

12.108 Lab 1: Field Trip**Overview of Earth Materials at Harvard Univ. Museum Gem and Mineral Exhibit**

1) Cubes Find 3 minerals which crystallize as cubes. What other shapes, if any, do these same minerals form? Do the shapes have anything in common? Is there any evidence of how these minerals fracture? What other observations can you make regarding their appearance (colour, luster, texture of surface, etc.)?

Name	Shapes and Fracture	Other Observations
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Mineral 1a		
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Mineral 1b		
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Mineral 1c		
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2) Hexagonal Prisms Find 3 minerals whose crystals have a hexagonal cross section. What other shapes, if any, do these same minerals form? Do the shapes have anything in common? Is there any evidence of how these minerals fracture? What other observations can you make regarding their appearance (colour, luster, texture of surface, etc.)?

Name	Shapes and Fracture	Other Observations
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Mineral 2a		
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Mineral 2b		
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Mineral 2c		
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3) Parallelograms What are the similarities and differences in shape between the following minerals? Look for variation in shape of the faces, and describe the overall appearance of the crystals.

Garnet

Calcite

Gypsum

4) Minerals Take a moment to look at the specimens of the following minerals, which will serve as reference minerals for this course, noting any distinctive characteristics.

1) graphite/diamond

2) Taenite-kamacite

3) Troilite-pyrrhotite

4) Magnetite

5) Hematite

6) Periclase-Wustite

7) Corundum

8) Olivine

9) Perovskite

10) Feldspars

11) Pyroxenes

12) Serpentine

13) Quartz

14) Calcite-Aragonite

15) Garnet

16) Zircon

17) Ice

18) Halite