



# Cub Scout Day Camp Geology Belt Loop

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# Requirements for the Geology Belt Loop

1. Explain to your den or an adult family member what geology means.
2. Collect samples of igneous, sedimentary, and metamorphic rocks. Explain how each was formed.
3. Collect samples of three minerals. Explain to your family or den what a mineral is and show and tell about the minerals you collected.



# Requirements for the Geology Pin (select 6)

1. Make a plaster cast of a fossil.
2. Make a special collection of rocks and minerals that illustrates the hardness scale.
3. Give examples of sedimentary, igneous, and metamorphic rocks.
4. Gather several different types of rocks. Compare them and put them in groups according to physical properties such as color, texture, luster, hardness, or crystals.
5. Describe the effects of wind, water, and ice on the landscape.
6. Make "pet rocks" using rocks, paint, and glue-on eyes. Tell a creative story about your pet rocks.
7. Draw a diagram showing different types of volcanoes or draw a diagram that labels the different parts of a volcano.
8. Make a crystal garden.
9. Make a collection of five different fossils and identify them to the best of your ability.
10. Make a poster or display showing 10 everyday products that contain or use rocks or minerals.
11. Visit a mine, oil or gas field, gravel pit, stone quarry, or similar area of special interest related to geology.
12. With your parent or adult partner, visit with a geologist. Find out how he or she prepared for the position. Discuss other careers related to geology.
13. Draw the inside of a cave showing the difference between stalactites and stalagmites.

# Today's Plan

1:00 write name on ziplock bag.

- Rotate through 5 groups (5 minutes each):
  1. Plaster-of-Paris Mold of fossil or sea shell
  2. Find, stand on, and examine big volcanic, metamorphic, and sedimentary rocks in back yard
  3. Determine the hardness of selected rocks
  4. Collect volcanic rock (red), metamorphic rock (granite), sedimentary rock (sandstone)
  5. Collect three minerals (iron, copper, pyrite)

1:30 Review of rock collection in the house.

1:45 Summary of geology and seismic interpretation.

1:55 Scouts to explain what geology means.

# Volcanic Rocks

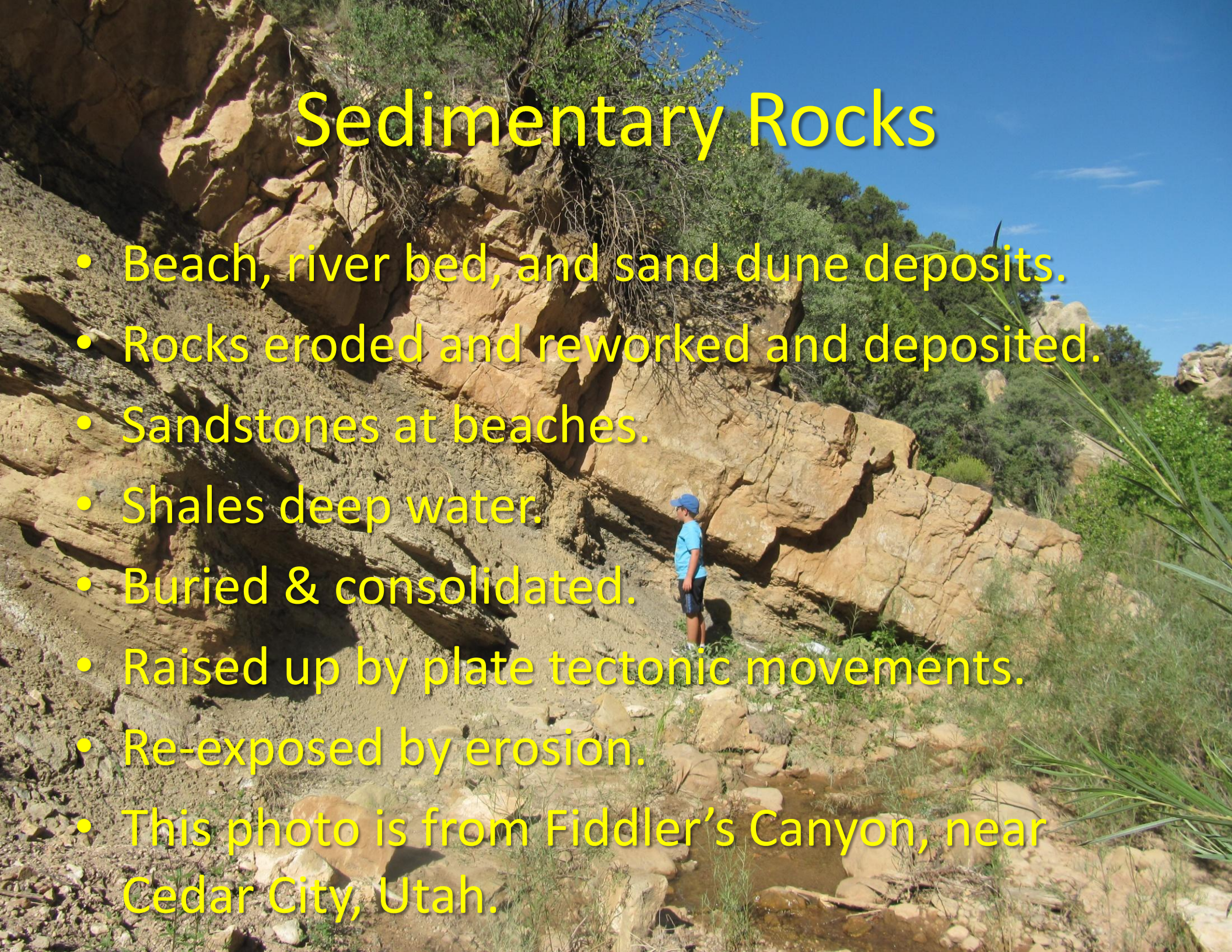
- From lava deep in the earth.
- Typically at plate edges.
- Can visit in Hawaii.
- No volcanoes in Texas.
- This photo is from St. George, Utah





# Sedimentary Rocks

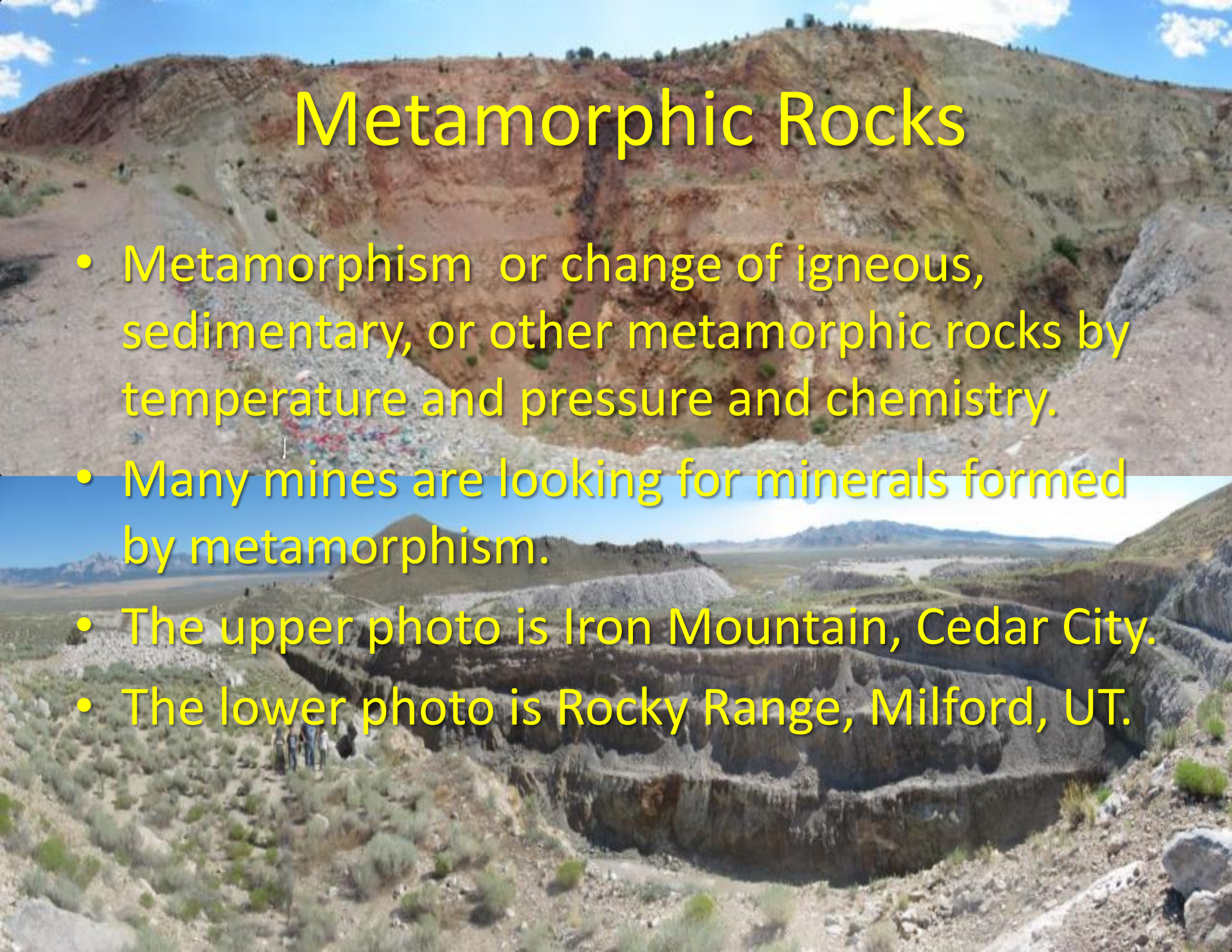
- Beach, river bed, and sand dune deposits.
- Rocks eroded and reworked and deposited.
- Sandstones at beaches.
- Shales deep water.
- Buried & consolidated.
- Raised up by plate tectonic movements.
- Re-exposed by erosion.
- This photo is from Fiddler's Canyon, near Cedar City, Utah.





# Metamorphic Rocks

- Metamorphism or change of igneous, sedimentary, or other metamorphic rocks by temperature and pressure and chemistry.
- Many mines are looking for minerals formed by metamorphism.
- The upper photo is Iron Mountain, Cedar City.
- The lower photo is Rocky Range, Milford, UT.



# Hardness Scale

1. Talc	1.5 Graphite
2. Gypsum	2.2-2.5 Fingernail
3. Calcite	
4. Fluorite	3.2.-3.5 Copper Penny
5. Apatite	5.1 Knife Blade
6. Orthoclase Feldspar	
7. Quartz	5.5 Glass Plate
8. Topaz	6.5 Steel File
9. Corundum	
10. Diamond	7.0 Streak Plate



# Notes

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# Notes

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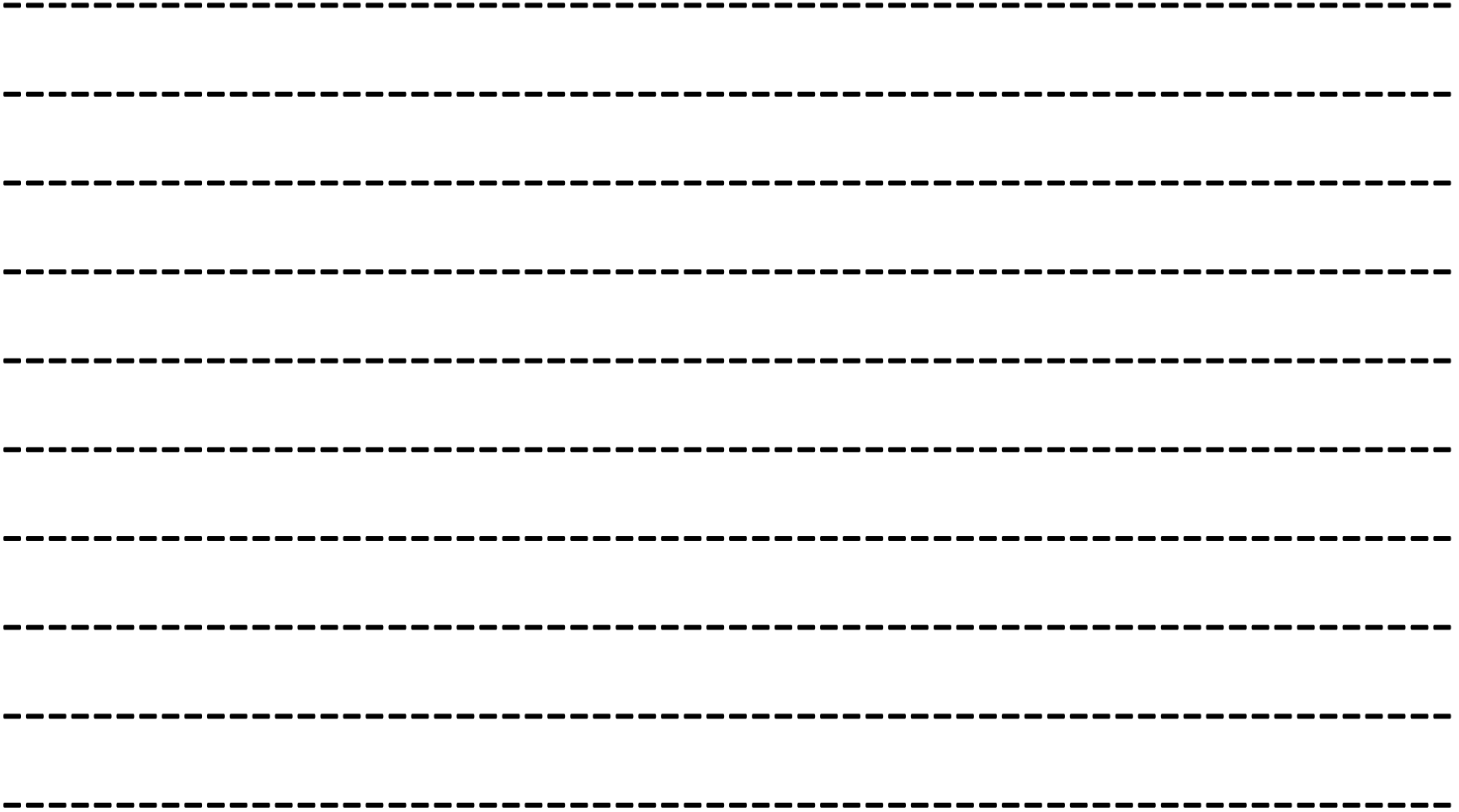


# Notes

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# Notes

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