

## Activity 2.4 A word puzzle

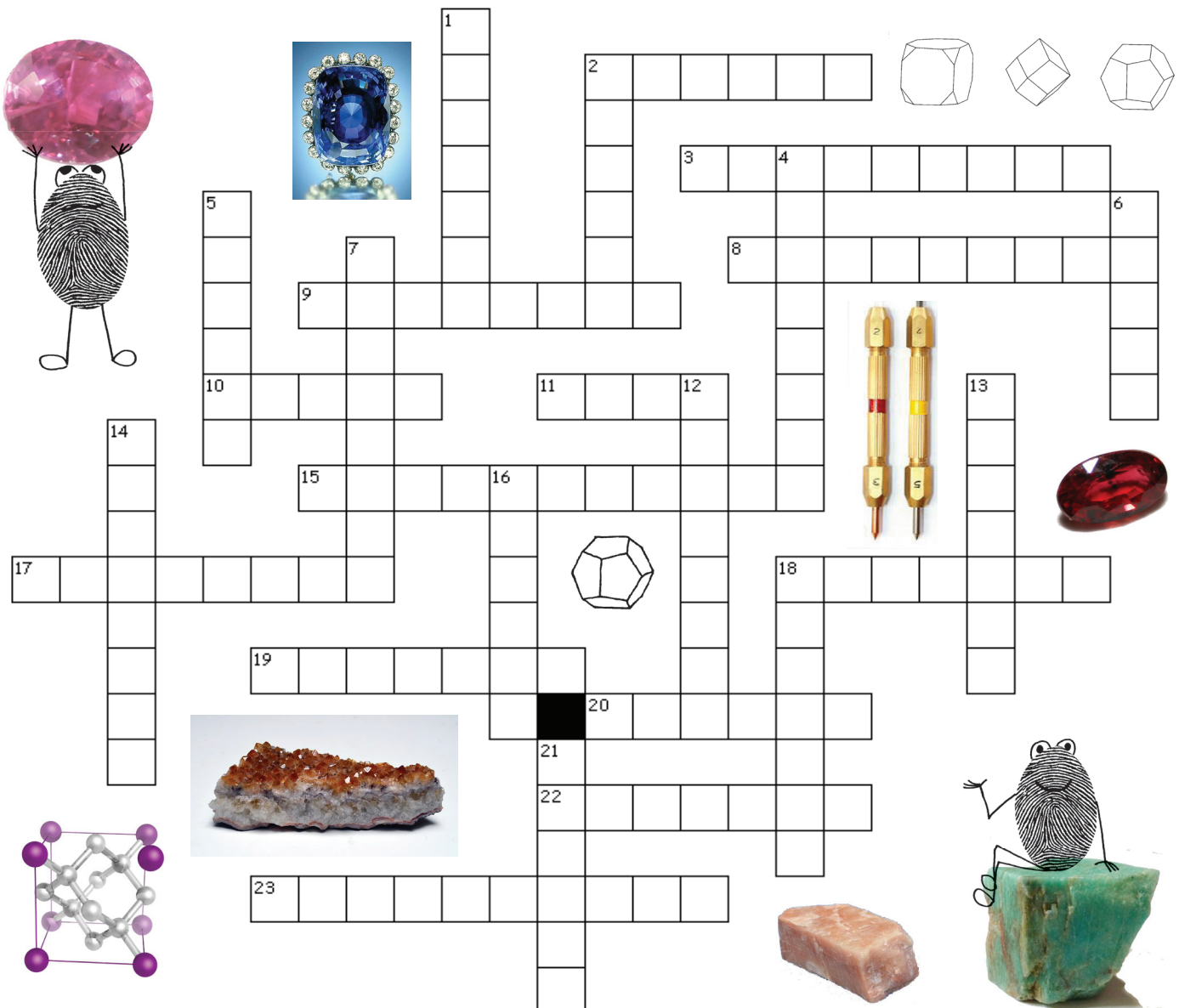
Here is a fun way to do more practice with mineral names. The answers to these clues are all in the chapter.

### ACROSS:

- 2) Used to make plaster, cement and fertilizer
- 3) The most magnetic mineral
- 8) A green mineral used for jewelry and as a pigment in paint.
- 9) Its name means "field stone," it comes in bluish-green and pink and it is number 6 on the Mohs hardness scale.
- 10) Number 8 on the Mohs hardness scale
- 11) One of the softest minerals, number 1 on the Mohs
- 15) A radioactive mineral that contains uranium.
- 17) Contains the element fluorine.
- 18) Most aluminum is extracted from this.
- 19) Number 5 on the Mohs hardness scale.
- 20) Has the chemical formula  $\text{FeS}_2$ .
- 22) A mineral that contains the element boron and shows the unusual property of fiber optics
- 23) Is used as a source of zinc, gallium, cadmium and indium.

### DOWN:

- 1) A form of pure carbon, but in hard, clear crystals.
- 2) A mineral that contains a lot of lead, and was used to make lead ammunition for musket rifles in the 1700s.
- 4) A form of pure carbon that forms flat sheets. You use this mineral every day when you write with pencils.
- 5) A source of the element barium.
- 6) Contains the element beryllium.
- 7) This red mineral is an excellent source of iron. The first part of its name is Greek for blood (because it is red).
- 12) A mineral ore for mercury, having the formula  $\text{HgS}$
- 13) Formula  $\text{CaCO}_3$ , pure crystals can look like rhombohedrons.
- 14) Both sapphires and rubies are made of this mineral.
- 16) The mineral name for salt.
- 18) A mineral that comes in flat, shiny, black sheets
- 21)  $\text{SiO}_2$



## barite



Often found in limestone or hot spring areas. Usually white or light brown. Sometimes crystallizes into rose shapes, which are popular with collectors.

## zircon



Found in nearly all igneous rocks, although in very small amounts. Because it is so hard, it is often used as a gemstone in jewelry.

## hematite



Hematite is a major ore (source) of iron. The name "hematite" comes from its blood-red color ("hema" means blood).

## cinnabar



Cinnabar has a reddish color and is very dense (heavy) because of the mercury (Hg). Pure mercury is a liquid at room temperature, but it is a solid when bound to sulfur.

## cuprite



Cuprite forms cubic crystals. It is sometimes called "ruby copper" because of its color. When exposed to air it changes to  $\text{CuO}$ .

## fluorite



Fluorite is used in the production of steel. It has a glassy luster and can look similar to a quartz crystal, except for its tetragonal (4-sided) shape.

## quartz



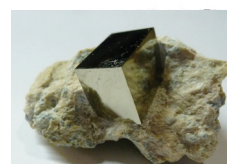
Quartz is used in electronics, as a gemstone, and in the manufacturing of glass (where it is the main component). Sand is made of very tiny pieces of quartz.

## galena



Galena is very dense (heavy) because of the lead in it. During the era of musket rifles, galena was used as the source of lead to make musket balls.

## pyrite



This mineral is often called "fool's gold" because of its golden color and shiny luster. It has no actual gold in it. It leaves a black streak, not gold.

Cards for "Make Five"

Copy onto card stock and cut apart.

## corundum



Corundum is very hard. It is so hard that it is used in industry as an abrasive (like sand paper). Blue corundum is called a sapphire and red is a ruby.

## talc



Talc is extremely soft. In fact, you can scratch it with your fingernail! Talc is the main ingredient in talcum powder (used to dry off after a shower).

## calcite



Calcite is the main ingredient in limestone. It is one of the most common minerals in the world. Caves are made of limestone.

## gypsum



Gypsum is a soft mineral. It is one of the main ingredients in plaster and plasterboard. One type of gypsum is called alabaster and was carved by ancient peoples.

## chalcopyrite



Chalcopyrite is pinkish-purple with flecks of gold. It is found wherever copper is mined. The copper can be taken out of it by using chemical processes.

## epsom salt



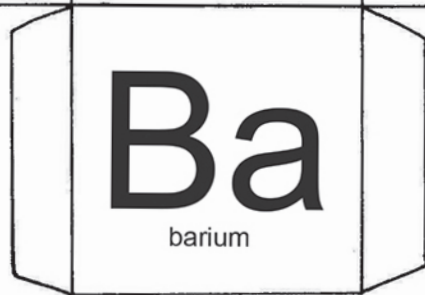
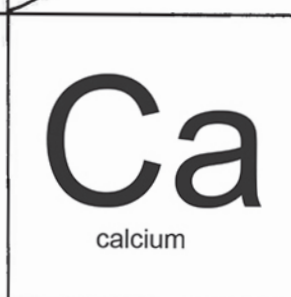
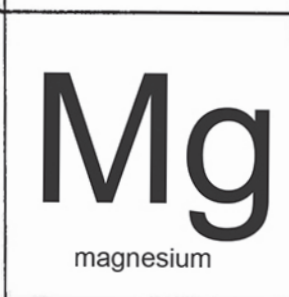
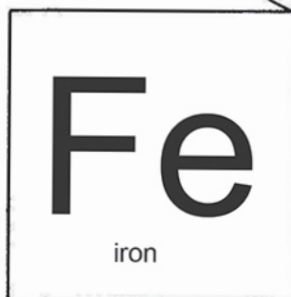
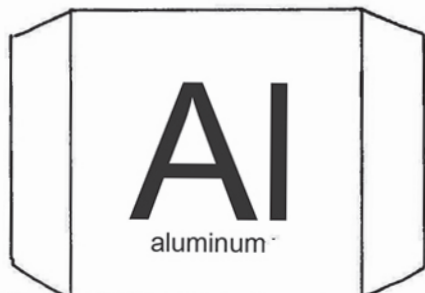
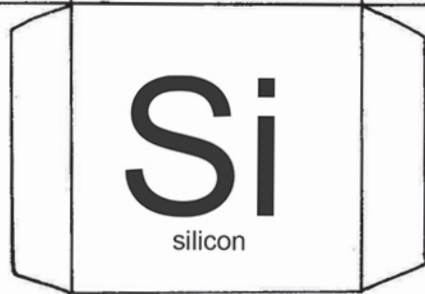
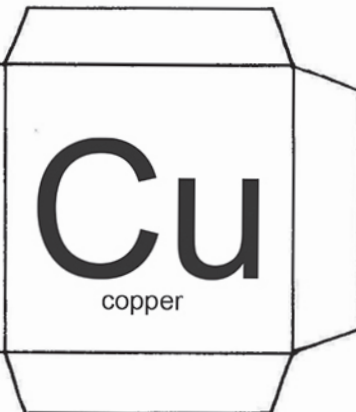
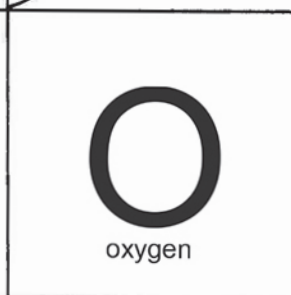
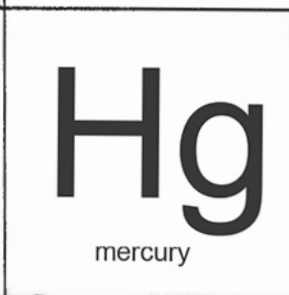
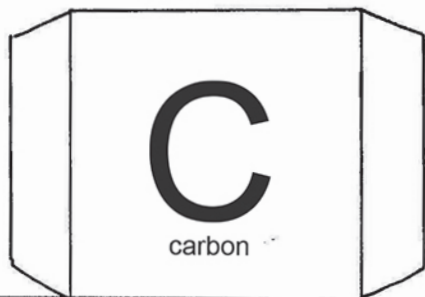
This mineral dissolves into water very easily. It is often used in medical treatment of wounds on hands and feet. It helps in the healing process.

## diamond/graphite



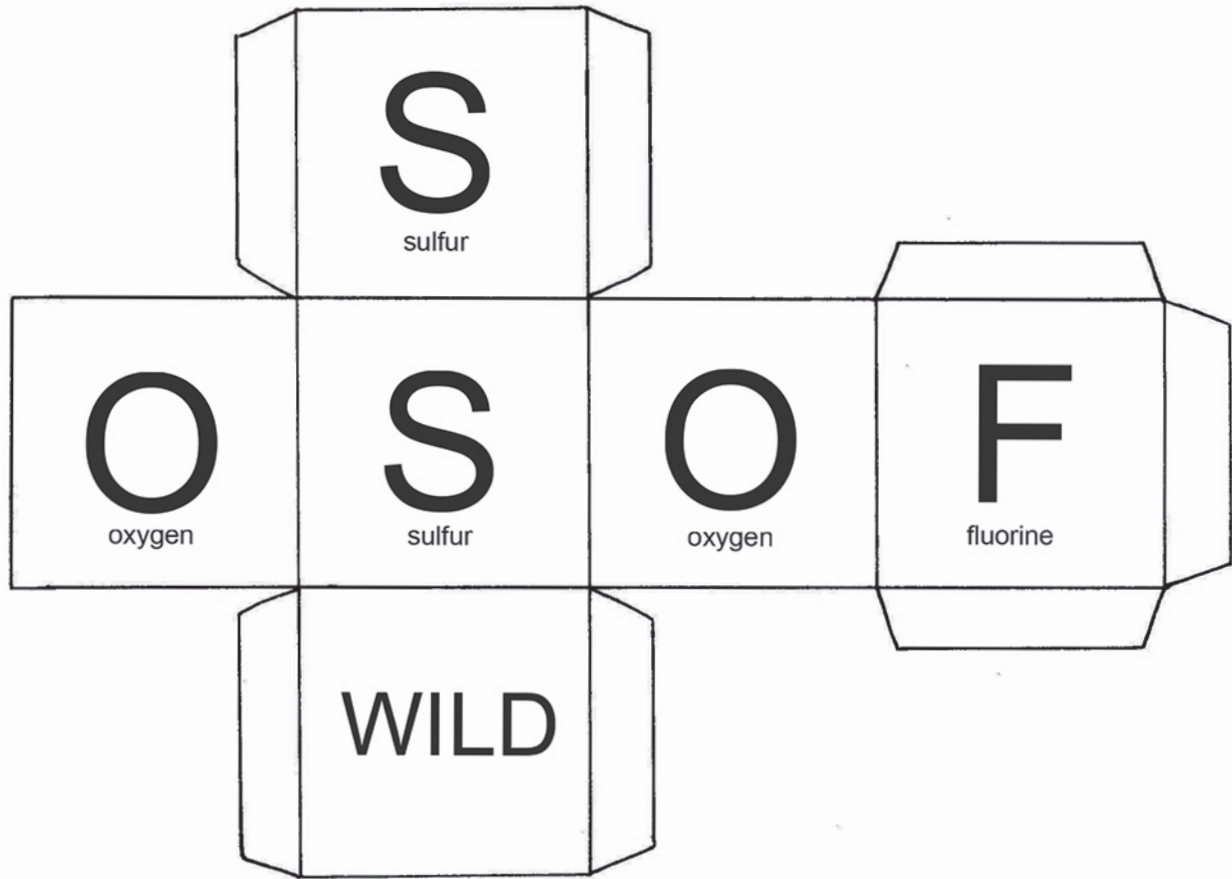
Strangely enough, both priceless diamonds and the stuff in your pencil are made of the same thing: pure carbon. The difference is how the atoms are bonded together.

Cards for "Make Five"  
Copy onto card stock and cut apart.



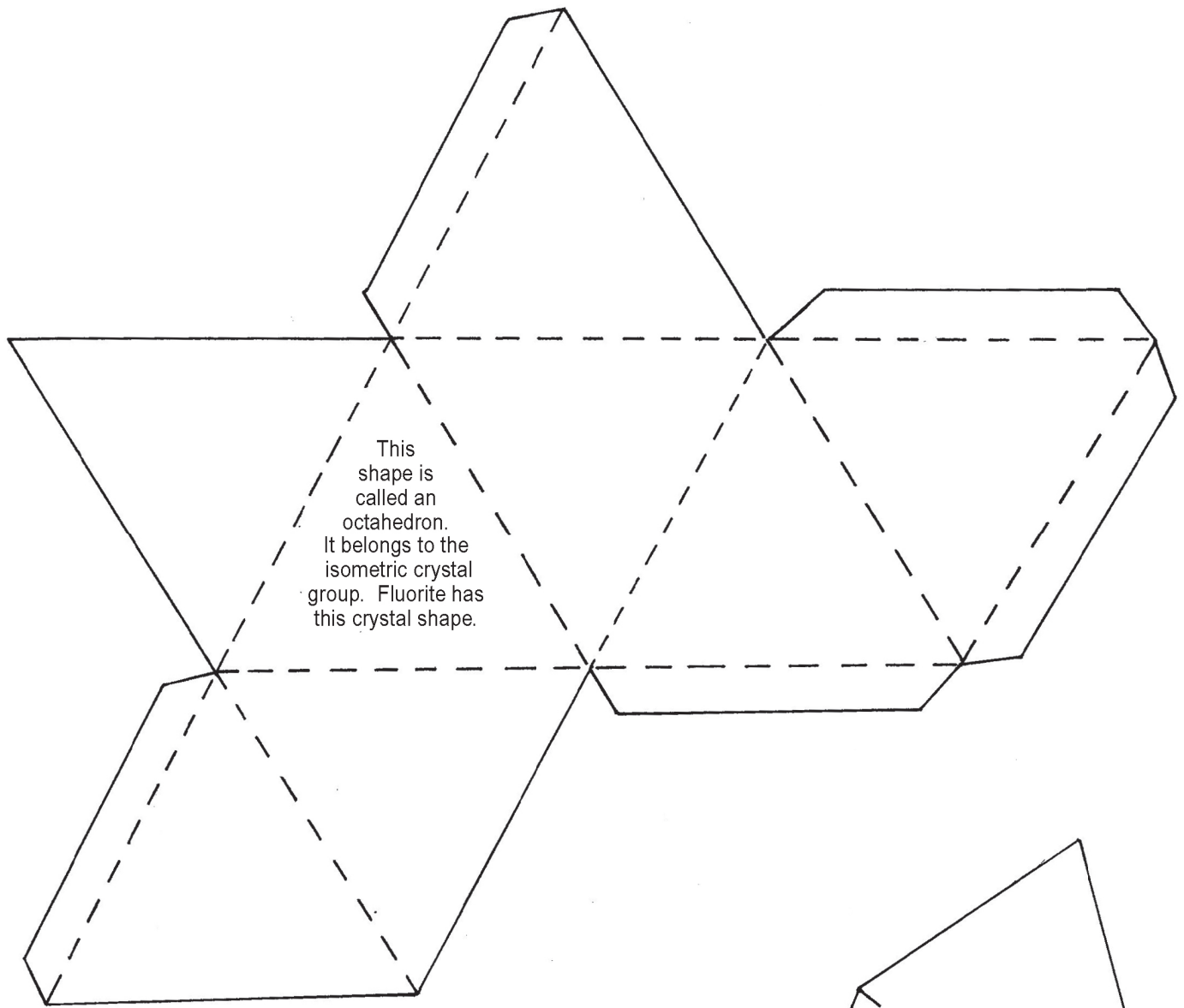
("Make Five" game)

COPY ONTO CARD STOCK

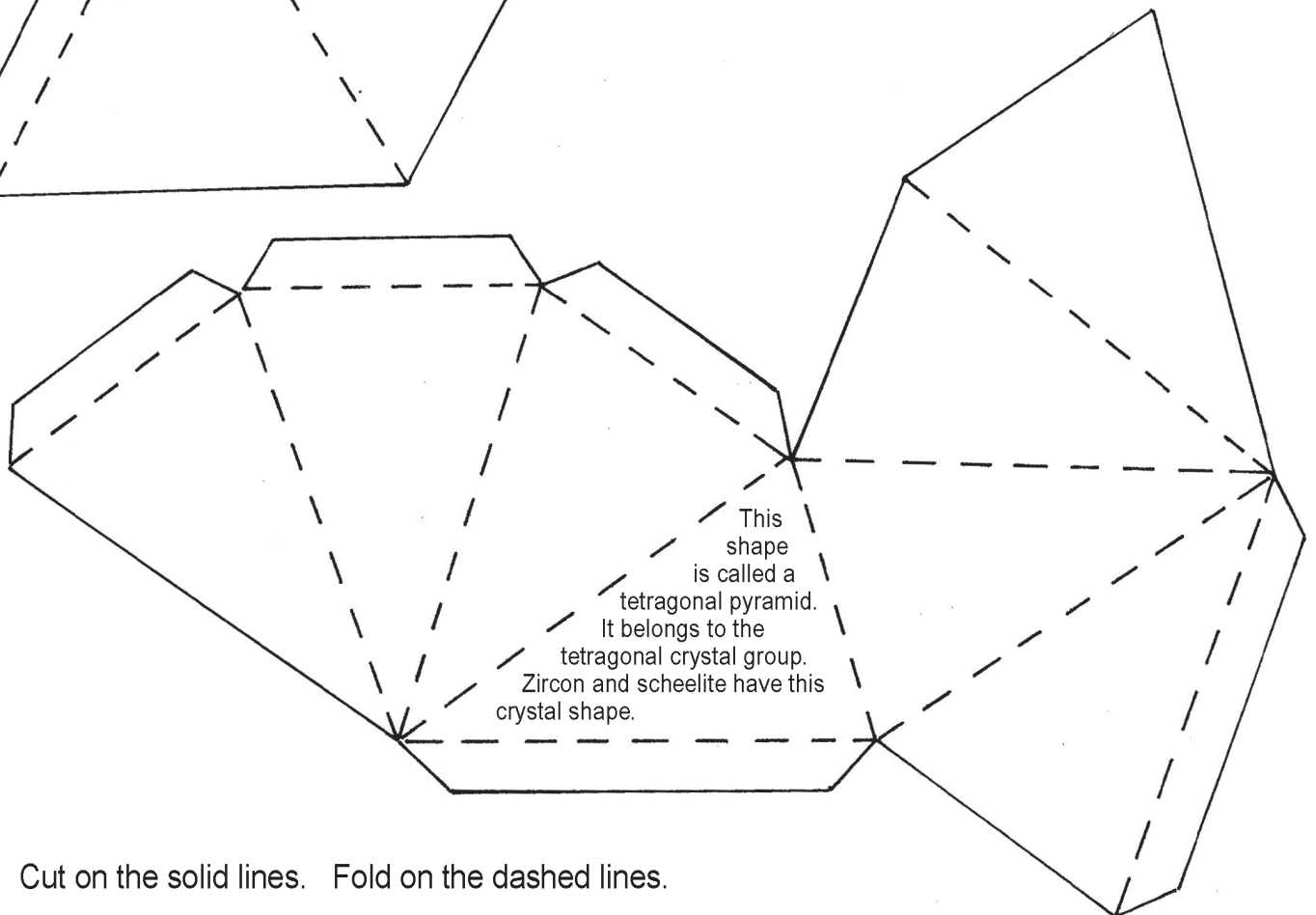


COPY ONTO CARD STOCK

("Make Five" game)

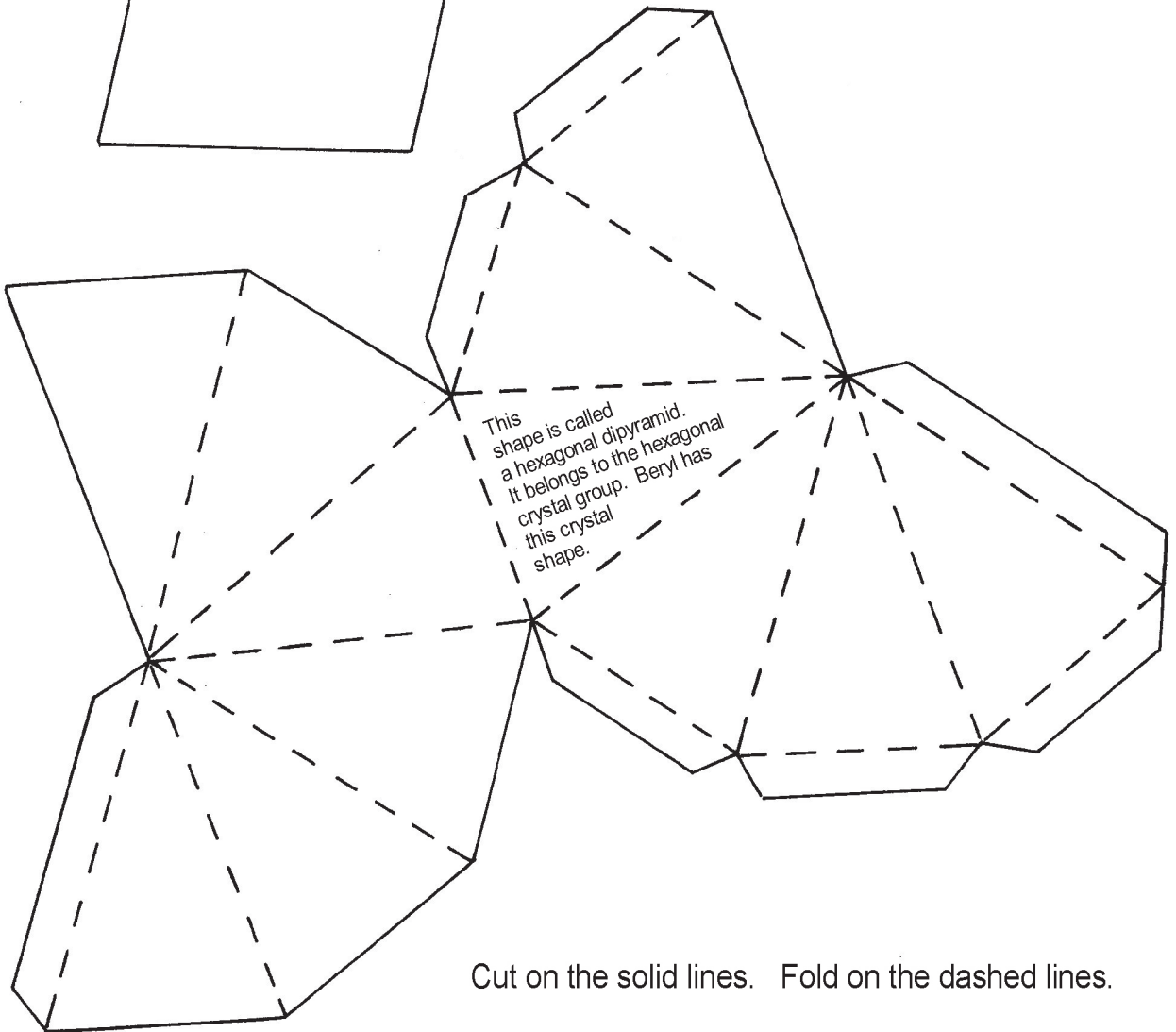
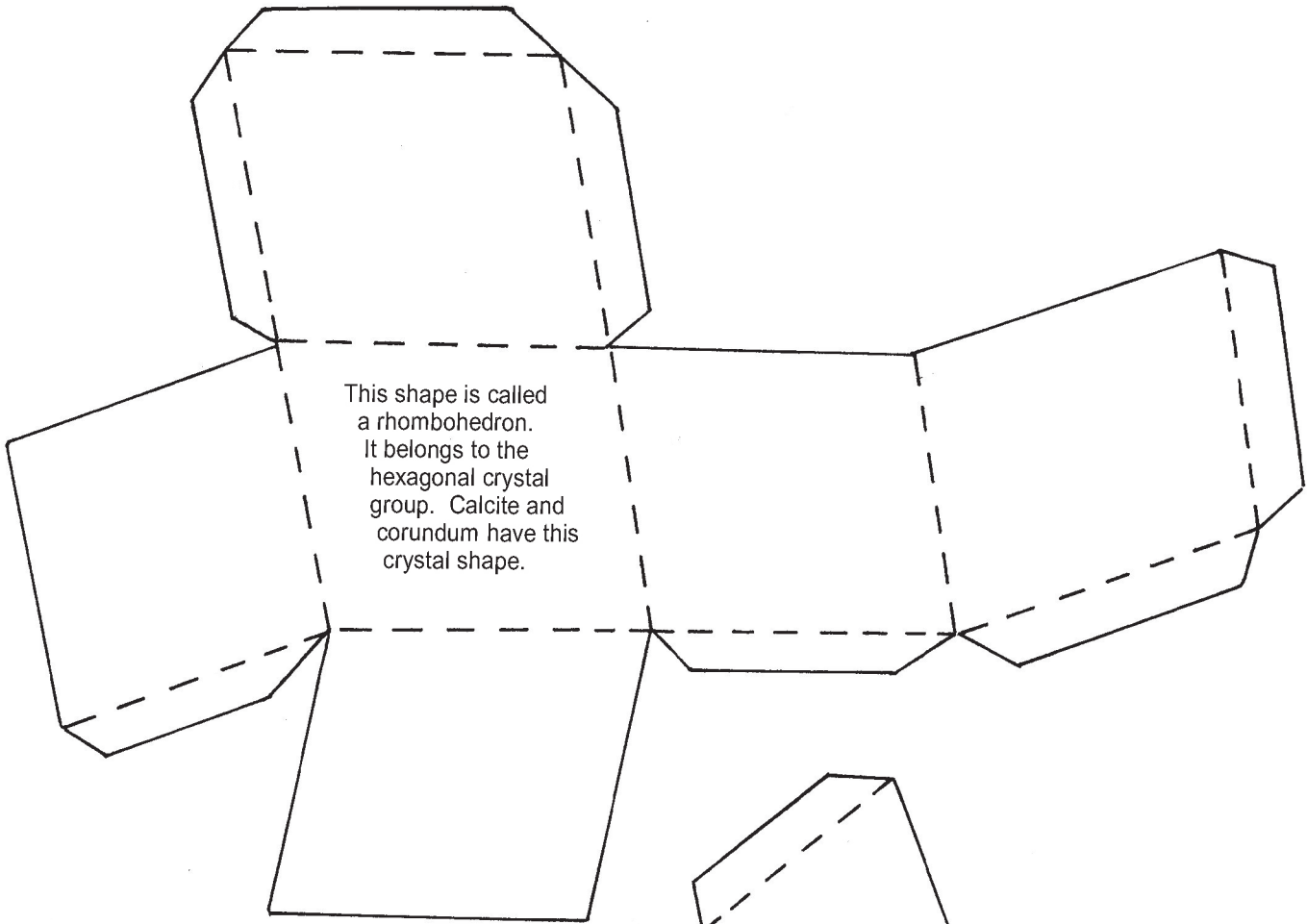


This shape is called an octahedron. It belongs to the isometric crystal group. Fluorite has this crystal shape.



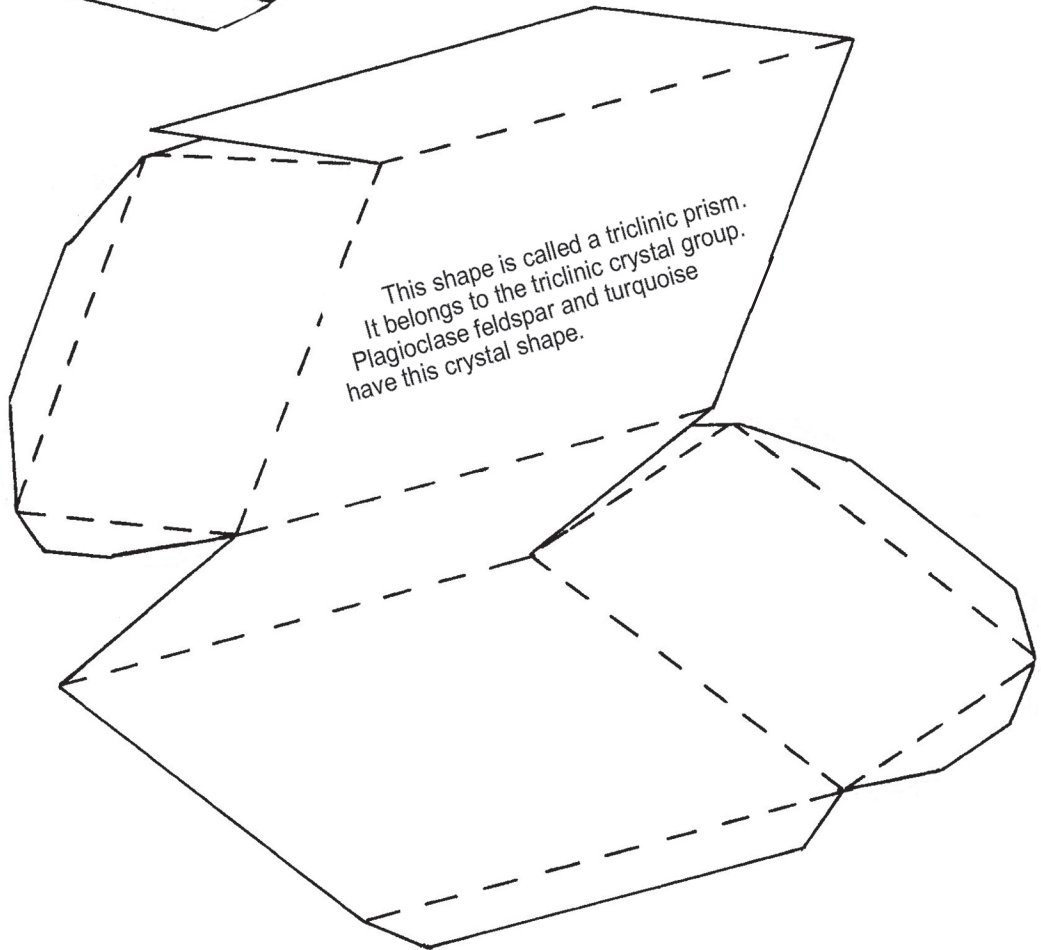
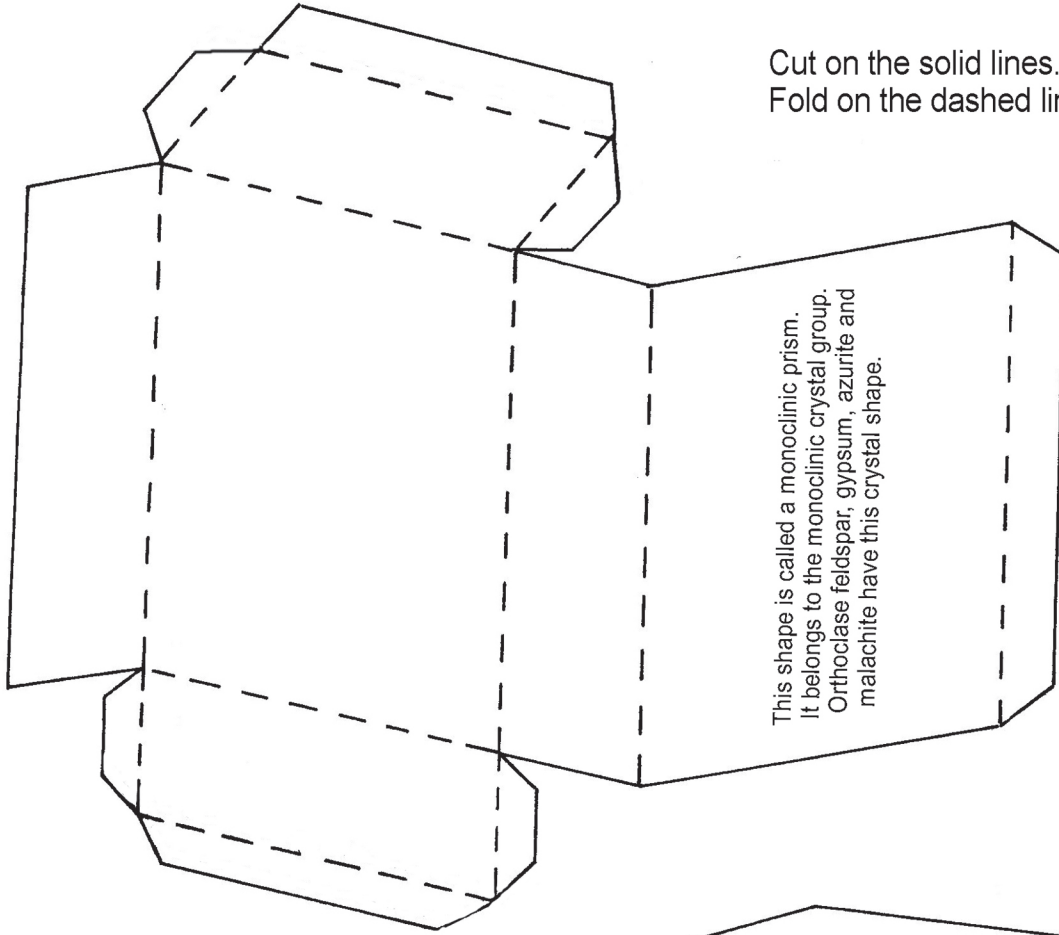
This shape is called a tetragonal pyramid. It belongs to the tetragonal crystal group. Zircon and scheelite have this crystal shape.

Cut on the solid lines. Fold on the dashed lines.

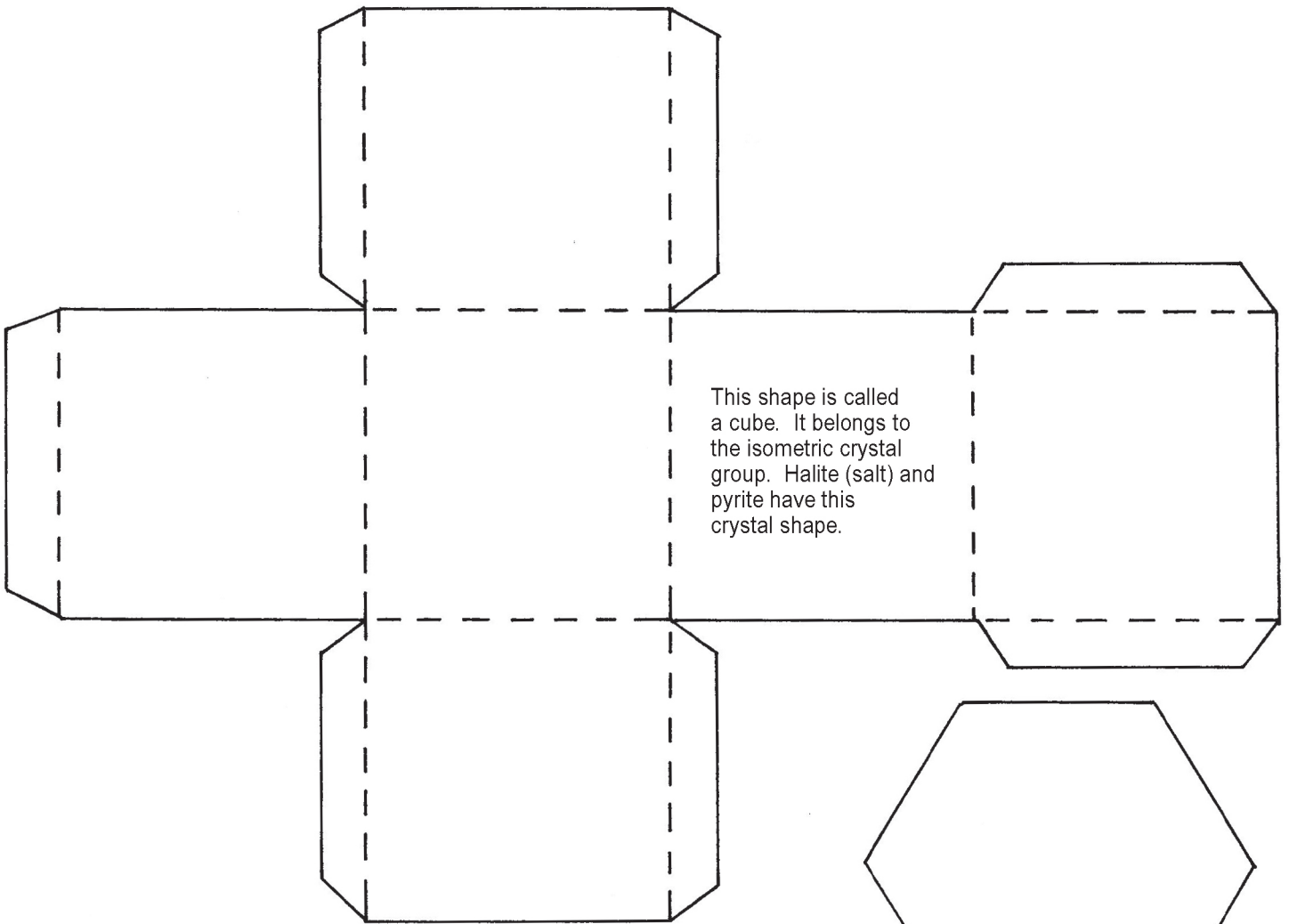


Cut on the solid lines. Fold on the dashed lines.

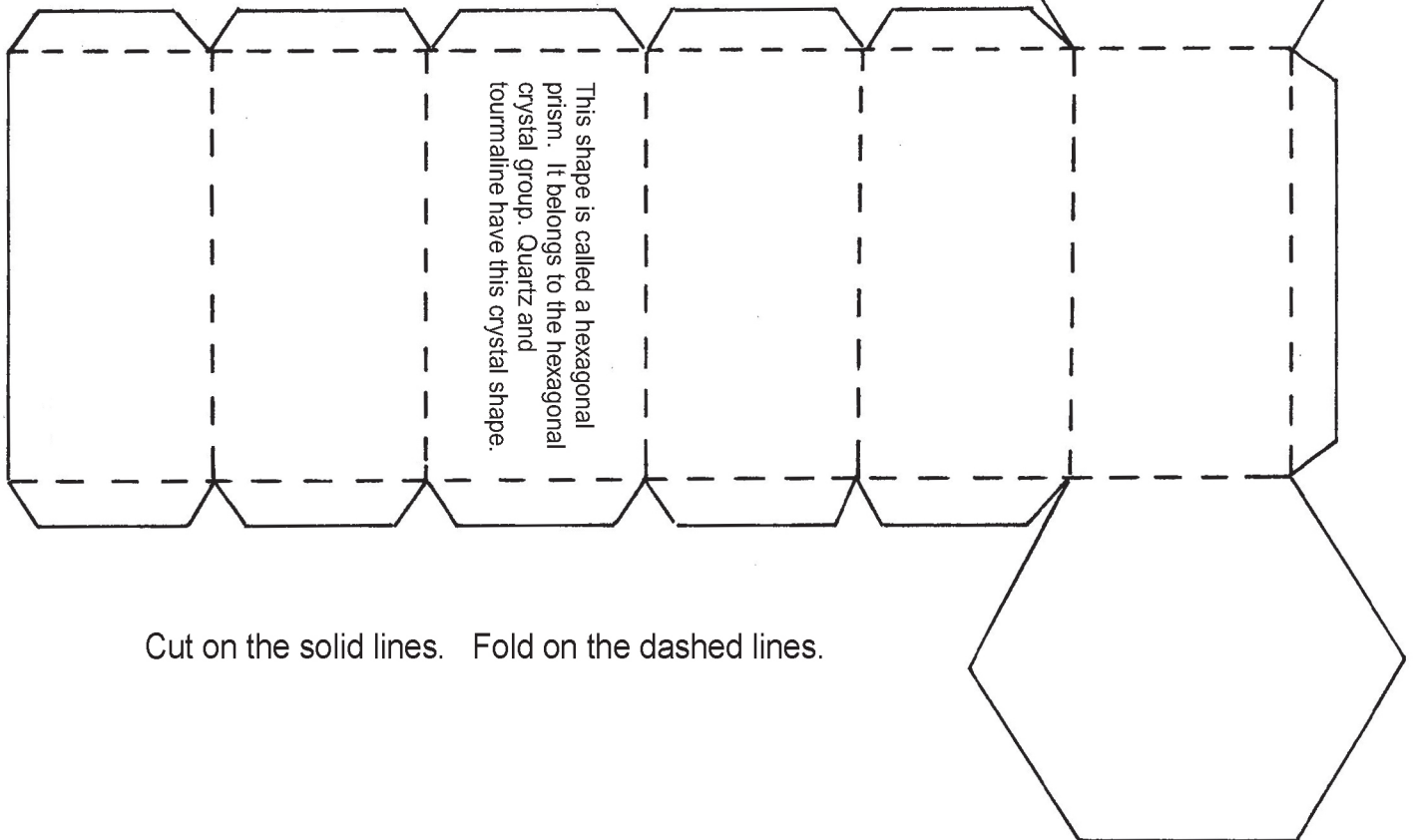
Cut on the solid lines.  
Fold on the dashed lines.





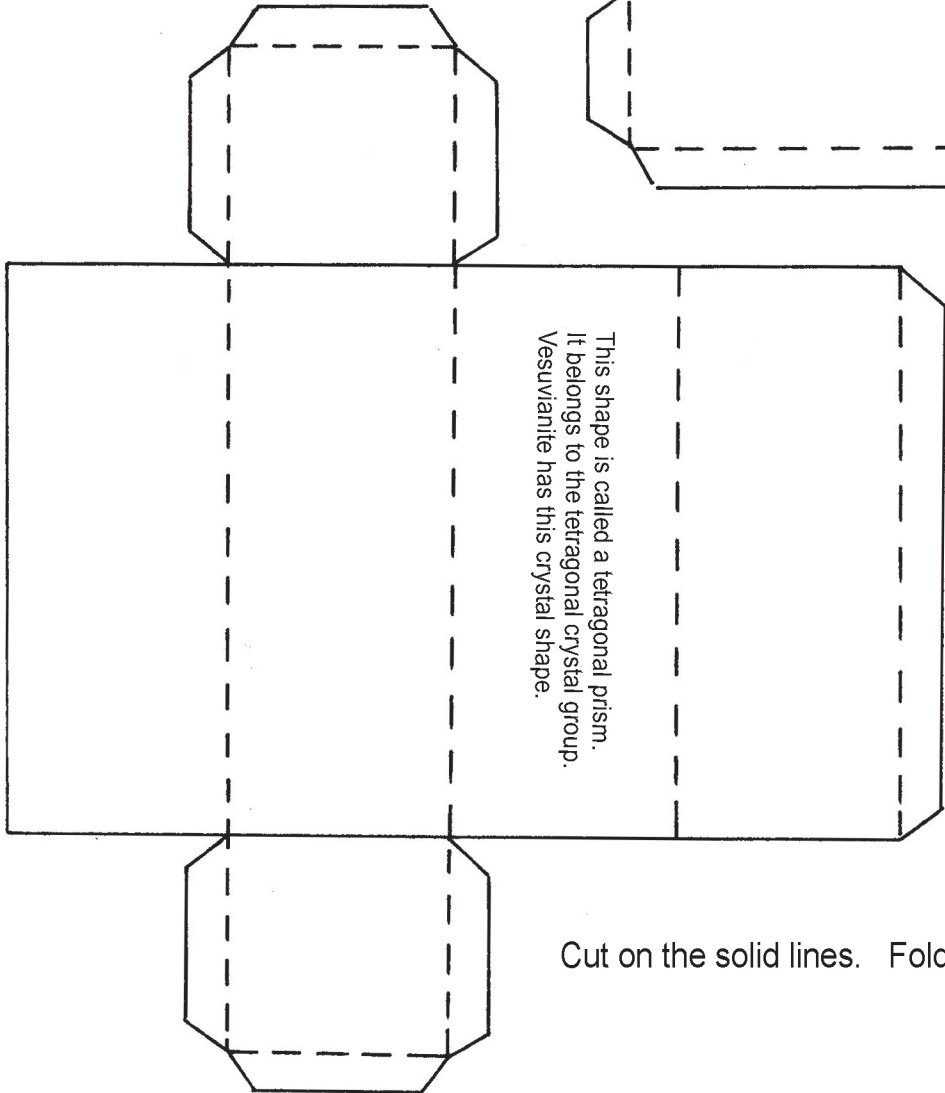
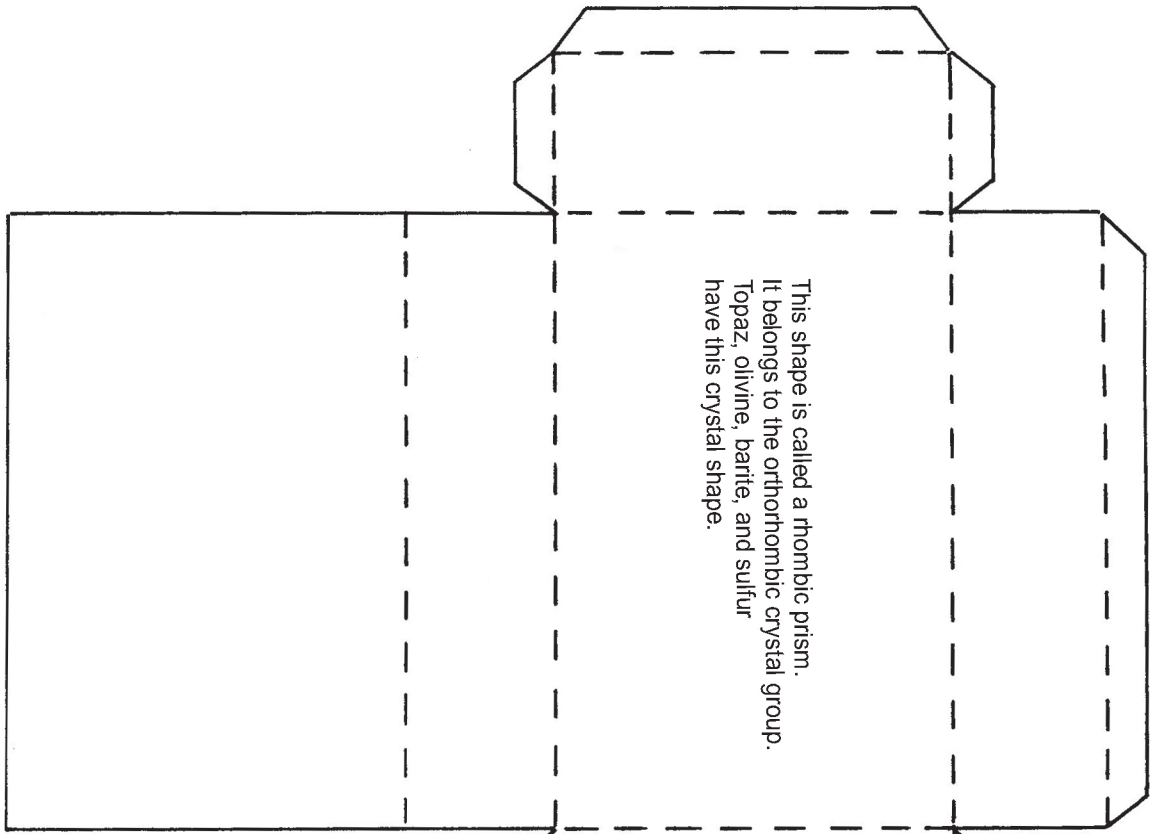


This shape is called a cube. It belongs to the isometric crystal group. Halite (salt) and pyrite have this crystal shape.



This shape is called a hexagonal prism. It belongs to the hexagonal crystal group. Quartz and tourmaline have this crystal shape.

Cut on the solid lines. Fold on the dashed lines.



Cut on the solid lines. Fold on the dashed lines.