

# Materials at a Glance

Experiment 1	Experiment 3	Experiment 4	Experiment 5	Experiment 6
pencil flashlight compass  A clear night sky away from bright lights is needed.	basketball ping-pong ball flashlight empty toilet paper tube tape scissors a dark room student-selected objects	modeling clay in the following colors gray white brown red butter knife or sculptor's knife ruler  Materials other than clay can be used, such as Styrofoam balls or plaster of Paris and paint.	modeling clay in the following colors: gray white brown red blue green orange butter knife or sculptor's knife colored pencils	computer with internet access printer and paper flashlight  <b>Optional</b> binoculars or telescope star map app and mobile device
Experiment 2				
two sticks (used for marking locations) two rulers tape string, several meters long (several yards) protractor				

Experiment 7	Experiment 8	Experiment 9	Experiment 11	Experiment 12
8 objects of different sizes to represent the planets ruler (in centimeters) marking pen large flat surface for drawing—1 x 1 meter (3 x 3 feet), such as a large piece of cardboard or several sheets of construction paper large open space at least 3 meters (10 feet) square push pin piece of string one meter (3 feet) long additional objects of students' choice to represent asteroids, etc.	imagination pencil colored pencils  <b>Optional</b> several sheets of blank paper	computer internet connection	computer or tablet internet connection	computer internet connection
		Experiment 10		
		computer internet connection		

# Materials

## Quantities Needed for All Experiments

Equipment	Materials	Other
basketball compass computer with internet access flashlight knife, butter or sculptor's ping-pong ball printer protractor ruler (in centimeters) rulers, 2 scissors  <b>Optional</b> binoculars or telescope star map app and mobile device tablet	modeling clay in the following colors gray white brown red blue green orange objects of different sizes to represent the planets, 8 objects, student-selected paper for printer pen, marking pencil pencils, colored push pin sticks, 2 (used for marking locations) string, one meter (3 feet) long string, several meters long (several yards) surface for drawing — 1 x 1 meter (3 x 3 feet), such as a large piece of cardboard or several sheets of construction paper tape toilet paper tube, empty  <b>Optional</b> materials other than clay for models, such as Styrofoam balls or plaster of Paris and paint objects of students' choice to represent asteroids, etc.	clear night sky away from bright lights dark room imagination open space at least 3 meters (10 feet) square

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