

## Doodle Sheet: Chemical Reactions in Living Organisms

A. Challenges

B. The WHAT: What they need.

*What do organisms need to survive and reproduce?*

- 1.
- 2.
- 3.
- 4.
- 5.

The HOW: How they get it.

*How does the organism meet the need at left?*

- 1.
- 2.
- 3.
- 4.
- 5.

C. Poster Title: \_\_\_\_\_

*My notes:*

Inputs       $\longrightarrow$       Uses       $\longrightarrow$       Outputs

D. Why do organisms (including humans) need \_\_\_\_\_? My ideas...

E. Top Three

- 1.
- 2.
- 3.

One more I noticed: \_\_\_\_\_

Questions I have:

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

F. "You are what you eat." My thoughts...

### Looking a bit closer...

G.	<u>Big Molecule</u>	<u>Component Molecule</u>	<u>Chemical Formula</u>	<u>Elements</u>
	Carb	Glucose		
	Fat	Triglyceride		
	Protein	Amino acid -isoleucine -phenylalanine -glycine		

H. Some "Big Ideas" from the Protein Reading

I. Commonalities and Differences between Proteins, Fats, and Carbs

Commonalities

Differences

J. Stuff we know about Matter and Energy:



Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

1. What is matter?

1. What is energy?

2. What do you know about matter?

2. What do you know about energy?

3. What are some examples of matter?

3. What are some examples of energy?

4. Do you know of any "rules" about matter?

4. Do you know of any "rules" about energy?

K. Refined Question:

L. Outputs

What is poop?

What is pee?

Other things...

What is mucus?

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

M. What's happening to the matter we take in?

[This is a model idea.]

N. Why do living things rearrange matter?

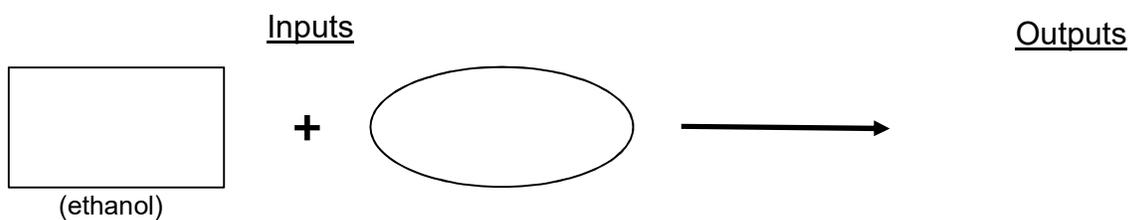
O. Model idea:

P. Burning Food

Observations

Questions

Q. Burning Ethanol: Tracking Matter



Observations

Evidence

R. What do you want to test for and why?

Record what happened in your class during the tests for substances.

Record final equation.

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

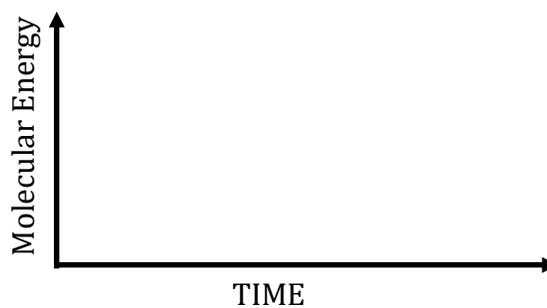
S. Definitions

T. Observations of energy before, during, and after the reaction:

→Where does it come from?

U. Ideas about energy  
in the reactants and products:

V. Our representation:



W. Model: