



HOME DEMO NO. 20

Baseball Moon

The Moon is a big round ball just like the Earth. But, it doesn't always look like a fully round ball. Sometimes it looks like a just a sliver or half of a ball. We call the changes in the Moon's shape it's "phases" (FAYZ-iz). The Moon doesn't make its own light. The light we see is sunlight that's bouncing off the Moon into our eyes here on Earth. The Moon looks the same to astronauts.

Make your own Moon model and see the phases change for yourself.

What you need:

1. A baseball (or other ball about that size)
2. A dark room
3. A lamp on a table
4. A stool or a chair that swivels

What you do:

1. Move the stool or chair as far from the lamp as you can be, where you still have room to spin all the way around.
2. Turn on the lamp. Turn off all the other lights in the room, and close the curtains if you need to.
3. Sit on the stool with your back to the lamp. Hold the ball at arms length and raise it up so that light from the lamp hits it, and you see the whole round ball. That's like a full moon as seen from you; your head is the Earth.
4. Now turn to your left. Only half the ball is lit up. That's a half-moon.
5. Now turn again to your left so that you are facing right toward the lamp. The ball won't be lit up. It will be in your hand, and you'll see the light from the lamp. But the side near you will be dark. This is a new moon.
6. Keep going around to your left and you'll see the phases of your ball... uh, your Moon.

What's happening?

The Moon goes to our left as we see it from the Northern half of the Earth. It's the same direction we run around the bases in baseball. The Moon's orbit is slightly tilted, so it almost always catches light from the Sun even when it's on the side of the Earth that's away from the Sun. It took humans centuries to figure this out. You can see it right at the end of your arm.