



Make a CD Saturn

Saturn is almost everybody's favorite "alien" planet.

You can make a lovely model of Saturn and her rings. You can hang your model Saturn from the ceiling and watch it gracefully turn with the air currents. Or your Saturn will make a beautiful holiday decoration.



What you need:

- Three large styrofoam meat trays (at least 9 x 11 inches)
- One unwanted compact disc (CD) or digital video disc (DVD)
- One 2-inch diameter styrofoam ball, carefully cut in half with a sharp knife

Please ask an adult to help you cut the styrofoam ball.

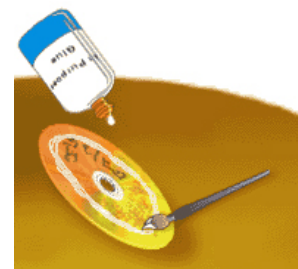
- Ruler
- White glue
- Wooden toothpicks
- Paint brush, about 1/4 to 1/2 inch wide
- Glitter—silver, gold, black or any other colors you want
- Yarn, black or other colors (optional)
- Needle-nosed pliers (or scissors will do)
- Small paper clip
- Thread

What to do:

Our pictures are just suggestions. Decorate your Saturn and rings however you want.

First, start with the rings:

- The CD will become Saturn's rings. Usually one side of the CD has printing on it. This is the side you will decorate with glitter.
- Try not to get glitter in the center part of the CD, where you will be gluing the styrofoam ball.
- Rinse the paintbrush out between uses, so it will stay soft and easy to use.
- Use the paintbrush to carefully spread glue on the CD. If you want to make it look like some of the rings



Find this activity online by visiting NASA's Space Place website: <http://spaceplace.nasa.gov/saturn-model>.

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are silver and some gold, spread the glue only where you want to put the first color, then sprinkle the glitter on the wet glue. Let it dry completely. Then repeat for the remaining areas. You can use as many different colors as you want. Just be sure to let the glue dry completely for each color before adding the next color.

- If you want to use yarn also—for example, black to show the divisions in the rings—glue it on and let it dry before adding the glitter.
- Stick a toothpick into the flat side of each half of the styrofoam ball to give yourself a handle.
- Use the paintbrush to apply glue and glitter on the round part of each half, as you did for the CD. Let the glue dry completely.

Now put them together:

- Take the toothpick out of one of the styrofoam halves. On the other half, make sure the toothpick is stuck exactly into the center and push it in until it starts to poke out the top.
- Spread glue around the center of the decorated side of the CD. Pick up the CD and place the styrofoam half with the toothpick exactly in the center of the CD, toothpick sticking through the hole.
- Now push the other styrofoam half onto the toothpick sticking out the hole on the other side of the CD. When both halves are flat against the CD, a small part of the toothpick will be sticking out one of Saturn's "poles." Break it off with needle-nosed pliers.



And hang it up:

- Open a small paper clip so it looks like this:



- Decide which half of Saturn you want to be the top. Since Saturn's axis is tilted 27 degrees, stick the paperclip into the top about $\frac{1}{2}$ inch away from the center (where the toothpick comes through). Angle the paperclip so it passes through the hole in the CD and helps hold the two styrofoam halves together.
When you hang your Saturn up, and it turns in the breeze, you will see the "rings" from different angles, just as we see the real Saturn at different angles from Earth.
- Tie any length of thread to the paperclip and hang your model wherever you like.

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