Modeling the Solar System

Summary
Students will use a computer program to scale a solar system model. They will then create and build it.

Main Core Tie
Science - Earth Science
Standard 1 Objective 2

Time Frame
2 class periods of 45 minutes each

Group Size
Small Groups

Materials
- A selection of balls (marble, golf ball, tennis ball, volley ball, soccer ball, playground balls)
- index cards
- markers,
- metersticks
- popsicle sticks or wooden skewers
- glue or tape
- computer per group
- student worksheet
  (attached)

Background for Teachers
Time needed
: 30 minutes the first day, 40 minutes the second day.

Instructional Procedures
- Place the selection of balls, marbles or other round objects in the front of the room. It will be nice if you can have a different one for each group. A 6 cm diameter ball will need 194 m of space for the whole system so do not choose balls much bigger than this unless you have a really large space to put it in.
- Ask groups to choose a ball for their "sun" in a model solar system.
- Provide an index card, ruler, marker and wooden stick for each group.
- Read the instructions from the student sheet and allow students to calculate their "solar system". Each group will build a little different system. The sizes of planets will be different based on their scales.
- When students go outside to build the systems, they should step off the meters. They can practice in the room if you provide a place where the floor has been measured in meter length steps.

Bibliography
Lesson Design by Jordan School District Teachers and Staff.