

Year 8: ASK Yourself!

Subject: Science

Unit 8.7: Obtaining useful materials

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
S kills				
	I need to explain why recycling of some materials is particularly important.	I can partially describe how Earth's resources are turned into useful materials or recycled. I can partially describe and explain the properties of ceramics and composites.	I can confidently suggest factors to take into account when deciding whether extraction of a metal is practical. I can confidently predict the method used for extracting metal based on its position in the reactivity series.	I can expertly suggest ways in which waste products from industrial processes could be reduced. I can expertly suggest ways in which changes in behaviour and the use of alternative materials may limit the consumption of natural resources.
K nowledge				
	I need to know that there is only a certain quantity of any resource on Earth, so the faster it is extracted, the sooner it will run out. I need to know that recycling reduces the need to extract resources.	I partially know that most metals are found combined with other elements, as a compound, in ores. I partially know that the more reactive a metal, the more difficult it is to separate it from its compound.	I confidently know that carbon displaces less reactive metals, while electrolysis is needed for more reactive metals. I confidently know that the choice of extraction method for a metal, given data about reactivity.	I understand how to use data to evaluate proposals for recycling materials.