

Salt naming — simulation worksheet

Grade 7 · IB MYP 2 Sciences · Unit 1 Chemistry's Secrets Unlocked · Neutralisation and salts

Name: _____ Class: _____ Date: _____

How to use this worksheet

- Open the simulation: scan the QR code or type school.taneski.com/science/g07/01-salt-naming/ (offline: the file Simulation - Salt naming.html).
- The simulation has a **Tasks** tab (on the right) with the same three parts as this sheet. It checks your answers.
- This sheet collects your **explanations, tables and drawings**. Write full sentences and use the new words below.
- **Part 1** Pre-lab (before the practical) · **Part 2** During the lab (with Workbook Activity 9) · **Part 3** Homework.



Scan to open

New words

neutralisation — the reaction of an acid with an alkali. It makes a salt and water, and the pH moves towards 7 (neutral).

salt — a new substance: a metal joined to the part of an acid that is left without its hydrogen. Table salt (sodium chloride) is just one salt.

alkali — a base that dissolves in water. **base** — any substance that neutralises an acid.

hydroxide — the OH part of an alkali, for example sodium hydroxide, NaOH.

reactants — the substances you start with. **products** — the new substances that are made.

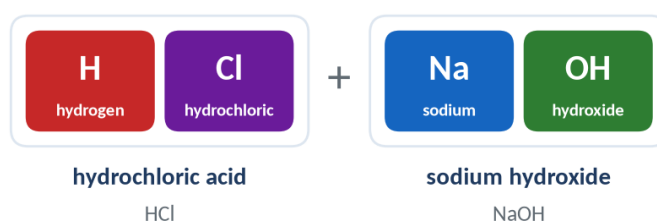
Part 1 · Pre-lab: predict (about 15 minutes)

Open **Tasks** → **1 · Pre-lab** in the simulation. Do each step there, then write your answers here.

1 Hydrochloric acid and sodium hydroxide are set up. **Predict** what the reaction will make. Then press **React!** and write what the simulation shows.

My prediction	
What the simulation shows	

2 Before the reaction the pieces look like this. Press **React!** and watch where each piece goes. Complete the table.



Piece	Colour in the simulation	Comes from (acid or alkali?)	Ends up in (salt or water?)
H			
Cl			
Na			
OH			

3 Complete the sentences.

The 1st name of the salt is the _____ from the _____.

The 2nd name of the salt comes from the _____.

4 Explain why every reaction between an acid and an alkali makes water. Use the words *hydrogen* and *hydroxide*.

5 Name the salts. Type each answer in the Tasks tab to check it.

Acid	Alkali	Salt	Other product
hydrochloric acid	potassium hydroxide		
sulfuric acid	sodium hydroxide		

6 Complete the rule table. The box **How to name the salt → Acid name → salt ending** in the simulation helps you.

The acid's name...	The salt's name ends in...	One example from the simulation
hydro...ic acid		
...ic acid		
...ous acid		

Part 2 · During the lab: compare (about 10 minutes)

With **Workbook Activity 9 (page 16)**: add hydrochloric acid to sodium hydroxide with universal indicator until it turns green, then filter and evaporate the water to get salt crystals. Open **Tasks → 2 · During the lab**.

Safety

- Wear **eye protection**. Sodium hydroxide and hydrochloric acid hurt eyes and skin: rinse any splash with plenty of cold water and tell your teacher.
- The burner and the evaporating basin get **hot**. Switch the burner off when a little water is left, and let the basin cool.
- **Never taste** the salt: there may be other chemicals on the equipment.

7 Compare what you see in the lab with what the simulation shows. Write "not shown" if the simulation does not show it.

	In the lab I see...	The simulation shows...
Reactants (what I start with)		
Colour of the indicator at the start		
Colour when the solution is neutral		
What is left after evaporating		
Name of the salt		
The other product		

8 Write the **word equation** for the reaction in the lab.

9 Another group used potassium hydroxide instead of sodium hydroxide. Which salt did they make? **Explain** how you know.

10 The simulation is a **model**. Give **two** ways in which the real reaction in the beaker is different from what the simulation shows.

Part 3 · Homework: analyse (about 20 minutes)

Open **Tasks** → **3 · Homework**. Work out each answer first, then check it in the simulation.

11 Complete the table. In the last column write which rule you used (...ide, ...ate or ...ite).

Acid	Alkali or base	Salt	Rule
nitric acid	calcium hydroxide		
phosphoric acid	sodium hydroxide		
ethanoic acid (in vinegar)	potassium hydroxide		
sulfurous acid	sodium hydroxide		
hydrobromic acid	magnesium hydroxide		

12 Work backwards. A fertiliser bag says it contains **potassium nitrate**. Which acid and which alkali could make it? Write the word equation.

13 In the simulation, magnesium hydroxide is called a **base**, not an alkali. **Explain** the difference between a base and an alkali. Then give one everyday use of magnesium hydroxide and say what it neutralises.

14 Reflection. Explain to a friend, in three steps, how to name the salt made from any acid and any alkali.