

Planetary Bulge

What Do I Need?

- round lid
- utility knife (with parent supervision)
- skewer
- tag board paper
- scissors
- clear tape or hot glue
- hole punch

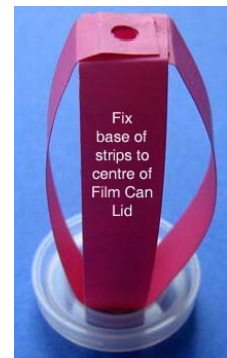
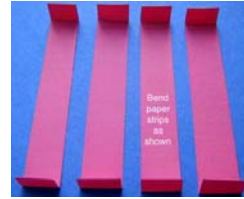
What Do I Do?

1. First, have an adult cut a hole into the center of the round lid. Slide the skewer through the hole. It should fit snugly.
2. Next, cut your tag board into 4 strips (10-inches long x $\frac{3}{4}$ inch wide). Fold both ends of the strips about an inch from the edges and punch a hole in the center.
3. Arrange all 4 strips into a 't' shape by lining up the holes in the center. Glue or tape these pieces together.
4. Now, line up the holes of the opposite ends and tape or glue them together.
5. Slide the skewer through this oblong figure and glue the base of the strips to the center of the round lid.
6. Spin the top to see the planetary bulge.

What's Going On?

The strips of paper make a spherical shape, similar to a planet. When we spin our top to simulate a planet's rotation, the sphere begins to bulge at the equator and flattens to an oblate spheroid. The equatorial diameter (horizontal) is greater than the polar diameter (vertical).

The amount of bulge is dependent on the composition and rotation. For example, Saturn is the most oblate planet in our Solar System because of its fast rotation and low density.



Source: www.arvindguptatoys.com/toys.html