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**Task**

A student has been asked to answer the exam question below.

Read through their answer and:

- tick where they have given a correct piece of equipment, substance, or result
- cross out any mistakes
- correct these mistakes
- add any information that is missing.

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Q. Describe the tests to identify the following gases: chlorine, oxygen, hydrogen and carbon dioxide. Your answer should include:

- the names of any equipment or substances used
- the result that would indicate the presence of that gas.

**(4 marks)**

If you are testing for chlorine gas you need litmus paper. When you put it into chlorine gas it will turn blue. If there is oxygen get a lit splint and put it into the test tube and there will be a squeaky pop if there is oxygen. Hydrogen also needs a lit splint and a test tube of the gas. For carbon dioxide it's different as you need limewater (calcium oxide solution) and it will go cloudy.

## Teaching notes and answers

For students who need a little more support, they can be told that there are four mistakes and four missing pieces of information. The questions increase in demand; students will often struggle to see where information is missing. It may help to draw attention towards where this information is missing.

If you are testing for chlorine gas you need **damp** litmus paper. When you put it into chlorine gas it will turn ~~blue~~ **white because it has been bleached**. If there is oxygen get a ~~lit~~ **glowing** splint and put it into the test tube and ~~there will be a squeaky pop~~ **it will relight** if there is oxygen. Hydrogen also needs a lit splint and a test tube of the gas. **It will burn quickly and make a pop sound**. For carbon dioxide, it's different as you need limewater (calcium ~~oxide~~ **hydroxide** solution) and it will go cloudy **when carbon dioxide is bubbled through it**.