

Combined Science - Chemistry - Key Stage 4

C10 Using Resources

## **Lesson 4**

# **Higher tier - Phytomining and bioleaching**

Miss Offer



# Independent task -Recall questions

## Answer the following questions:

1. Which grade ore contains a low percentage of copper?
2. Why is mining not used for low-grade ores?
3. What happens to the plants once they have been grown in phytomining?
4. How is pure copper extracted once phytomining has occurred?



# Independent task - Recall questions

## Answer the following questions:

1. Which grade of ore contains a high percentage of copper?
2. What are the 2 methods of extracting copper from low-grade ores?
3. What happens to the bacteria once they have absorbed the copper compounds?
4. How is pure copper extracted once bioleaching has occurred?
5. Give 2 disadvantages of bioleaching



# Independent task - Questions

## Answer the following questions:

1. Why is it important to find alternative methods to extract metals?
2. State the main steps involved in phytomining
3. Phytomining is often said to be a “carbon neutral” process. Explain why.
4. Purification of copper after phytomining often involves electrolysis. Explain why this means the process is not carbon neutral.
5. State the main steps involved in bioleaching.

