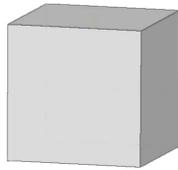


# Crystal Quest!

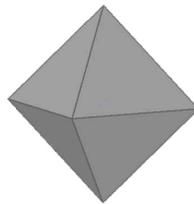
When you visit the Natural History Museum of Los Angeles County, it's fun to explore the museum's **Gem and Mineral Hall** and search for precious crystals and gems. Have fun answering the following questions as you tour through the hall.

1. **Wait!** Just before you enter the Mineral Hall there is a display on the right with a BIG sample of **pyrite**. This mineral is also called "fools gold." Take a good look at it, so you remember what it looks like when you find the real gold.

Which shape below is most like the pyrite crystals? **Circle one.**



cube



octahedron

2. Also, by the entrance is a super-sized piece of **Wyoming jade** with a nice polished green surface. Nephrite and jadeite can both be called jade. Be on the look out inside the hall for beautiful carvings of jadeite and nephrite.

## **Now enter the mineral hall....**

*You may work on the questions in any order, but if you start with the right hand wall as you enter and follow the wall around the room, it may be easier to find the crystals!*

3. Look at the many beautiful specimens on the **California mineral wall**. One famous piece on the top shelf looks like a small, shiny bear. What is the bear made of?

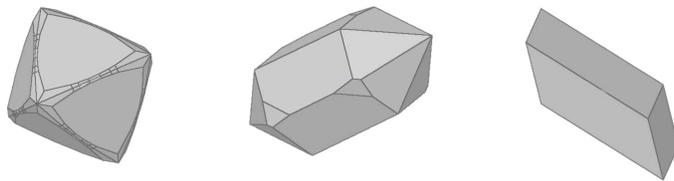
4. Next to the shiny bear, you can find the **California State Gem**. What is this mineral and what color is it?

5. Wonderful **tourmaline**, **topaz**, and **beryl** come from California. From the samples you see, guess which California **county** has produced the most of these gemmy minerals?

6. Some people think of minerals as the ingredients of rocks. If you look at the examples from **sedimentary rocks** in the holes on the wall, you will discover a mineral that is an ingredient in food. This edible crystal from Carlsbad, New Mexico, is made of sodium and chlorine (NaCl) and is commonly called salt. It is big enough to salt about 10,000 orders of medium McDonald's French fries! **What is its mineral name?**

7. Watch out, don't bump into the Canyon Diablo Meteorite! Meteorites are rock space travelers that have arrived on Earth. One of the meteorites in the display is a rock from another planet. **Which planet did it come from?**

8. **So what are minerals?** They are natural crystals with an orderly arrangement of atoms. The colored balls in the window with the really large **quartz** crystal show one of these arrangements. Which of these drawings is a quartz crystal? **Circle one.**



*Learn more facts about minerals as you go along the wall to the fluorescent mineral display.*

9. Mysterious glowing minerals are hiding in the **fluorescent mineral display**. Watch carefully as the normal lights go off and the black lights come on. One of the minerals still glows even **after** the black light is off. Watch for it in the "Long Wave" window. Which one is it? (Hint: fluorescent light bulbs are partly named after this mineral.)

10. Wow! Look at the **Crystal Ball** (near the door to the **Hixon Gem vault**). This ball is a **rock**; it is not glass! It is a huge **quartz** crystal that has been very carefully shaped. Have someone stand on the other side of the ball and look at him or her through the ball. Is the person right side up or upside down?

*Now unlock the secrets in the chamber of gems by entering the **Hixon Gem Vault**. Don't worry, the door will not close behind you while the museum is open! Each display of gems contains its own special treasures.*

11. The opal display has beautiful but small **opal ball**. Some opals are called fire opal. Do you see any flames that appear and disappear in these opals if you move around? What colors are the flames?

12. Have you found the **cat's eyes**? These gems have lines that move when you do. Does it look like they be looking at you? Don't forget to look at the gems with six-pointed stars in the same display.

13. **Ruby** and **sapphire** are beautiful varieties of the aluminum mineral named **corundum**. Lips can be ruby red, but what colors are eyes that are like sapphires?

14. Do you think **spinel** or **tourmaline** comes in the most different and most beautiful colors?

15. **Diamond**, the royal gem, comes from a very special kind of rock. From studying the diamond display, can you figure out what the rock is called?

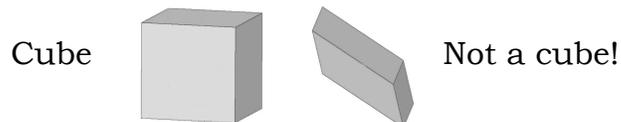
*Return to the main mineral hall to continue your quest.*

16. Step back in time in the gold display corner. Yes, it is real gold. The largest nugget is the Mojave Nugget. How much does it weigh?

17. Can you guess why so many nuggets are a bit rounded like pebbles in a stream?

*Now that you have practiced looking at crystals, try these special extra credit searches.*

18. How many minerals can you find that grow in the shapes of cubes, and what are their names? (Hint: Cubes have corners like squares.)



19. If you could take just one gem or mineral home, which one would you like to take?

