

Reactivity Series KS3 - Worksheet

1. Put the following metals in order of reactivity.

Iron, potassium, copper, zinc, lead, calcium, magnesium, sodium, gold

	Most reactive
	
	Least reactive

2. Complete the equations

a. metal + oxygen →

b. metal + water → +

c. metal + acid → +

3. What is formed when magnesium burns in air?

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4. What happens when copper is put into a beaker of water?

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5. How do you test for hydrogen gas?

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6. What is formed when sodium reacts with hydrochloric acid?

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7. How should metals more reactive than carbon be extracted from their ores?

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8. Why is gold used in jewelry?

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9. What is the rule for displacement reactions?

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10. Tick which reactions would happen

	copper	Magnesium	zinc
copper sulfate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Magnesium sulfate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Zinc Sulfate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

11. Using the reactions from Q10. Choose 1 reaction you've ticked and explain why it happens. Choose 1 reaction you haven't ticked and explain why it doesn't happen.

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12. Write word and symbol equations for the first reaction from Q11.

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Reactivity Series KS3 - Worksheet (Answers)

1. Put the following metals in order of reactivity.

Iron, potassium, copper, zinc, lead, calcium, magnesium, sodium, gold

potassium	Most reactive
sodium	
calcium	
magnesium	
zinc	
iron	
lead	
copper	
gold	

2. Complete the equations

a. metal + oxygen → metal oxide

b. metal + water → metal hydroxide + hydrogen

c. metal + acid → salt + hydrogen

3. What is formed when magnesium burns in air?

It forms magnesium oxide

4. What happens when copper is put into a beaker of water?

nothing happens, copper is not reactive enough to react with water

5. How do you test for hydrogen gas?

Test for hydrogen gas with a lit spill, a positive result is a squeaky pop

6. What is formed when sodium reacts with hydrochloric acid?

sodium chloride (salt) and hydrogen

7. How should metals more reactive than carbon be extracted from their ores?

By electrolysis

8. Why is gold used in jewelry?

It's very unreactive, so won't react with your skin

9. What is the rule for displacement reactions

A more reactive metal will displace a less reactive metal from a compound

10. Tick which reactions would happen

	copper	Magnesium	zinc
copper sulfate		✓	✓
Magnesium sulfate	x		x
Zinc Sulfate	x	✓	

11. Using the reaction from Q10. Choose 1 reaction you've ticked and explain why it happens. Choose 1 reaction you haven't ticked and explain why it doesn't happen.

The ticked reaction happen, as the metal is more reactive than the metal in the compound so a displacement reaction takes place.

The reactions with the crosses do not happen, as the metal is less reactive than the metal in the compound so can't displace it.

12. Write word and symbol equations for the first reaction from Q11.

Copper sulfate + Magnesium → magnesium sulfate + copper



copper sulfate + Zinc → zinc sulfate + copper



zinc sulfate + magnesium → magnesium sulfate + zinc

