🌍 Lesson Plan: Science in Our World

Grade Level: 3
Subject: General Science
Duration: 45–60 min
NGSS 3-PS2-2: Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.

🎯 Learning Objectives

By the end of this lesson, students will be able to:

- **Identify** key scientific concepts including simple machines, states of matter, and animal adaptations.
- **Observe** and record data regarding motion and friction using a structured experiment.

- Activity: Documenting Data (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-science-in-our-world-3rd-gr-documenting-data-3.pdf)
- Practice Worksheet 1 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-science-in-our-world-3rd-gr-0.pdf)
- Practice Worksheet 2 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-science-in-our-world-3rd-gr-1.pdf)
- Practice Worksheet 3 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-science-in-our-world-3rd-gr-2.pdf)

Lesson Procedure

Step 1: Introduction (10 minutes)

- Ask students: "What are some examples of science you see in this room or outside the window right now?"
- Introduce the broad topics of 3rd Grade Science using the Science in Our World Study Guide. (https://newpathworksheets.com/api/guide/study-guide-science-grade-3-science-in-our-world-3rd-gr.pdf)
- Discuss the section on "Animals Around Us" and how they adapt to their environment.

Step 2: Direct Instruction (10 minutes)

- Review the concepts of Forces, Motion, and Simple Machines from the Study Guide.
- Explain the difference between living and nonliving things, and how matter changes states.
- Demonstrate how to record scientific data in a table.

Step 3: Guided Practice (10 minutes)

Assign Practice Worksheet 2 as a quiz to evaluate understanding of sound, light, and energy. (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-science-in-our-world-3rd-gr-2.pdf)

- Collect worksheets and review the data tables for accuracy and completeness.

Differentiation Strategies

For advanced learners:

- Ask students to design their own simple machine to solve a classroom problem.
- Have students graph the data collected from the car experiment.

For learners needing support:

- Provide real-life examples of solids, liquids, and gases to aid understanding.
- Read worksheet questions aloud and assist with recording data.

🎨 Extension Activities

- Create a poster showing the life cycle of a local plant or animal.
- Go on a nature walk to identify and list living and nonliving things observed.
- Set up a recycling station in the classroom and track what items are collected.

SCIENCE IN OUR WORLD

Everywhere we look, there are signs of SCIENCE! Science is all around us. We see examples of many different scientific happenings every day.

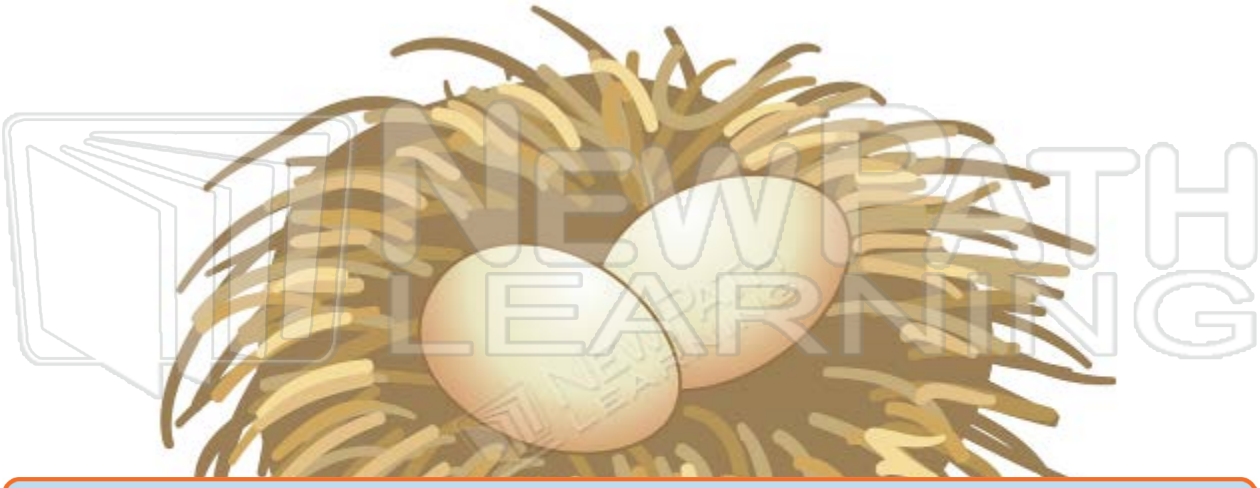
Plants Around Us

If you took a moment to observe plants around you, you would notice that plants usually stay in the same place but still get what they need to survive.

Let's say you want to plant a garden in your yard. After you pick the area where you want to plant your garden, it is important to **observe** how much sunlight that area gets before picking out the type of plants to plant in your garden because some plants grow well in only areas that receive a lot of sunshine while other plants only grow well in shady areas.

You are taking a walk in the park and notice a bird that has built a nest on a high branch of a tree. The bird quickly flies down to a puddle to take a drink. This reminds us that animals, like birds, need living and nonliving things to survive.

How many animal homes (shelters) can you see around you as you walk in the park? …a bird's nest, a beehive, or maybe a mouse hole.



Water Act. This law protects our waters and tries to prevent people from polluting our waters…so we can have clean water to drink everyday!

Weather We See Outside

You might watch the weather report in the morning to see what the weather is going to be like for that day. If you hear the **meteorologist** say that the **air pressure** will be high for the day, you know that you will have a sunny day.

Or you might hear a meteorologist on the radio report a severe thunderstorm **watch** in your area. This tells you that a severe thunderstorm

You could help conserve electricity by turning off lights when you leave a room or by opening your windows instead of turning on your air conditioner. You can conserve water by turning off the faucet while you brush your teeth or by taking shorter showers.

This includes recycling too! One way you could create less garbage at home in order to help the environment and have less trash be sent to landfills is to recycling things like paper and glass.

Matter and Its Properties We Can See

Matter is all around us. Anything you see around you that takes up space and has mass is matter.

Properties are characteristics or traits of the objects we see around us every day. Some objects we see are large, while others are much smaller in size. Some objects are heavy, while others are light in weight. You can observe with your eyes and hands many physical properties of matter around you.

For example, density is a property of matter. Let's say you threw a rock in a creek and the rock sank right down to the bottom. You now know about the **density** of the rock: the rock had greater density than water.

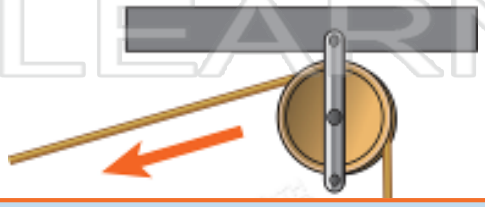
Changes in Matter We See

You see objects, people, and animals in motion all the time. If something or someone is moving – that means it is in motion! An example of an object in motion is a car driving by on the road.

Sometimes you will see objects slowing down because of friction. If you roll a ball on grass and then you roll the ball on the sidewalk, you would notice the ball roll faster on the sidewalk. This is because the grass causes MORE friction against the ball making it roll slower than it did on the sidewalk.

Work and Machines We Use and See (simple machines)

When you move something, you are working. Simple machines are used everyday by many people to make work easier to do. Everyday you most likely see or even use a simple machine....like when you see a pulley on the top of the flagpole at your school. When you walk up a ramp instead of the stairs, you are walking up an inclined plane, which is a simple machine. When you put something together using a screw, you are using a simple machine. Even when you go to the park and take a ride on the see saw with your little brother or sister, you are riding on a simple machine.



Light is also a form of energy that we see and use every day. When you wear a black shirt outside on a sunny day, the black color of your shirt will absorb the light from the sun, making you feel warmer. Light, when blocked, also creates shadows. You most likely will see a shadow every sunny day.

Sounds We Hear

When you hear sounds around you, you hear sounds of different volumes. Many sounds you hear around you measure in higher **decibels**, like an airplane taking off, and many sounds would measure in lower decibels, like when you hear someone whispering. When you listen to a band play or music on the radio, you can hear high and low sounds being played by different instruments. Pitch describes how low or high the sounds are that are being played.

When it is daytime on our side of the planet Earth, it is nighttime on the other side of the world.

The Earth and its position from the Sun determine what season we are having on Earth. So, if we live in the Northern Hemisphere, during the winter the Northern Hemisphere is tilted away from the Sun during the winter months, making it colder where we live.

Documenting Data

Sci C

Name _____ Class _____ Date _____

Purpose

PREVIEW

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Documenting Data

Sci C

Name _____ Class _____ Date _____

Primary Examples

Conductors

Objects	yes	no					
crayon		✔					
penny	✔						
eraser		✔					
paper clip	✔						

car 3	5′	5′	4′	5′	4′		
car 4	10′	12′	10.5′	11′	6′		
car 5	5.5′	6′	8′	5′	5′		
car 6	8′	7.5′	5′	9′	8′		

Science in our world - 3rd gr.

Sci C

Name_____ Class_____ Date_____

1 Animals go to different places to get what they need to survive. Where do **plants** go to get what they need to survive?

A Plants usually stay in the same place.
B All plants depend on humans to survive.
C Plants need only sunshine to survive.
D All plants go other places.

2 As the weather gets colder, you see a group of geese flying south to an area with a warmer climate. **Geese** are examples of birds that _____.

A populate
B investigate
C migrate
D hibernate

3 For a garden in your yard, what is important to **observe** before picking out the type of plants to plant?

A how far it is to walk to your garden
B how much sunlight the garden gets
C what should to use

4 Many birds build a nest in a tree and fly down to a puddle to take a drink. What does this show you about **what living things need to survive**?

A They only need living things.
B They only need nonliving things.

PREVIEW

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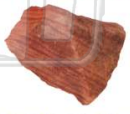
5

7

B It will be very cloudy.
C It will be rainy.
D It will rain most of the day.

in your area.
C A blizzard might be coming.
D It might rain next week.

9 While hiking, you find a **mineral** and scratch it with your fingernail and pieces of it fall to the ground. What **property** have you just identified of the mineral?



A its hardness
B its color
C its luster
D if it makes a streak on the ground

10 Your class will plant tall plants on Earth Day, but you live in an area that is always very windy. Where would be a **good, protected place** to plant them to protect them from wind?

A in the middle of an open field
B under some large rocks
C along a wall that blocks the wind
D near the school pond

Science in our world - 3rd gr.

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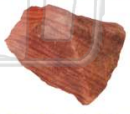

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Science in our world - 3rd gr.

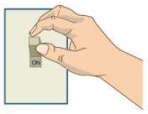
Sci C

Name_____ Class_____ Date_____

1 What is one way you could **create less garbage** at home and send less trash to landfills?

A use paper products more often
B don't recycle aluminum
C save water
D recycle paper and glass

2 What is a way that you could help **conserve electricity**?



A ride your bike more
B recycle
C leave your radio on a lot
D turn off lights when you leave a room

3 When the ice in your cup melts during a phone conversation, what two **states of matter** have you observed?

A a solid changing into a liquid
B a liquid changing into a solid

4 You see a penny thrown into a fountain **sink** right to the bottom. What do you now know about the **density** of the penny?

A A penny has greater density than water.
B A penny has no density

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B chemical
C natural
D physical

B a little more
C the same
D a great deal more

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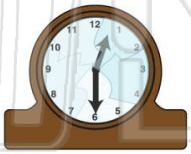

A a broken clock
B a chair
C a boy thinking about a math problem
D a dog running

10 What **simple machine** would be most helpful in moving a cart filled with books from the ground into the back of the Book Mobile truck?

A a wheel and axle
B a pulley
C an inclined plane
D a lever

Science in our world - 3rd gr.

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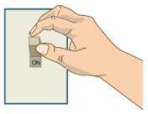

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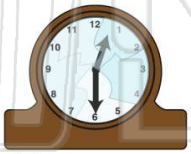

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Science in our world - 3rd gr.

Sci C

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A a wedge
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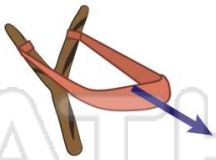
C a screw
D a lever

2 If you take a rubber band and pull it back but do **not** yet let it go, this is an example of _____ **energy**.

A motion
B renewable
C kinetic
D potential



3 When you rub your hands together quickly you are using _____ **energy** to create heat energy.

A light
B potential

4 When you wear a **black shirt** outside on a sunny day, the black color of your shirt will _____ the light from the sun, so you will feel warmer.

A absorb
B refract

5

7

A position
B shadow
C solution
D matter

A close to
B near
C away from
D towards

9 Everyday on earth, no matter what date it is, is always 24 hours long. The earth makes ____ complete **rotation(s)** on its axis each day.

A 1
B 2
C 3
D 4

10 When it is daytime on our side of planet **earth**, what is it like for people on the exact **opposite** side of the earth?

A It is daytime too.
B It is nighttime.
C It is afternoon.
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Science in our world - 3rd gr.

Sci C

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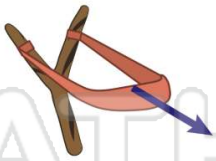

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