**Absence work**

 **16 April 2020**

**Gas Tests**

**Read the information below, then answer the questions that follow.**

During a chemical reaction a gas can sometimes be produced, however, many commonly produced gases are colourless and odourless (no smell). We can carry out a test to check which gas is being produced. When carbon dioxide is bubbled through limewater, it turns cloudy. When oxygen is produced it causes a glowing splint to relight. Hydrogen is another colourless and odourless gas, which we test for by putting a lit splint near to the reaction. If you hear a squeaky popping sound, it tells you that hydrogen is being produced. The following reactions produce carbon dioxide, oxygen and hydrogen respectively.

1. hydrochloric acid + calcium carbonate 🡪 metal chloride + water + carbon dioxide
2. hydrogen peroxide 🡪 oxygen + water
3. hydrochloric acid + metal 🡪 metal chloride + hydrogen

  

**Copy out the questions below and write your answers in full sentences.**

**Checkpoint questions:**

1. Why are gas tests important?
2. Which gas burns with a squeaky pop?
3. Which gas relights a glowing splint?
4. What do acids need to react with to produce hydrogen gas?
5. Which gas is produced when an acid reacts with a carbonate?

 **Copy the key knowledge table into your exercise books.**

Key knowledge- Do your look, cover, write check by learning the answers to the questions below.

|  |  |
| --- | --- |
| Why is sometimes hard to tell which gas has been produced in a reaction? | Lots of gases are colourless and odourless |
| What happens to limewater when carbon dioxide is bubbled through it?  | The limewater turns cloudy |
| What happens to a glowing splint when exposed to oxygen gas? | The glowing splint relights |
| What happens to a lit splint when exposed to hydrogen gas? | The lit splint burns with a squeaky pop |

**Complete the sentences below in your exercise book.**

Recall Quiz:

1. *We use gas tests because most common gases produced in reactions are \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_.*
2. *To test for carbon dioxide, bubble the gas produced through \_\_\_\_\_\_\_\_\_\_, which turns \_\_\_\_\_\_\_.*
3. *To test for oxygen, use a…, which will \_\_\_\_\_\_\_.*
4. *To test for hydrogen, use a…, which will produce a…*

**Application Question -I do**

Sophie dropped a lump of magnesium (Mg) into a test tube of hydrochloric acid (HCl), the chemical magnesium chloride (MgCl2) was formed. Sophie also noticed a gas being formed. When a lit splint was placed in the gas it made a squeaky ‘pop’ sound.

1. Which gas did Sophie make? Hydrogen

2. What would be the word equation for this chemical reaction?

 Magnesium + Hydrochloric Acid 🡪 Magnesium Chloride + Hydrogen

3. What would be the symbol equation for this chemical reaction?

 Mg + 2HCl 🡪 MgCl2 + H2

**Application Question – You do**

Copy the questions then write your answers in complete sentences

1. **Sodium combines with Hydrochloric Acid to produce Sodium Chloride and a colourless gas. The gas makes a squeaky pop when a lit splint is put near it.**
2. What is the gas that has been produced?
3. What is the word equation for this experiment?
4. What is the symbol equation for this experiment (use your planner to help you).
5. **In photosynthesis, plants use Carbon Dioxide and Water to produce Glucose (C6H12O6) and a colourless gas. The colourless gas will relight a glowing splint.**
6. What is the gas that has been produced?
7. What is the word equation for this experiment?
8. What is the symbol equation for this experiment (use your planner to help you).
9. **Copper Carbonate reacts with Sulphuric Acid to form Copper Sulphate, Water and a colourless gas. The gas makes limewater turn cloudy.**
10. What is the gas that has been produced?
11. What is the word equation for this experiment?
12. What is the symbol equation for this experiment (use your planner to help you).