



Rio Grande Educational Collaborative

Before and After School Program Lesson Plan

TITLE OF LESSON: Dry-Ice Demonstration

DATE:

SITE NAME:

CLASS SIZE:

NAME(S) OF INSTRUCTOR:

DURATION OF LESSON:

CREDIT (website used/name of author): https://youtu.be/aUEw88AV_H8

COMMON CORE STANDARDS: SL.K.2, 3.1.C, SL.5.1.B

LEARNING OBJECTIVES:

Students will understand the following:

- Observe, question, and draw conclusions about dry ice based on teacher demonstrations

ACTIVITY:

Instructional Sequence:

(Step by step instructions, should another instructor pick up and teach the lesson successfully)

Before the various demonstrations, review the states of matter with students and ask if they can label various transition states (evaporation, condensation, etc.). Explain that sublimation is when solid turns into a gas and that that's what's happening with dry ice.

Fog Cloud:

-Drop dry ice in a bowl/cup of water and let it smoke

Putting Out a Candle:

-Light a candle and place it in a cup

-Drop a piece of dry ice to put out the flame

-Light a match and try to light the candle while the dry ice smokes

Vibrating Coin:

-Grab a small piece of dry ice and a coin

-Pierce the ice with the coin, warm the coin if necessary. The coin will vibrate as the ice sublimates.

Floating Bubble:

-Place dry ice in a bowl and let the smoke pour out.

-Blow a bubble and let it sit on top of the smoke. The smoke should push it back into the air.

Dry ice bubble machine:

-Place dry ice in a bowl with water

-Add dish soap. The mixture should start bubbling.

Big bubble:

-Place dry ice in a bowl with water

-Take a piece of string and dip it in dish soap

-Slide the string over the rim of the bowl to create a bubble film. The dry ice will expand the bubble until it pops.

Water bottle bubble maker:

- Cut a hole into a plastic water bottle big enough for a straw
- Put the straw into the bottle
- Put a small piece of dry ice inside the bottle with water and close it
- You can squeeze the bottle to create dry ice bubbles. Add soap if you're having trouble.

Frozen flower:

- Add dry ice to a bowl with water
- Add a flower or other plant to the bowl. Take it out while wearing gloves or by using a pair of tongs.
- You can do the same with gummy snacks.

MATERIALS:

The following materials or equipment needed for this lesson:

(Include special equipment request)

- Dry Ice
- Gloves
- Matches
- Coins
- Water
- Soap
- Plastic water bottle
- Straw

SIGNATURE: _____ **DATE:** _____

SITE SUPERVISOR'S SIGNATURE: _____ **DATE:** _____

INSTRUCTOR'S REFLECTION:

Reflection on the lesson given:

1. How many students participated in the lesson given? _____
2. Name(s) of instructors participated. _____
3. How long did your lesson take? (Amount of time) _____
4. How did the students feel about the lesson? _____
5. Did the students like the lesson? _____
6. What part of the lesson did the students like? _____

7. What part of the lesson did the students not like? _____

8. Were the students interested in the topic of the lesson? _____
9. Was the content of the lesson difficult for the students? _____
10. What could you have changed to make the lesson interesting? _____

11. Did you have any trouble getting your lesson together? (Idea & Materials) _____

12. How do you rate your lesson? (1-10) Why? _____

SITE SUPERVISOR'S REFLECTION:

Reflection on the instructor's lesson:

1. How many students participated in lesson? _____
2. How many instructors participated in lesson? _____
3. Did the students enjoy the lesson? _____
4. What part did the students enjoy? _____

5. What part did the students NOT enjoy? _____

6. What could have been changed to make the lesson interesting? _____

7. Was the content of this lesson difficult for students to understand? Why? _____

8. What part of STEAM or literacy was used? (Science, Technology, Engineering, Art, Mathematics or Literacy)

9. Comments: _____

