

Lesson 5: Precipitation

Getting Started

✿ Questions to Explore

- How does the weather affect living things?
- Why do we study and observe the weather?
- What causes the weather?
- How is weather measured?



Facts and Definitions

- **Precipitation** is rain, snow, hail, sleet, or any form of water that falls from the sky.
- A **rain gauge** measures the amount of rainfall.
- Rain, snow, hail, and sleet are all forms of precipitation.

⦿ Skills

- Describe weather using quantitative measures of temperature, wind direction, wind speed, and precipitation. (S)
- Identify and use common tools to measure weather: wind vane (wind direction), anemometer (wind velocity), thermometer, and rain gauge. (S)
- Give examples of ways living organisms depend on their environments. (S)

✂ Materials

- *The Kids' Book of Weather Forecasting* by Mark Breen and Kathleen Friestad
- chalk* (optional)
- construction paper (kit)
- glue
- Science Journal (kit)
- scissors

Introduction

Ask your child to describe what she has seen falling from the sky. She may mention rain, snow, sleet (tiny ice pellets), and hail (lumps of ice that fall during some warm-weather thunderstorms). Explain that these are examples of **precipitation**.

Reminder:

1. Fill out your weather log each day as outlined in Lesson 1.
2. Record the air pressure as outlined in Lesson 2.
3. Take four temperature readings during the day for the daily temperature experiment as outlined in Lesson 3.
4. Record the speed and direction of the wind as outlined in Lesson 4.

Activities

Reading and Questions

Ask your child to read the following pages in *The Kids' Book of Weather Forecasting* before answering the following questions.

NOTE: Preview the suggested demonstration on p. 65 (trace around a puddle...you can make your own puddle as needed). If you and your child choose to do this demonstration, she can do it before completing the readings. The demonstration is optional as the book explains what the results will be.

pp. 64-65 (covers water and water vapor)
p. 69 (covers dew and frost)
pp. 80-81 (covers rain, snow, sleet, and freezing rain)
p. 101 (covers hail)

1. What happens to puddles of water that seem to disappear? (p. 65)

The water evaporates, or changes to a gas called water vapor.

2. What is dew? (p. 69)

Dew is what we call little drops of water that collect on the grass (and other surfaces) overnight. Your child should understand that dew occurs when water vapor (a gas) from the air condenses or turns back into a liquid.

3. How do snowflakes form? (p. 80)

Up high in the sky, water vapor turns to ice, and the ice collects on dust and other particles. The crystals grow until they are too heavy, and then they fall from the sky as snowflakes. (Your child may mention that if the weather is warm, the snowflakes may turn into rain.)

Activity 1: Types of Precipitation

Tell your child that there are four main types of precipitation (rain, snow, sleet, hail). Can she name them? Provide time for her to watch the video at the following web link to see examples of each type.



Forms of Precipitation

www.beyondthepage.com/link/12857/

Now, using what she learned in the readings and in the video, your child will create a mini-poster to define the different types of precipitation. Give her the "Types of Precipitation" page, and ask her to cut out the boxes on it. Once she's done that, tell her to match each type of precipitation with its definition. Once she's matched the types to their correct definitions, she will glue the pairs of boxes to a piece of construction paper. Encourage her to draw a picture to go along with each type of precipitation.

Answer Key:

- rain: water that falls from the sky in the form of drops
- snow: flakes of ice that fall from the sky
- sleet: water that freezes before it hits the ground and looks like small, round pieces of ice

- hail: a ball of ice that falls out of a storm cloud

Once your child has completed her mini-poster, ask her the following questions:

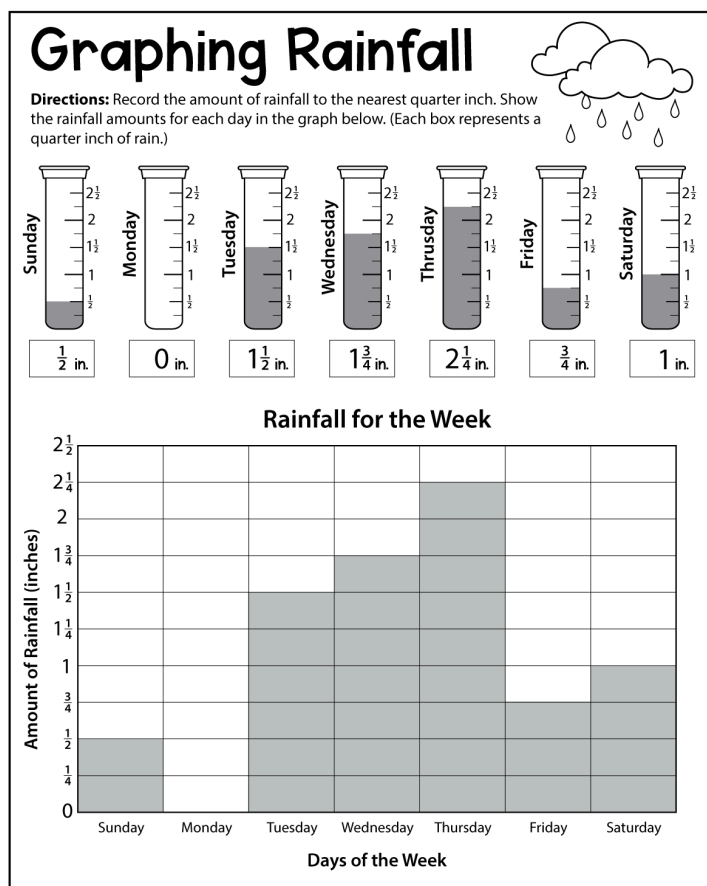
- Which type of precipitation do we see most often here where we live?
- Which is your favorite type of precipitation? Why?

Activity 2: Graphing Rainfall

Give your child the "Graphing Rainfall" page. Explain to her that the tool we use to measure rainfall is a **rain gauge**, a container that collects rain and lets you measure its amount. (If your child is interested, p. 84 of the book describes how to make a rain gauge.) On the activity page, your child will write the amount of rainfall shown in each gauge to the nearest quarter inch. Then she will fill in the bar graph with the different amounts of rainfall. Each box for the graph represents a quarter inch of rain. After she completes the graph, ask her the following questions:

- Which day received the most rainfall?
- Which day received the least rainfall?
- Was there more rain on Sunday or Friday?
- Which day would have been the best day to go on a picnic?

"Graphing Rainfall" Answer Key



Activity 3: Quick-Take Forecasts

Your child can test her developing weather forecasting abilities by trying to answer the "Quick-Take Forecasts" quizzes on pp. 34, 37, and 44 in the book. Tell her to be sure to first cover up the answers at the middle or bottom of the page. Next, she should read each question and jot down the answer in her journal. Then, she can uncover the answers and check her work. All answers are explained. As she comes across future "Quick-Take Forecasts" in the book, encourage her to try to answer those as well.

Wrapping Up

Ask your child to describe the different types of precipitation. Which type does she enjoy most and why? Ask her to explain why we must have precipitation in order to survive. What would happen if it never rained? What would be affected? Why?

Life Application

The next time there is precipitation in your area, take your child outside to observe the sky conditions, how the precipitation falls, wind, and temperature. How does this current weather make your child feel? Would different weather make her feel differently?

Types of Precipitation

RAIN

HAIL

SLEET

SNOW

water that freezes before it hits the ground and looks like small, round pieces of ice

a ball of ice that falls out of a storm cloud

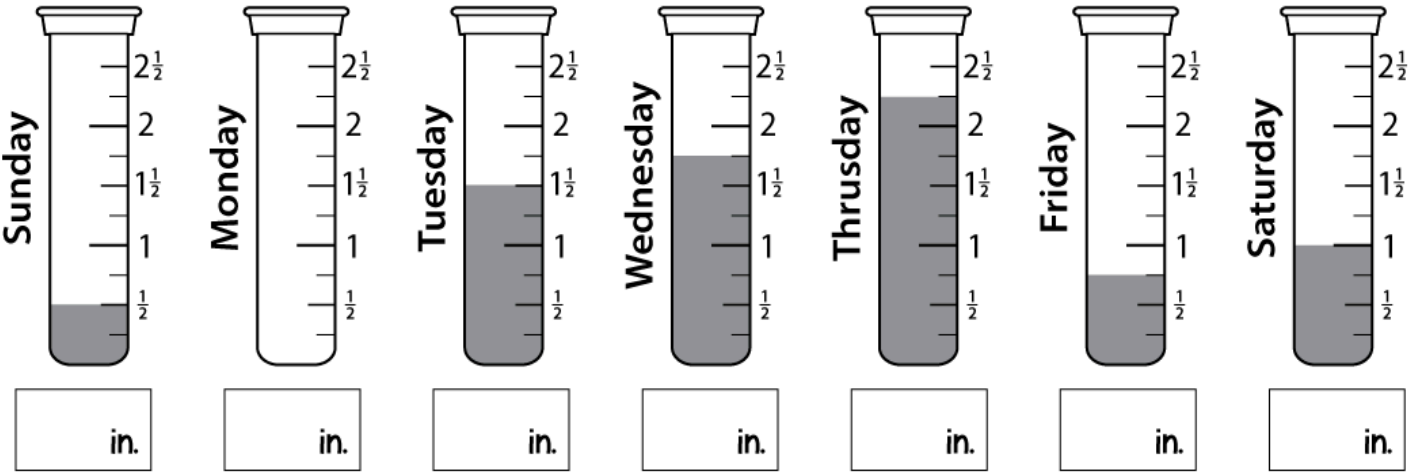
water that falls from the sky in the form of drops

flakes of ice that fall from the sky

Graphing Rainfall



Directions: Record the amount of rainfall to the nearest quarter inch. Show the rainfall amounts for each day in the graph below. (Each box represents a quarter inch of rain.)



Rainfall for the Week

