

# Race to Water

**First Grade**

**Activity: 2**

**Time: 1 Class Period**

## General Description

Students will determine if different colors absorb heat at different rates. The students will classify the water as a solid or liquid depending on the stage of the activity.

## Objectives

Students will investigate the rate of heat absorption of different colors.

Students will classify water as a solid or liquid by observing the characteristics of water.

Students will use what they learn about color and heat absorption to decide what color clothing they should wear at different times of the year.

## Arizona State Standards

SC01 S1C1 PO1 Compare common objects using multiple senses

SC01 S1C1 PO3 Predict results of an investigation based on life, physical, and Earth and space sciences (e.g., animal life cycles, physical properties, Earth materials)

SC01 S1C2 PO1 Demonstrate safe behavior and appropriate procedures (e.g., use of instruments, materials, organisms) in all science inquiry

SC01 S1C2 PO2 Participate in guided investigations in life, physical, and Earth and space sciences

SC01 S1C2 PO4 Record data from guided investigations in an organized and appropriate format (e.g., lab book, log, notebook, chart paper)

SC01 S1C4 PO1 Communicate the results of an investigation using pictures, graphs, models, and/or words

SC01 S5C1 PO2 Classify materials as solids or liquids

SC01 S6C2 PO1 Identify evidence that the Sun is the natural source of heat and light on the Earth (e.g., warm surfaces, shadows, shade)

SC01 S6C3 PO2 Analyze how the weather affects daily activities

M01 S2C1 PO1 Formulate questions to collect data in contextual situations

M01 S2C1 PO2 Make a simple pictograph or tally chart with appropriate labels from organized data

M01 S2C1 PO3 Interpret pictographs using terms such as most, least, equal, more than, less than, and greatest

M01 S2C1 PO4 Answer questions about pictographs using terms such as most, least, equal, more than, less than, and greatest

M01 S2C1 PO5 Formulate questions based on graphs, charts, and tables

M01 S2C1 PO6 Solve problems using graphs, charts, and tables

## **Teacher Background**

It is very important to have the ice cubes as uniform as possible.

## **Materials** (per student group)

(5) 4-inch square pieces of colored paper (white, black, red, green, blue)

Ice cubes

Activity Card 1-2

## **Procedure/Exploration**

1. The students will be divided into groups.
2. They will predict which color helps the ice win the melting race.
3. Place the cubes on the paper and put them in a sunny place.
4. Record which ice cube melts first, second, third, fourth and fifth.
5. Have students share the data with their classmates.
6. Based on individual data “Which color caused the ice to melt the fastest?”
7. Based on class data “Which color caused the ice to melt the fastest?”
8. How does this experiment affect the color choices we make?

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**First Grade**  
**Activity: 2**  
**Activity Card: 1-2**

Student's Name:

Date:

## Recording Sheet

Highlight the color that you think will melt the fastest. Then record the real time it takes each ice cube to melt on each color.

Color	Group 1	Group 2	Group 3	Group 4	Group 5
Black					
White					
Red					
Green					
Blue					

What does your data tell you about colors and the speed that ice cubes melt?

Below draw and color a picture of yourself during the summer. Make sure you show what type of clothes and what colors you would wear to stay the coolest.

Below draw and color a picture of yourself during the winter. Make sure you show what type of clothes and what colors you would wear to stay the warmest.