Race to Water

Second Grade
Activity: 4
Time 1: Class Period

General Description
Students will place ice cubes on different colors of paper in a sunny place. They will predict which color helps the ice win the melting race.
Students will explore the concept that a solid can change and become a liquid.

Objectives
Students will investigate how color affects the rate ice melts.
Students will identify two states of matter; solid and liquid, and their characteristics.

Arizona State Standards
SC02 S1C1 PO1 Formulate relevant questions about the properties of objects, organisms, and events in the environment
SC02 S1C1 PO2 Predict the results of an investigation (e.g., in animal life cycles, phases of matter, the water cycle)
SC02 S1C2 PO1 Demonstrate safe behavior and appropriate procedures (e.g., use of instruments, materials, organisms) in all science inquiry
SC02 S1C2 PO4 Record data from guided investigations in an organized and appropriate format (e.g., lab book, log, notebook, chart paper)
SC02 S5C1 PO2 Classify materials as solids, liquids, or gases
SC02 S5C1 PO3 Demonstrate that water can exist as a:

- gas – vapor
- liquid – water
- solid – ice

SC02 S5C1 PO4 Demonstrate that solids have a definite shape and that liquid and gases take the shape of their containers

W02 S3C2 PO1 Write expository texts (e.g., labels**,** lists, observations, journals)

R02 S3C2 PO1 Follow a set of written multi-step directions

M02 S2C2 PO2 Make a simple pictograph or tally chart with appropriate labels from organized data
M02 S2C2 PO3 Interpret pictographs using terms such as most, least, equal, more than, less than, and greatest
M02 S2C2 PO4 Answer questions about a pictograph using terms such as most, least, equal, more than, less than, and greater than

Teacher Background
It is very important to have the ice cubes as uniform as possible. A good extension of this lesson would be to measure the ice cube with the use of a balance or scale.

Materials

Ice cubes
Several pieces of colored paper (red, black, white, yellow, blue, green)
Stop watches
Activity Card 2-4

Procedure/Exploration

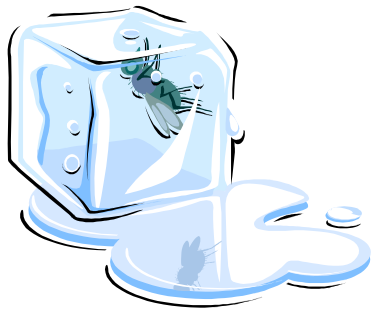
1. Students will divide into groups.
2. Students will predict which color helps the ice win the melting race. Record their predications in their science journal.
3. Place the cubes on the different colored pieces of paper and put them in a sunny place.
4. Record the time it takes for each ice cube to melt using Activity Card 2-4.
5. Make observations about what the ice looks like as it is melting
6. Make a table of the how long it took each of the ice cubes to melt.
7. Students will record and evaluate the results.
8. Graph the results in order to share with the class.
9. Have the students look at their results and answer the following questions: Which color caused the ice to melt the fastest? How does this experiment relate to the color choices we make when wearing clothes?
10. Relate the two forms of water, solid and liquid to other matter that can take both forms, solids and liquids (e.g., popsicles, ice cream, orange juice concentrate)

Race to Water

Second Grade
Activity: 4
Activity Card: 2-4

Student's Name: **Date:**

	Black	White	Red	Green	Blue
First					
Second					
Third					
Fourth					
Fifth					



"Which melted first, which melted last?"