

# BEING A SCIENTIST



Scientists come in all shapes and sizes as they explore things around the world. In this learning plan, students will discuss the attributes of scientists and practice using their senses to experiment. Then, they can share about their findings.



## STANDARDS

K-ESS3-2: People encounter questions about the natural world every day.

K-ESS3-2: Ask questions based on observations to find more information about the designed world.

K-PS3-1: Make observations (firsthand or from media) to collect data that can be used to make comparisons.

## OBJECTIVES

- ✓ Students will be able to tell about attributes of scientists.
- ✓ Students will be able to experiment, ask questions, compare, and use their senses like a scientist.

## GUIDING QUESTIONS

- What is a scientist?
- Are you a scientist?
- What do scientists do?
- What do you want to explore?

## MATERIALS

- Scientists Can... worksheet
- Parts of a Scientist worksheet
- Science Tools worksheet
- Block Exploration worksheet
- Magnet Experiment worksheet
- Science tools for students to use (magnifying glass, scale, musical instruments, plastic bugs/animals, magnets, blocks)
- Magnets, paperclips, nails, metal silverware, etc.



## ASSESSMENTS

Formative assessments and checks for understanding occur throughout the lesson:

- Students' responses to guiding questions
- Students' ability to tell about scientists
- Students' ability to be a scientist as they explore, ask questions, and experiment
- Students' work on practice worksheets

**Summative Assessment:  
Block Exploration**

## DIFFERENTIATION STRATEGIES

- Read all text to students and model at the beginning of activities as needed.
- Students who are still learning to write can dictate their findings during a science experiment to an adult. They can also draw pictures to represent their findings.
- Whenever possible, plan additional ways for students to use their five senses to explore the environment around them.

## EXTENSION ACTIVITIES

- As an introduction to this learning plan, you can show pictures of diverse people and ages and ask, "Is this person a scientist?" It can be surprising to hear students' responses. Emphasize that anyone can be a scientist!
- Set up a water table with varying sizes of containers and measuring scoops. Invite students to explore with the water and then report on something they discovered. They can share by drawing or telling about their findings.



## ACTIVITY OVERVIEW

### Activity 1

#### Scientists Can...

Students make a collage of images showing what scientists can do.

### Activity 2

#### Parts of a Scientist

Students label body parts that help scientists explore and learn.

### Activity 3

#### Science Tools

Students experiment with science tools and draw the tool they used.

### Activity 4

#### Magnet Experiment

Students experiment with magnets to find things that are magnetic.

### Activity 5

#### Block Exploration

Students build a block tower and experiment with ways to make it taller.

### ACTIVITY 1: SCIENTISTS CAN...

- Write the following words on slips of paper: ask questions, predict, observe, use 5 senses, record data, tell about findings, experiment, compare, count, and measure. Then, place the words inside a bag.
- At the beginning of this activity, pull out the bag and tell students, "Today we are going to explore things about scientists. The words inside my bag tell us about what scientists can do. We are going to act out each word together."
- Invite a student to pull a word out of the bag. Read it aloud to the class. Then, show them one way they can act this out and pretend to be a scientist.
- Continue until you have discussed all of the words. Emphasize to students that they don't have to pretend any more... everyone can be a scientist!
- Give each student a copy of the Scientists Can... worksheet.
- Students will cut apart the pictures on the second page. They can choose pictures of things that scientists can do to add to their collage on the first page. It is possible for them to argue that every picture shows something a scientist can do, but they do not have to add all of the images.
- Encourage the students to share their posters at the end and talk about things a scientist can do.

# BEING A SCIENTIST



## ACTIVITY 2: PARTS OF A SCIENTIST

- Choose a book to read to the class. Tell them, "Today we are going to be like scientists as we explore this book!" Books about bugs, plants, animals, and space are recommended scientific topics for this age group.
- As you read, ask students to share things they are hearing, things they see in the illustrations, and things they are wondering about with their brains.
- Then, talk with the class about all of the parts of the body you used to explore the book.
- Discuss how scientists use their brain, eyes, nose, hands, mouth, ear, and even feet to explore the world around them. Give examples of each one.
- Next, pass out the Parts of a Scientist worksheets.
- Students will draw a line from each label to the kid scientists! They can show where each body part is located. Emphasize that these parts help scientists learn and explore. Finally, they can choose one part to write about to complete the sentence below.
- A teacher can model the sentence on the board to support students.

## ACTIVITY 3: SCIENCE TOOLS

- Create a science exploration station! Lay out a variety of tools for students to use in their own experiments. Ideas include: a magnifying glass, a scale, a ruler, musical instruments, plastic bugs/animals, magnets, blocks.
- Students will experiment with the science tools. Guide them as they explore by asking questions and inviting them to tell you about what they are doing.
- At the end of the activity, give each student a copy of the Science Tools worksheet. Students will draw a picture of one tool they used and complete the sentence.
- Model example sentences on the board as needed.





## ACTIVITY 4: MAGNET EXPERIMENT

- Provide students with magnets and a variety of items to use as they experiment. Ideas include paper clips, nails, silverware, crayons, pencils, and blocks.
- As students hold the magnets near these items, they will find that some are magnetic and some are not.
- Ask students to share their findings with each other.
- Then, give them each a Magnet Experiment worksheet. Students will cut apart the items at the bottom of the page. They can sort and glue in place.

## ACTIVITY 5: BLOCK EXPLORATION

- In this activity, students will experiment while building a tower of blocks.
- Provide them with blocks and challenge them to build the tallest tower they can!
- As they work, ask them questions like, "What tools do you need to use?" "How many blocks high is your tower right now?" "What could you try to make it taller?" "Is your tower taller than mine?"
- When students are finished, give them each a Block Exploration worksheet.
- They can draw a picture of their tower. Then, they can circle the tools they used and check the boxes about their experiment.
- Read the words and discuss what is happening in the pictures to help students tell about the actions they took as a scientist.



NAME \_\_\_\_\_

DATE \_\_\_\_\_

# SCIENTISTS CAN...

Directions: Cut apart the pictures on the next page. Choose pictures of things that scientists can do to add to your collage below.



A large, empty rectangular area outlined in purple, intended for students to create a collage of pictures related to scientists.

# SCIENTISTS CAN...

Directions: Cut apart the pictures below and find things that scientist can do.

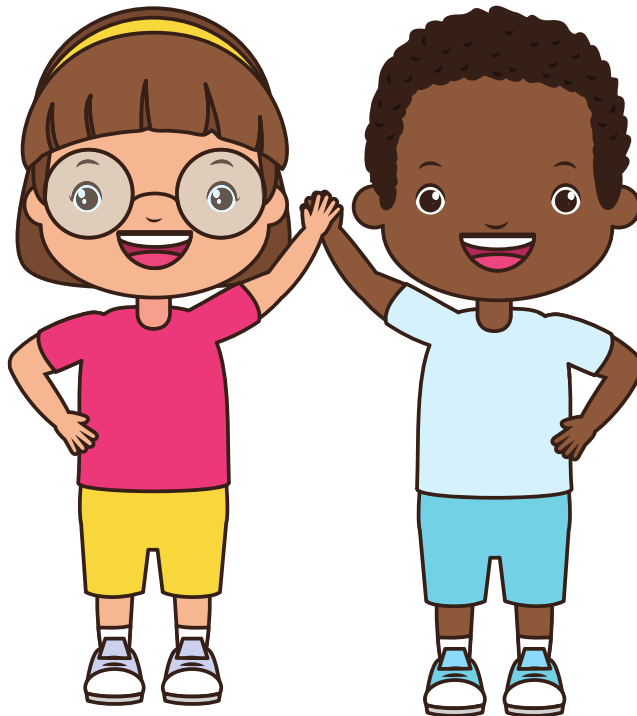


NAME \_\_\_\_\_

DATE \_\_\_\_\_

# PARTS OF A SCIENTIST

Directions: Draw a line from each label to the kid scientists! Show where each body part is located. These parts help scientists learn and explore. Then, choose one part to write about to complete the sentence below.



A scientist's \_\_\_\_\_ can

\_\_\_\_\_.

NAME \_\_\_\_\_

DATE \_\_\_\_\_

# SCIENCE TOOLS



Directions: Experiment with science tools. Then, draw a picture of one tool you used below and complete the sentence.



A large orange-bordered rectangular area for drawing and writing.



I used a \_\_\_\_\_

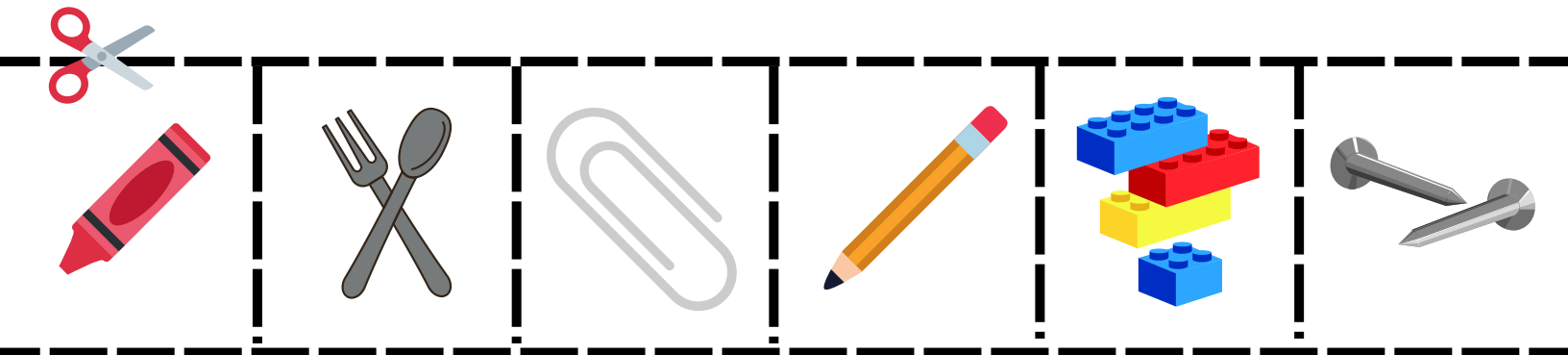
NAME \_\_\_\_\_

DATE \_\_\_\_\_

# MAGNET EXPERIMENT

Directions: Experiment to find items that are magnetic. Then, cut apart the items at the bottom of the page. Sort and glue in place.

 Magnetic	 Not Magnetic





NAME \_\_\_\_\_

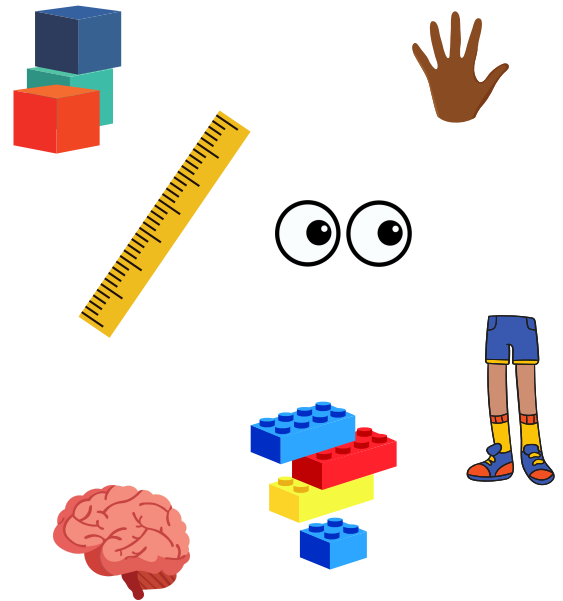
DATE \_\_\_\_\_

# BLOCK EXPLORATION

Directions: Build a tower out of blocks. Draw a picture of your tower. Then, circle the tools you used and check the boxes about your experiment.

Draw a picture of your block tower:

Circle the tools you used:



✓ Draw a check in each box to show what you did in your experiment:



I Asked Questions



I Tried More Than Once



I Wrote Notes and Drew Pictures



I Compared