

9F Patterns of reactivity

Extension questions

Science Interactive LTD, PO BOX 50764 LONDON NW6 9AT email: sales@science-interactive.co.uk

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Answer the following questions:



Click mouse to reveal answer

Q1. Name the lowest density metallic element. It is soft and reactive?

Q2. Name a soft, reactive, low density metallic element, important for healthy plant growth?

Q3. Name a soft, reactive, low density metallic element used in yellow street lights?

Q4. Name a silver-white low density metallic element used for saucepans and bicycle wheel rims?

Q5. Name a soft, dense, un-reactive grey metallic element used in car batteries?

Q6. Name an orange metallic element used for household electrical wiring?

Q7. Name an un-reactive metallic element with extremely high electrical conductivity used for coins?

Q8. Name a very un-reactive, expensive yellow metallic element used for jewellery?

Q9. Name a non metallic gaseous element needed for respiration?

Q10. Name the most common magnetic element. Corrodes to form rust?

Q11. Name an industrially important form of iron used for car bodies and structural girders?

Q12. Iron corrodes in the presence of air and water to form ...?

Q13. What is the most common solvent - contains the elements hydrogen and oxygen?

Q14. What do we call it when mild discolouration of silver, for example, occurs?

Q15. What do we call an unwanted reaction between metals and the atmosphere and water?

Q16. When a complete reaction takes place between acid and alkali they are said to ...?

Q17. What do we call a chemical with a pH value less than 7? Sulphuric or hydrochloric are examples?

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Answers:

- A1. Lithium
- A2. Potassium
- A3. Sodium
- A4. Aluminium
- A5. Lead
- A6. Copper
- A7. Silver
- A8. Gold
- A9. Oxygen
- A10. Iron
- A11. Steel
- A12. Rust
- A13. Water
- A14. Tarnish
- A15. Corrosion
- A16. Neutralise
- A17. Acids

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multiple choice

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1: Which of the following metals react most quickly when placed in acid ?

A Magnesium

B Gold

C Silver

D Zinc

2: Which option shows the correct order of reactivity, starting with least reactive ?

A Magnesium < Lead < Gold

B Gold < Iron < Silver

C Copper < Iron < Magnesium

D Copper < Silver < Iron

3: Why are very reactive metals like potassium stored under oil ?

A Prevents oxygen or water reaching it

B Stops it drying out

C Keeps it clean

D Prevents it from dissolving

4: Which metal will react quickest in cold water ?

A Zinc

B Gold

C Potassium

D Iron

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literacy in science

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Answer all the questions below:



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1) Unscramble the following words:

rvctityiea

oexygn

rtus

icacid

2) Make three sentences using the following nine words or phrases:

difference in speed
various metals
metal extraction

of a reaction
placed in
displacement

reactivity
reactivity series
from metal ores

3) Match the word or phrase with the right meaning:

Reactivity



How metals are displaced from their ores using carbon

Smelting



How metals remove less reactive metals from compounds

Displacement



Description of how fast metals react in air, acid or water

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literacy in science

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Answer all the questions below:

1) Unscramble the following words:

reactivity

oxygen

rust

acidic

2) Make three sentences using the following nine words or phrases:

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various metals
metal extraction

of a reaction
placed in
displacement

reactivity
reactivity series
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3) Match the word or phrase with the right meaning:

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complete the sentence

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Place the right word or words to complete the sentence:



Click mouse to reveal answer

cold

painted

pure

coin

extracted

water

lithium

oxygen

displace

- a) Gold can be found in its _____ or native state because it is very un-reactive.
- b) Group I metals like sodium and _____ tarnish in air within minutes of being cut.
- c) Many metals react with _____ in the air to form their oxides.
- d) A gold _____ buried 200 years ago when found, would look as good as new.
- e) Iron will _____ copper from its compound. This is called displacement.
- f) Aluminium was _____ from its ore, only after the invention of electricity.
- g) When metals react with _____, the products formed are the metal hydroxide and hydrogen gas.
- h) Metals like iron need to be _____ or oiled to prevent them from rusting.
- i) Magnesium might be expected to react with _____ water because it is reactive.

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complete the sentence

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- e) Iron will displace copper from its compound. This is called displacement.
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- g) When metals react with water, the products formed are the metal hydroxide and hydrogen gas.
- h) Metals like iron need to be painted or oiled to prevent them from rusting.
- i) Magnesium might be expected to react with cold water because it is reactive.