

Planetarium

Equipment:

Scissors or craft knife

Glue spreader

Paint sponges in various sizes

Pin

Ruler

Materials:

11 inch (27.5 cm) cardboard circle

12 inch (30 cm) cardboard ring.

3 cocktail sticks,

1 bamboo skewer, 5 inches (12.5 cm)

13 inch (32.5 cm), 11 inch (27.5 cm), 10 inch (25 cm), 9 inch (22.5 cm), 7 inch (17.5 cm), 5 inch (12.5 cm), 4 inch (10 cm), 3 inch (7.5 cm),

2 inch (5 cm) cardboard strips with small hole at each end.

12 inch (30 cm) cardboard strip with small hole in the middle

12 cardboard squares, 1/2 inch x 1/2 inch (1.3 cm x 1.3 cm).

2 inch (5 cm) yellow pom pom (Sun)

1/4 inch (0.75 cm) purple, tan, red, pink and white pom poms (Mercury, Venus, Mars, Ceres, Pluto)

1 inch (2.5 cm) orange and tan pom poms (Jupiter, Saturn)

1/2 inch (1.3 cm) blue, green pom poms (Neptune, Uranus)

1/3 inch (1 cm) light blue pom pom (Earth)

Tiny pom poms for moons and asteroids.

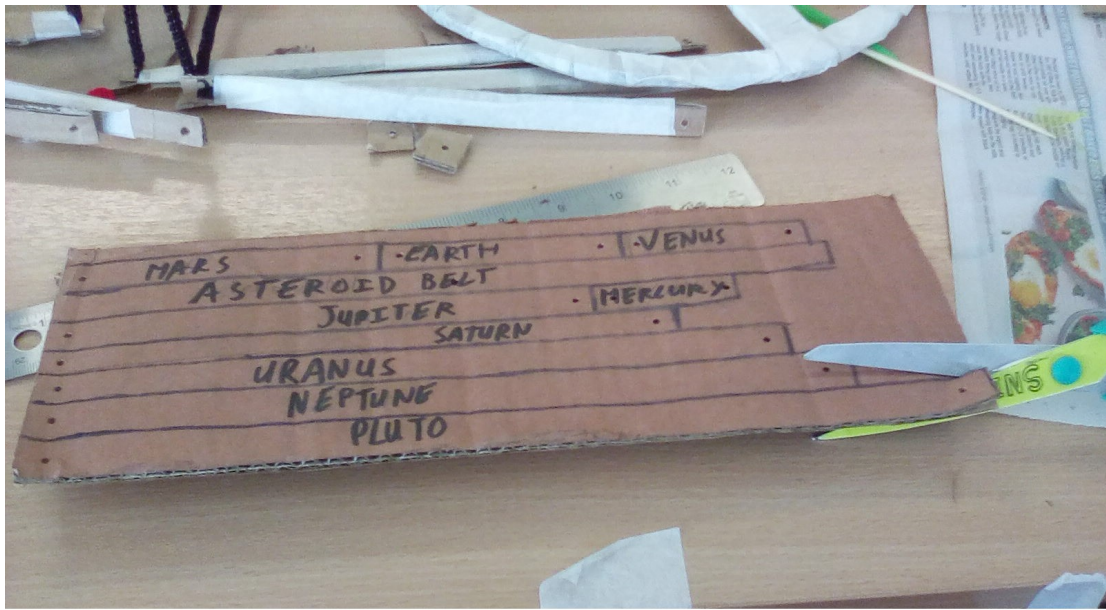
Masking tape.

PVA glue

Black, white, purple and blue paint.

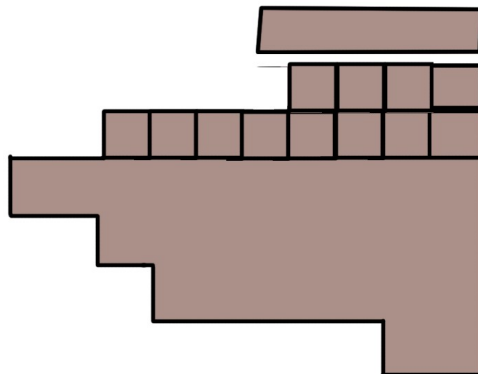
Glitter/glitter glue if desired





1. Cut out strips for planets carefully.
(Ask for assistance if required.)

2. Cut 12 small (~ 2cm*2cm)squares out of your
left-over cardboard.

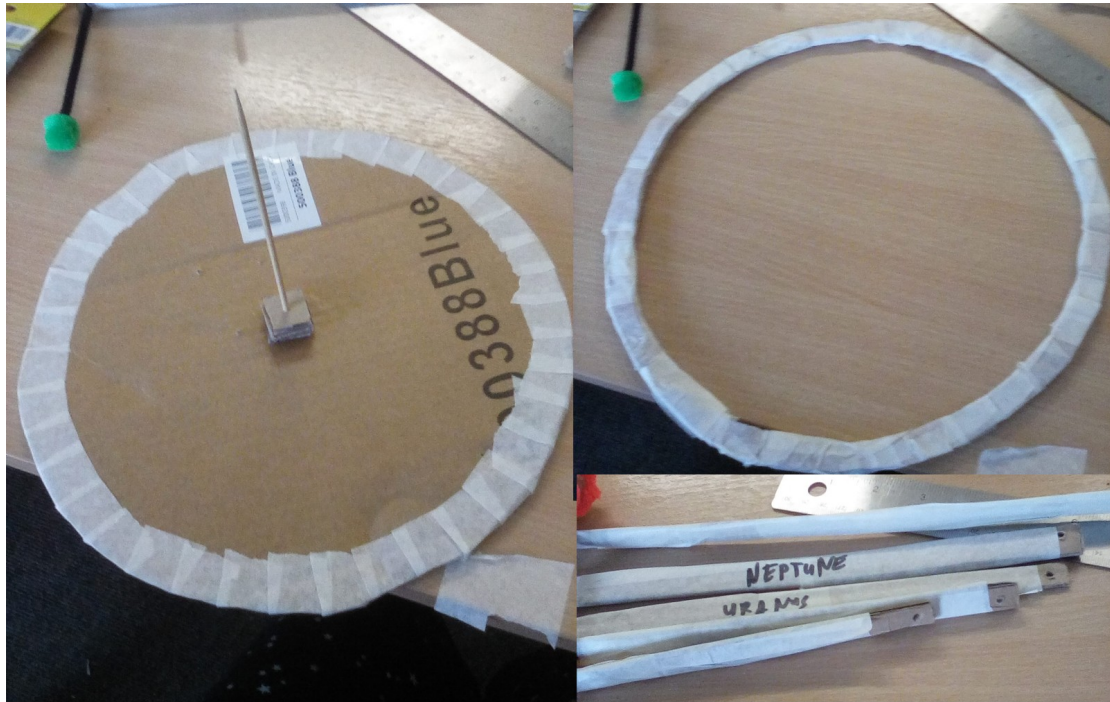




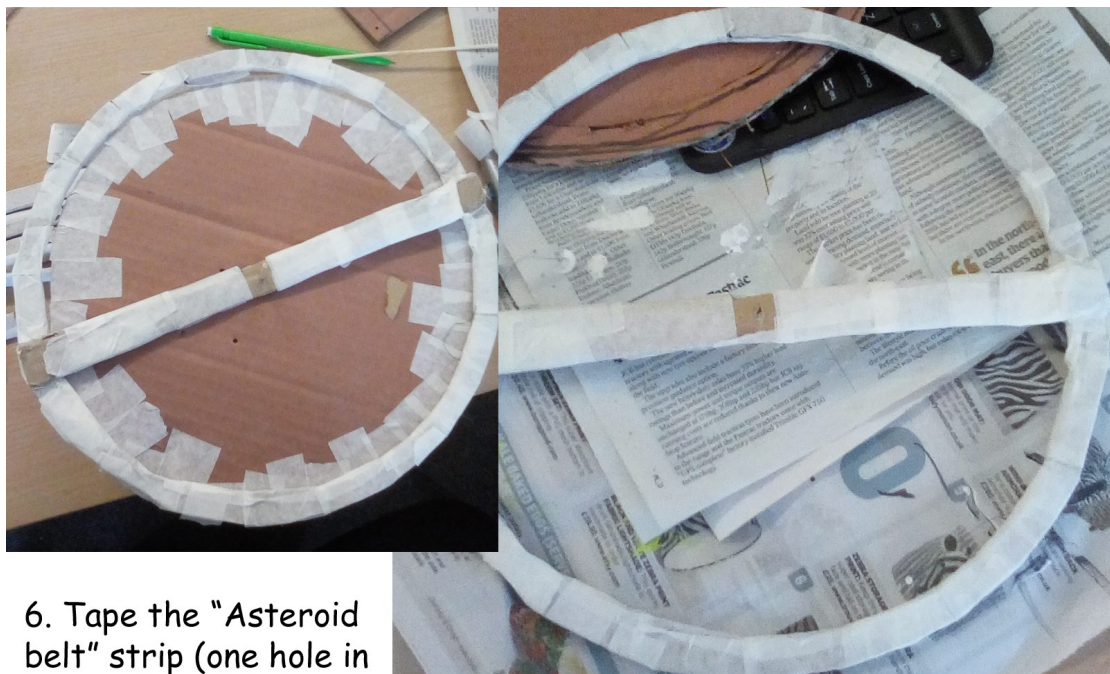
3. Push bamboo stick through middle of your cardboard squares.



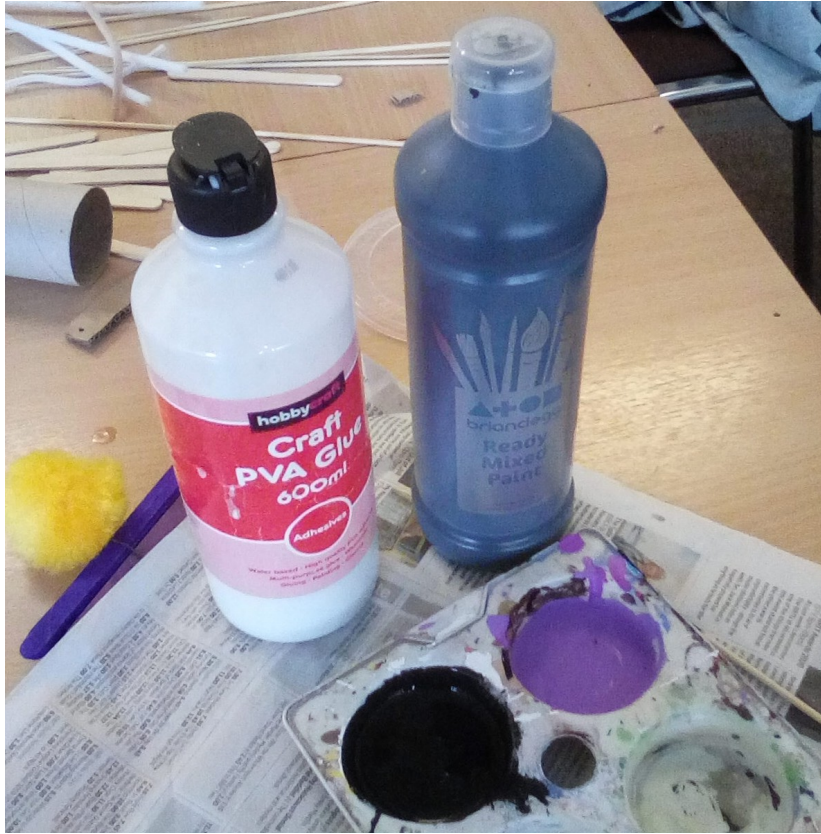
4. Push bamboo stick through centre of large cardboard circle, and 4 cardboard squares. Glue the squares to each other and the circle.



5. Cover the edge of the circle, the cardboard ring and strips with white masking tape. Lots of small pieces are better than fewer large ones, be patient!



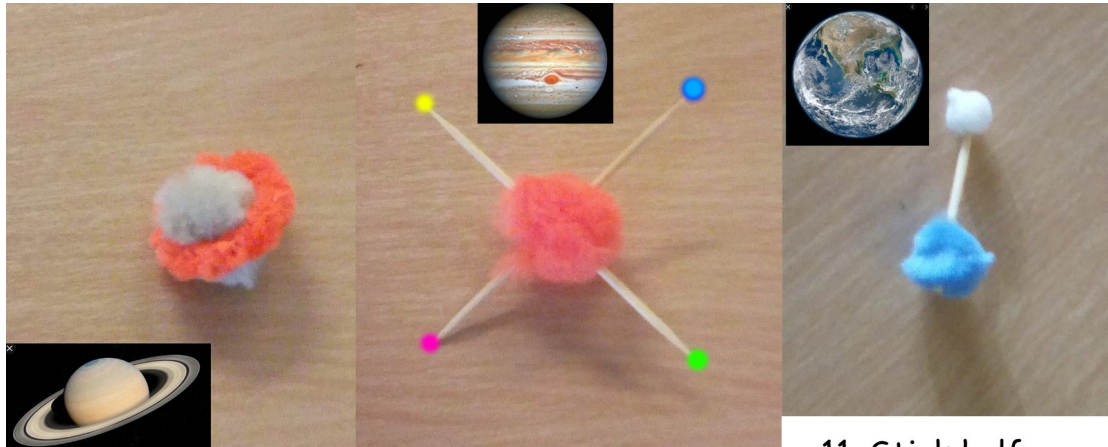
6. Tape the "Asteroid belt" strip (one hole in the middle) to the ring. Try and get it as close to the middle as possible! You can use the circle base to help!



7. Mix 1 part PVA Glue with 1 part Black Paint.



8. Using a sponge, paint the base and ring black.



9. Wind orange pipe cleaner around large light brown Pom Pom.
This is Saturn, the 2nd largest planet. It has a large system of rings that are mostly ice.

10. Stick 2 cocktail sticks through large orange Pom Pom and stick tiny pom poms to the ends.
Be careful!
This is Jupiter, the largest planet in the solar system. It has 79 moons.

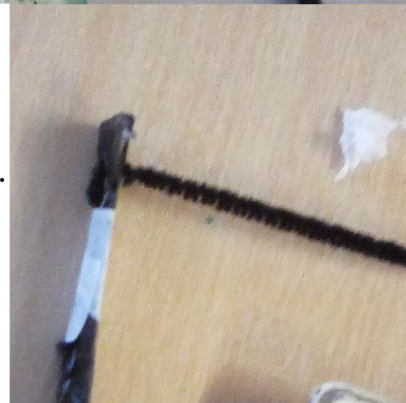
11. Stick half cocktail stick through light blue Pom Pom and attach small white Pom Pom to the end.
This is Earth!



12. Attach small white pom pom to end of longest pipe cleaner. This is Pluto! It is a "dwarf planet", and used to be considered one of the main planets in the Solar System.

13. Put pipe cleaner through one end of the longest strip and bend to hold it.

14. Tape pipe cleaner to cardboard.





Order of Planets
 Furthest from
 Sun to nearest

- Pluto
- Neptune
- Uranus
- Saturn
- Jupiter
- Mars
- Earth
- Venus
- Mercury

15. Repeat Steps 12 to 14 for the other planets!

16. Paint strips black.



17. Mix some white, blue and purple paint together loosely, leaving some swirls.

18. Using a small sponge, dab lightly over the base and ring to give the appearance of nebula. Allow to dry.
 Nebulae are large interstellar clouds of dust and gases.

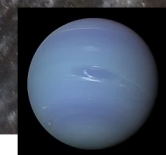




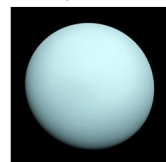
19. Stick small pom poms around ring. These are asteroids. Asteroids are relatively tiny rocky planets orbiting the sun.
20. Push half cocktail stick through pink pom pom and attach to the asteroid ring. This is Ceres, a dwarf planet like Pluto and the first of the asteroids to be observed.



21. When everything is totally dry, push the other end of Pluto's strip over the base stick. Put a cardboard square over it.
22. Repeat for Neptune, Uranus, Saturn and Jupiter. Neptune and Uranus are called the "ice giants" as their interiors are mostly ice and rock.



Neptune



Uranus



23. Put the Asteroid belt on, and another cardboard square.



Mars' red colour comes from "iron oxides" in the crust



Venus turns opposite to Earth, the sun rises in the west and sets in the east

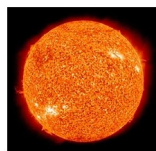


Mercury is named for the messenger of the Greek Gods.

24. Put the remaining 4 inner planets on. Mars, Earth, Venus and finally Mercury.



25. Stick the large yellow pom pom on top of the stick.
This is the Sun!



The sun is a star at the centre of the Solar System. It is a sphere of plasma heated by nuclear fusion at its core.

Finished!