Mining and the Environment

Lesson Focus: ***You will learn about the impact of mining on the environment and the steps which are now being taken to ensure the environment is protected.***

Keywords: ***plundered, residue, felled, stringent, restoration, ecosystem, biodiversity***

In the early days of mining, prospectors plundered the land without any regard for the future in their quest for wealth. Alluvial miners would dig up the countryside, collect as much gold as they could find, muddy-up the waters and then move on to a new area to continue mining. Deep-reef miners would dig their shafts, removing trees in the area to support their tunnels, clear the shaft of gold, leave large piles of 'mullock' (the waste rock from the shaft) and move on to a new area, without even filling in the hole. Many animals and people fell down shafts that had been left open. Cyanide (a deadly poison), which was used to separate the gold from the rock, produced a fine powder. This fine powder, containing the residue of cyanide, was left behind. When it rained, the cyanide was washed into nearby rivers, polluting the water and killing the wildlife. Many trees were felled in the process of early mining—used to hold up the miners' tents, to support the shafts and for fuel. This process devastated many areas and reduced the amount of trees in any given area.

Today, the government is much more stringent in enforcing policies to protect the environment as much as possible throughout the mining process. All mining companies are required to complete an Environmental Impact Statement before they are even allowed to begin work in an area. They must also prove to the government that they have the funds to complete the proposals in their Environmental Impact Statement. Part of this process involves deciding what the future use of the land will be—as a wetland, for tree farming, grazing or perhaps natural restoration. Mining companies now discuss and sign agreements with local Aboriginal communities outlining how an area is to be restored after mining is complete.

Throughout the mining process, teams of biologists are responsible for researching and monitoring the effect of the mine on the environment. They must ensure that the ecosystem of the area is kept in balance. The mine is also strictly monitored for any chemicals dispersed into the air, lakes and streams. Any dangerous chemicals which are used in the mining process must be disposed of correctly under very strict supervision.

After the mining of an area is complete, a team moves in to begin the restoration process. Anything to do with the mining of the land is removed, such as pegs used to mark out areas, plugging all holes which have been caused by drilling and taking away any plastic items. Plants are then brought in to be established. As these plants become established, more fauna moves back into the area, often bringing with them new flora as well. The area is monitored for a set time to ensure its biodiversity is at a suitable level for sustainability.

Use the information to complete these.

1. List three negative effects of mining on the environment.

   (a) _____

   (b) _____

   (c) _____

2. After mining is finished, three ways land can be restored are …

   (a) _____

   _____

   (b) _____

   _____

   (c) _____

   _____

3. Explain why you think it is important for mining companies to include local Aboriginal communities in the decision-making process.

4. List three reasons why mining companies should be responsible for restoring the land.

(a) _____

(b) _____

(c) _____

5. Most human activity affects the environment. Mining is one. List four others and explain their effect on the environment.

Activity	Effect on Environment

6. State why you think it is so important to have laws to protect the environment.

Topics for Discussion/Debate

'All mining should be stopped to preserve the environment.' Discuss what you think about this statement. Consider the pros and cons.

Additional Activities

Research to find how a mine, closest to your local area, has restored or intends to restore the environment after the mine is closed. Record the approaches they intend to use and write a report. Include your suggestions for the type of flora and fauna which you believe should be returned to the area.

Search Engine Keywords

Australia+mining+environment