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 Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

    Predict the method used for extracting metal based on its position in the reactivity series.

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| Know -12 |  | Apply |
| Ideas |  |  |  |
| K1 | There is only a certain quantity of any resource on Earth, so the faster it is extracted, the sooner it will run out. Recycling reduces the need to extract resources. |  | A1 | Explain why recycling of some materials is particularly important. |
| A2 | Describe how Earth's resources are turned into useful materials or recycled. |
| K2 | Most metals are found combined with other elements, as a compound, in ores. The more reactive a metal, the more difficult it is to separate it from its compound. Carbon displaces less reactive metals, while electrolysis is needed for more reactive metals. |  | A3 | Justify the choice of extraction method for a metal, given data about reactivity. |
| A4 | Suggest factors to take into account when deciding whether extraction of a metal is practical. |
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| Key words |
| K3 | **Natural resources:** Materials from the Earth which act as raw materials for making a variety of products. |  |  |  |
| K4 | **Mineral:** Naturally occurring metal or metal compound. |  |  |  |
| K5 | **Ore:** Naturally occurring rock containing sufficient minerals for extraction. |  |  |  |
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| K6 | **Extraction:** Separation of a metal from a metal compound. |  |  |  |
| K7 | **Recycling:** Processing a material so that it can be used again. |  |  |  |
| K8 | **Electrolysis:** Using electricity to split up a compound into its elements. |  |  |  |
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| 3 | Extend |  |  |  |
| E1 | Suggest ways in which changes in behaviour and the use of alternative materials may limit the consumption of natural resources. |  |  |  |
| E2 | Suggest ways in which waste products from industrial processes could be reduced. |  |  |  |
| E3 | Use data to evaluate proposals for recycling materials. |  |  |  |
| E4 |  |  |  |  |
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| E5 |  |  |  |  |
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