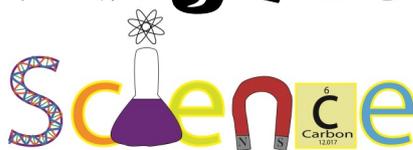
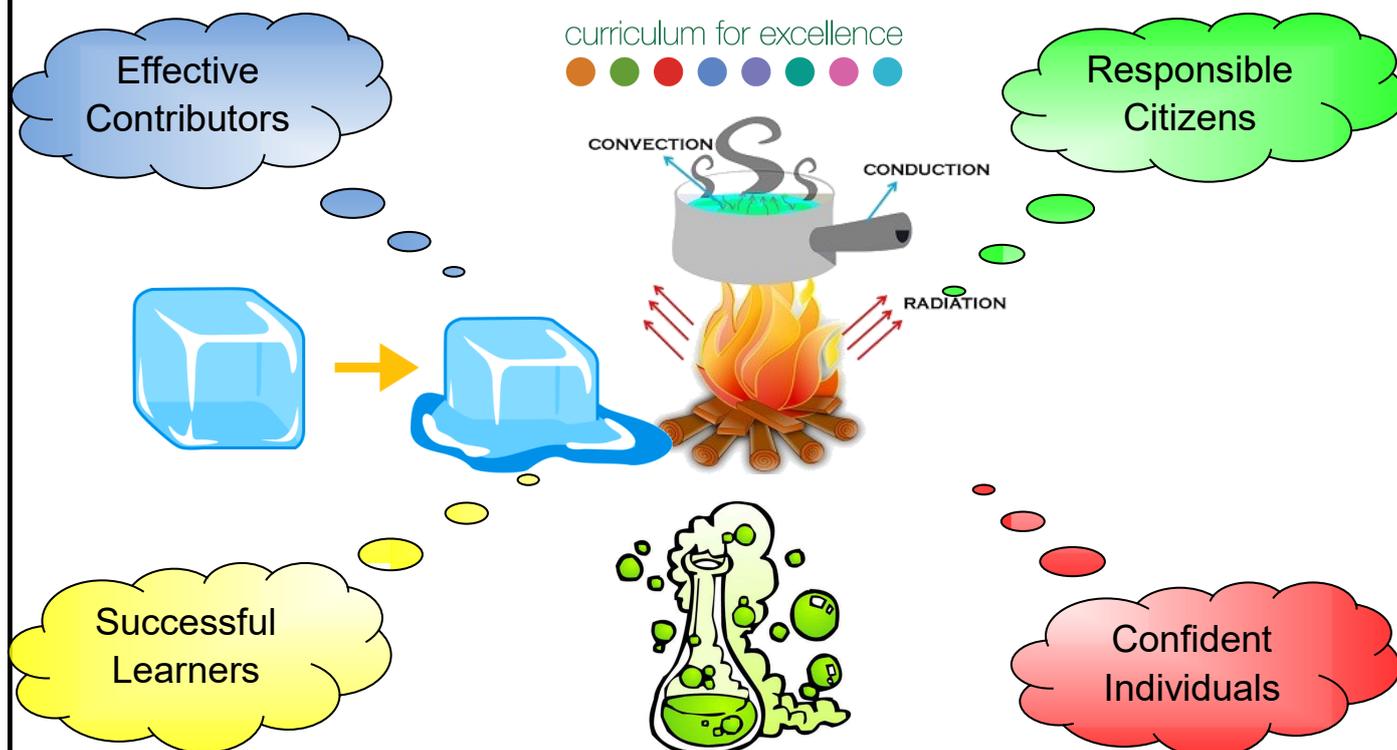


Firrhill High School



P2: Energy & Reactions



Homework	Due	Comment
<i>Homework 1</i> Energy		
<i>Homework 2</i> Chemical & Physical Reactions		
<i>Homework 3</i> Reaction Rates		
<i>Homework 4</i> Heat Transfer		

Name:

Class:

Teacher:

1. Energy

1. Fill in the blanks in the passage below:

A _____ E _____ told us that energy cannot be c _____ or d _____, it can only c _____ f _____.

2. Think about the energy changes in each of these situations:



A kettle changes _____ energy
in to _____ energy.



A Bunsen burner changes _____
energy in to _____ energy.



A washing machine changes _____
energy in to _____ energy.



A wind-up torch (dynamo) changes
_____ energy into _____ energy.

3. Give three reasons why we need energy

1. _____
2. _____
3. _____

4. Write down two energy changes that happen in the house and aren't listed above.

1. _____
2. _____

2. Chemical & Physical Changes

1. Complete the missing words.

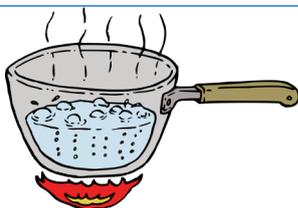
During a chemical changes a _____ is always formed. Chemical changes are usually _____ to reverse.

Physical changes don't create a new substance. Physical changes are usually _____ to reverse.

2. For each example below, decide if it is a chemical or physical change.



Baking bread is a _____ change



Water evaporating is a _____ change



A rock smashed into pieces is a _____ change



An old nail rusting is a



An ice cream melting is a



An egg frying is a

3. For each example below state what sign tells you a chemical reaction has taken place (you can youtube these experiments to see them for yourself!)

Reaction

Sign of Chemical Reaction

Magnesium reacts with oxygen, burning a white bright light and creating a dull grey substance.

Liquid silver nitrate and liquid sodium chloride react to form solid silver chloride.

Calcium reacts with water forming bubbles and making the water turn cloudy.

3. Reaction Rates

In class you investigated four different ways to increase the rate of reaction.

Choose **one** factor and write a short report on what you found.

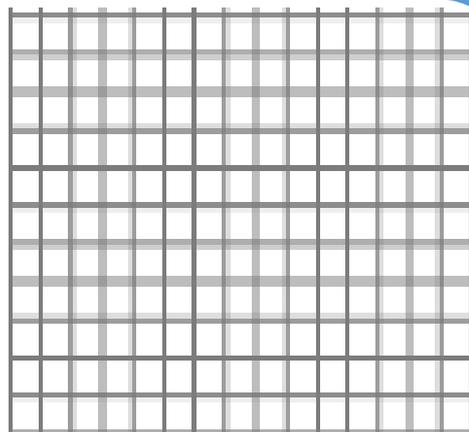
You will need to select one set of results from your jotter to help you.

Title:

Aim:

Underlying Science:

Results:

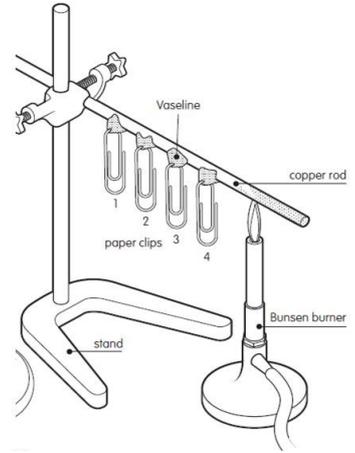


Conclusion:



4. Heat Transfer

1. Maya carried out an experiment heating a metal rod above a Bunsen burner. Paper clips were stuck to the rod with Vaseline.

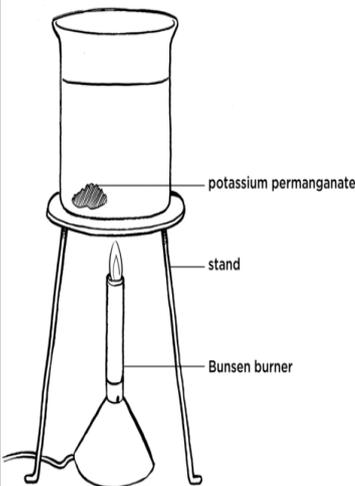


A) Describe what Maya saw happen next.

B) What is the scientific name for this process?

C) This process can only be seen in solids. Why is this?

2. Harris carries out a different experiment to see heat travel through water.



A) Describe what Harris saw happen next.

B) What is the scientific name for this process?

C) This process can only be seen in liquids and gases. Why is this?

3. Iona carries out a final experiment to see how heat travels from the sun to earth.

A) What did Iona see happen next?

B) What is the scientific name for this process?

