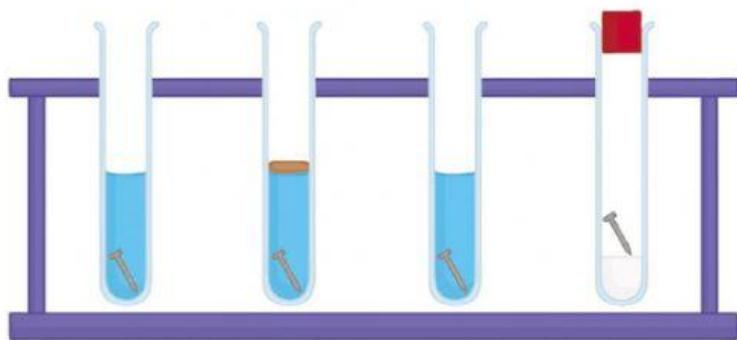


Observe the experiment in this video then answer the questions below.



Test tube conditions:

Test tube 1 – water and air

Test tube 2 – water, no air (removed during boiling process / sealed by oil layer)

Test tube 3 – water, air and salt

Test tube 4 – no water, air (calcium chloride absorbs the water, bung prevents moisture from air)

Questions:

1. Use the information from the box above to make a clear table of the conditions of each test tube.

Test Tube	Air (Yes or No)	Water (Yes or No)	Salt (Yes or No)
1			
2			
3			
4			

Complete the following sentences. Use the words from the box below.

2. Describe what your results have shown.

The results show that rusting occurs in the presence of **air** and **water**. It should also show that **salt** increases the rate of rusting.

3. Explain your results using your understanding of the oxidation reaction which causes rusting.

The **oxidation** reaction of iron requires oxygen, which is in the air, and dissolved in the water. Although water was present in test tube 2, it had been boiled so any dissolved oxygen had been removed. Test tube 4 did not show any rusting because only **air** was present.

air

oxidation

oxygen

water

removed

salt