

# Materials and the Earth

## Lesson 14: Mining and Quarrying

Science

Chemistry - Key Stage 3

Miss Willett



# What have you learnt already?

1. What is the mantle made of?
2. What is sediment?
3. What is the charge of a proton?



# Using materials

**Which am I?!**

Chlorine from be taken from me to clean pools

I am used for pans due to my good thermal conductivity

I can be used to neutralise soil and lakes



# Using materials      Complete the sentences:

- Limestone is used for .....
- This is because it is.....
- Salt is used for .....
- This is because it.....
- Copper is used for.....
- This is because it is.....



# Extracting materials

Match up!

**SALT**

Underground mines

**COPPER**

Overground quarries

**LIMESTONE**

Quarries or evaporation



# Extracting materials

**Answer the questions:**

- 1) How can copper (and other metals) be extracted from the Earth?
- 2) State the method of extraction that limestone and copper share.
- 3) Suggest a unique way that salt can be extracted by.
- 4) Give an advantage **and** disadvantage of this method.



# Extracting materials

Answer space:

1)

2)

3)

4)



# Advantages and disadvantages

**True or false?**

Land will never recover from quarrying

‘Blasting’ is the term used to first excavate materials

Because we are extracting natural materials, waste can never be toxic





# Advantages and disadvantages

Complete the following table:

Advantages:	Disadvantages:



# Bringing it together..

## Case study - what would you do?

A developer has asked you if they can extract salt on your land (a large area by the Welsh coast). They can either extract by evaporation or mining. You need to decide and explain the best course of action.

In your response, you need to:

- Decide which method is the better option
- Explain your choice
- Give an overall decision, with reference to one advantage and one disadvantage



# Bringing it together..

Answer space:

