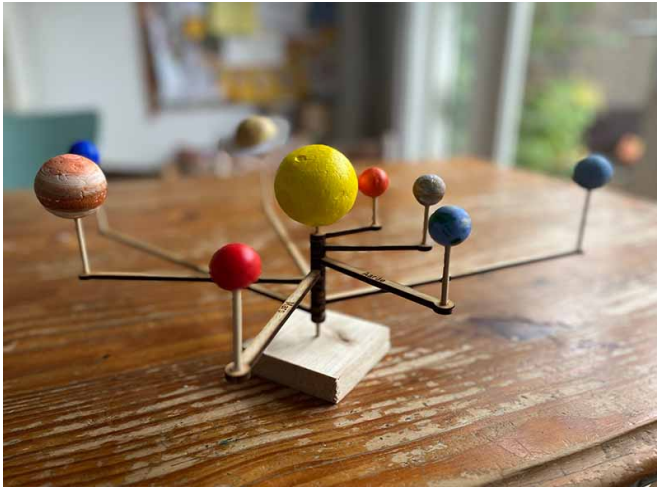


Solar system



duration: 45 - 60 minutes
age: from 9 years

Make a mini solar system and learn about the planets.

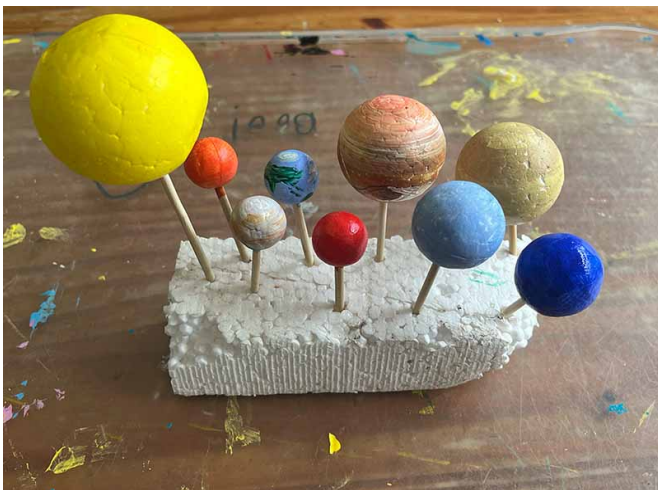
undefined

tools

- ☐ Pencil
- ☐ Scissors
- ☐ Glue gun
- ☐ Side cutters
- ☐ Hobby knife
- ☐ Drawing compass
- ☐ Drill with drill bit (same size as skewers)
- ☐ Pencils (for painting)

materials

- ☐ Wooden base, about 3x3 inches
 - ☐ Thick skewers (about 1/8")
 - ☐ Styrofoam balls (1x 2", 2x 1.6", 2x 1.2", 4x 0.8")
 - ☐ Paint
 - ☐ Paper
-



1 Paint the planets

- Painting the planets first allows them to dry while you make the rest of the project.
- The best way to paint the planets is by placing them on a temporary skewer. You can easily hold your planet this way.
- Paint your planets.
- Place them in a piece of styrofoam or cardboard to allow them to dry.



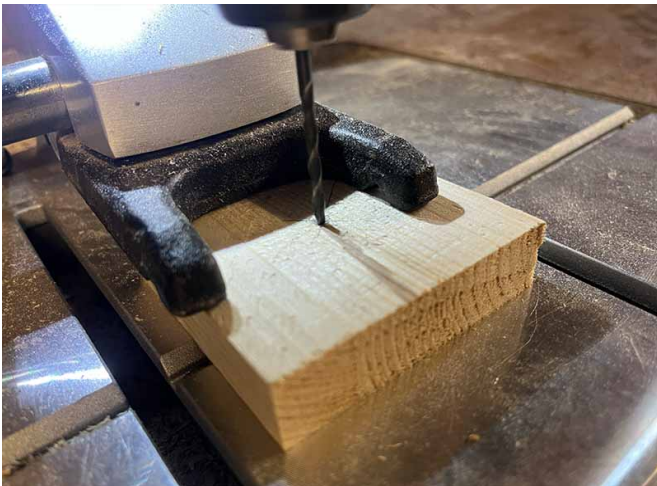
2 Cut the template

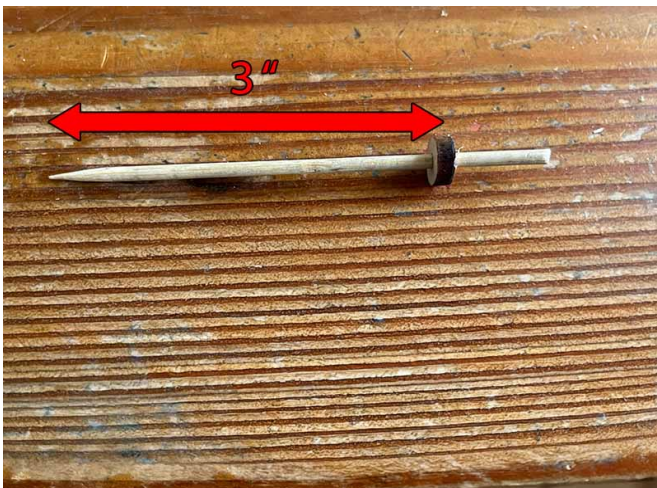
- Download the template.
- Use the laser cutter to cut the shapes out of 1/8" plywood.



3 Base

- Cut the wooden base. About 3x3 inches is a good size.
- Find the center of the square, and drill a hole the same size as your skewer.





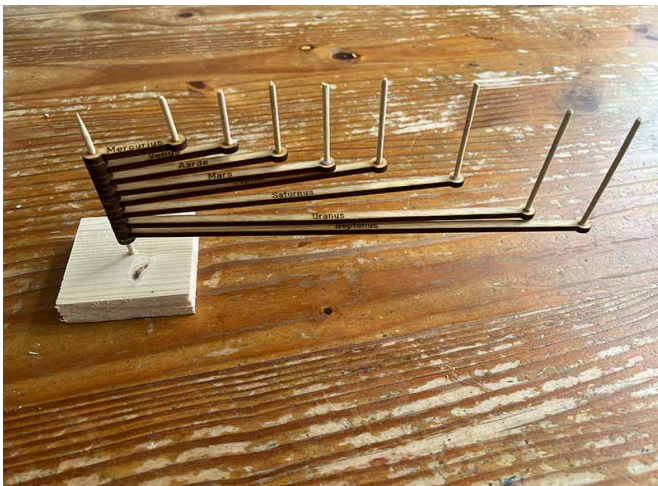
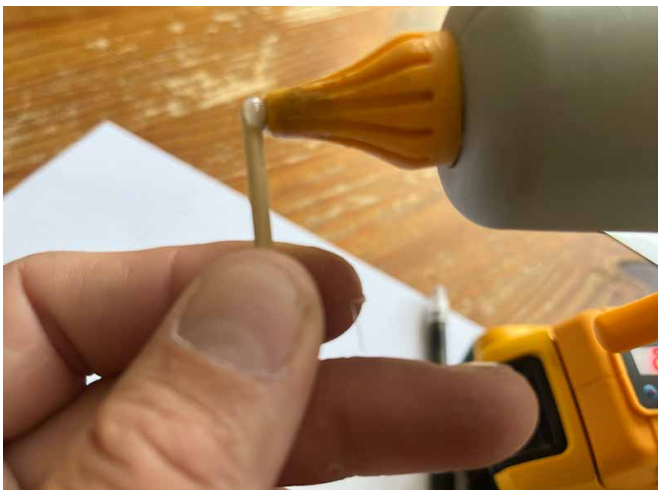
4 Center skewer

- Use the side-cutters to cut a skewer to about 4 inches.
- Glue a ring to the skewer about 3 inches from the pointy end.
- Slide the laser-cut pieces onto the long end of the skewer. Longest one at the bottom. Make sure to put a ring between each of the planet holders.



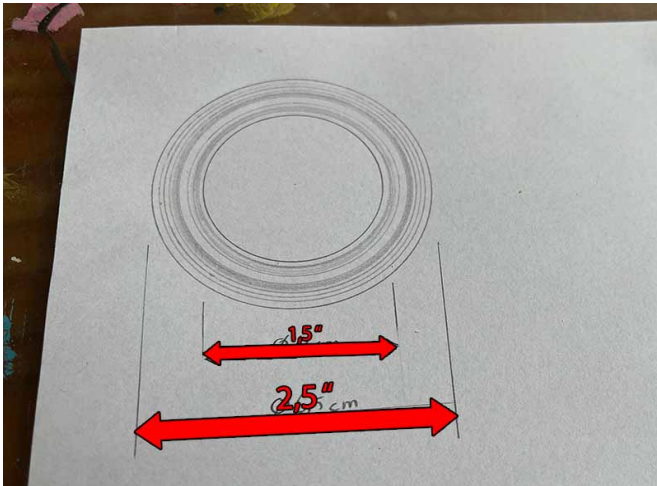
5 Planet skewers

- The best way to glue the skewers is to place a small amount of glue on the tip of the skewer before placing it.
- Put pieces of skewer into the open ends of the planet holders
- Use some hot glue to secure the skewers in place.
- Cut them all to size, the top should be in line with the skewer from the last step.



6 Place it on the base

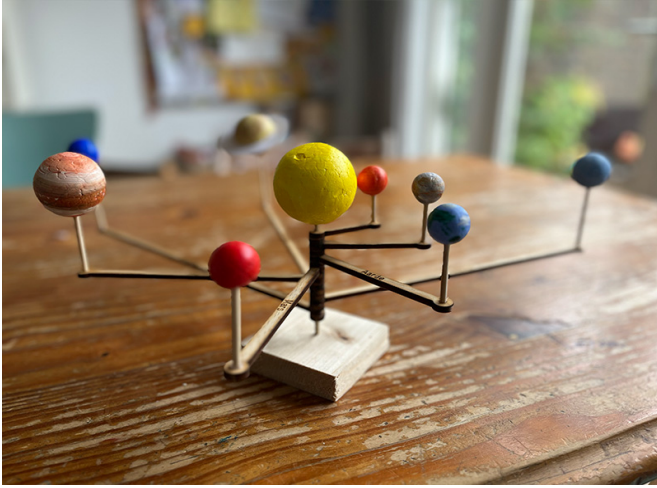
- Place your holder on the base. If needed, you can add a little glue.



7 Saturn's rings

- Use the compass to draw 2 concentric circles. one 1,5" and one 2,5" in diameter.
- Draw some more circles within the 2 you already drew for a nice ring effect.
- Cut out the outside of the rings. Leave the center in tact.
- Cut Saturn in half with the hobby knife.
- Glue the ring in place between the 2 halves of Saturn.





8 Place the planets

-
- If you have a small pin with a white head, you can use that to make Earth's moon.
-
- Place the planets on their skewers and you're done!.