MINERAL EXPLORATION

Mining is the process of extracting useful materials from the earth. Some examples of substances that are mined include coal, gold, or iron ore. Iron ore is the material from which the metal iron is produced.

The process of mining dates back to prehistoric times. Prehistoric people first mined flint, which was ideal for tools and **weapons** since it breaks into **shards** with sharp edges**.** The mining of gold and copper also dates back to prehistoric times.

These profitable substances that are mined from the earth are called minerals. A mineral is typically an inorganic substance that has a specific chemical composition and crystal structure. The minerals are valuable in their pure form, but in the earth they are mixed with other, unwanted **rocks** and minerals. This mix of rock and minerals is usually carried away from the mine together, then later processed and refined to isolate the desired mineral.

The two major categories of modern mining include surface mining and underground mining. In surface mining, the ground is blasted so that ores near Earth's surface can be removed and carried to refineries to extract the minerals. Surface mining can be destructive to the surrounding landscape, leaving huge open **pits** behind. In underground mining, ores are removed from deep within the earth. Miners blast **tunnels** into the rock to reach the ore deposits. This process can lead to accidents that trap miners underground.

Along with accidents, a career in mining can also be dangerous since it can lead to health problems. Breathing in **dust particles** produced by mining can lead to lung disease. One of the most common forms is black lung disease, which is caused when coal miners breathe in coal dust. Many other types of mining produce silica dust, which causes a disease similar to black lung disease. These are incurable diseases that cause breathing impairment and can be fatal.

The mining process can also harm the environment in other ways. Mining creates a type of water pollution known as acid mine **drainage**. First, mining exposes sulphides in the soil. When the rainwater or streams dissolves the sulfides, they form acids. This acidic water damages aquatic plants and animals. Along with acid mine drainage, the disposal of mine waste can also cause severe water pollution from toxic metals. The toxic metals commonly found in mine waste, such as arsenic and mercury, are harmful to the health of people and wildlife if they are released into nearby **streams**.

DECIDE OF THE STATEMENTS ARE TRUE OR FALSE

1. Mining is the process of pulling out valuable materials from underground.
2. Prehistoric people had mined gold and copper before mining flint.
3. Most minerals are already in their pure forms when they are mined from the Earth.
4. Surface and underground are the two main categories of mining.
5. Underground mining may result in open huge pits.
6. One of the risks of working as a miner is getting lung disease.
7. Black lung disease can be deadly.
8. Acid mine drainage is a water pollution.

LIVEWORKSHEETS

LABEL THE PICTURES USING THE WORDS IN BOLD

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