# elevate: Science

# Experience *IT!*Activity

Rainmaker Challenge

### What Is IT!

#### How does it rain?

To produce rain, it is important to fully understand the water cycle, the effects of gravity, and be familiar with heat and temperature.

### Think About IT!

Water on earth's surface is heated by the sun. The water then begins to evaporate in the form of a gas called water vapor. As water vapor collects, it forms tiny drops of water. Eventually, the drops become so heavy that gravity plays a role in pulling them back down to earth in the form of rain.

### Extend IT!

### What questions might you have about rainfall?

- Does the temperature of the air affect the amount of rainfall produced?
- How do you think rain changes to snow, sleet, or hail?

Conduct the same experiment using several different variables. Design a chart to record and compare your data. Perhaps try changing the type of plate (i.e. styrofoam, paper, or glass). What will your data reveal?



### **Materials List:**

- Ceramic or glass plate
- Jar
- Hot water
- Ice cubes

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## **Experience IT! Activity**

### Dare to Change IT!

How can your understanding of making rain help your neighborhood or community?

Scenario: Unfortunately, your local community has had very little rainfall and the wells are drying up. They are looking for ways to generate fresh water for irrigation that is effective and not wasteful. The local community is in search of engineers to help them create artificial rainfall to help provide water for their gardens.

Challenge: How can you use your understanding of the water cycle to help develop a self-watering garden?

### **Suggested Resources and Articles:**

American Rivers: 10 Ways to Save Water at Home

Seeker: 10 Ways to Create Water as the World Fights Drought

YouTube™: Can Air Be A Water Source During A Drought?

YouTube™: Thriving Bottle Garden Hasn't Been Watered in Over 40 Years

NASA: The Water Cycle





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