



Unit 11 • The Earth and Universe: minerals and the Earth's history

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 36

1 Key words

[4]

Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

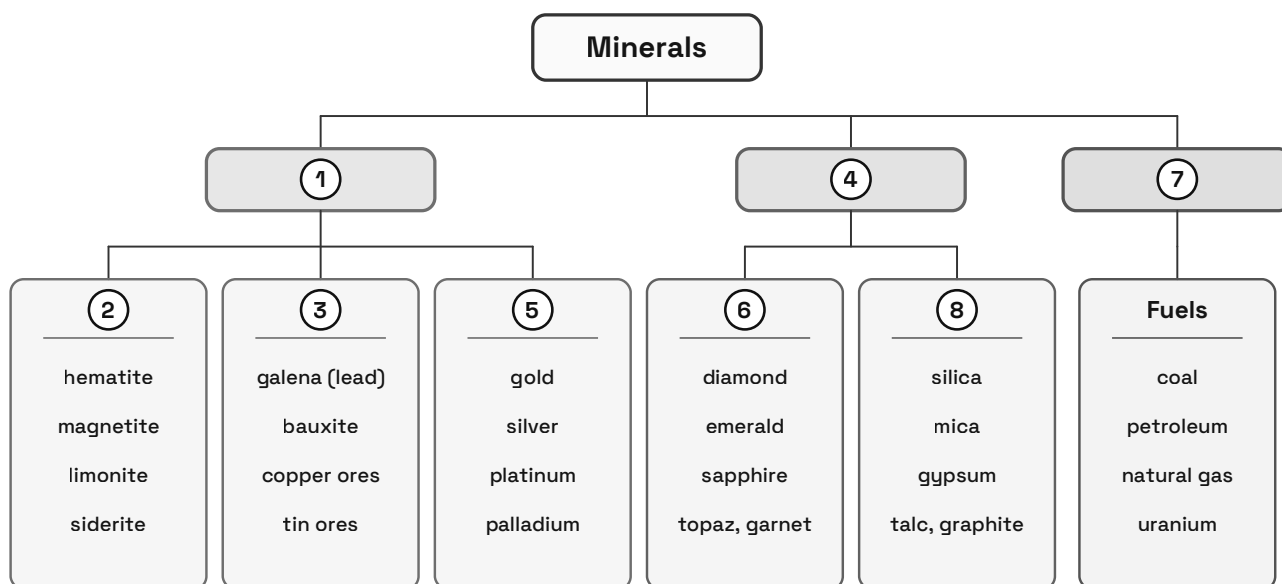
energy minerals ferrous gems mammals mineral mineralogy non-ferrous ore
Precambrian reptiles

A natural, solid, pure substance with a definite chemical composition is called a _____. The branch of geology that studies minerals is _____. A metallic mineral that holds enough metal to be worth extracting is an _____. Minerals that contain iron, such as hematite and magnetite, are _____ minerals. Rare, hard, beautiful minerals such as diamond and ruby are called _____. Coal, petroleum, natural gas and uranium are _____. The first, longest part of the Earth's history, the Cryptozoic eon, is also called the _____. The Mesozoic era is also called the age of _____.

2 Label the diagram

[4]

The flowchart shows the types of minerals. Write the type of mineral that belongs in place of 1 to 8. Each carries 0.5 mark.



1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____



[5]

Choose the correct option for each of the following questions.

- i. What is the branch of science that studies minerals called? [1]
 - a. geology
 - b. paleontology
 - c. mineralogy
 - d. archaeology
- ii. Which statement describes the tidal hypothesis? [1]
 - a. The Earth formed from matter splashed out when two stars collided.
 - b. The Earth formed from a hot lump pulled out of the Sun by the strong gravity of a giant star passing quickly by.
 - c. The Earth formed from nebular dust.
 - d. The Earth formed from the explosion of a big heavenly body.
- iii. Bauxite, from which aluminium is made, is a [1]
 - a. ferrous mineral
 - b. non-ferrous mineral
 - c. precious mineral
 - d. non-metallic gem
- iv. Which fact about the Solar System is best explained by the nebular hypothesis? [1]
 - a. Jupiter is the biggest planet.
 - b. The Sun is a single star.
 - c. All the planets go round the Sun in nearly one plane and in the same direction.
 - d. Asteroids lie between Mars and Jupiter.
- v. Which of these uses a mineral as a **source of energy**, not as a raw material? [1]
 - a. limestone made into cement
 - b. sand made into glass
 - c. coal burnt in a brick kiln
 - d. slate laid on a roof

[3]

Write very short answers to the following questions.

- a. About how long ago did the Earth form? [1]
-
-
- b. Which era is called the era of mammals? [1]
-
-
- c. Name one place in Nepal where limestone is found. [1]

[8]

Write short answers to the following questions.

- a. Write any two differences between metallic minerals and non-metallic minerals. [2]
-
-
-



b. Give a reason: minerals are said to be pure chemicals. [2]

c. Give a reason: the Mesozoic era is also called the era of conifers. [2]

d. In which era did these evolve: (i) mammoths with long tusks, (ii) fish with lungs? [2]

6 Long answers [8]

Write long answers to the following questions.

a. What are the hypotheses about the origin of the Earth? Explain any one of them. [4]

b. Dinosaurs such as the long-necked sauropod, stegosaurus, triceratops and tyrannosaurus once ruled the land. [4]

- i. In which era did they evolve and die out?
- ii. What were the reasons for their extinction? Write any two.
- iii. If they were still roaming the Earth, what would be the impact on the balance of nature, in your opinion?



[2]

The Earth formed 4,600 million years ago. The Phanerozoic eon began 540 million years ago, and its first era, the Paleozoic, ended 250 million years ago. (i) What percentage of the Earth's history is the Phanerozoic eon? (ii) How long did the Paleozoic era last?

[illegible]

8 Think

[2]

Which era was unsuitable for the evolution of life, and why? Explain with an example.

(not marked)

Collect some minerals or rocks from your surroundings (a river bank, a building site, your kitchen salt, a pencil's "lead"). Look at each one closely and fill in the table.

Name of mineral	Color	Shape	Luster	State

