

Promoting the Use of Educational Technology in Learning and Teaching in Science (S1-3) Learning and Teaching Resources

Neutralisation



Neutralisation

Integrated Science (S2)

Bell Ringer

As you come in and get settled, follow these instructions:

1

Pair up with your neighbour

2

Get your group's iPad and login with your google classroom account

3

“What is the definition of neutralisation?”

Learning Objectives

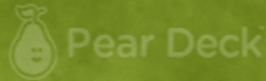
- To understand the definition of neutralisation
- To state the chemical names of salts formed by the neutralisation of common acids and alkalis
- Write word equations to describe the neutralisation reactions between common acids and alkalis
- To understand and describe the relationship of mass of reactants and products in neutralisation reaction

Carbon Neutral(碳中和) is also a kind of neutralisation.

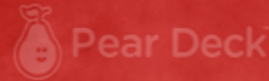


Sugar can be used to neutralize the salt.

True



False



A Quick Review...

A neutralisation reaction can be defined as a chemical reaction between an acid and alkali, forming...





Let's see our classmates' definitions on
acidic, **neutral** and **alkaline** solution!



What do you think about this diagram?

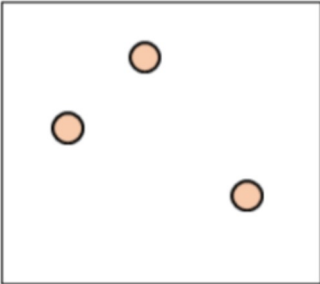
Write down your opinions for **each** solutions.

What do you think about the particles present in the following solution?

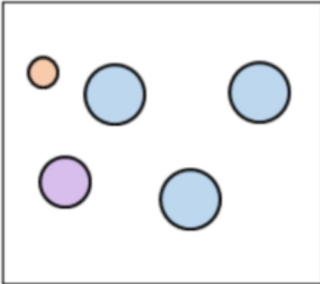
- Drag the particles into the space provided to express your ideas

○ acid particle ○ alkali particle ○ water particle

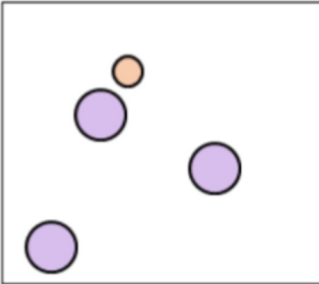
- Why do you select those particle(s)?



Acidic solution



Neutral solution



Alkaline solution

What do you think about this diagram?

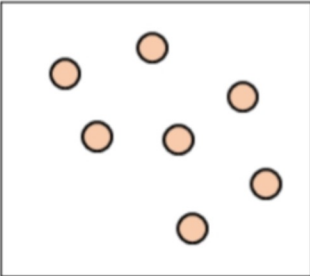
Write down your opinions for **each** solutions.

What do you think about the particles present in the following solution?

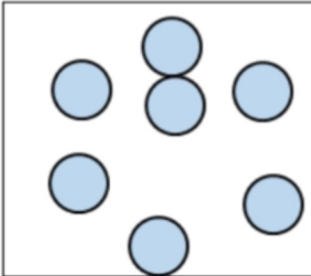
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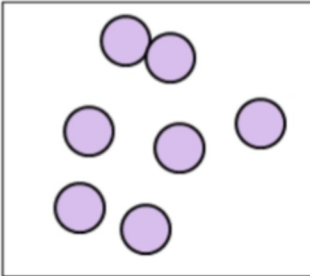
- Why do you select those particle(s)?



Acidic solution



Neutral solution






Alkaline solution

What do you think about the particles present in the following diagram?

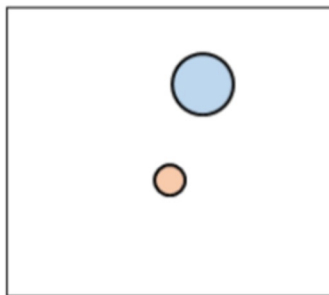
Write down your opinions for **each** solutions.

What do you think about the particles present in the following solution?

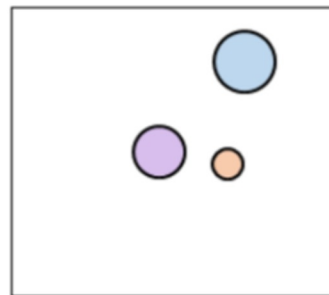
- Drag the particles into the space provided to express your ideas

 acid particle  alkali particle  water particle

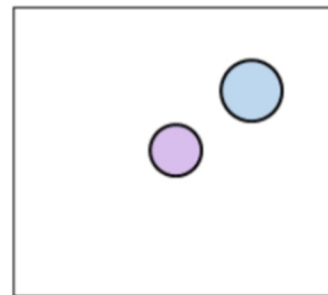
- Why do you select those particle(s)?



Acidic
solution



Neutral
solution



Alkaline
solution

Definition of neutralisation

Neutralisation can be represented by the following word equation:



Examples of neutralisation

hydrochloric acid

(acid)

+

sodium hydroxide

(alkali)



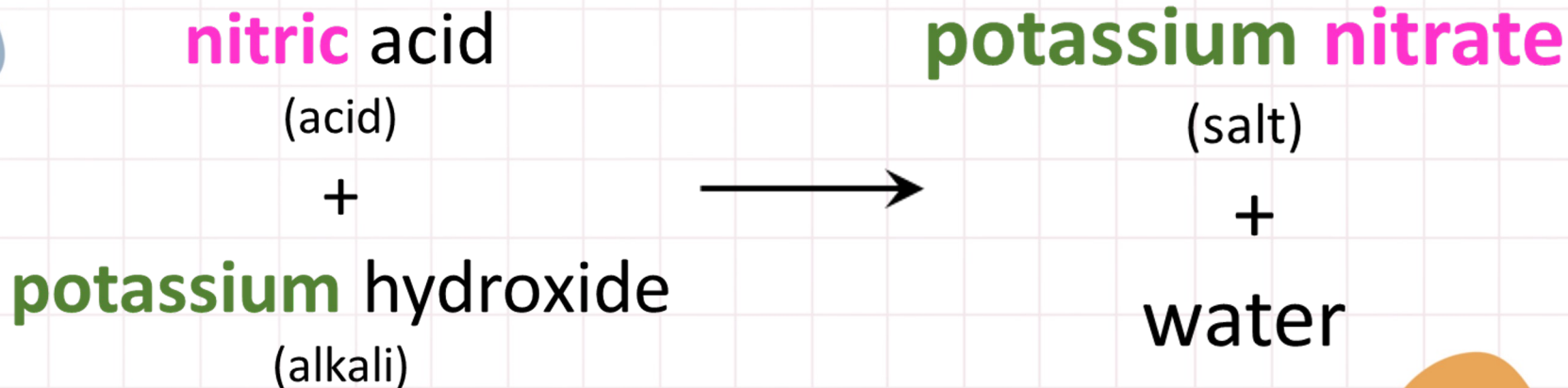
sodium chloride

(salt)

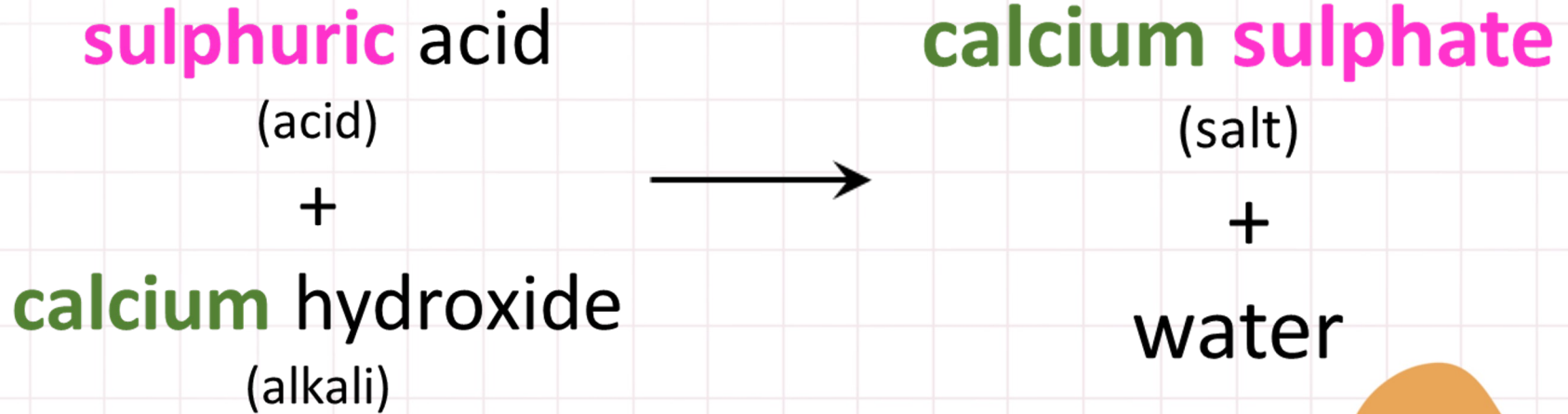
+



water

Examples of neutralisation



Examples of neutralisation





**From the aforementioned three examples of neutralisation,
what pattern can you **observe** in the products?
(e.g. characteristics of the product, naming, ...etc)**






A Quick Check...

What is the name of salt formed when **nitric acid** is added into **sodium hydroxide**?

Let's consolidate what we learn!

Reconstruct
your diagram.

What do you think about the particles present in the following solution?

- Drag the particles into the space provided to express your ideas
 acid particle  alkali particle  water particle
- Why do you select those particle(s)?




Acidic
solution



Neutral
solution



Alkaline
solution



Go to Google Classroom and reconstruct your diagram through the link of DragGame and submit it.

5. DragGame - Neutralisation (After lesson)



**After adding
some alkaline
solution...**

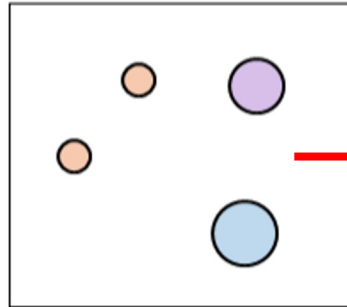
**What do you
think about this
diagram?**

What do you think about the particles present in the following solution?

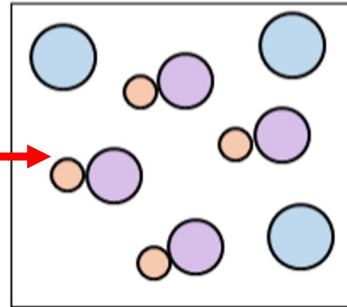
- Drag the particles into the space provided to express your ideas

○ acid particle ○ alkali particle ○ water particle

- Why do you select those particle(s)?



Acidic
solution



Neutral
solution



Alkaline
solution

Let's take a look at the word equation again.

hydro**chloric** acid

(acid)

+

sodium hydroxide

(alkali)



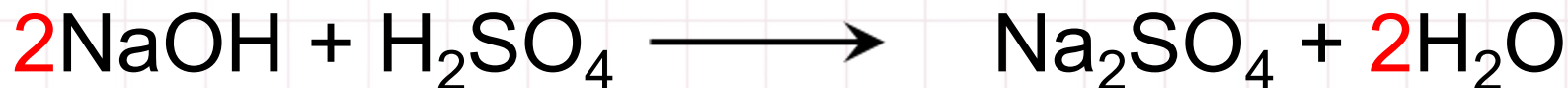
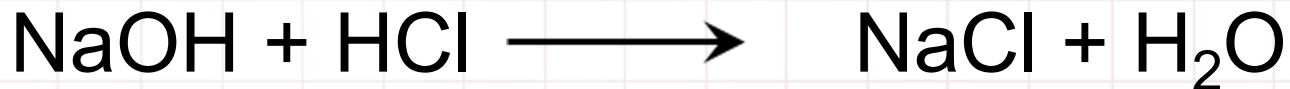
sodium chloride

(salt)

+

water

How about using chemical equation?



Tell me the **difference** between word equation and chemical equation.

Please draw the particles on neutral and alkaline solution.

What do you think about the particles present in the following solution?

- Drag the particles into the space provided to express your ideas



acid particle

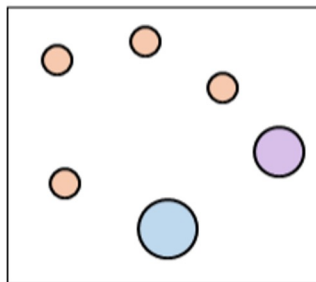


alkali particle



water particle

- Why do you select those particle(s)?



Acidic
solution



Neutral
solution



Alkaline
solution



From our discussion, we concluded that

Mass is conserved in neutralisation.



Learning Objectives

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