*Name:*_____ *Date:*_____
*Block:*_____ *Integrated Science 7*

Lab Report: Dry Ice Experiment

DIRECTIONS:

I. What is the question we are asking?
Why does the combination of dry ice (solid carbon dioxide) and water within a capped bottle cause the bottle to explode?

II. What do we already know about it? (answer at least 20 words long)

III. Hypothesize a solution to our question. (answer at least 20 words long)

IV. Experiment

A. Materials provided:
1. Balloons
2. Dry Ice
3. Wet Ice
4. Latex Gloves

B. Equipment needed:
1. Flask (250 mL beaker)
2. 400 mL beaker
3. 100 mL beaker
4. 600 mL beaker
5. 1000 mL beaker
6. Forceps or tongs

C. Safety Precautions
1. Every group member will put on latex gloves at this time
2. Every group member will put on goggles at this time
3. Warning: DO NOT TOUCH DRY ICE WITH YOUR SKIN. IT WILL BURN YOU SEVERELY.
4. In case of any accidents, immediately notify the teacher
5. When receiving dry ice from the teacher, always carry it inside the 1000 mL beaker
6. When receiving wet ice from the teacher, always carry it inside the 100 mL beaker

D. Test 1-- Compare the melting of wet ice and dry ice
1. Fill the 600 mL beaker and the 400 mL beaker with 200 mL of water
2. Place a piece of wet ice (liquid water) into one of the beakers. Using the forceps, pick up a piece of dry ice and place it in the other beaker
3. Record your observations of the way in which each melts (at least 20 words long):

E. Test 2—Observe the way in which dry ice and wet ice melt in the absence of water
1. *Empty and dry your beakers*
2. *Place a piece of wet ice into one of the beakers. Using forceps, place a piece of dry ice into the other beaker. Take both beakers outside.*
3. *Place the piece of each type of ice on the sidewalk several feet apart.*
4. *Record your observations of the way in which each melts (at least 20 words long):*

F. Test 3—Replace the bottle cap from the video with a stretchable cover (a balloon)

1. *Fill the flask (250 mL beaker) with 250 mL of water*
2. *Using the forceps, place a piece of dry ice into the opening of the flask*
3. *Fit the opening of the balloon over the opening of the flask (250 mL beaker).*
4. *Wait several minutes.*
5. *Record your observations of what happens (at least 20 words long)*

V. Analyze your Data: Do your observations support your hypothesis? Explain why or why not. (answer must be at least 40 words long)