

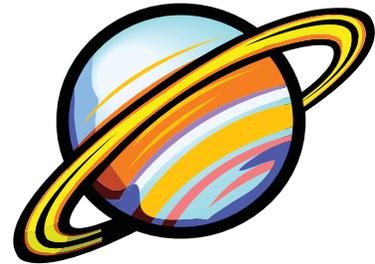
# Saturn's Rings Flip Book

After nearly 7 years of traveling from Earth through space, the Cassini spacecraft entered orbit around Saturn in June of 2004! It has been revealing new information about this gas giant planet ever since! You and your child are going to learn about different parts of Saturn as you make a flip book.

This activity is adapted from *Reading, Writing, and Rings*, Jet Propulsion Laboratory, NASA (EG-2004-03-012-JPL) <http://saturn/jpl.nasa.gov>

## What You Need:

- Saturn's rings, surface, interior and core templates
- Scissors
- Crayons
- Glitter and other craft items, such as yarn, star stickers, glow-in-the-dark paint, etc.
- Glue
- Reading materials related to Saturn
- 1 piece black construction paper
- Stapler



## What to Do:

- You will read a story about Saturn aloud to your child as he or she colors the pages to the flip-book, starting with the rings of Saturn.
- When your child is done coloring, help him or her write down one thing (or more!) they learned about Saturn's rings from your reading. Use the space provided on the Saturn's rings page.
- Cut around the rings on the lines indicated – your child may need help here. Cut out the center of the rings.
- Repeat the reading, coloring, writing, and cutting for Saturn's surface, and interior.
- When all of the levels are completed, put them together so that the bottom edges of the pages line up.
- Place a piece of 8 ½ x 11" black construction paper behind the pages and staple them together so that a booklet is formed.
- Invite your child to decorate the black construction paper using the craft materials. This is the space around Saturn.
- When the booklet is completed, the interior of Saturn can be slipped through the rings to hold the pages together.

## **About Saturn** (Read aloud to your child as they color)

Saturn is the sixth planet from our Sun. Because it is so far away from the Sun, it does not get much sunlight and is very, very cold. Because it is so far away, it takes Saturn 30 years to go around the Sun! Earth only takes one year to go around the Sun.

No person has ever even visited Saturn – so what we know about the planet is from our observations through telescopes and through spacecraft that have gone by Saturn.

A special mission is now studying Saturn – the Cassini Mission. Because Saturn is so far away, it took the Cassini spacecraft almost 7 years to get to Saturn from Earth. How old are you?

### **Rings**

You might think there are only two rings around Saturn, but there are hundreds! The rings are very wide but very thin. The rings are 185,000 miles wide, but only a little over a half a mile thick. That's like Earth having rings that stretch almost all the way to the Moon (which is a bit farther away at 250,000 miles).

The rings are very beautiful. Some are twisted, some are braided. There are small moons in the rings. The rings are made of chunks of water ice and ice-covered rock. Some of the chunks are the size of a sand grain. Some are the size of a house!

### **Outer Layers**

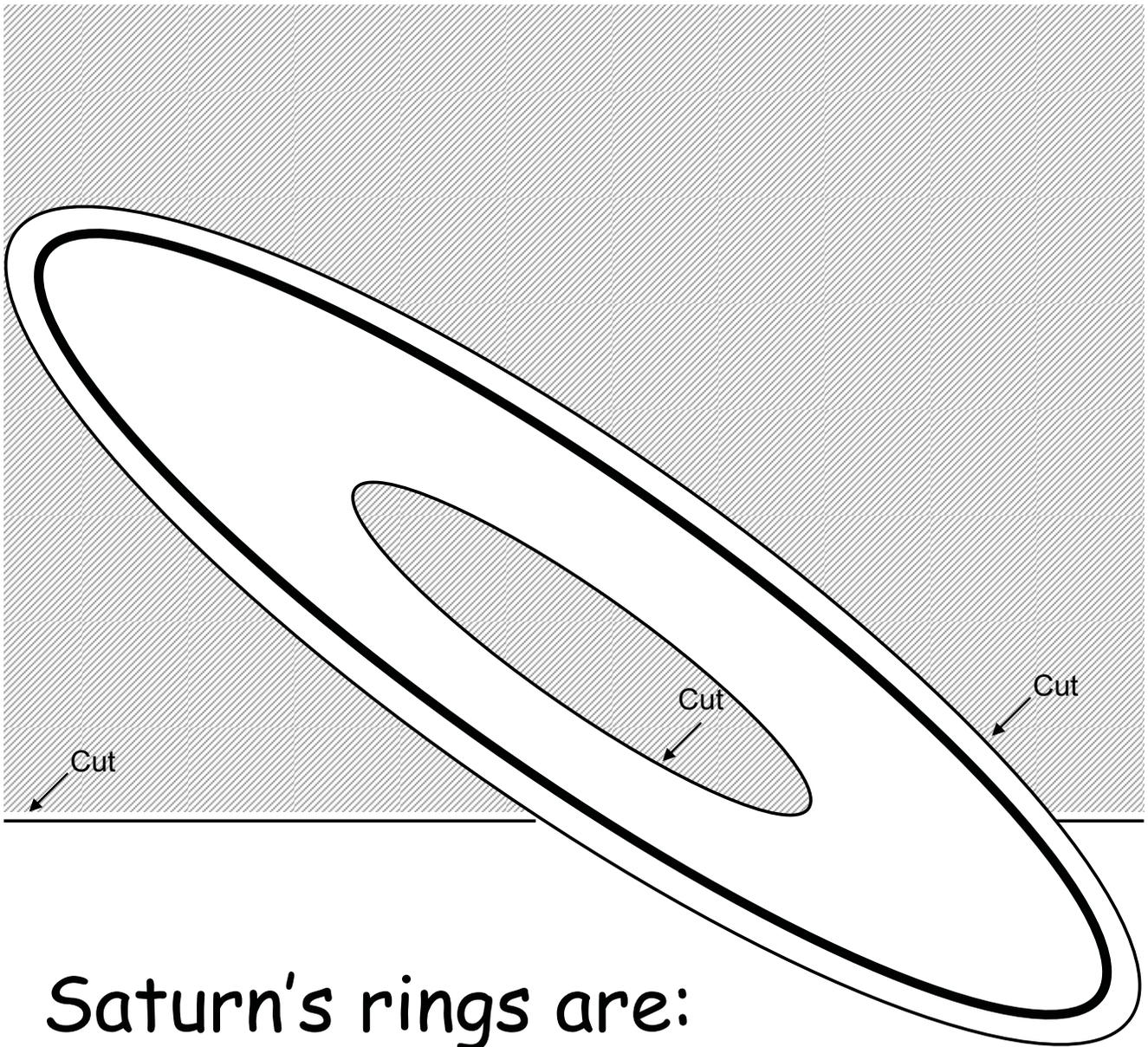
Saturn is covered with thick clouds. The top layer is very cold and there are many storms in Saturn's thick clouds – the white spots on Saturn's surface may be storms. Saturn is very windy. Winds reach more than a thousand miles an hour!

Because it is so windy, the clouds move. The moving, swirling clouds make Saturn look striped with yellow and gold bands.

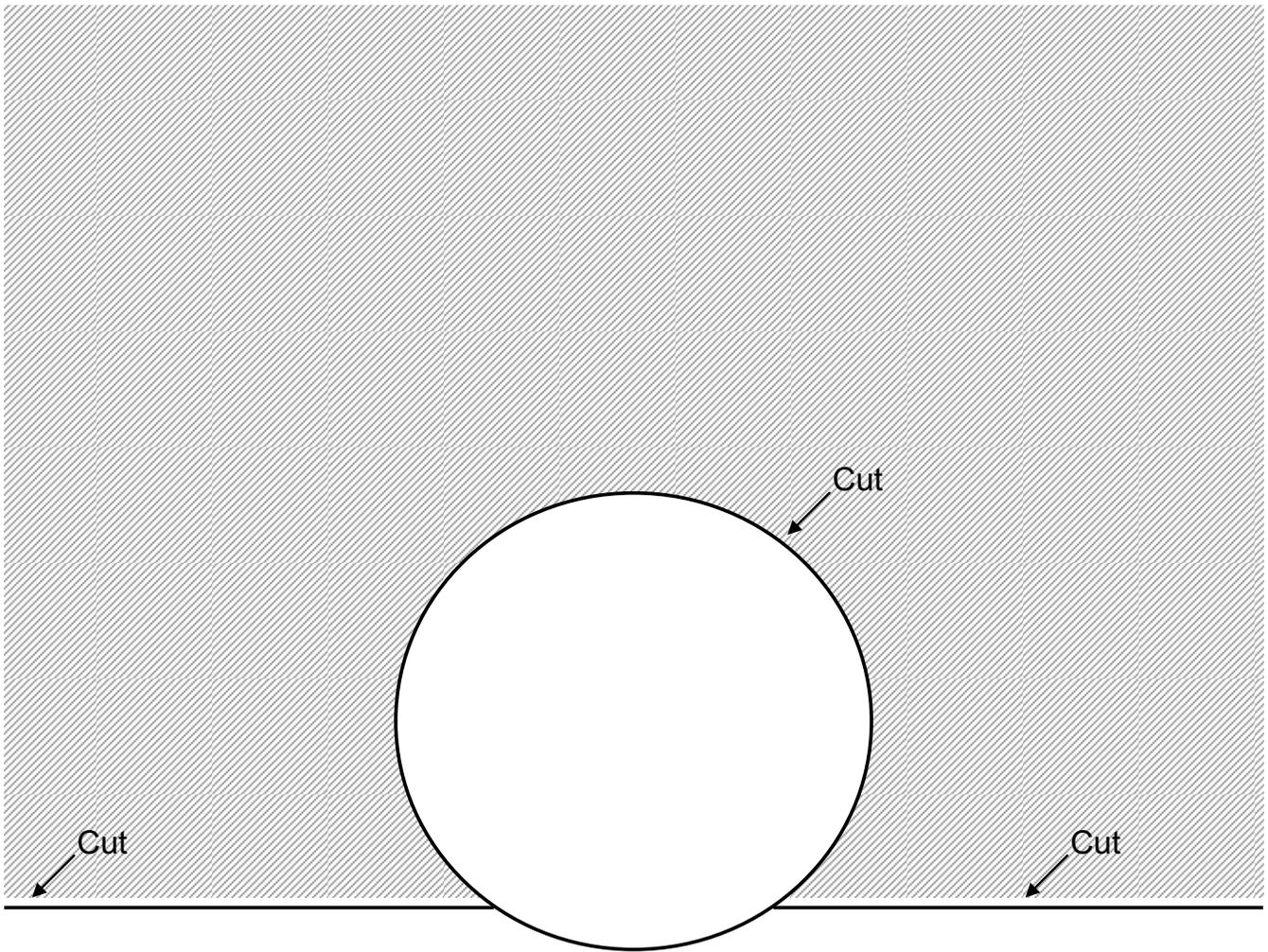
Saturn is made mostly of gas – hydrogen and helium. It is a giant ball of gas. If you got close to Saturn and tried to put your hand on its surface, your hand would go right through!

### **Inner Layers**

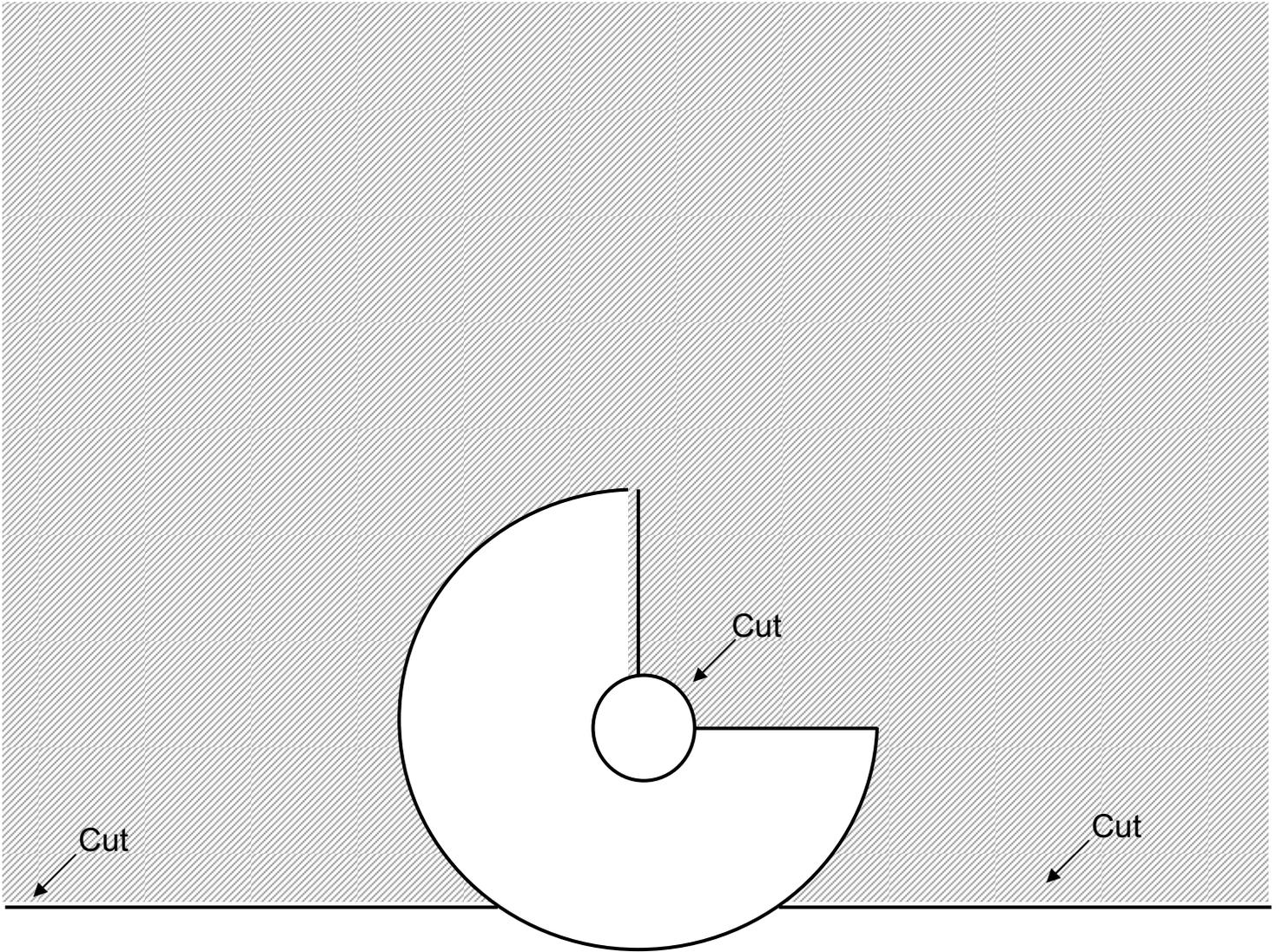
The very center of Saturn is called the core. Scientists think that Saturn has a rocky core. Some scientists think that the temperatures in Saturn's core are so hot that the rock is actually melted!



Saturn's rings are:



Saturn's surface is:



Saturn's core is: