



Learn at Home

Kindergarten - Science



Unit Overview

This series of online activities packet of resources is designed for students and their parents who wish to support in-school learning with activities that can be done independently and/or with a partner at home. The packet includes ten activities that support the major scientific work of the Kindergarten Grade with a particular focus on science content. These activities should each take 30-40 minutes (although some can be extended) and may be completed in any order. Sessions 1-6 require online access and sessions 7-9 require household items.

How to use this guide

For each activity, you will find:

- A description and/or instructions for the activity
- Information about both content and practice that the activity supports
- One or more focus or discussion questions that will help deepen the learning of the activity

Day 1 Science

Activity: Weather

Task

Complete the online course on weather. Join Tony, the weather reporter, to learn how to use a thermometer and predict weather conditions during a season.

At the end of the activity, you should be able to:

- Identify weather trends during a season
- Describe simple tools, such as a thermometer to record changes in the weather
- Use a thermometer to predict weather conditions during a season

Link: <https://en.e-learningforkids.org/science/lesson/weather/>

In these activities, Tony will forecast the changes in the weather, like if it's going to rain, or if the sun will shine. You will be asked to complete each of the weather wise games to collect points and advance to the next level. Once you complete the three games, you will be awarded a certificate with your name written in golden letters!

Vocabulary

Learn the new vocabulary words below. You will use these vocabulary words in today's activity.

- Weather** - The happenings (rain, snow, sunshine, wind, sleet, hail, hurricane, tornadoe) in the atmosphere at a certain time.
- Seasons** – winter, spring, summer, fall; there are four seasons in one year
- Thermometer** – a tool used to measure temperature.
- Temperature** – the amount of heat in matter

Click on Weather Wise – Level 1

- How many seasons are there in a year?
- What are the four seasons of the year?
- Match each picture to the correct season.
- Identify what clothes to wear for each season by dragging each picture to the correct season.

Click on Weather Wise – Level 2

- What is the role of a weather reporter or what is the weather reporter's role?
- What tool do we use to measure temperature?
- How do you measure temperature?
- Who invented the thermometer?
- Earn more points by clicking the appropriate season for the thermometer readings.

Click on Weather Wise – Level 3

- a. Use the thermometer to read the temperature that appears on the screen.
- b. Identify weather conditions based on temperature.

Day 2 Science

Activity: Living and Non-Living Things

Task

Complete the online course on living and non-living things. Vincente is living on the beach and knows a lot about living and non-living things. Explore living and non-living things.

At the end of the activity, you should be able to:

- Distinguish living things from non-living things.
- Knows living things can grow, eat and breathe.

Link: <https://en.e-learningforkids.org/science/lesson/jamaica-living-and-non-living-things/>

Vocabulary

Learn the new vocabulary words below. You will use these vocabulary words in today's activity.

- Plant** – a living thing with basic needs of nutrients, sunlight, water, air, and space
- Leaf** – A plant part in which photosynthesis takes place.
- Stem** - The part of a plant that supports the leaves and flowers and carries water to those parts.
- Roots** - The underground part of a plant that anchors and absorbs water and nutrients.
- Animals** - a living thing that has movement and basic needs of food, water, air, and space to live

Click on Exercise 1 – Living and non-living things

- Identify living or non-living things.

Click on Exercise 2 – Can it grow?

- Living things can grow, and non-living things can't. Help answer the questions.

Click on Exercise 3 – Living things in the sea?

- Help decide if things in the sea are living and non-living.

Click on Exercise 4 – Breathing Things

- Living things can breathe. Non-living things cannot. Please answer the questions in the course.

Day 3 Science

Activity: Playing with Plants and Animals

Task

Complete the online course on plants and animals. Click on “Playing with Plants and Animals”

Link: <https://en.e-learningforkids.org/science/lesson/playing-with-plants-and-animals/>

Task: In this activity, you will be asked to play with plants and animals. Learn to grow flowers and name farm animals and their body parts.

Vocabulary

Learn the new vocabulary words below. You will use these vocabulary words in today’s activity.

- Plant** – a living thing with basic needs of nutrients, sunlight, water, air, and space
- Leaf** – A plant part in which photosynthesis takes place.
- Stem** - The part of a plant that supports the leaves and flowers and carries water to those parts.
- Roots** - The underground part of a plant that anchors and absorbs water and nutrients.
- Animals** - a living thing that has movement and basic needs of food, water, air, and space to live

Plants

- Name the parts of a plant?

Animals

- Identify the farm animal
- Name the body part of a farm animal.

Day 4 Science

Activity: All About Plants

Task

Complete the online course on plants. Brenda is on the beautiful turtle beach, learning a lot about plants. You will be asked to help take care of her garden while learning all about plants. You will learn all about plants.

At the end of the activity, you should be able to:

- Identify the basics parts of a plant
- Identify the parts of a flower
- Identify what plants need to grow and live
- Identify what part of a plant produces food

Link: <https://en.e-learningforkids.org/science/lesson/cayman-islands-all-about-plants/>

Vocabulary

Learn the new vocabulary words below. You will use these vocabulary words in today's activity.

- Plant** – a living thing with basic needs of nutrients, sunlight, water, air, and space
- Leaf** – A plant part in which photosynthesis takes place.
- Stem** - The part of a plant that supports the leaves and flowers and carries water to those parts.
- Roots** - The underground part of a plant that anchors and absorbs water and nutrients.

Click on Exercise 1 – What do we know about plants?

- Identify what plants need.

Click on Exercise 2 – Parts of a Plant

- Name or list the parts of a plant.

Click on Exercise 3 – What do plants need to grow?

- Help Brenda find materials that will help plants grow. List the materials below.

1. _____

2. _____

3. _____

4. _____

Click on Exercise 4 – What plant parts do we eat?

- Which food item is the leaf of a plant?
- Which food item is the seed of a plant?
- Which food item is the flower of a plant?
- Which food item is the stem of a plant?
- Which food item is the root of the plant?

Click on Exercise 5 – How to grow a plant?

- What is the first step to growing a plant?
- What is the second step to growing a plant?
- What is the third step to growing a plant?
- What is the fourth step to growing a plant?
- What is the fifth step to growing a plant?

Day 5 Science

Activity: States of Matter

Task

Complete the online course on states of matter. Mr. Beaker will help you identify the states of matter. Be it ice, water or vapor.

At the end of the activity, you should be able to:

- Describe matter.
- Describe the three different states of matter.
- Describe how matter can change states.
- Identify solids, liquids and gases.

Link: <https://lessons.e-learningforkids.org/efk/Courses/EN/S0602/launch.html>

Vocabulary

Learn the new vocabulary words below. You will use these vocabulary words in today's activity.

- Matter- Everything in the universe that has mass and takes up space.
- Solid - A form of matter that takes up a specific amount of space and has a definite shape.
- Liquid - Matter that has a definite volume but no definite shape.
- Gas - A form of matter that does not have a definite shape or a definite volume.

Click on Exercise 1 – What is Matter?

- Click the arrows on the projector to view examples of solids, liquids and gases.

Click on Exercise 2 – Changing States of Matter

- Matter can change from being a liquid to a solid or to a gas. Explore water.

Click on Exercise 3 – Identify States of Matter

- Identify items as a solid, liquid or a gas.

Day 6 Science

Activity: Center of the Sea – Day & Night

Task

Complete the online course on Center of the Sea – Day & Night. William is going to explore the shipwreck of the Titanic. Learn about day and night while you help William get ready for his journey!

At the end of the activity, you should be able to:

- Distinguish day and night
- Decide which activities take place at daytime and at nighttime
- Explore what can you see in the sky during nighttime
- Know that we live on the earth and there are other planets in the universe.

Link: <https://en.e-learningforkids.org/science/lesson/center-of-the-sea-day-night/>

Vocabulary

Learn the new vocabulary words below. You will use these vocabulary words in today's activity.

Day – the period between the time that the sun rises and sets.

Sun- the star that is nearest to the earth. The earth receives heat and light from the sun and travels around it.

Click on Exercise 1 – Things we see during the day or night.

What is seen during the day? And what is seen during the night? Drag each item to the correct drop area. Then check your answer.

Click on Exercise 2 – Activities at specific times of the day

Which photos are taken during the day, and which during the night? Drag each photo to the correct drop area, then check your answer.

Click on Exercise 3 – Night and day

It is daytime at the spot of the Earth. Read the statement and identify if it is true or false.

Click on Exercise 4 – Night sky through a telescope

Which items can you see in the night sky? Place a telescope on each correct item, then check your answer.

Day 7 Science

Activity: How are Rocks Different?

Task

This activity will help you understand that there are many different types of rocks.

The parent should read through the activity and collect six (6) different rocks and work with your child as he or she completes the table.

Vocabulary

Learn the new vocabulary words below. You will use these vocabulary words in today's activity.

Texture: the feel or appearance of the surface of an object

Luster: the amount of light that an object reflects

Reflect: the redirection of light that hits an object

Mass: the amount of matter in an object

Geologist _____

Date _____

Rock	Colors	Feel (texture)	Shiny or dull (Luster)	Size (cm)	Mass (g)

How are Rocks Different?

1. What was the most interesting rock you found? What was interesting about it? Ask your parent or caregiver to record your thoughts below.
2. How were some of the rocks that you found similar? How were they different?

Day 8 Science

Activity: Ear Guitar

Task

This activity will help you to understand the vibrations that cause sound. Your parent/caregiver should read through the activity. Follow the directions below to conduct the experiment.

Vocabulary

Learn the new science vocabulary words below. You will use these vocabulary words in today's activity.

Sound: a vibration that travels through a solid, liquid or gas and can be heard by the ear

Vibration: the process of moving back and forth

Directions

Ear Guitar

Share Some secret sounds with a friend.

Materials

- Nail
- Two empty yogurt cups (you can also use two tin cans)
- Scissors
- String
- Bar of Soap
- Paper Cups
- A Friend, Sibling or Parent

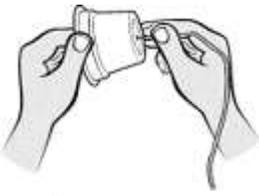


What do I need?

1. Use the nail to poke a hole in the center of the bottom of each yogurt cup. (If you use tin cans, have a grown-up make a hole with a hammer and the nail.)



2. With your scissors, cut a piece of string that's about 15 feet long.



3. Wet the bar of soap. Rub one end of the string on the soap, then roll the string in your fingers so it's pointy. Poke the end of the string through the hole into the cup.

Answer the following questions.

1. Can you hear the sound through your “ear guitar”?
2. How do you think the sound is traveling?
3. What makes you think the sound is traveling that way?

Activity 9: *Reflecting Rainbows*

Task:

This activity will help you understand the reflective properties of light. Your parent or caregiver should read through the activity with you. Follow the directions below to conduct the experiment.

Vocabulary

Learn the new math vocabulary words below. You will use these vocabulary words in the activity today.

Reflect: the redirection of light that hits an object

Pattern: a repeated shape or marking

Reflecting Rainbows

Decorate your white walls with rainbow colors!

What Do You Need?

- Compact disc (also known as a CD) (If you don't own any CDs, you can buy an old one at a garage sale or ask at a record store if they will give you a CD that won't play.)
- Sunshine (or a bright flashlight and a room that you can make dark)
- Piece of white paper



What Do I Do?

1. Take the CD out of its case and take a look at the blank side (the side that doesn't have any printing on it). You'll see bands of shimmering color. Tilt the CD back and forth, and the colors will shift and change.
2. Hold the CD in the sunshine. If it's a cloudy day, turn out the lights and shine your flashlight at the CD. Hold your piece of white paper so that the light reflecting off the CD shines onto the paper. The reflected light will make fabulous rainbow colors on your paper.

(Don't reflect the sunlight into your eyes or anyone else's eyes. The reflected sunlight is so bright that it can injure your eyes.)

3. Tip the CD and see how that changes the reflections. Change the distance from the CD to the paper. What happens to the colors?
4. Take a close look at your CD. It's made of aluminum coated with plastic. The colors that you see on the CD are created by white light reflecting from ridges in the metal.

More Things To Do

When light reflects off or passes through something with many small ridges or scratches, you often get rainbow colors and interesting patterns. These are called interference patterns. Here are several other ways you can see interference patterns.

- Squint at a distant bright light at night. You'll see starburst patterns around the light. If you look closely, you can see colors in the patterns. These patterns form when light bends around your eyelashes and imperfections in the layers that make up the lens of your eye. Tilt your head to one side while watching the pattern and notice that the pattern moves with you.
- In a dark room, look at a bright light (maybe a candle flame) through a nylon stocking, a silk scarf, a feather, or a tea strainer. The pattern that you see depends on what you look through. Move the thing you're looking through and notice that the pattern moves with it.
- Buy a set of "rainbow glasses" in a toy store or a science shop. Through these glasses, all lights look like rainbows. The glasses are made with diffraction gratings, clear plastic that is etched with many lines.

What's Going On?

Why does a CD reflect rainbow colors?



Like water drops in falling rain, the CD separates white light into all the colors that make see reflecting from a CD are interference colors, like the shifting colors you see on a soap bubble or an oil slick.

You can think of light as being made up of waves-like the waves in the ocean. When light waves reflect off the ridges on your CD, they overlap and interfere with each other. Sometimes the waves add together, making certain colors brighter, and sometimes they cancel each other, taking certain colors away.

What did you learn about light in this activity?

Day 10

Activity: Reading Three Kinds of Water

Directions

Read the passage below and answer the questions that follow.

Did you know that water comes in three different forms?

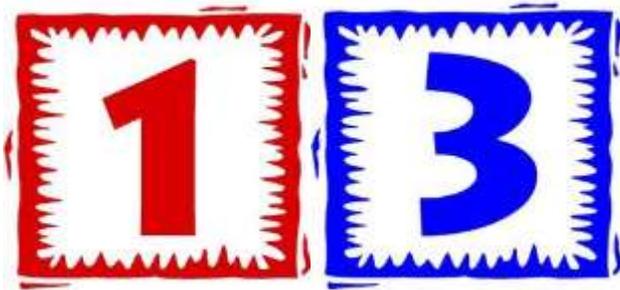
Water can be *liquid*. We drink liquid water, and we wash with it.

Water can be *solid*. Frozen water is called ice. Ice is solid. We use ice cubes to keep drinks cold.

Water can be *gas*. An example is steam. When we boil liquid water, it turns into steam. Steam also creates heat to warm homes.

People need water to live. So remember, use water carefully. Never waste water.

1. How many forms of water are there?



2. What form of water do we use for drinking and washing?



solid water



liquid water

3. What do we call solid water?



Ice.



Steam

4. How can steam be made?



By boiling water.



By freezing water

5. What is an example of water when it is a gas?

6. What did you learn from "Three Kinds of Water"?

7. Draw a picture of water turning into steam.