

# 2f

## "How to Build a Rain Gauge" Lesson Plan





## Learning Objectives

1. List the three basic parts of weather.
2. Describe the importance of water.
3. Learn how and why to measure rain.
4. Build a basic rain gauge.

## Intended Audience

4-H Club members



## Supplies & Resources Needed

- Lesson plan outline
- Tin can(s) (soup can, canned vegetables)
- Rust-resistant paint (paint brushes or spray can)
- Small ruler
- Structure or base to hold the gauge
- Water-proof glue
- Newspapers or drop cloth
- Completed rain gauge



## References

Purdue University Extension. (n.d.) *Indiana 4-H Weather Manual Level 1, Weather Watchers* (4-H 346). West Lafayette, IN.

## Projected Length

15-20 minutes

## Introduction



*We are all affected by the weather. Weather affects the plants, animals, and humans. Our food supply is dependent upon the weather. Weather is important for everything and it's fun, exciting, and interesting to learn about.*



## Objective 1

List the three basic parts of weather.



*Have you ever wondered what makes weather?*

There are three basic parts for weather: air, water, heat. If you took away any one of these parts, then you could not have weather.

## Objective 2

Describe the importance of water.



*Let's talk some more about the "water" part of the weather.*

Water covers about two-thirds of the Earth's surfaces. It not only is in the ocean, lakes, and rivers, but in the air as well. Without water vapor, there would be no clouds. Without clouds, Earth would be a desert-dry planet. There is water in the air at all times even though you cannot see it. Water comes in the form of rain, snow, sleet, fog, and hail. Fog is a visible cloud near the ground. Another name for water in the air is precipitation.

## Objective 3

Learn how and why to measure rain.



*Why should we measure how much rain we get?*

We measure rain in inches. Rain or water in the air is also called precipitation. A rain gauge is an instrument used to measure rainfall amounts. We need to know how much water (rain) we have for our food crops, food animals, our rivers and lakes, and for our own bodies.



*How does a rain gauge work?*

A rain gauge catches the amount of visible water from rain and snow that is present in the air. Would a rain gauge work for sleet, fog or hail? Probably not - but it should be able to measure the other forms of water in the air. A rain gauge measures rain and snow in inches. You will need to measure the water in your rain gauge every day because it may evaporate in a short amount of time.



## Objective 4

Build a basic rain gauge.

### Activity

Distribute rain gauge supplies and share the instructions on how to build a rain gauge. It would be helpful to show the members a rain gauge that is already completed.



*We'll follow these steps to build a basic rain gauge.*

- Glue your can to a small board or piece of foam (needs to be heavy enough not to blow away).
- Glue your ruler to the inside of the can (use a glue that will not dissolve in water).
- Set your rain gauge somewhere away from the house and trees so the water will fall into your rain gauge.
- Optional: paint your can before assembling. Be sure to use a drop cloth or newspaper to catch any paint drops!

### Group Discussion

Ask the group some of the following discussion questions.

- What is important for you to know about the weather?
- Why should everyone know about water (rain)?
- What are some of the ways that you know there is water visible in the air?
- Describe how a rain gauge works.

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