

Investigation #1: What is the Universe?

3 sheets of 8½ X 11 typing paper
Clear tape
40 pennies
Pen or pencil
Ruler or straight edge

Investigation #2: Spreading out the Heavens

Large round rubber balloon
Colored marker
Bag of large marshmallows

Investigation #3: The Strange Behavior of Space and Light

A large round ball
Strips of paper
Tape
Piece of string
Metric ruler
Colored marker

Investigation #4: Kepler's Clockwise Universe

Large sheet of paper
Thick piece of cardboard
Two thumbtacks
Metric ruler
String
Pencil

Investigation #5: Invisible Forces in the Universe

Flat sheet of paper
Tape
Flexible tubing (cut in half)
Marble
Meter stick or long flat board
Other objects to observe falling, examples: small pebble, another rock, foam ball.

Investigation #6: Galileo and Inertia

Small bucket with a handle
Short rope
Water
Flexible pipe insulation tubing, cut in half lengthwise (Size ??)
Marbles
Tape

Investigation #7: Making Telescopes

2 magnifying (convex) lenses
One thin convex lens from 1 to 2 inches in diameter
One thicker convex lens from ½ inches to 1 inch in diameter
Lined paper

Investigation #8: History of Flight

8 ½ x 11 sheet of paper
Large paper clips
Pattern for paper airplane (See appendix of Student Journal)
Metric tape measure

Investigation #9: Rockets and Space Exploration

4" x 4" piece of paper 2 cone shaped paper drinking cups (use one for cutting out the fins)
Clear tape
Scissors
Effervescent antacid tablet
35 mm film canister with lid that fits inside canister
Marker
Trash bag

Investigation #10: The Earth in Space

Globe of the earth, mounted from its axis
A ball or balloon (about 1/4 the size of the globe)
Flashlight
Sticky note
Axis-mounted earth globe (may be viewed at a library if one is not available elsewhere)

Investigation #11: The Earth's Atmosphere

Small plastic cup
4" x 6" index card
Water

Investigation #12: The Moon

A quarter
A Lincoln penny
Paper
Pencil
Flat cookie sheet
Flour
Red paprika
Marble
Dime
Clear Tape

Investigation #13: The Rocky Planets: Mercury, Venus, Earth , and Mars

Up-to-date reference sources and Internet sources of information about the rocky planets.

Investigation #14: Planets: Mars and Martians

Internet or library materials to reference.

Investigation #15: The Jovian Planets: Jupiter, Saturn, Uranus, and Neptune

Internet or library materials to reference.

Investigation #16: The Sun and Its Light

A few different bottles of sunscreen
A prism
White surface
Source of light (strong)

Investigation #17: The Sun and the Earth Relationship

Straight pole or stick
Metric measuring tape
Watch

Investigation #18: The Constellations

Supplies for Shoebox
Constellations: Large shoebox, Heavy black paper, Glue, Tape, Cardboard, Silver Markers,
Constellation diagrams (from Appendix and other sources)
Flat black spray paint

Investigation #19: A Great Variety in Space

Pictures from the internet or from books and magazines of space.

Investigation #20: Chaos or a Creator?

Letter tiles from a game of Scrabble that spell the word "CREATION"