



Mining in Society

Scouts BSA · STEM

Name

Started

Completed

Almost everything you use, from your phone to your toothpaste, has something mined in it. This badge shows you where those materials come from, how mining is done safely, and how land is restored afterward. It's a big topic that connects science, history, and everyday life.

Requirements

Every official requirement, in plain language. Check the official wording when you sign off (scouting.org/merit-badges/mining-in-society/). Tips and examples are ideas, not extra requirements.

1 Minerals and their uses

Tips for this section: Walk through your house and match products to minerals, like salt, graphite in pencils, or copper in wires.

Example for this section: Make a chart of 10 minerals and products: halite for table salt, graphite for pencils, copper for wires, gypsum for drywall, quartz for glass, talc for baby powder, bauxite for aluminum cans, and three more you discover.

- ☐ **1a** Pick 10 different minerals and name a product that uses each one

- ☐ **1b** Explain how mining helps produce and process things that are grown

- ☐ **1c** Find out which countries the minerals from 1a come from, and talk about what you learned with your counselor

- ☐ **2** Get a map of your state or region with its major cities, highways, rivers, and railroads. Then mark five mining operations, find out what each one processes and whether it's a surface or underground mine, and discuss with your counselor how those resources are used

Tip: Use a state geological survey website or a map to find mines near you and mark them on a printed map.

Example: Mark five mines on a printed map of your state, like a sand and gravel pit, a limestone quarry, and a coal or metal mine. For each, note what's mined and where that material ends up.

- ☐ **3** Discuss with your counselor the hazards miners can face at an active mine and how they protect themselves

Tip: Look up the safety gear and rules miners use today and talk about how they protect workers.

Example: Describe how today's miners stay safe: hard hats, cap lamps, self-rescuers, air monitoring underground, safety training, and inspections by federal mine safety inspectors. Compare that with conditions a hundred years ago.

- ☐ **3a** Explain how miners wear and use protective gear: hard hat, earplugs, safety glasses, respirator or dust mask, high-visibility vest, and self-rescuer

- ☐ **3b** Explain how miners protect their hands and feet from impact, pinching, vibration, slips, trips, and falls

- ☐ **3c** Explain how monitoring equipment alerts miners to danger, and how drones, robots, and similar tools can assist mine rescues

- ☐ **4** Discuss with your counselor the dangers of abandoned mines and quarries

Tip: Learn the safety message about staying out of old mines and quarries, and why they're so dangerous.

Example: Explain why abandoned mines are deadly: hidden shafts, rotten timbers, bad air, and water-filled quarries that are colder and deeper than they look. The message is simple: stay out and stay alive.

5 See mining up close: Choose 1 of 6

Tips for this section: Look for a mining museum, an active quarry with tours, or a rock and mineral display near you. Visit with an adult.

- ☐ **5a** With a parent's or guardian's OK and your counselor's help, take virtual tours of two kinds of mines online. Compare their exploration, planning and permitting, equipment, and minerals produced, then talk it over with your counselor

- ☐ **5b** With a parent's or guardian's permission and your counselor's OK, go see a museum exhibit on mining or minerals. Learn the exhibit's history and the kind of mining it shows, and give three examples of mineral resources shaping history

- ☐ **5c** With a parent's or guardian's permission and your counselor's OK, visit an active mine. Learn how its resource is explored, planned, permitted, mined, and processed. Take photos if allowed, get brochures, and share them and what you learned with your counselor

- ☐ **5d** With a parent's or guardian's permission and your counselor's OK, visit a mining equipment maker or supplier. Discuss what equipment it provides and where it's used in mining. Take photos if allowed, get brochures, and share them and what you learned with your counselor

- ☐ **5e** Discuss with your counselor two ways rock is crushed or reduced, one using a chemical process to pull out a mineral, and explain how smelting differs from refining

- ☐ **5f** Learn a local mine's history: what was mined, how the deposit was found, the methods used, and how the resource was used. Ask a historian, community leader, or businessperson how mining affected your community, note social, cultural, or economic effects, and share with your counselor

6 Mining and the environment

Tips for this section: Find examples of old mine sites turned into parks, lakes, or wildlife areas.

Example for this section: Find a reclaimed mine near you or in your state, like a strip mine turned into grassland or a quarry turned into a lake. Explain how the land was reshaped, replanted, and checked over time.

- ☐ **6a** Pick a modern mining site, find out how it limits environmental impacts, and share what you learned about mining and sustainability

- ☐ **6b** Explain what reclamation means in mining and how it connects to the Outdoor Code and the Leave No Trace Seven Principles

- ☐ **6c** Discuss with your counselor how society values restoring mined land for wildlife and people, and how the Summit Bechtel Reserve went from a mine site to what it is today

7 Space, ocean, recycling, or commodity prices: Choose 1 of 4

Tips for this section: Pick a topic that sparks your curiosity, like mining on the Moon or recycling metals from old electronics.

Example for this section: Choose a topic like recycling metals from old phones and laptops. Explain how much gold, copper, and other metals are inside, how they're recovered, and why it matters for the future.

- ☐ **7a** Learn what space mining could offer: how NASA and private investors might locate, extract, and process minerals off Earth, and the main reasons to mine near-Earth asteroids, the moon, or other planets. Find out how space exploration and processing differ from Earth's. Share this with your counselor and discuss why sampling material at or near the surface in space is so hard

- ☐ **7b** Name three minerals dissolved in seawater or found on the seafloor and three places the ocean is mined today. Discuss with your counselor why people mine the ocean, the reclamation needed afterward, special concerns, and the sustainability problems it raises

- ☐ **7c** Find out which metals and minerals get recycled. List four metals and two nonmetals and how each is recycled, then discuss with your counselor how recycling affects resource sustainability and relates to mining

- ☐ **7d** With a parent's or guardian's permission, look up today's prices of commodities such as gold, copper, aluminum, cement, or coal, find how two of them have trended over the past five years, and report to your counselor

- ☐ **8** Research one career related to mining: training and education, costs, job outlook, pay, duties, and advancement. With a parent's or guardian's OK you may search online or at a library, interview a pro, or visit a workplace. Discuss your findings with your counselor and what makes the career appealing

Tip: Look into jobs like geologist, engineer, or equipment operator and what training each one needs.