

## FINAL SCAVENGER HUNT QUESTIONS 2011

### Mad Science

When a substance goes directly from a solid to a gas, this process is called:

**Melting      Sublimation      Evaporation      Freezing**

The 3 states of matter are: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Dry Ice is compressed and frozen:

**H<sub>2</sub>O (water)      O (oxygen)      CO (carbon monoxide)      CO<sub>2</sub> (carbon dioxide)**

Dry Ice is compressed and frozen: **CO      O      H<sub>2</sub>O      CO<sub>2</sub>**

### Geode Gallery

The most common mineral in geodes is **galena      quartz      calcite      sulfur**

The most common mineral found in agate is \_\_\_\_\_

Why are some geodes hollow and others solid?

### CARVED OPAL AND OBSIDIAN (506)

How old is this shark tooth from northern Africa?

### AMBER WAY(507)

Amber is fossilized \_\_\_\_\_. The amber in this booth formed \_\_\_\_\_ years ago during the \_\_\_\_\_. Properties of amber are \_\_\_\_\_.

Three different organisms found in this amber are \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Where was this amber found?

### XQUISIT MINERALS(509)

What element does azurite, malachite and chalcopyrite have in common? Use the chemical symbol.

How is gypsum used to build houses?

### LEXCELL (503)

Drilling mud is used to control pressure in an oil well. One of the heaviest minerals used to make drilling mud is \_\_\_\_\_.

### OLM (407)

Circle the correct answer. Do Opals contain water? **Y N** If so, \_\_\_\_% of an opal is water.

What is the rarest color in opal fire? Why?

### HORIZON (403)

The continuous changing of rocks from one type of rock to another is the rock cycle. What type of rock is schist? **Sedimentary igneous metamorphic** How was it formed?

How did the garnets in the schist form?

Schist is a \_\_\_\_\_ rock. Schist's parent rock is \_\_\_\_\_

### JIM'S GEMS (303)

Gemstones are cut with a \_\_\_\_\_

Gemstones usually rate between \_\_\_\_ and \_\_\_\_ on Mohs hardness scale. How are gemstones cut?

### WRIGHT'S(301)

What is another name for ulexite? **TV rock      CD rock      DVD rock**

Ulexite is also called \_\_\_\_\_.

Look through the piece of calcite. What special optical property does this mineral have that makes its identification easy?

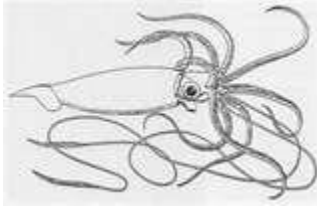
### CHAPPARAL (208)

Where is jade found?

What type of rock is agate?

## **FOSSIL FANATICS (207)**

Which animal will fossilize better? Why?



What is an ammonite?

What is an ammonite? When did it live? What happened to them?

## **SCHOOLER'S MINERALS AND FOSSILS(206)**

Rocks from outer space are called \_\_\_\_\_.

## **J&J COLLECTIBLES(205)**

Is petrified wood a fossil? **Yes No**

What is the most expensive gem stone? Why?

## **ROCKAHOLICS (202)**

The common name for the mineral pyrite is \_\_\_\_\_ . Why?

Fool's gold is the mineral \_\_\_\_\_. Why is it called fool's gold?

## **RARE EARTH(203)**

Two types of fluorescent minerals are \_\_\_\_\_ and \_\_\_\_\_.

Texas state stone is \_\_\_\_\_.

## **SHU'S ROCKS AND MINERALS (204)**

Find a coprolite. What is a coprolite?

## **LARSON'S ROCKS(107)**

Sphalerite gives us the metal \_\_\_\_\_. When zinc is combined with copper, it becomes \_\_\_\_\_.

## **DB OPALS (102)**

What is opal? How is opal formed?

## **CUTTER'S BENCH (103)**

Physical properties used to identify minerals include cleavage and fracture. What is the difference?

The continuous changing of rocks from one type to another is the \_\_\_\_\_.

The three types of rocks are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.

## **BANDERA INTERNATIONAL IMPORT COMPANY (104)**

What is the Texas state gemstone?

## **LOVE OF LAND (W01)**

What is the state stone of Texas?

## **Front Hallway**

### **DEMONSTRATION AREA(Front hallway west)**

Watch jewelry being made! What did you get to watch? **Casting Faceting Polishing**

### **KNAPPER**

Two rocks that are used to make stone tools are \_\_\_\_\_ and \_\_\_\_\_. How hard are these rocks?

What does the knapper do to the rock to make tools?

What does a knapper make? How?

Flint knappers chip flint and other rocks to make



**SHARKS (Front hallway center)**

How many circles of teeth can you find? How many big shark teeth can you find?

Find a display with crusher shark teeth. How are the crusher teeth different from normal shark teeth? Why?

**ARTWORK 'N' NATURE (Front hallway)**

What determines the different colors in petrified wood?

The Rock Painter paints on \_\_\_\_\_ canvas petrified wood sidewalk

The Rock Painter paints on \_\_\_\_\_

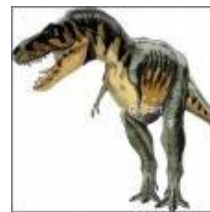


**Petrified wood**



**Plates**

**PROCTOR MUSEUM (Front hallway east)** Find this dinosaur footprint cast.



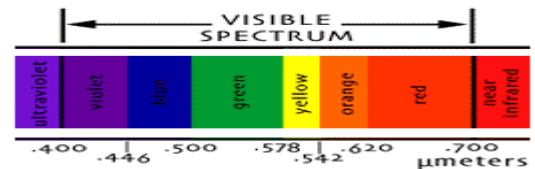
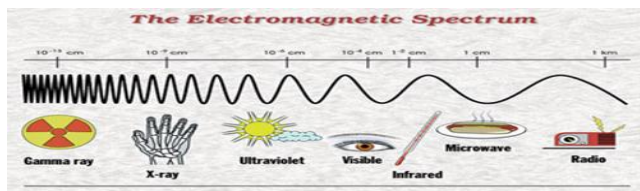
Circle the dinosaur that made this footprint. How do you know?

**MINERAL SECTION**

Find a quartz crystal. The quartz crystal is shaped like



What happens to the rocks when the ultraviolet lights are turned on?



Violet Green Red

Circle the color that has the highest energy level. **Red Green Violet** How do you know?

Can we see ultraviolet light? **Yes No** Why?

**PALEONTOLOGY SECTION(Front hallway east doors)**Paleontologists study fossils to learn about past life and past climates. Find the fossils for each era. What do they tell you about the life forms and climate of that era?

- Paleozoic: trilobite, brachiopod, horn coral
  - Mesozoic: ammonite, shark tooth, dino or mosasaur bone
  - Cenozoic: mammoth tooth, oreodont skull, mammoth shoulder bone
- What do they tell you about the life forms and climate of that era?

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- Paleozoic:** trilobite, brachiopod, horn coral
  - Mesozoic:** ammonite, dino or mosasaur bone
  - Cenozoic:** mammoth tooth, oreodont skull, mammoth shoulder bone
- All of these fossils are extinct. What do they tell us about the life forms and climate of each era?

Find these fossils! **K-3**



Find an example of each of the following fossils. Describe the fossil and give the name of the fossil. **5**  
Vertebrate fossil-  
Invertebrate fossil-

**EAST WING**

**HOUSTON GEOLOGICAL SOCIETY (East hallway center)**Oil, coal and natural gas are called fossil fuels. Are fossil fuels renewable, nonrenewable or alternative energy sources?How do geologists find fossil fuels?

**HOUSTON MUSEUM OF NATURAL SCIENCE**

How are shark teeth different from ray teeth? Why?  
Label these teeth. Which one is a meat eater? Why? Which one eats oysters and clams? How do you know?



Find teeth that look like these pictures. Why are ray teeth and shark teeth different?



Shark Tooth

Ray Tooth

**Enjoy the HMNS activity of the day!**

**YOUTH SECTION (Atrium)** These physical properties used to identify minerals.

Luster is the way light is reflected from the mineral. If the mineral looks like a metal, it has a metallic luster. If the mineral doesn't look like a metal it has a nonmetallic luster. Find a mineral for each luster.

Physical properties are used to identify minerals. Find 2 physical properties used to identify minerals. What properties did you find?

**K-3** Rocks can be identified using physical properties. The way that a rock feels is a physical property. Can you identify rocks by the way they feel? Try it! How does a rock feel?

**5<sup>TH</sup>** Hardness is a physical property that is used to identify minerals. In the stops at the Rock Food Table and Jim's Gems you learned how hardness is used. Minerals have other physical properties used for identification. Match the property to its ability to identify minerals.

- |             |  |
|-------------|--|
| 1. Luster   | A. Mark mineral leaves on an unglazed porcelain tile   |
|             | B. When the mineral breaks leaving a flat shiny surface  |
| 2. Streak   | C. Way light is reflected from the mineral. If the mineral looks like a metal it is metallic; if it doesn't look like a metal the mineral is nonmetallic |
| 3. Cleavage | D. When the mineral breaks with a rough surface without a pattern  |
| 4. Fracture |  |

**ROCK VILLAGE(Atrium)**

What did the children who made this village use to make it?

Can you identify a rock by touch? Try it!

**DINO DIG SAFETY RULES**

Follow the safety rules. Wear safety goggles. Don't hit the rock with the hammer. Use the "chisel". Stay in one place!

**DINO DIG**

Paleontologists are geoscientists who study fossils. In order to study skeletons, they must dig each bone out carefully. Chip carefully and safely to find a dinosaur, gem or petrified wood.

**ROCK FOOD TABLE (Back hallway center)**

Mohs, a German geologist set up a hardness scale listing rocks from softest with a 1 to hardest which is rated a 10. Diamonds are 10 on the scale, what is the softest mineral on Moh's Hardness Scale?

**calcite talc sulfur**

What rock is used for "milk" on the rock food table?

What rock is used for "hot chocolate" on the rock food table?