

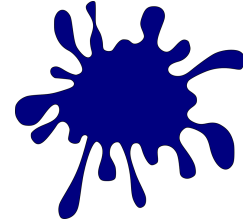
Name _____

Date _____

What is Energy: Splat Lab

Objectives: You will be able to demonstrate an understanding of energy by...

- Summarizing prior knowledge and conceptions about energy
- Making predictions about the ways different forms of energy can “change” and object
- Designing and conducting an experiment to quantify different types of energy



Do Now: What do you know about energy? How would you define it?

Class definition: Energy is _____

It is something an object _____. Unlike force, which is something an object _____.

Splat! : How can you change the shape of a ball of clay?
What does that mean about ENERGY?

*I am committed to keeping this activity fun, respectful, safe and educational. I understand all of the guidelines that we laid out as a class. If I break this commitment, I understand that I lose the privilege to play and experiment, and will have to complete **super boring** questions in a textbook.*

Signed, _____

1. Brainstorm: What are the different ways you can change the shape of a ball of clay?

To understand the results of your experiment, you need a way to **measure** how smushed the ball is.

2. Brainstorm ways you can **measure** the smushed-ness of the clay:

Name _____

Date _____

3. **Circle** the measurement your group agrees to use. This is called the **dependent variable**. It **depends** on the variable you choose to change.
4. When scientists design experiments, they choose one variable to change. What variable are **you** going to change? (Ex. I could drop the clay at different heights. The variable I'm changing is HEIGHT)

The variable I am changing is _____

I am going to change it by _____

I am going to measure this variable by _____

The variable that **you** can change is called the **independent variable** because it stands alone and isn't changed by the other variables you are trying to measure..

5. What effect do you think your **independent variable** has on how much the clay changes shape?

If I *increase/decrease* _____, I think the _____ will *increase/decrease*.

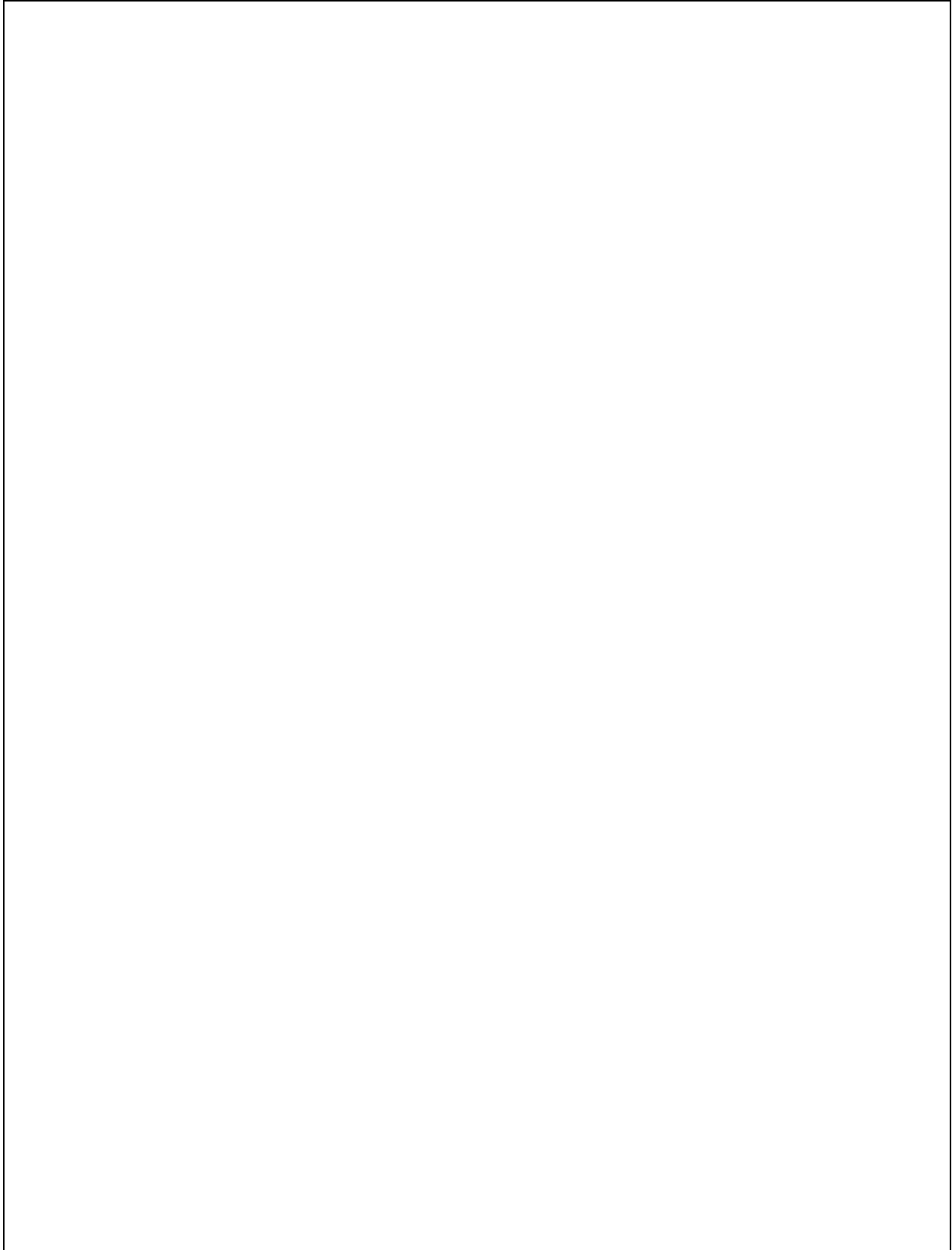
(circle one) (independent variable) (dependent variable) (circle one)

6. What are the other (control) variables involved in this scenario? How do you plan to keep them constant? (Ex. If I'm throwing the ball of clay from different heights, I need to make sure I throw it with the same speed every time. One of my control variables is **speed**.)

7. Write a procedure for your experiment in 4-5 sentences. If you do a good job, a classmate doing a different version of the experiment should be able to replicate exactly what you did.

Name _____

Date _____



7. Start your experiment and take data! Record it however makes sense to you, but make sure your teacher can understand what you did!

Name _____

Date _____

8. What do you think now?

When I *increase/decrease* _____, the _____ *increases/decreases*.
(circle one) (independent variable) (dependent variable) (circle one)