



National  
Qualifications  
2026

**X826/75/11**

## **Environmental Science Supplementary source booklet**

WEDNESDAY, 22 APRIL

9:00 AM – 11:30 AM

This booklet contains sources for use with question 8 in Section 2.

### **Supplementary sources of information**

**Source 1** is a diagram showing the proposed extraction technique.

**Source 2** is a table showing the minerals necessary for relevant low-carbon technologies.

**Source 3** is a statement from a geologist.

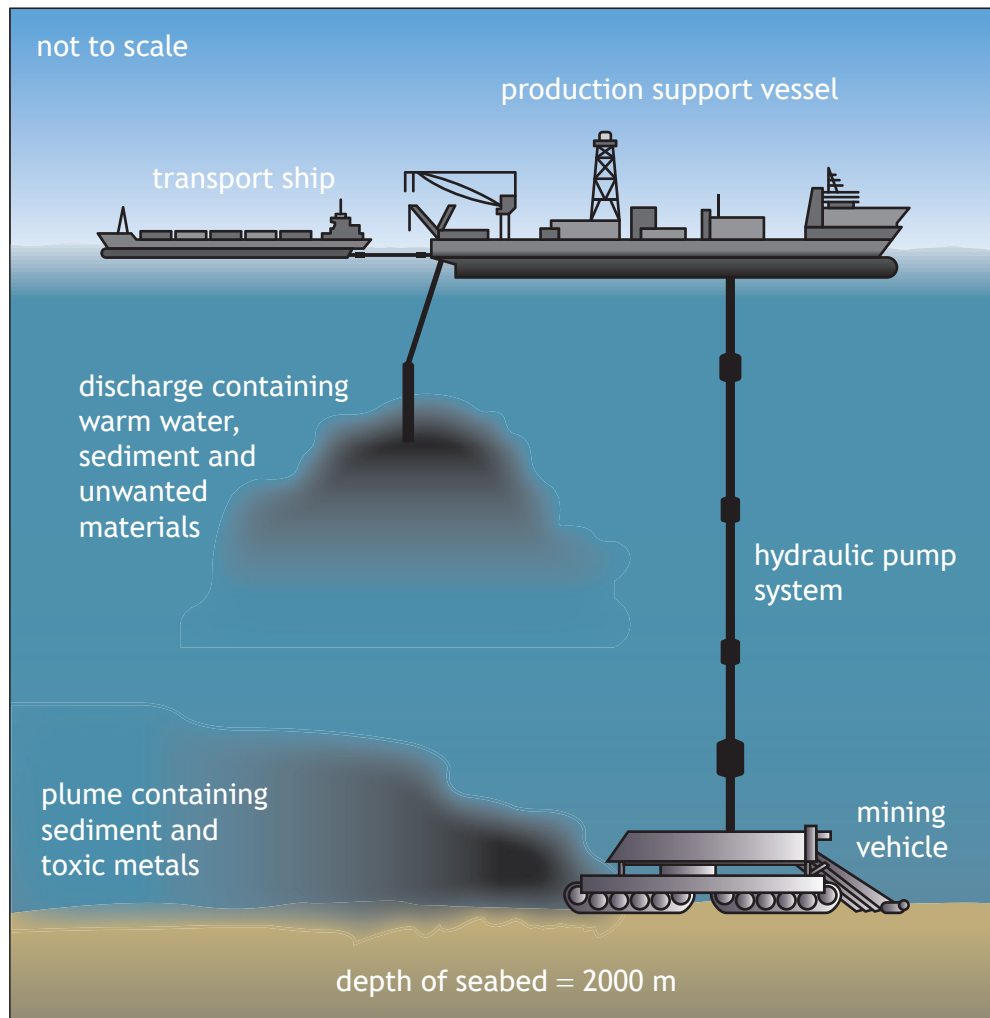
**Source 4** is a table highlighting countries with the largest on-land mineral reserves.

**Source 5** is a table showing the estimated land and deep-sea mineral reserves.



\* X 8 2 6 7 5 1 1 \*

**Source 1** Diagram showing the proposed extraction technique



**Source 2** Table showing the minerals necessary for relevant low-carbon technologies

|            | wind | solar | hydro | geothermal | energy storage | carbon capture and storage (CCS) |
|------------|------|-------|-------|------------|----------------|----------------------------------|
| aluminium  |      |       |       |            |                |                                  |
| chromium   |      |       |       |            |                |                                  |
| cobalt     |      |       |       |            |                |                                  |
| copper     |      |       |       |            |                |                                  |
| graphite   |      |       |       |            |                |                                  |
| indium     |      |       |       |            |                |                                  |
| iron       |      |       |       |            |                |                                  |
| lead       |      |       |       |            |                |                                  |
| lithium    |      |       |       |            |                |                                  |
| manganese  |      |       |       |            |                |                                  |
| molybdenum |      |       |       |            |                |                                  |
| neodymium  |      |       |       |            |                |                                  |
| nickel     |      |       |       |            |                |                                  |
| silver     |      |       |       |            |                |                                  |
| titanium   |      |       |       |            |                |                                  |
| vanadium   |      |       |       |            |                |                                  |
| zinc       |      |       |       |            |                |                                  |

**Source 3** A statement from a geologist

*‘To say that the United Kingdom has very little in the way of natural resources is rather inaccurate. In fact, the United Kingdom has a diverse range of onshore mineral resources. These of course include minerals widely used in industry, such as limestone, gypsum, and fluorspar, but we also have some deposits of metallic minerals such as tin, tungsten, copper, zinc, gold, iron, cobalt, molybdenum, nickel, and lithium.’*

[Turn over

**Source 4** Table highlighting countries with the largest on-land mineral reserves

| <b>Mineral</b> | <b>Major producers of mineral</b>                                                    |
|----------------|--------------------------------------------------------------------------------------|
| Aluminium      | China, India, Russia, Canada, United Arab Emirates                                   |
| Chromium       | Zimbabwe, Kazakhstan, South Africa, India, Türkiye                                   |
| Cobalt         | Democratic Republic of the Congo, Russia, Australia, Indonesia, Madagascar           |
| Copper         | Chile, Peru, China, Democratic Republic of the Congo, United States of America       |
| Lithium        | Australia, Chile, China, Argentina, Zimbabwe                                         |
| Manganese      | South Africa, Gabon, Australia, China, Ghana                                         |
| Molybdenum     | China, United States of America, Chile, Peru, Russia                                 |
| Nickel         | Indonesia, Philippines, Russia, Australia, New Caledonia (French Overseas Territory) |
| Titanium       | China, Australia, India, South Africa, Canada                                        |
| Vanadium       | China, Australia, Russia, South Africa, Brazil                                       |
| Zinc           | China, Peru, Australia, India, United States of America                              |

**Source 5** Table showing the estimated land and deep-sea mineral reserves

| <b>Mineral</b> | <b>Estimated global land reserves (million tonnes)</b> | <b>Estimated global deep-sea reserves (million tonnes)</b> |
|----------------|--------------------------------------------------------|------------------------------------------------------------|
| Cobalt         | 10                                                     | 85                                                         |
| Copper         | 0.9                                                    | 211.7                                                      |
| Lithium        | 25                                                     | 2.5                                                        |
| Manganese      | 1.7                                                    | 7.0                                                        |
| Molybdenum     | 14                                                     | 14.1                                                       |
| Nickel         | 118                                                    | 278                                                        |
| Titanium       | 680                                                    | 141                                                        |
| Vanadium       | 17                                                     | 12.9                                                       |

[END OF SUPPLEMENTARY SOURCE BOOKLET]