



Science Project Proposal

Due Friday, September 18

Question: How does the (IV) affect the (DV)?

1. **How does the temperature of the basketball affect the height of the bounce?**

2. Independent variable: **temperature of basketball**

Dependent variable: **height of the bounce**

3. List at least 3 **constants** for your experiment

- **same basketball, same surface, dropped from same height, always measure from the top of the basketball**

4. Briefly explain what you are going to do in each group.

A. Group 1 (control group—what you **normally** do)

I will let the basketball sit for 10 minutes at room temperature (75 Celsius). I will drop the ball from 1 meter. I will measure how high the top of the ball bounces to.

B. Group 2 (experimental/test group(s)—may be more than one)

I will put the basketball in the refrigerator for 10 minutes and then drop it from 1 meter.

Group 3—I will put the basketball in the oven at 100 Fahrenheit for 10 minutes and then I will drop it from 1 meter.

5. Number of trials for EACH group (**minimum of 20/see teacher**):

Explain: **I will drop each temperature group 15 times**

6. How are you going to **measure** your results? **Be specific!!**

I will have a helper hold a meter stick vertically. I will have another helper drop the ball. I will crouch down so that I can see the meter stick and tell how high the ball bounces.

Pending teacher approval, I find this project idea appropriate for my student. I understand that if my student changes his/her idea without written teacher approval, significant points will be deducted.

Parent signature: _____