



General Procedure for Building Mobiles

The following **General Procedure** describes the steps for building a Planet Mobile for a Science Unit on the Solar System. Teachers should share with the pupils an example of the Planet Mobile the pupils will be making. Verbal and written directions are enhanced when an example model is available for pupils to analyze.

1. Show pupils a model of the Planet Mobile and explain to pupils they are going to make a Planet Mobile of the Solar System.
2. As a class:
 - brainstorm the names of the planets (Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto)
 - list the planets starting with the Sun (Start with the Sun, followed by Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto)
 - discuss the range in size of the Sun and planets (Note the Sun is the biggest. The planets are too big to represent accurately. Suggest making Jupiter, Saturn, Uranus and Neptune smaller than the sun and making the remainder of the planets much smaller. Ask what is special about Saturn - Saturn has rings).
3. Record the pupil's ideas on the chalkboard or on chart paper.
4. Divide the pupils into working groups of 5 or 6 pupils.
5. Provide each group with a piece of cardboard about 30 cm across.
6. Have pupils find the center of the large cardboard by drawing a line from top to bottom and a line from right to left. Where the two lines meet marks the center of the circle. This will be the location of the Sun.
7. Have pupils use a compass and draw the orbits of the 9 planets by drawing circles around the center of the piece of cardboard. Remind pupils the first 4 planets orbit close to the Sun then there is a gap where the asteroids orbit. The last 5 planets orbit far from the sun.
8. Using a pair of scissors or a large nail, pupils will punch a series of 9 holes in the cardboard. The first hole is made in the center for the Sun; then one hole is punched in each orbit for each of the 9 planets.
9. Have pupils make circles for the planets. Jupiter, Saturn, Uranus and Neptune are a bit smaller than the Sun. Mercury, Venus, Earth, Mars and Pluto are smaller. Saturn has rings. Write the name of the planet on the back of the circle. Color or paint the planets.
10. Tape, paste or staple a piece of string to each planet. Place the string in the correct hole in the large cardboard circle (Mercury goes in the inner orbit, Venus is second, Earth is third, and so on). Adjust the strings so they lie in a plane. Tie. Display.
11. Give each group an opportunity to present their Planet Mobile to the class. Pupils can also evaluate, summarize and synthesize the activity.
12. For younger pupils present leading questions (For Example: Why does the Sun go in the middle? What are the most important things you learned? Can you point out the planets to us?)
13. Have pupils complete the Pupil Self-Assessment at the end of this section.