



Earth's resources

Learning objectives

- 1 Identify what humans use Earth's resources for.
- 2 Apply your knowledge of key terms to your own experiences.
- 3 Use data to carry out calculations on Earth's resources.

Introduction

Earth contains many different resources that we all use and depend upon on a daily basis. It is important that we consider the types of resources we are using and compare their impact on the environment.

While the word 'resource' is derived from the Old French word *resourdre* meaning to 'rise again' or to 'recover', we use it currently to discuss many types of materials, some that are able to be replaced and many that are not.

Instructions

- Use the infographic poster and fact sheet to learn more about Earth's resources as well as some key definitions.
- Remember that we use Earth's resources for so many things that some will not be on the poster or the fact sheet – apply your knowledge to your own life and suggest other answers too.

Maths skills

Complete the calculations using some global data about oil production in 2021.

Questions

1. What do humans use Earth's resources for? Circle any you think are correct.

warmth shelter transport food

2. State the difference between finite and renewable resources. Delete as appropriate.

Finite resources will **keep going forever if replaced / eventually run out.**

Renewable resources will **eventually run out / keep going forever if replaced.**



3. Which one of the following objects that you use all the time comes from a finite resource? Circle one.

mobile phone (metals) toothbrush (plastic) paper (wood)

4. How do you know it is a finite resource?

5. Which one of the following comes from a renewable resource? Circle one.

mobile phone (metals) toothbrush (plastic) paper (wood)

6. How do you know it is a renewable resource?

7. State the difference between natural and synthetic products. Delete as appropriate.

Natural products are **produced in a lab / formed from plants and animal processes.**

8. Give an example of a synthetic product that you use on a daily basis.

9. Suggest an alternative natural product that you could use instead of the synthetic product.

10. Create a pros and cons table below for the use of this alternative product:

Pros	Cons



Global context: calculation

Area	Oil production in thousands of barrels per day in 2021
North America	23,942
South & Central America	5909
Europe	3420
Commonwealth of Independent States (CIS)	13,829
Middle East	28,156
Africa	7286
Asia Pacific	7335

Figure 1: Data from bp's Statistical Review of World Energy, 2022 (71st edition)

1. Calculate the total number of barrels of oil produced **per day** in 2021 across the world, using *Figure 1*.

Hint: remember the oil production in the table is given in *thousands* of barrels per day.

2. Calculate the **total number** of barrels of oil produced in the year 2021. Use your answer to Question 1.

Hint: 2021 was not a leap year.

3. Calculate the % of the total oil production that North America was responsible for in 2021, using *Figure 1*.

Hint: find the number for North America and the total oil production in Q1.
