

## Visit To Alcoa Bauxite Mine

Name:

Date:

### 1) Before You Visit: What Do You Know?

What is bauxite? What does it look like?

Based on your current knowledge of Alcoa's operations and bauxite mining, what do you expect to see at the mine site?

Draw a sketch of what you think a mine pit looks like.



**2) Alcoa's Mineral Lease (1SA):**

On the lease map below:

- Draw a line from your school to the areas you will visit today. Circle those areas.
- Add the rail line linking the refineries to the ports
- Use arrows to indicate that Bunbury and Kwinana are export ports



**3) Pre-mining:**

a) What is 'exploration drilling' and what is its purpose?

b) List the types of surveys that are carried out prior to mining. What information do they give and why is this important?

## mining and rehabilitation

### 4) Mining:

Number the steps of the mining process in order.

Scrape off Topsoil



Fertilising with helicopter



Remove and store overburden



Exploration and drilling



Clear timber



Bauxite into crusher



Load bauxite into haul truck



Landscaping the ground



Direct return topsoil



Transport to refinery on conveyor



Blasting and ripping



Ripping, seeding and planting



**5) Crushers and Conveying:**

a) What is the role of the crusher in the mining process?

b) How is the bauxite transported to the refineries?

c) How long is the conveyor?

**6) Rehabilitation:**

Match the steps in the rehabilitation process with the reasons they are done:

**STEPS**

A. LANDSCAPING the steep pit walls are reshaped

B. SOIL is spread on the pit floor.

C. RIPPING – the soil is loosened and broken up

D. SEEDING, PLANTING and FERTILISING

E. MONITORING plant species, tree growth and the return of native animals to rehabilitated areas.

**REASONS**

to return seeds and nutrients contained in the soil to the mine pit

to ensure the jarrah forest plants and animals are returning.

to make the mine pit blend into the surrounding forest.

to allow the plants' roots to grow and to prevent erosion by allowing the water to sink into the soil instead of running off.

to return the jarrah forest plants.



alcoa  
**discover**  
mining and rehabilitation

**7) Reflection:**

