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Career as a Mining Engineer

Mining engineers plan mining operations and design underground and surface mines. They also design mining equipment and supervise technicians and workers who use it. Most mining engineers work for firms in the coal and metal industries. Some specialize in just one of these industries. Engineers can work for companies that make mining equipment. Others work for government agencies that regulate the mining industry.

When new deposits of ore are discovered, mining companies send engineers to determine whether the deposits can be mined profitably. Engineers study maps, waterways, and samples of rock. They also meet with scientists and government officials. If the mining engineers decide that the deposits are worthy to mine, they begin to plan mining operations. If an underground mine is to be used, engineers design mine shafts and tunnels. If the situation calls for surface mining, the engineers decide where to dig the pits and where to put the rock and soil that are removed during the mining process.

Mining engineers supervise the mining operation. They train crews of workers and supervisors. Engineers and engineering technicians inspect mines to make sure that the roofs of underground mines are supported correctly and that the air in mine shafts does not contain poisonous gases. These engineers may also inspect and repair mining equipment. Some mining engineers help to plan ways of restoring the land around mine sites so that it can be used for other purposes.

Mining engineers may specialize in designing equipment used to excavate and operate mines. This equipment includes ventilation systems, earth- and rock -moving conveyors, and underground railroads and elevators. Engineers also design equipment that chips and cuts rocks / coal and select explosives used to blast ore deposits.

1. Answer the questions and tasks

1. What do mining engineers primarily focus on?
2. In which industries do most mining engineers typically work?
3. How do mining engineers assess newly discovered ore deposits?

4. What responsibilities do mining engineers have when planning underground or surface mining operations?
5. Describe some tasks related to safety that mining engineers perform at active mining sites.
6. Explain how mining engineers contribute to environmental restoration efforts after mining activities.
7. Name specific types of equipment designed by specialized mining engineers.

2. True - False

1. Mining engineers only work for private companies in the coal industry.
2. When new ore deposits are found, mining engineers analyze them before deciding if they're worth extracting.
3. Underground mines require careful design of shafts and tunnels by mining engineers.
4. Surface mining doesn't involve any planning about waste disposal from extraction processes.
5. Supervising training programs for workers is part of a mining engineer's role.
6. Ensuring proper ventilation in underground mines isn't important for mining engineers.
7. Designing equipment such as cutting tools and blasting materials falls under the duties of mining engineers.
8. Restoring the landscape post-mining activity is irrelevant to mining engineers' job scope.
9. Mining engineers are involved in selecting appropriate machinery like conveyor belts and railway systems.
10. Mining engineers never collaborate with geologists or government officials regarding mining projects.

3. Insert Missing Word

1. Mining _____ plans mining operations and designs both underground and surface mines.
2. They design various kinds of mining _____ including ventilation systems and moving conveyors.
3. When discovering new deposits, engineers evaluate their profitability based on maps, waterways, and rock _____.
4. If the deposit proves valuable enough, engineers proceed to create detailed operational _____.
5. An essential task involves ensuring adequate support for the _____ of underground mines.
6. To prevent accidents, engineers must ensure that the air inside mine shafts contains no harmful _____.
7. After mining ends, some engineers assist in rehabilitating the surrounding environment through land _____ measures.