

Scout: Geology Merit Badge Checklist

Geology Merit Badge Requirements	Booth name covering activity	Location
<input type="checkbox"/> 1. Define geology. <ul style="list-style-type: none"> <input type="checkbox"/> Discuss how geologists learn about rock formations. <input type="checkbox"/> In geology explain why the study of the present is important to understanding the past. 	Red Rocks Overlook Denver Basin Oil and Gas AIPG, SME, Rocks & Minerals	On the Ridge On the Ridge Visitor Center
<input type="checkbox"/> 2. Pick 3 resources that can be extracted or mined from Earth for commercial use. <ul style="list-style-type: none"> <input type="checkbox"/> Discuss with your counselor how each product is discovered and processed. 	Denver Basin Oil and Gas AIPG Booth SEM Minerals Booth	On the Ridge Visitor Center Visitor Center
<input type="checkbox"/> 3. Review a geologic map of your area and discuss the different rock types and estimated ages of rocks represented. Determine whether the rocks are horizontal, folded, or faulted, and explain how you arrived at your conclusion.	Geologic Mapping	Visitor Center
<input type="checkbox"/> 4b. Find out about 3 career opportunities available in geology. Pick one and find out the education, training, and experience required for the profession. Discuss this with your counselor, and explain why this profession might interest you.	SEM Minerals Booth AIPG Booth And ask the volunteers working the sites and booths	Visitor Center On-site
5c. Mineral Resources Option		
<input type="checkbox"/> 1. Define rock. Discuss the 3 classes of rocks including their origin and characteristics.	AIPG Booth SEM Minerals Booth	Visitor Center
<input type="checkbox"/> 2. Define mineral. <ul style="list-style-type: none"> <input type="checkbox"/> Discuss the origin of minerals and their chemical composition and identification properties, including hardness, specific gravity, color, streak, cleavage, luster, and crystal form. 	Rock & Mineral ID Booth	Visitor Center
<input type="checkbox"/> 3b. With your counselor's assistance, identify 15 different rocks and minerals. <ul style="list-style-type: none"> <input type="checkbox"/> List the name of each specimen, tell whether it is a rock or mineral, and give the name of its class (if it is a rock) or list its identifying physical properties (if it is a mineral). 	Rock & Mineral ID Booth	Visitor Center
<input type="checkbox"/> 4. List 3 of the most common road building materials used in your area. <ul style="list-style-type: none"> <input type="checkbox"/> Explain how each material is produced and how each is used in road building. 	AIPG Booth SEM Minerals Booth	Visitor Center
<input type="checkbox"/> 5b. With your counselor, choose 2 examples of rocks and 2 examples of minerals. <ul style="list-style-type: none"> <input type="checkbox"/> Discuss the mining of these materials and describe how each is used by society. 	AIPG Booth SEM Minerals Booth Rock and Mineral Identification	Visitor Center
5d. Earth History Option		
<input type="checkbox"/> 1. Create a chart showing suggested geological eras and periods. <ul style="list-style-type: none"> <input type="checkbox"/> Determine which period the rocks in your region might have been formed. 	Rock & Mineral ID Booth All of the sites on the Ridge will help with this	Visitor Center On the Ridge
<input type="checkbox"/> 2. Explain to your counselor the processes of burial and fossilization, and discuss the concept of extinction.	Morrison Museum WIPS	On the Ridge Visitor Center
<input type="checkbox"/> 3. Explain to your counselor how fossils provide information about ancient life, environment, climate, and geography. <ul style="list-style-type: none"> <input type="checkbox"/> Discuss the following terms and explain how animals from each habitat obtain food: benthonic, pelagic, littoral, lacustrine, open marine, brackish, fluvial, eolian, protected reef. 	Dinosaur Courtship/Croc Creek Western Interior Seaway WIPS Booth Fossil ID Booth	On the Ridge On the Ridge Visitor Center Visitor Center
<input type="checkbox"/> 4. Identify 15 different fossil plants or animals. <ul style="list-style-type: none"> <input type="checkbox"/> Classify each specimen to the best of your ability, and explain how each one might have survived and obtained food. <input type="checkbox"/> Tell what else you can learn from these fossils. 	Bone and Bulges Sites Main Tracksite Dinosaur Courtship/Croc Creek Western Interior Seaway	On the Ridge On the Ridge On the Ridge On the Ridge Visitor Center
<input type="checkbox"/> 6c. Visit a rock outcrop that contains fossils.		

<input type="checkbox"/> Determine the type of rock and identify the fossils in the outcrop.	Dinosaur Ridge Hike Fossil ID Booth	On the Ridge Visitor Center
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Other Booths/Activities With Information	Booth/Area	Location
<input type="checkbox"/> American Institute of Professional Geologists (AIPG)	Geology	Visitor Center
<input type="checkbox"/> Moments in Stone	Paleontology	Visitor Center
<input type="checkbox"/> Bird Conservancy of the Rockies	Birds	On the Ridge
<input type="checkbox"/> Molly Brown House Museum	CO History & Mining	Visitor Center
<input type="checkbox"/> SME Minerals Education Coalition	Geology	Visitor Center
<input type="checkbox"/> Morrison Natural History Museum	Paleontology	On the Ridge
<input type="checkbox"/> Colorado Groundwater Association	Groundwater Management	Visitor Center
<input type="checkbox"/> Geocaching Colorado	Local Geocaches	Visitor Center
<input type="checkbox"/> Western Interior Paleontological Society (WIPS)	Paleontology	Visitor Center
<input type="checkbox"/> Legendary Ladies	Historical Women in Science	Visitor Center
<input type="checkbox"/> Society of Women Engineers	Engineering	Visitor Center
<input type="checkbox"/> Women In Mining	Geology	Visitor Center
<input type="checkbox"/> Libby Talks	Climate Change/Conservation	Visitor Center
<input type="checkbox"/> Scout Food Vendor: Hamburgers & Hot Dog Meals	Lunch	Visitor Center
<input type="checkbox"/> Trek Through Time Exhibits	Exhibit Hall	Visitor Center
<input type="checkbox"/> Fossil Casting Booth	Paleontology	Visitor Center
<input type="checkbox"/> Mister Bones	Paleo Puppeteer	Visitor Center
<input type="checkbox"/> Backyard Bones: Dinosaur Dig	Replica Dig Site	Visitor Center
<input type="checkbox"/> Gift Shop	Funsies	Visitor Center