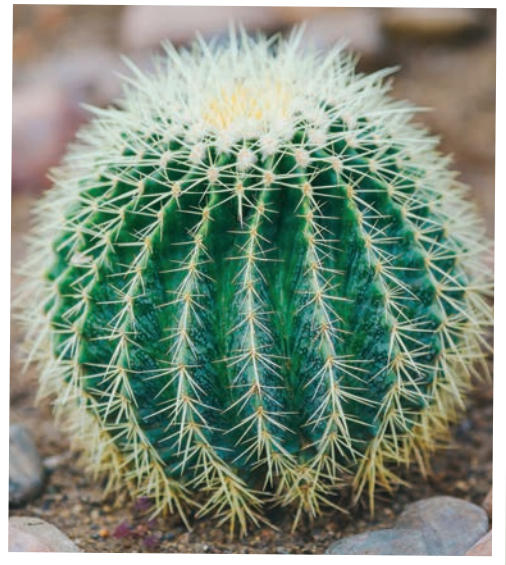
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(d)



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# Design and Build a Cabbage Protector

The desert is a dry environment with little rainfall and extremes in temperatures. As such, plants that live in the desert usually have a range of adaptations to protect them from the harsh environment and animals that may wish to eat them.

Your neighbor has a problem with rabbits entering her vegetable garden and eating her cabbages. In small groups, design and build an object that mimics desert plant adaptations to solve her problem.



## The Problem

Define the problem.

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## The Solution

Explain how your design provides a solution to the problem.

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## Materials

List the materials you will use to build your object.

## Draw a Model

Draw a labeled diagram of your design.





## Procedure

Decide on a way to test the effectiveness of your group's design.  
Write the steps you will take.

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## Observations

Draw and label the object you built.





## Analyze and Interpret

1. What properties of the materials you used make them suitable for their purpose?

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2. What desert plant adaptations did you draw inspiration from in designing your object?

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3. Describe how your object protected the cabbages from being eaten by rabbits.

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4. Evaluate the effectiveness of your group's design. How did it compare with the designs of other groups?

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5. How could your group's design be improved?

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## Plant and Animal Adaptations

1. Why are certain organisms found only in specific habitats?  
\_\_\_\_\_
2. Why can only a few species of plants and animals survive in deserts?  
\_\_\_\_\_
3. Provide two examples of plant adaptations to living in a desert.  
\_\_\_\_\_  
\_\_\_\_\_
4. Provide two examples of animal adaptations to living in a desert.  
\_\_\_\_\_  
\_\_\_\_\_
5. What is an epiphyte? How does this adaptation help a plant to survive?  
\_\_\_\_\_
6. How can animals reduce competition for resources in a tropical rainforest?  
\_\_\_\_\_
7. Describe one way tundra plants are adapted to living in soil with permafrost.  
\_\_\_\_\_  
\_\_\_\_\_



8. Provide two reasons animals may migrate.

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9. What is hibernation?

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10. List three ways living in groups help animals to survive and reproduce.

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11. What are two possible impacts that can occur when an animal's habitat is destroyed?

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12. What is an endangered species?

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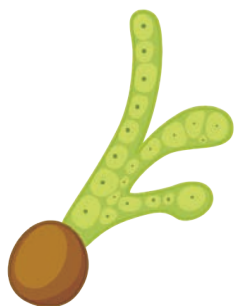


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# Moss Life Cycle Cut-outs







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# Fern Life Cycle Cut-outs

