

# Bay Area Scientists in Schools Presentation Plan

Lesson Name Let it Snow!

Presenter(s) CRS Staff

Grade Level TK Standards Connection(s) \_\_\_\_\_

**Teaser:** *Your opportunity to tell teachers and students what will be fun and interesting about your visit!*

Winter is coming! We are going to explore the many aspects of snow and ice. We will have stations focusing on cold weather habitats, an ice melting challenge, and a clouds/make-your-own-snowball station.

**Objective:** *As a result of your lesson, what will students learn? What will they be able to do?*

Students will learn about why it snows and what kinds of animals and plants live in cold climates. They will also test to see if different methods melt ice faster than others. Lastly, they will be able to see how clouds release snow and make their own snowball to take home.

**Vocabulary/Definitions:** 3 – 6 important (new) words

Precipitation: When rain or snow falls from the clouds

Habitat: An animal or plant's home

Climate: The way the weather is in one place over many years

## Materials:

*What will you bring with you?*

- Paper plates
- Clear plastic cup or jar
- Shaving cream
- Food coloring
- Baking soda
- Hair conditioner
- Ziploc bags
- Ice cubes
- Salt
- Sugar
- Q-tips
- Pictures of animals, plants and habitats
- Memory game (matching plants/animals)

**Classroom Set-up:** A place to fill up and dump water. Please have three areas available (one for each station).

## Classroom Visit

### 1. Personal Introduction:

\_\_\_\_5\_\_\_\_ Minutes

*Who are you? What do you want to share with students and why? How will you connect this with students' interests and experiences?*

[each scientist will introduce themselves]

### Topic Introduction:

\_\_\_\_10\_\_\_\_ Minutes

*What questions will you ask to learn from students? Big Idea(s), vocabulary, assessing prior knowledge...*

Brrrrrr! Is anyone else in here cold? What are some things that can make you cold? Today we are going to talk about one thing that we don't really see in California during the winter but is very cold. Can anyone guess what that is? It's snow! We are going to learn about why it snows, how we can melt snow, and what kinds of plants and animals like to live in the snow.

### 2. Learning Experience(s):

\_\_\_\_30\_\_\_\_ Minutes

*What will you do, what will kids do? Demonstrations, hands-on activities, images, games, discussion, writing, measuring... Describe in order, including instructions to kids.*

The students will then split into three groups. After 10 minutes the groups will switch to a new table.

#### Table 1: Ice Melting Challenge

At this station, we will talk about ice and how it's water that has become very, very cold. When we make ice hot, it turns back into water. The students will each have a cube of ice and they will try to be the first to melt it entirely! They cannot touch it with their hands but will have a bowl of salt, a bowl of sugar, and Q-tips to help them along. The fastest way to melt the ice is with salt since it lowers the freezing point of water. The students will learn how we use salt to melt ice on the roads to make it safe to drive.

#### Table 2: Cold Weather Plants and Animals

At this station, the students will learn about which plants and animals live in cold climates and what they have in common. First, we will ask the students what they wear when it's cold outside (sweater, coat, hats, mittens, etc.). Then we will talk about how some animals have coats too! We will talk about how some animals and plants hibernate in the winter. We will talk about why other animals don't live in the cold (no fur, cold-blooded, etc.). Then we will have a memory game where they have to match and name cold weather animals and plants.

#### Table 3: Cloud in a Cup/Make Your Own Snowball

At this station, the students will learn where snow comes from and will be able to make their own. They will learn that when clouds get very heavy with raindrops, they precipitate. When it is very

cold, that rain turns to snow. They will then mix up hair conditioner with baking soda to make their very own snowball to take home!

**3. Wrap-up: Sharing Experiences**

**\_\_\_\_\_10\_\_\_\_\_ Minutes**

*Putting the pieces together – how will students share learning, interpret experience, build vocabulary?*

What happens to a cloud when it gets very heavy with water? (It precipitates or rains)

What happens when a cloud precipitates and it's very cold outside? (It snows!)

Who can tell me a plant or animal that live in the snow? (Answers will vary)

Why can those animals live in the snow and others can't? (Answers will vary)

What happens to water when it gets very cold? (It turns to ice)

What was the fastest way to melt your ice cube? (Using salt)

**4. Connections & Close:**

**\_\_\_\_\_5\_\_\_\_\_ Minutes**

*What else might kids relate this to from their real-life experience? How can they learn more?*

*Thanks and good-bye! Clean-up.*

You don't have to go very far to see snow and ice. You can find it all around you! What are some things we use ice for? If you go somewhere that is snowy, look at the different types of snow on the ground. Some snow is soft and puffy and some is hard.

**Total 50 – 60 Minutes**

### **Follow-up – After Presentation**

Students can write a letter to our mascot Curious Cam about what they learned in science today. Please email [teach@crscience.org](mailto:teach@crscience.org) for the template.

For more snow and ice experiments: <http://cocopreme.hubpages.com/hub/Easy-Snow-and-Ice-Experiments>