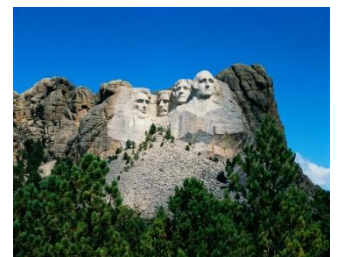


Rocks and Minerals Unit

This is a unit I designed for my primarily preschooler, but my older two kids (2nd, 4th grades) will join in as well. These sheets require tracing, some matching, and some cutting-pasting activities. (There's a fill in the blank option for older kids starting on page 13.)

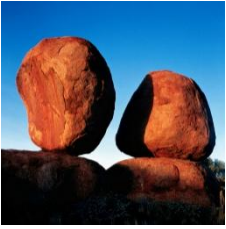


- rocks
- how we use rocks
- famous rock formations
- 3 types of rocks
- minerals
- mining
- recycling
- birthstones



Made by Liesl at the

[Homeschool Den](http://www.homeschool-den.com)



Rocks and Minerals Unit



Big rocks are called

pebbles.

Small rocks are called

sand.

Tiny rocks as small as grains of salt are called

boulders.

Some rocks are very hard. Many buildings are made of

granite and marble.

Rocks can be red-hot. Melted rock is called lava.



Devil's Tower is made from lava that hardened inside a volcano.

The softer rock of the volcano has worn away.

You can set fire to one rock called coal.



There are three main types of rocks:

igneous rocks

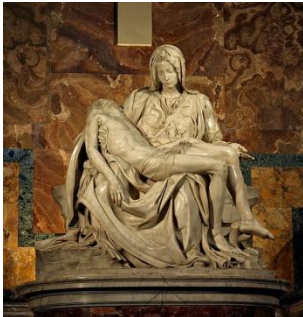
metamorphic rocks

sedimentary rocks

What are rocks used for?

Making buildings	Building roads
Creating statues, like Michelangelo's Pieta	Heating homes and running factories
Walls	Pyramids
Building Stonehenge, an ancient calendar	Castles

Cut these pictures out and paste them into the correct square above:



Famous Rocks Around the World





Famous Rocks

Cut these out and paste them under the correct picture above.

Twelve Apostles, Great Ocean Road, Victoria, Australia	Rock of Gibraltar, Near Spain
Devil's Tower Wyoming, USA	Kaaba Mecca, Saudi Arabia <small>A cube shaped building made of granite which has a mosque built around it. It is the most sacred site in Islam. Every Muslim is to make a pilgrimage here once in his/her life time.</small>
Rosetta Stone, in the British Museum	Uluru Also known as Ayer's Rock Northern Territory, Australia
Mt. Rushmore, South Dakota, USA	Stonehenge, England
Arches, Utah, USA	The Great Wall of China
Sphinx Egypt	Buddha of Bamiyan Destroyed by the Taliban in Afghanistan in 2001

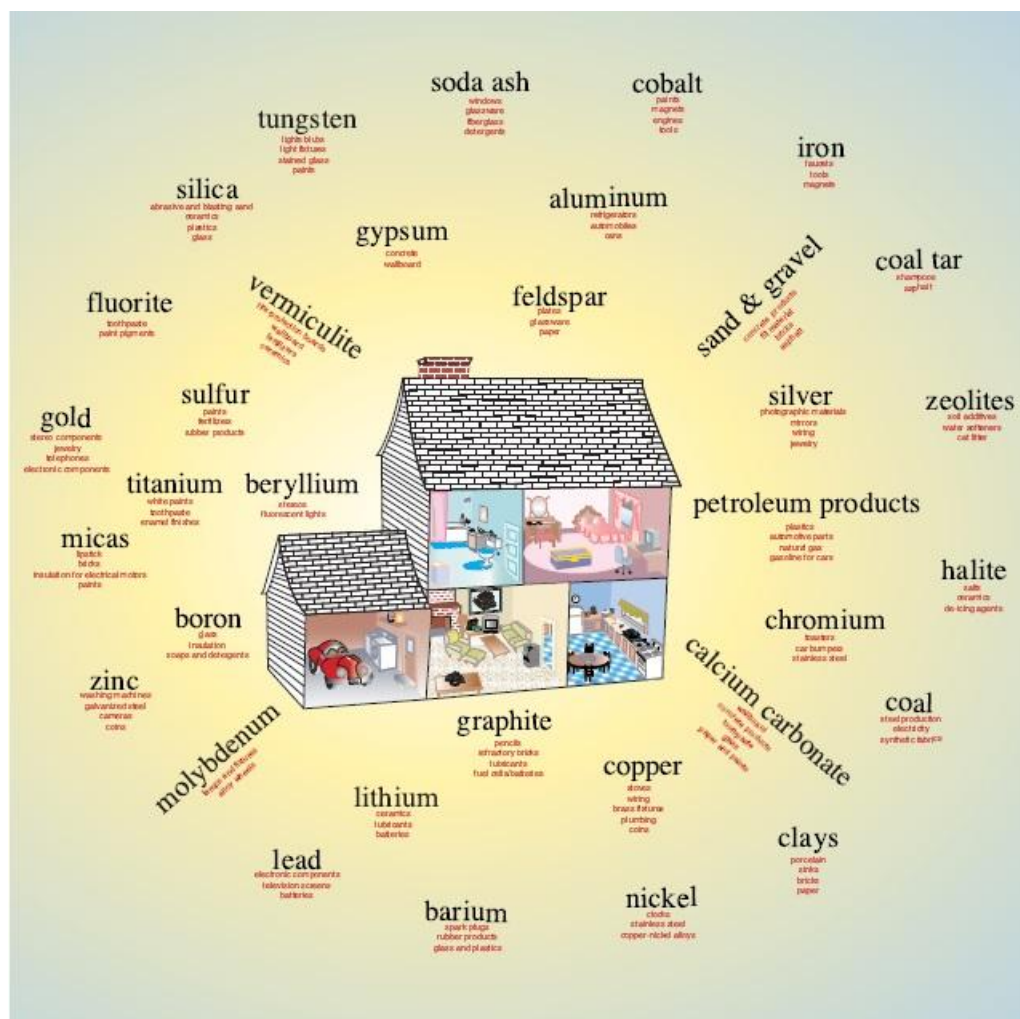
On another page for your science notebook:

In areas with a lot of limestone, rainwater and streams dissolve away the calcite in the limestone. Over thousands of years calcite drips on the roof and floor. These form pointed "icicles" of rock.

Draw a picture of a cave with stalactites and stalagmites:

What do we use minerals for?

Minerals Around Our Homes:

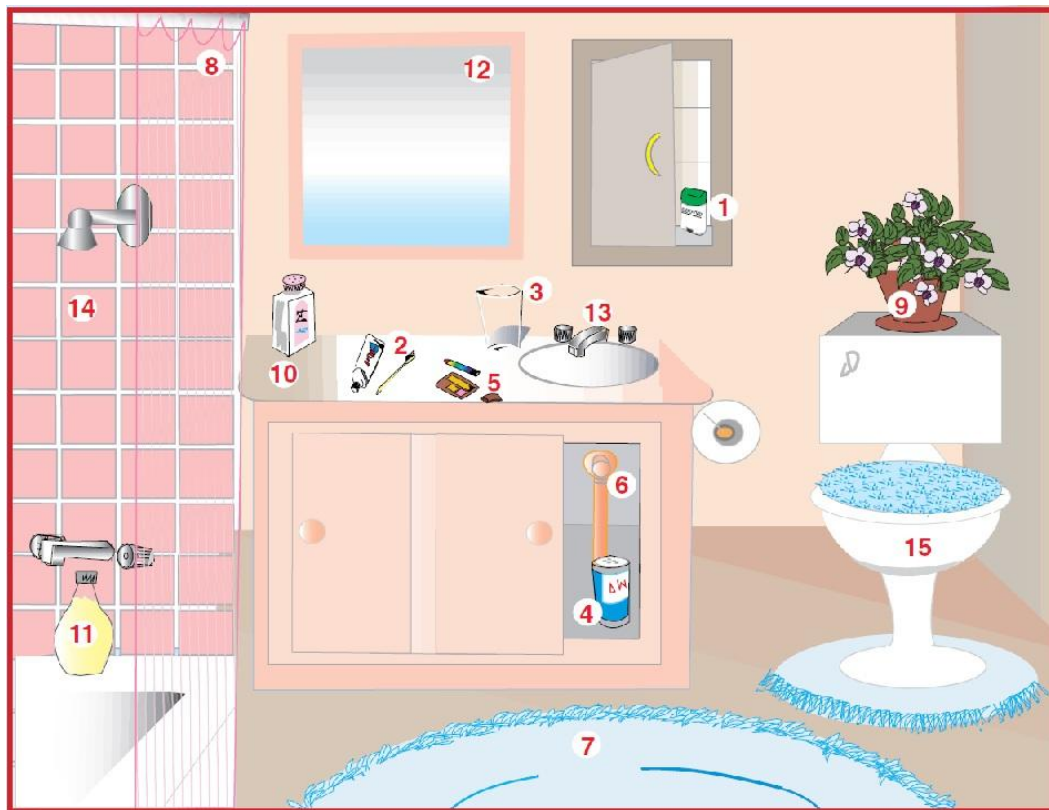


[Minerals in the workplace](#): A four page pamphlet about how everything from aluminum to zinc is used in and around workplaces.

http://minerals.usgs.gov/minerals/pubs/general_interest/safety/mineralsusesafety.pdf

Minerals in Our Environment

What minerals can be found in our environment?



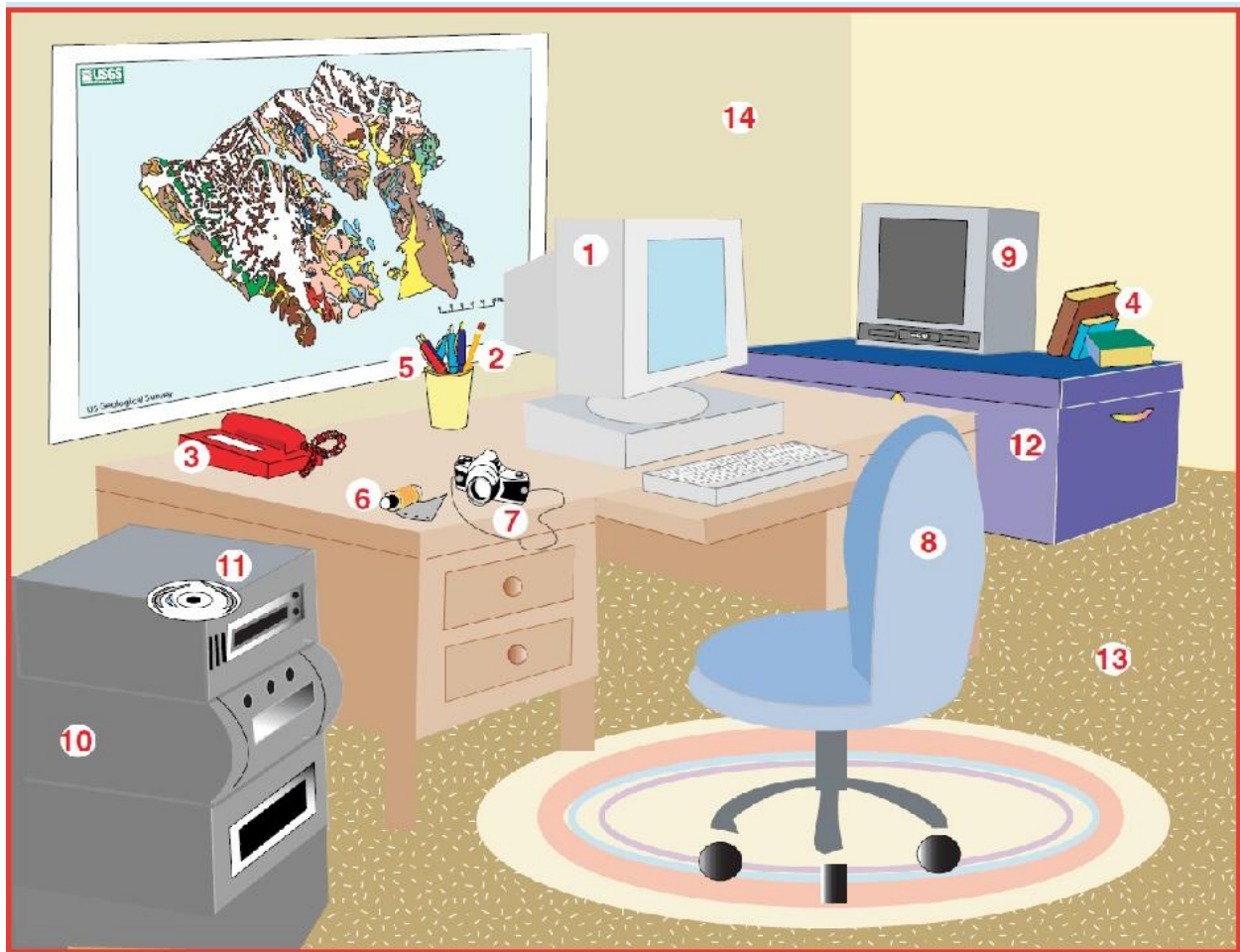
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Answers for the picture above, on left. Answers for the pictures on the next page below, on right.

1. **DEODORANT:** Includes aluminum and the container is made of petroleum products.
2. **TOOTH PASTE:** Includes fluorite, barite and calcite. The container is made of petroleum products or aluminum.
3. **DRINKING GLASSES:** Includes feldspar, silica and soda ash.
4. **ABRASIVE CLEANSER:** Includes silica or calcite.
5. **LIPSTICK AND MAKEUP:** Includes clay, mica, talc, limestone and petroleum products.
6. **PLUMBING:** Made of copper, clay and petroleum products.
7. **RUGS:** Includes limestone, petroleum products and selenium.
8. **PLASTIC SHOWER CURTAINS:** Contains petroleum products.
9. **FLOWER POT:** Made of clays and metallic minerals for pigments in glaze.
10. **TALCUM POWDER:** Contains talc and mica.
11. **DANDRUFF SHAMPOO:** Includes coal tar, lithium clays and selenium. The container is made of petroleum products.
12. **MIRROR:** Includes feldspar, silica and silver.
13. **FAUCETS:** Includes iron, nickel and chromium.
14. **TILES:** Made of clay, feldspar, wollastonite or talc, mineral pigments.
15. **TOILET:** Includes clays, silica, copper, zinc, petroleum products and borates.

1. **COMPUTER:** Includes gold, silica, nickel, aluminum, zinc, iron, petroleum products, and about thirty other minerals.
2. **PENCIL:** Includes graphite and clays.
3. **TELEPHONE:** Includes copper, gold and petroleum products.
4. **BOOKS:** Includes limestone and clays.
5. **PENS:** Includes limestone, mica, petroleum products, clays, silica and talc.
6. **FILM:** Includes petroleum products and silver.
7. **CAMERA:** Includes silica, zinc, copper, aluminum and petroleum products.
8. **CHAIR:** Includes aluminum and petroleum products.
9. **TELEVISION:** Includes aluminum, copper, iron, nickel, silica, rare earths, and strontium.
10. **STEREO:** Includes gold, iron, nickel, beryllium and petroleum products.
11. **COMPACT DISC:** Includes aluminum and petroleum products.
12. **METAL CHEST:** Includes iron and nickel. The brass trim is made of copper and zinc.
13. **CARPET:** Includes limestone, petroleum products and selenium.
14. **DRYWALL:** Includes gypsum, clay, vermiculite, calcium carbonate and micas.

[USGS Poster](#)



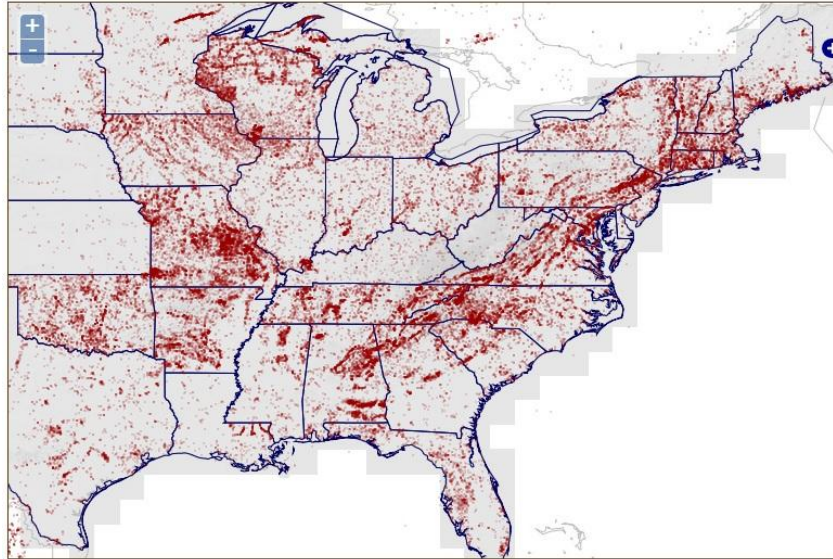
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What are these minerals used for? (matching)

- | | |
|-----------|--|
| copper | glass, electrical components, optical lenses |
| aluminum | cement |
| diamond | pencils |
| quartz | cans, airplanes, automobiles |
| graphite | wire, pots, plumbing |
| limestone | jewelry, drilling, construction |

Mining

Mines are found all around the USA (the red dots are mines, past or present)



Impact of Mining:

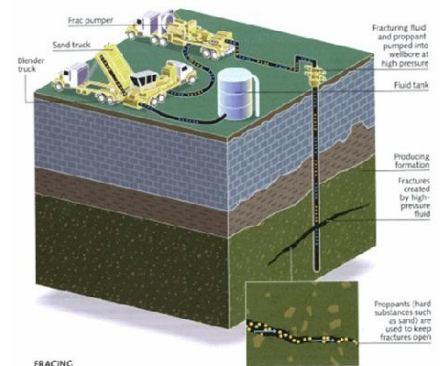
strip coal mining



underground mining



fracking



Picture credits: Wikimedia Commons -- [coal mining](#), [underground mining](#), [fracking](#)

Great information for kids about mining:

http://www.nativeaccess.com/sites/default/files/curriculum/worksheet/Mining_WS.pdf

Color the picture and talk about how the environment is impacted by the mining you see.

http://www.oresomeresources.com/resources_view/resource/worksheet_impacts_diagram

Recycling:



Recycling video clip:

<http://www.youtube.com/watch?v=P9UjmOHC300>

Recycling aluminum cans coloring book:

http://www.mrcollinson.ca/4%20science/rocks%20and%20minerals/4_science_rocks_minerals_aluminum_can_book.pdf

The life of an aluminum can

http://www.mrcollinson.ca/4%20science/rocks%20and%20minerals/4_science_rocks_minerals_aluminum_can_pictures.pdf

About 127,000 aluminum cans are recycled every minute.

Recycling Cell Phones:

What valuable metals can be found in cell phones?



copper gold silver
platinum palladium

Months and Birthstones

Traditionally there is a birthstone for each month. Here are the months and the gemstones for each month. Trace your birthday month and birthstone. Trace the months and birthstones for the rest of your family as well.

January -- garnet

February -- amethyst

March -- aquamarine

April -- diamond

May -- emerald

June -- pearl, alexandrite

July -- ruby

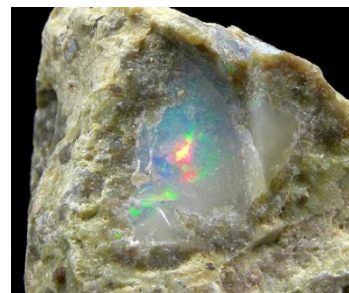
August -- peridot

September -- sapphire

October -- opal

November -- topaz, citrine

December -- zircon, turquoise

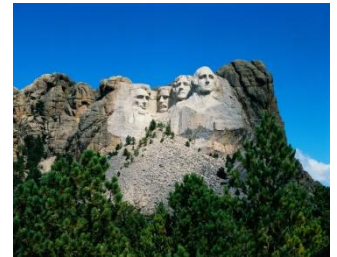


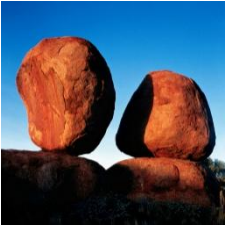
Rocks and Minerals Unit

Name: _____

Date: _____

- rocks
- how we use rocks
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- 3 types of rocks
- minerals
- mining
- recycling
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Rocks and Minerals Unit



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Small rocks are called _____.

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There are three main types of rocks:

_____ rocks

_____ rocks

_____ rocks

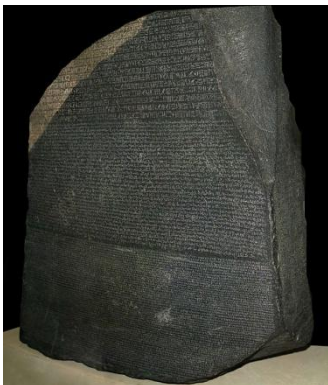
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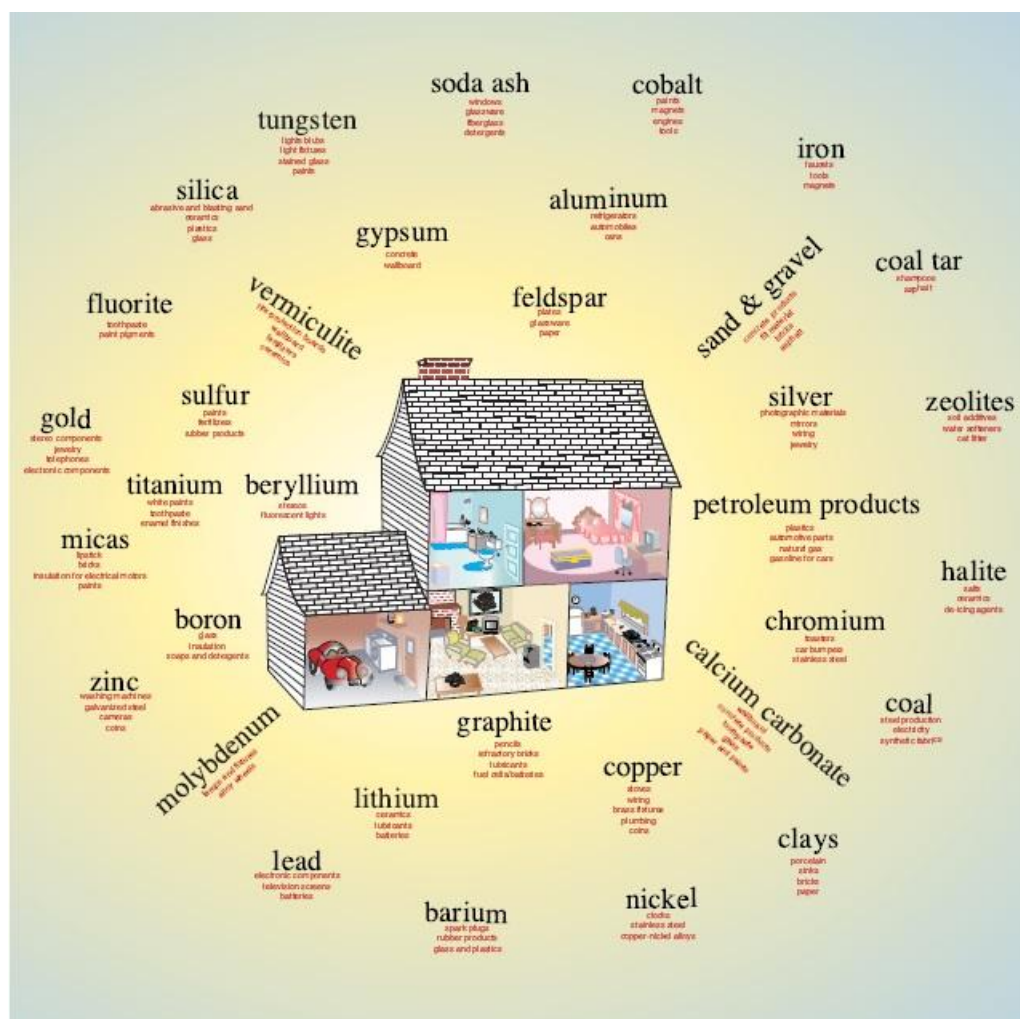
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What do we use mineral for? Minerals around our homes:



Read one of the pamphlets below and tell us what you learned:

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[copper](#) - <http://pubs.usgs.gov/fs/2009/3031/FS2009-3031.pdf>

[gold](#) - <http://pubs.usgs.gov/gip/gold/gold.pdf>

[lead](#) - <http://pubs.usgs.gov/fs/2011/3045/pdf/fs2011-3045.pdf>

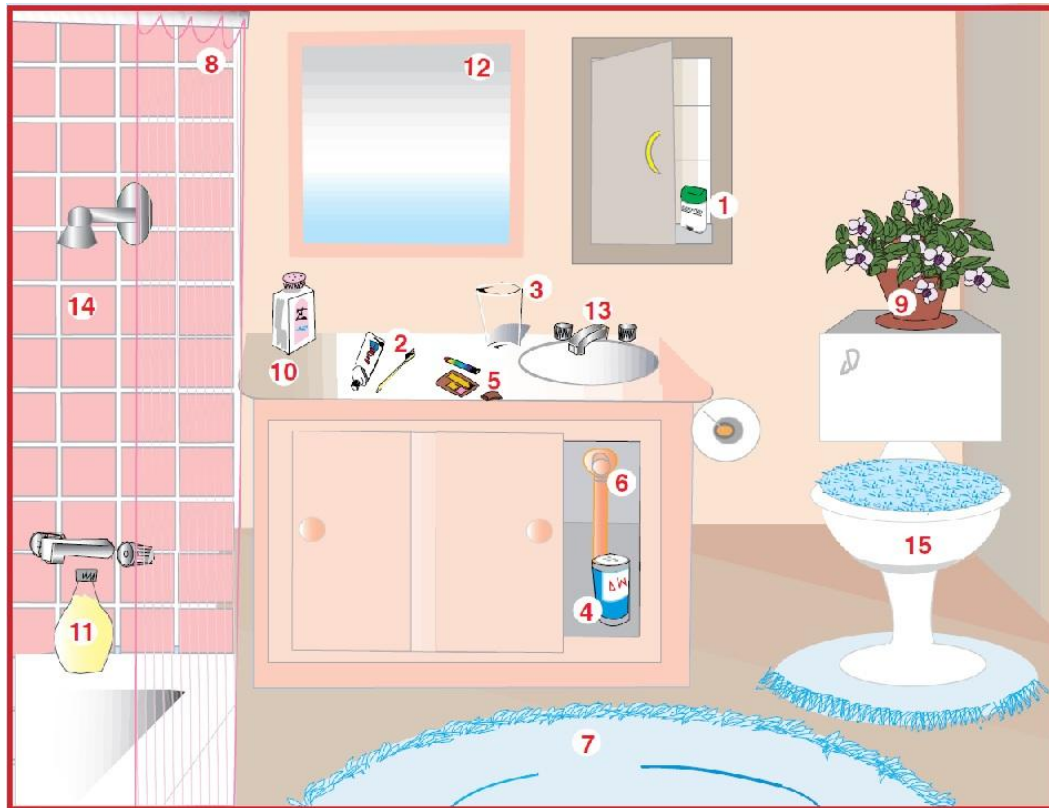
[beryllium](#) - http://pubs.usgs.gov/fs/2012/3056/pdf/fs_2012_3056.pdf

[nickel](#) - <http://pubs.usgs.gov/fs/2012/3024/pdf/fs2012-3024.pdf>

[chromium](#) - <http://pubs.usgs.gov/fs/2010/3089/pdf/fs2010-3089.pdf>

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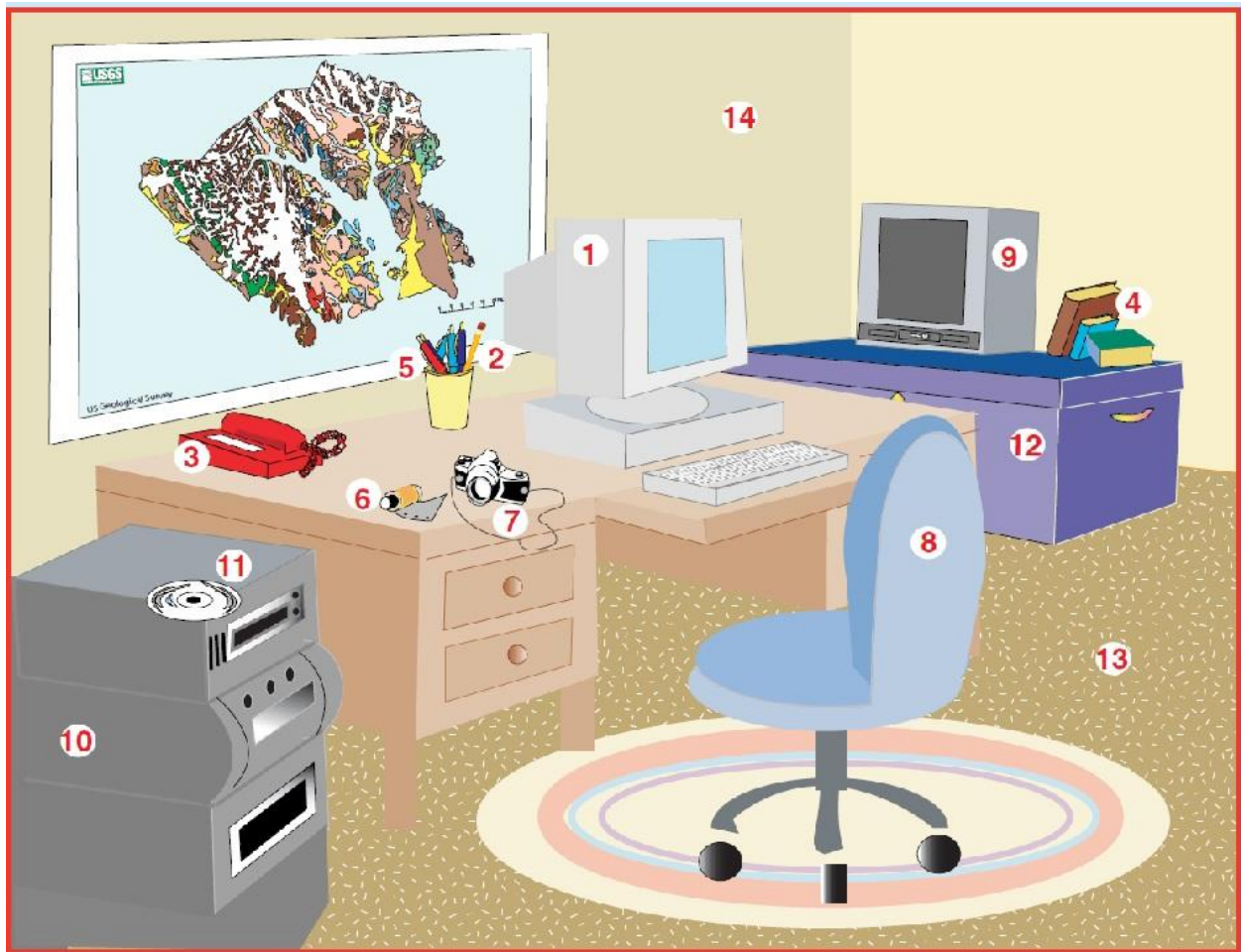
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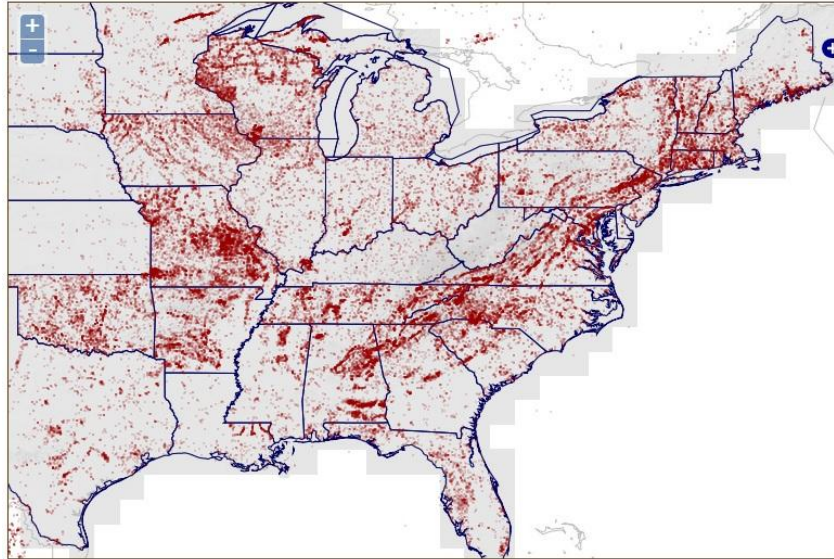
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Mines are found all around the USA (the red dots are mines past or present)



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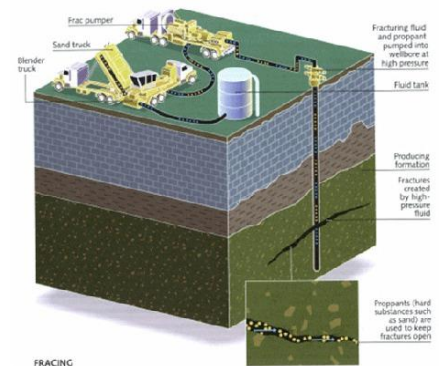
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July -- ruby

August -- peridot

September -- sapphire

October -- opal

November -- topaz, citrine

December -- zircon, turquoise

