HISD | Elementary Curriculum and Development

INSPIRING TEACHING, IGNITING LITERACY & LEARNING.

2019-2020 HISD @ H.O.M.E. Distance Learning
At a Glance
Science – Grade 2

Monday April 13	Tuesday April 14	Wednesday April 15	Thursday April 16	Friday April 17
Objective: Distinguish between natural and manmade resources. **Overview:** Students will compare items inside their home and outside to find samples of manmade resources and manmade resources.	**Objective:** Identify the basic needs of a plant. **Overview:** Students will think about the basic needs of a plant and create a colorful poster describing the needs.	**Objective:** Observe and record how the physical characteristics of plants help them meet their needs. **Overview:** Students will draw a list of plant parts observed after a walk outside or the backyard with a parent.	**Objective:** Observe, record, and compare how the physical characteristics of plants help them meet their needs. **Overview:** Students will find two different plants outside and label their parts. They will also create a graph of their similarities and differences.	**Objective:** Identify the basic needs of animals **Overview:** Students will think about the basic needs of animals and create a colorful chart of those needs.
Monday **April 20**	**Tuesday** **April 21**	**Wednesday** **April 22**	**Thursday** **April 23**	**Friday** **April 24**
Objective: Observe and record how the physical characteristics of animals help them meet their basic needs. **Overview:** Students will think about their favorite animal and create a chart of its physical characteristics.	**Objective:** Investigate how the physical characteristics and behaviors of animals help them meet their basic needs. **Overview:** Students will compare two different animals and create a chart of how they each obtain their food.	**Objective:** Investigate and record some of the unique stages that insects undergo during their life cycle. **Overview:** Students will choose an insect life cycle to break down in a colorful flow chart.	**Objective:** Compare and give examples of the ways living organisms depend on each other and their environments. **Overview:** Students will observe a Marine Ecosystem and draw one of the food chains they locate in this large food web.	**Objective:** Understand how changes in the environment affect the growth and behaviors of organisms. **Overview:** Students will look at different animals in their environment and discuss how changes to the environment can affect hibernation and migration.

2019-2020 HISD @ H.O.M.E. Distance Learning
Science – Grade 2
April 13-24, 2020 – Week 1

Monday – 30-45 minutes

Activity / Task

Natural and Manmade Resources
To access this interactive lesson, visit: https://tinyurl.com/HISDGrade2Day-9

Objective: Distinguish between natural and manmade resources.

Think About It!
What are some objects that are natural? What are some objects that were manmade? If you can, discuss the questions and share your thinking with someone in your home.

Do It!
What you need:
- Science notebook or paper
- Pencil

What to do:
- Take a walk outside and record all the natural Earth materials that you observe.
- Add the things you observe outside that are manmade from natural Earth materials to your list.
- Look around inside your home and record all the natural Earth materials and manmade materials you observe.
- Create the "Natural and Manmade Resources" chart shown on the right in your notebook.
- List the natural Earth materials and manmade resources in the chart.

Natural and Manmade Resources

Natural Resources	Manmade Resources

Natural Resources	**Manmade Resources**
Rocks Sand Water Gravel Air Soil Pebbles Wood	Bricks Flowerpots Sidewalks Wood frame house Wooden playground equipment Lumber

Understand It!
- **Natural resources** are Earth materials that are not made by man.
- **Manmade resources** are things that humans make that are not found independently in nature.
- Humans often take **natural resources** and use them to make **manmade resources**.

Apply It!
Journal Reflections: What are some objects that you saw that are natural? What are some objects that were manmade? Which resource was used to make the manmade objects?

_____ *is a natural resource.*

_____ *is a manmade resource.*

_____ *is the natural resource used to make* _____ .

Resources: Guided activity using Google slides

2019-2020 HISD @ H.O.M.E. Distance Learning
Science – Grade 2
April 13-24, 2020 – Week 1

Tuesday – 30-45 minutes	
Activity / Task	**Basic Needs of Plants** **To access the interactive lesson, visit**: ***https://tinyurl.com/HISDGrade2Day10***

Objective: Identify the basic needs of plants.

Think About It!
What are the basic needs of plants? If you can, discuss the question and share your thinking with someone in your home.

Do It!
Plant Needs
What you need:
- Science notebook or sheet of paper
- Pencil

What to do:
- Think about what plants need to survive.
- Create the "Plant Needs" chart shown on the right.
- List the things plants need to survive and why they need them.

Plant Needs	Why

Understand It!
Plants are living organisms with basic needs. These needs typically include **food**, **water**, **air**, and **space** to live and grow.
- **Air**, **water**, and **light** help plants make their own food.
- **Nutrients from the soil** help keep the plant healthy.
- **Space** gives the plant enough room to grow.

Anchor Chart by HISD Curriculum using Marker

Apply It!
Journal Reflections: Write about the basic needs of plants. Explain why those needs are important.

Plants need _____ *because* _____.

Plants need _____ *because* _____ .

Plants need _____ *because* _____ .

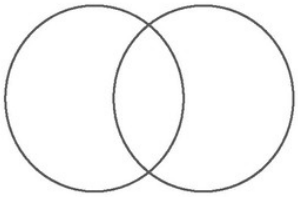
Resources	Guided activity using Google slides

2019-2020 HISD @ H.O.M.E. Distance Learning
Science – Grade 2
April 13-24, 2020 – Week 1

Wednesday – 30-45 minutes	
Activity / Task	**Physical Characteristics of Plants** **To access this interactive lesson, visit: *https://tinyurl.com/HISDGrade2Day11*** Objective: Observe and record how the physical characteristics of plants help them meet their needs. Think About It! What are the parts of a plant? What is the function or job of each plant part? If you can, discuss the questions and share your thinking with someone in your home. Do It! What you need: • Plant (outside) • Science notebook or sheet of paper • Pencil What to do: • Take a walk outside to observe different plants. • Choose one plant to draw and label the parts in your science notebook. • Create the "Plant Parts and Functions" chart shown on the right, in your notebook. • List the plant parts plant and its function in the chart. Understand It! • **Root** – takes in water and minerals from the soil. • **Stem** – supports the plant, moves water and minerals up the plant • **Leaves** – absorb or take in sunlight, make food for the plant • **Flower** – attracts insects to pollinate the plant • **Seed** – makes more plants Apply It! Journal Reflections: What are the parts of a plant? What is the function or job of each part of the plant? _____ *is a part of a plant and its function or job is to* _____. _____ *is a part of a plant and its function or job is to* _____. _____ *is a part of a plant and its function or job is to* _____.
Resources	Guided activity using Google slides

Plant Part	Function (what it does)

2019-2020 HISD @ H.O.M.E. Distance Learning
Science – Grade 2
April 13-24, 2020 – Week 1

Thursday – 30-45 minutes	
Activity / Task	**Comparing Physical Characteristics of Plants** ***To access this interactive lesson, visit: https://tinyurl.com/HISDGrade2Day012*** Objective: Observe, record, and compare how the physical characteristics of plants help them meet their needs. Think About It! How do the characteristics of a plant help it survive? If you can, discuss this question and share your thinking with someone in your home. Do It! What you need: • Two different plants • Science notebook or piece of paper • Venn diagram • Pencil  Venn Diagram by HISD Curriculum using Microsoft Office What to do! • Go outside and locate two different plants. • In your notebook or piece of paper, draw both plants and label the parts (stem, roots, flower, leaves, etc.). • Write the comparisons and differences about the two plants in the Venn diagram. • After completing the Venn diagram, think about how the parts of each plant help it meet their needs. Write your thoughts and ideas in your notebook. • Understand It! **Parts of a plant and their function** **Plant Part** / **Function (what it does)** Root – Takes in water and minerals from the soil Stem – Supports the plant; Moves water and minerals up the plant Leaves – Absorbs or takes in sunlight; Makes food for the plant Flower – Attracts insects to pollinate the plant Seed – Makes more plants Apply It! Journal Reflections: Describe the two plants you observed. How do the physical characteristics of these plants help them meet their needs? How are these plants alike? Which parts look different?
Resources	Guided activity using Google Slides

2019-2020 HISD @ H.O.M.E. Distance Learning
Science – Grade 2
April 13-24, 2020 – Week 1

Friday – 30-45 minutes	
Activity / Task	**Basic Needs of Animals** **To access this interactive lesson, visit: https://tinyurl.com/HISDGrade2Day13** Objective: Identify the basic needs of animals. Think About It! What do animals need to survive? If you can, discuss the question and share your thinking with someone in your home. Do It! What you need: • Science notebook or sheet of paper • Pencil • Colored pencils • Crayons What to do: • Create the "Basic Needs" chart shown on the right, in your science notebook. • Think about the things that you might need to grow and survive. • List your needs in the top part of the chart. *Example: I need air to breathe*. • Draw pictures of you meeting those needs in the bottom part of the "My Basic Needs" chart. My Needs / Pictures Understand It! Animals are living organisms with basic needs. Animals need **food**, **water**, **air**, and **space** to live and grow. Apply It! Journal Reflections: Choose one of the animals. Write about the basic needs of the animal and explain why these needs are important. *A _____ needs _____ because _____.* *My animal is a _____ . It eats _____ .* *Its shelter is _____ . It drinks _____ .* *It breathes _____ .* *A _____ needs _____ because_____.*  Image by Lubos Houska from Pixabay  Image by Alastair Newton from Pixabay  Image by Robert Balog from Pixabay
Resources	Guided activity using Google slides

Monday – 30-45 minutes

Activity / Task

Physical Characteristics of Animals
To access this interactive lesson, visit: *https://tinyurl.com/HISDGrade2Day014*

Objective: Observe and record how the physical characteristics of animals help them meet their basic needs.

Think About It!
Do you think that the physical characteristics of an animal help the animal survive? If you can, discuss the question and share your thinking with someone in your home.

Do It!
What you need:

- Science notebook or sheet of paper
- Pencil
- Crayons and/or colored pencils

What to do:

- Create a "Physical Characteristics chart in your notebook.
- Think about your favorite animal.
- Draw a picture of the animal you chose.
- Write a sentence about how it moves.
- Write a sentence about how it breathes.
- Write a sentence about the animal's body covering.
- Write a sentence that describes your animal.
- Record your sentences and picture in the chart.

Physical Characteristics of a Fish

Image by skeeze from Pixabay

1. Fish move using fins
2. Fish breathe with gills
3. Fish have two eyes
4. Fish are covered with scales

Understand It!
Animals are living organisms with basic needs. Some physical characteristics of animals include birds using their beak to grasp and hold on to food. The shell on a turtle's body provides it with a safe shelter. Animals live on every part of the Earth.

Apply It!
Journal Reflections: Write about the ways some physical characteristics help an animal meet its basic needs. Draw a picture of the animal to include in your journal entry.

Book Page Example

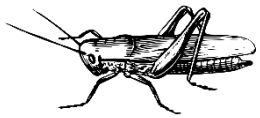


Image by OpenClipart-Vectors from Pixabay

The cricket has long back legs. This helps it jump high and hop away from an animal that can eat it.

The _____ *has* _____.

This helps it _____.

Resources

Guided activity using Google slides

2019-2020 HISD @ H.O.M.E. Distance Learning
Science – Grade 2
April 13-24, 2020 – Week 2

Tuesday – 30-45 minutes

Activity / Task

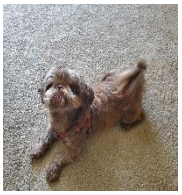
Comparing physical characteristics of animals
To assess this interactive lesson, visit: https://tinyurl.com/HISDGrade2Day015

Objective: Investigate how the physical characteristics and behaviors of animals help them meet their basic needs.

Think About It!
What are some physical characteristics that help animals survive? Do all animals use the same physical characteristics to meet their needs? If you can, discuss these questions and share your thinking with someone in your home

Owl

Dog



Photos taken by HISD Curriculum using Samsung

Do It!
What you need

- Dog and Owl picture
- Comparing & observing animal table (draw)
- Science Notebook or sheet of paper
- Pencil

Characteristics	Dog	Owl
Move		
Eat		
Defend Itself		
Behaviors		

What to do:

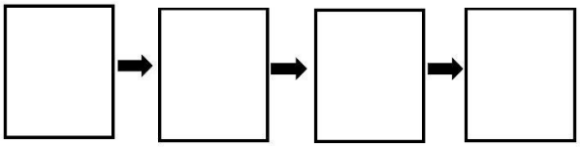
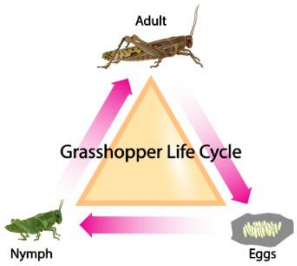
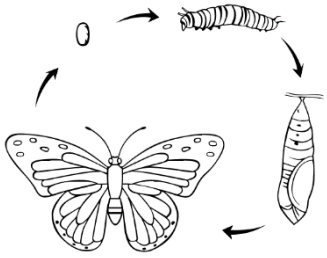
- Think about the differences and similarities between the owl and the dog.
- Compare them using the table to the right.
- Describe characteristics of both animals such as body covering, how they eat, move, and defend themselves.
- List the behaviors of each animal.

Understand It!
Animals are living organisms with basic needs. Animals need food, water, air, and space to live and grow. Animals also have physical characteristics, such as the shell on a turtle's body that provides it with a safe shelter. Animals have behaviors that protect them. They may migrate, hibernate or go into a dormant state if temperatures decrease or increase.

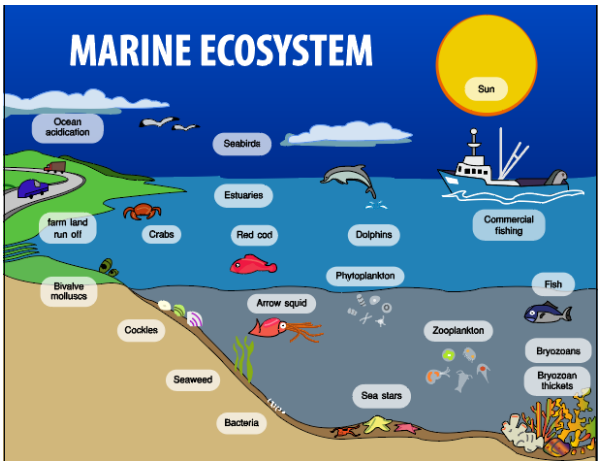
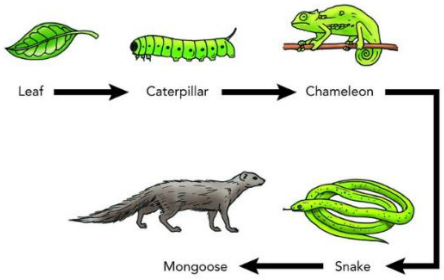
Apply It!
Journal Reflections: Use the following sentence stem to compare you two animals.
A_____ has _____, but a _____ has _____ to _____

*Example: A **fish** has **fins**, but a **dog** has **legs** to **move***

Resources: Guided activity using Google Slides

Wednesday – 30-45 minutes	
Activity / Task	**Life Cycle of Insects** **To access this interactive lesson, visit: *https://tinyurl.com/HISDGrade2Day16*** Objective: Investigate and record some of the unique stages that insects undergo during their life cycle. Think About It! How do the life cycles of insects compare to other animals? How do they compare to a plant's life cycle? If you can, discuss this question and share your thinking with someone in your home. Do It! What you need: • Science notebook or piece of paper • Pencil • Markers of colored pencils (optional) What to do: • Select an insect life cycle from the images below. • Draw a flow chart, like the one to the right. Draw the stages of the insect life cycle you chose inside the flow chart boxes. Be sure to label each stage. • Describe what happens in each stage.  Created by HISD Curriculum using Microsoft Office Understand It! Some insects go through 3 stages: Egg → Nymph → Adult  © aottorio - stock.adobe.com Some insects go through 4 stages: Egg → Larva → Pupa → Adult  Butterfly Life Cycle from 123 Science Fonts Apply It! Journal Reflections: Write and describe the differences between the two insects. What do you notice about their stages? Can you think of other insects that undergo the similar changes?
Resources	Guided activity using Google Slides

2019-2020 HISD @ H.O.M.E. Distance Learning
Science – Grade 2
April 13-24, 2020 – Week 2

Thursday – 30-45 minutes	
Activity / Task	**Food Chains** **To access this interactive lesson, visit *https://tinyurl.com/HISDGrade2Day17*** Objective: Compare and give examples of the ways living organisms depend on each other and on their environments, such as food chains. <u>Think About It!</u> How are the organisms in your food chain dependent on each other? Where does the energy begin in the food chain? If you can, discuss these questions and share your thinking with someone at your home. <u>Do It!</u> What you need: • Marine Ecosystem picture (right) • Science Notebook or sheet of paper • Pencil • Crayons or colored pencils What to do • Look closely at the marine ecosystem and make observations about the organisms. • Use your ecosystems pictures to create a food chain that represents the flow of energy. • Draw and label your food chain in your journal.  © magemasher - stock.adobe.com <u>Understand It!</u> The main source of energy comes from the Sun. Plants change the Sun's energy into food for themselves and animals that consume plants obtain that energy. The flow of energy continues as animals eat other plants and animals. The arrows on a food chain diagram show the flow of energy  Leaf to Mongoose Food Chain by Siyavula Education is licensed under CC BY 2.0 <u>Apply It!</u> Journal Reflections: Write and describe why plants are so important to the food chain. Do you think you can replace the animals in your food chain with other animals? If so, name them and write them down.
Resources	Guided activity using Google Slides

2019-2020 HISD @ H.O.M.E. Distance Learning
Science – Grade 2
April 13-24, 2020 – Week 2

Friday – 30-45 minutes

Activity / Task

Factors in the Environment
To access this interactive lesson, visit *https://tinyurl.com/HISDGrade2Day18*

Objective: Understand how changes in the environment affect growth and behavior of organisms.

Think About It!
How do plants and animals respond to changes in the environment? If you can, discuss this question and share you thinking with someone in your home.

Do It!
What you need:

- Animal Pictures (right)
- Science notebook or sheet of paper
- Pencil
- Markers or colored pencils (optional)

What to do:

- Analyze the pictures of the different animals
- In your science notebook or sheet of paper, write two columns: one side labeled “Hibernation” the other column labeled “Migration”.
- Write the name of each animal picture in the correct column
- Draw each animal in the correct column.


Image by Fabio Grandis from Pixabay


Image by ArtTower from Pixabay


Image by Robert Balog from Pixabay


Image by WikiImages from Pixabay


Image by ladymacbeth from Pixabay


Image by detillybert from Pixabay

Understand It!
Organisms depend on their environment for their survival. Migration and hibernation are instinctive behaviors that helps animals survive in their environments.

What is this behavior?	**Hibernation** When animals go into a deep sleep	**Migration** When animals travel from one place to another and back again
What reasons to organisms have for this behavior?	Cold temperatures It helps them to save energy	Lack of water Cold temperatures
What are some organisms that have this behavior?	Bats Squirrels turtles	Wildebeest Ducks Monarch butterfly

Apply It!
Journal Reflections:
Look at your two columns and the animals you placed as hibernating or migrating. Describe environmental factors you think caused the animals to migrate or hibernate.

Resources

Guided activity using Google Slides