

Minerals Notes

Name: _____

A. What is a mineral? *Mineral Characteristics* shared by _____ minerals.

1. **Natural:** occurs _____ **NOT manmade**
2. _____: Is **not alive** and **was never alive**
3. _____: Atoms are arranged in an **orderly pattern**
4. **Definite chemical composition:** _____
5. _____: **Not a gas, not a liquid**

How will we remember this?

Now **I Can Define mineralS!**

- **N**atural
- **I**norganic
- **C**rystalline
- **D**efinite chemical composition
- **S**olid

B. Physical Properties of Minerals (each mineral has a unique set of properties)

- 1. _____: First impression
–**Not very reliable** because **lots of minerals can occur in many different colors**
- 2. _____: The _____ color of a mineral, **the color of a mineral's powder**
- 3. _____: A mineral's _____ to being _____.

Moh's Scale of Hardness

Index Mineral	Scale	Common Objects
Diamond	10	Steel file (6.5) Glass (5.5) Knife blade (5.1) Wire Nail (4.5) Penney (3.5) Fingernail (2.5)
Corundum	9	
Topaz	8	
Quartz	7	
Orthoclase	6	
Apatite	5	
Fluorite	4	
Calcite	3	
Gypsum	2	
Talc	1	

MOH'S SCALE		
Hardness	Mineral	Simple Tester
1	Talc	Can be scratched with Fingernail
2	Gypsum	
3	Calcite	Copper coin will scratch
4	Fluorite	Can be Scratched with Knife
5	Apatite	
6	Orthoclase	Steel File will Scratch
7	Quartz	Can scratch window Glass
8	Topaz	
9	Corundum	
10	Diamond	

- _____: Depends on how **tightly packed** the atoms are

- 4. _____: **Splits along definite planes.** "Cleave" = to _____
- 5. _____: **Breaks irregularly**
- 6. _____: **How light shines off a mineral**
2 types: either * _____ or _____.

C. Special Properties

- 1. _____ : **Attracted to a magnet**, contains _____.
- 2. _____ : Looking through it, you see **“double”** ex.: _____
- 3. _____ : **Glow**s under **ultraviolet** (_____) light
- 4. _____ : **Continues to glow** even after the UV light has been removed
- 5. **Piezoelectric**: _____ is generated from _____. Ex: Quartz

D. Identification Tests

■1. **Hardness** (Resistance to being scratched)

Use reference materials: **fingernail, copper penny, glass, steel nail, or Other minerals on the “Moh’s scale of Hardness”**



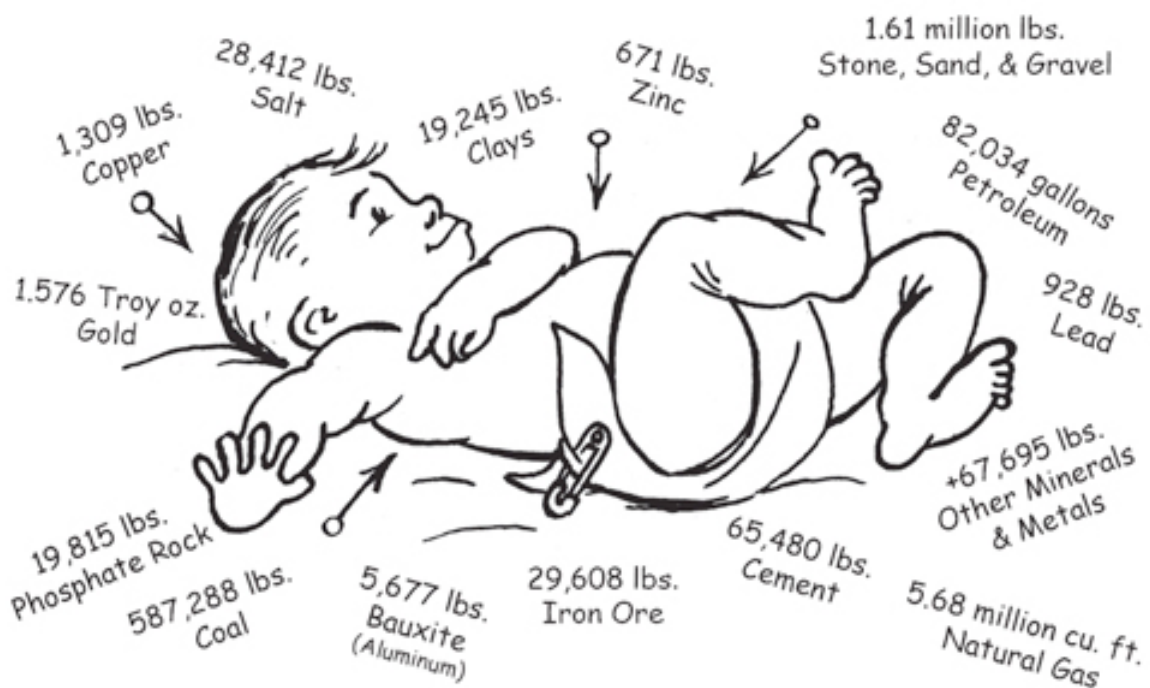
The red-brown streak of the mineral hematite.

■2. **Streak** (_____ Color)

Look at the **powder** left behind when you rub it on a **porcelain tile**

■3. **Acid Test**: Use hydrochloric acid to test for _____ (**calcite**)

Every American Born Will Need . . .



3.6 million pounds of minerals, metals, and fuels in their lifetime