

Objective

By the end of this lesson, you will be able to understand the science behind hail storms and their formation.

Materials and Prep

- Pen and paper
- Access to the internet or books for research
- Optional: Art supplies for a creative activity

Activities

- **Activity 1: Research** - Use the internet or books to gather information about hail storms. Write down key facts and interesting details.
- **Activity 2: Diagram** - Create a labeled diagram that illustrates the formation of hail stones. Include the different stages and processes involved.
- **Activity 3: Experiment** - Fill a plastic bag with water and place it in the freezer. Observe what happens to the water as it freezes. Compare it to the formation of hail stones.
- **Activity 4: Creative Expression** - Use your art supplies to create a visual representation of a hail storm. Show the size and impact of hail stones in your artwork.

Talking Points

- **Hail Formation**
 - "Hail forms when updrafts in a thunderstorm carry raindrops upward into extremely cold areas of the atmosphere."
 - "The raindrops freeze into ice pellets as they are carried higher and higher by the updrafts."
 - "Layers of ice build up on the hailstone as it is repeatedly lifted and coated with supercooled water droplets."
 - "Eventually, the hailstone becomes too heavy for the updrafts to support, and it falls to the ground as hail."
- **Hailstone Size**
 - "Hailstones can vary in size, from tiny pellets to as large as a grapefruit."
 - "The size of a hailstone depends on how many times it has been carried up and coated with additional layers of ice."
 - "The stronger the updrafts, the larger the hailstones can grow."
- **Hailstorm Impact**
 - "Hailstorms can cause damage to crops, vehicles, and buildings."
 - "The impact of large hailstones can break windows and dent cars."
 - "Hailstorms can also pose a danger to people caught outdoors, so it's important to seek shelter during severe weather."