



Materials for ALL the activities!

Chapter 1

Day 2

Shallow pan
One bag of flour
Container of cocoa
Measuring tape
Marble

Day 3

cereal boxes
flashlight
scissors
constellation map (provided)

Chapter 2

Day 2

Calculator
Bathroom scale (optional)
Various household objects (with weight provided on the label, i.e. bag of flour, sugar, etc.)
Weight Chart

Day 3

10 different colored beads
5 feet of string
Meterstick

Chapter 3

Day 2

One apple
One knife (be careful! Only an adult should use the knife!)

Day 3

3/4 cup of sugar
1/2 cup of packed brown sugar
1/2 cup of M&M's
1/2 cup of milk chocolate chips
1-3/4 cups flour mixed with 1 tsp. baking powder and 1 tsp. salt
one clear quart jar

Chapter 4

Day 2

Shallow Baking Dish
Water
Small Mirror
Modeling Clay (optional)
White Paper
Flashlight

Day 3

sheet of cardboard
one sheet of white paper
aluminum foil approximately 1 x 1 -inch
(3 x 3 centimeters)
pin or sharp point
tape
scissors
ruler
candle

Chapter 5

Day 2

Large tablecloth or sheet
Heavy object (i.e. bag of flour, sand,
etc...)
Marble

Day 3

Piece of paper
Measuring tape
Scissors
Starfield sheet (provided)

Chapter 6

Day 2

Meter stick or measuring tape
Tape
Protractor (provided)
Three feet of string
Sharpened pencil

Day 3

2 foot dowel rod (or similar item)
Bucket of gravel or sand
Driveway or sidewalk
chalk

Chapter 7

Day 2

four sandwich cookies (like oreo's)
paper plate
plastic/butter knife
pencil/pen

Day 3

Large sheet of heavy cardboard (about
three feet square)
Knife
Eight ping-pong balls or Styrofoam balls
Glue
Black permanent marker

Chapter 8

Day 2

One grape
One orange
Flashlight
Toothpick
Small amount of clay (optional)

Day 3

One dodge ball, beach ball or basketball
One tennis ball or baseball
At least two other people to help out

Chapter 9

Day 2

Scissors
Tape
Small empty box (shoe box size)
File folder/cardstock/heavy weight paper
Books or magazines
Aluminum foil
Two drinking straws
Marshmallows
Thermometer

Day 3

piece of paper
string
scissors
warm lamp or hotplate

Chapter 10

Day 2

One bright flashlight
One piece of paper
Pen/pencil
Several small objects (i.e. BB's, tiny marbles, paper dot cut-outs, etc.)
Dark room

Day 3

Data chart (provided)
Graph paper (provided)

Chapter 11

Day 2

Access to newspaper, tv or internet for weather data
Record log (provided)

Day 3

Cup or bowl
Food coloring
Water
Measuring tape or ruler
Drinking straw
Clock with second hand

Chapter 12

Day 2

A hotplate or electric stove
One empty soda can
Water
Large plastic bowl filled with cold water
Tongs
gloves

Day 3

Thermometer
Cotton balls
Rubber band
Water
Rubbing alcohol

Chapter 13

Day 2

Raw egg

Container filled with water

Salt

Spoon

Day 3

one set of water cycle posters (provided)

9 cubes (patterns provided)

Water cycle table (provided)

Chapter 14

Day 2

Large clear jar

Wire screening (wire strainers work well... as does cheesecloth and a rubberband)

Ice cubes

Hot water

Day 3

Empty 2 liter bottle

Matches

Water

Measuring spoons

Dark colored paper, wall, sheet, etc.

Chapter 15

Day 2

Empty 2L plastic bottle

Thermometer

Plastic baggie

Ice

Salt

Two pencils (or a wire strainer that can fit the bottle)

scissors

Day 3

Birthday candle

Candle holder (hex nut, ball of clay, etc.)

Small, clear glass jar (olive jars work great!)

Shallow pan

Ruler or measuring tape

Matches

Water

Chapter 16

Day 2

Styrofoam cup

Water

Lamp (with at least a 75 watt bulb)

Thermometer

Day 3

Styrofoam cup

Soil

Lamp (with at least a 75 watt bulb)

Thermometer

Chapter 17

Day 2

Two film canisters

Two sugar cubes

Ruler

Pencil

Two different kinds of sandpaper (one rough and one fine)

Day 3

Freezer (or a cold day)

Water

Measuring tape

Chapter 18

Day 2

Potatoes

fine tipped, permanent marker

sharp knife

Day 3

three candy bars such as snickers or

milky way

paper towels

Chapter 19

Day 2

Metal or heavy plastic pan--full-sized

loaf pans work fine

Sand

Water

A smooth brick

A rubber mallet

Day 3

A car and a driver

A felt-tipped pen

Lined pad of paper

Measuring tape

Chapter 20

Day 2

Vinegar

Baking Soda

Tall, clear and skinny container (olive jars work well)

Ruler

Tape

Day 3

pancake mix

skillet

teaspoon

water

thermometer (F°)

hot plate/stove

magnifier

ruler

glass jar (about the size of a peanut

butter jar)

Chapter 21

Day 2

4 cups sugar
2 cups water
small saucepan
wooden spoon
candy thermometer
one small, clean glass jar
measuring cup
cotton string
a weight to hang on the string (such as a screw or galvanized washer)

Day 3

Penny
Paper clip
a brick
chalk
old glass jar

Chapter 22

Day 2

Old plate or aluminum pie tin
One paper towel
Epsom salt
Water
Matches (optional)

Day 3

Large-mouthed glass/plastic jar (about a quart in size)
Enough uncooked rice to fill the jar about $\frac{3}{4}$ full
One small ball (rubber, ping pong, etc..)

Chapter 23

Day 2

One-half pound (8 oz.) of milk chocolate bars
6 cups miniature marshmallows
 $\frac{1}{2}$ cup chopped walnuts (optional)
6 cups crisp rice cereal
 $\frac{1}{2}$ cup water
1 cup corn syrup
2 cups granulated sugar
1 $\frac{1}{4}$ cup butter/margarine
1 teaspoon baking soda

Day 3

Nine small paper cups
Sand
Epsom salt
Water
Old newspapers
Scissors

Chapter 24

Day 2

Plate
Syrup or honey
Measuring spoon
Measuring tape
Cup or bowl
Clock with second hand
Microwave oven

Day 3

ten station cards (provided)
one die (pattern provided)

Chapter 25

Day 2

Large dish pan
Drinking glass shorter than the pan
Plastic wrap
Several clean marbles
Masking tape
Muddy water

Day 3

Soil sample of sand, silt, clay and gravel mixed together
1 quart jar
alum (optional)
water

Chapter 26

Day 2

One clear container (about one cup in volume)
One spoon
Small bag of candy coated chocolate (with or without nuts)
Small container of pudding (chocolate or butterscotch)
Small bag of gummy worms
colored sprinkles
two or three chocolate sandwich cookies, crushed
paper and pencil

Day 3

One cup of gravel, sand and clay
One plastic/glass container
Water
Measuring cup
Sawdust and flour (optional)

Chapter 27

Day 2

Two or three Baked Potatoes - halved
Small plastic "baggies"
toothpicks
magnifying lens (optional)

Day 3

Soup can with both ends removed
Wire mesh (small amount from an old screen door)
Jar
Spoon
Water
Paper towels
Magnifying glass

Chapter 28

Day 2

Sand
Newspaper
Empty jar (about the size of a small pickle jar)
Shoobox lid (any lid of similar size/shape will work)
Drinking cup
Water

Day 3

red, grape or orange soda
one generous scoop of Vanilla ice cream
Clear soda pop
Small gummy bears, chocolate chips,
crushed cookies, cereal, crushed ice or
other material to represent sand and
gravel
cake decoration sprinkles
Drinking straw
Clear plastic cup
Ice Cream scoop
Spoon

Chapter 29

Day 2

Seven or eight clear plastic salad trays
(you can find these at deli's,
supermarkets, etc...)
Permanent marker
Scissors
Tape
Island outline (provided)
Photocopier (optional)

Day 3

metal baking pan will work fine
Two sheets of newspaper
plastic wrap that is much larger than the
size of the baking pan

Chapter 30

Day 2

One shoe box trimmed to two (2) inches
deep, v-notched at one end, and
completely lined with plastic wrap (plastic
should extend several centimeters
beyond notched end)
Sprinkling can or containers (re-cycled
plastic pop bottles with holes poked into
the bottom)
Measuring cups
ruler
sod (indoor/outdoor carpet, discarded
carpet, and terry cloth all work as
substitutes)
soil (enough for the five trays to be
filled with the same soil)
water
Data chart (provided)

Day 3

pinecones
bucket of water
foil-lined baking sheet
oven

Chapter 31

Day 2

Two identical glass jars (mason jars work
fine)
4 cups cold water
10 ice cubes
One clear plastic bag
Thermometer

Day 3

White vinegar

As many objects as you can find which include: Chalk, Old seashells, Baking soda, Sugar, Sand, Rocks, Eggshells, etc...

Eyedropper or drinking straw

Glass bowl

Chapter 32

Day 2

Petroleum jelly

Three Small pieces (about 3 inch square) of stiff clear plastic

Strips of clear tape or contact paper (optional)

White paper

Magnifying glass

Day 3

8 oz. of Cool Whip non-dairy topping
red food coloring

whisk

two white, opaque lids that will fit the cool whip container from 8 oz. Cool Whip containers

frosting spreader

a bowl (large enough for 16oz of the topping)

a large spoon

Permanent marker

Outline map (provided)

Chapter 33

Day 2

Sturdy cardboard square (about 5 inches on each side will work)

String

Paper or plastic cup

water

Day 3

Clay or dough

Butter knife

Chapter 34

Day 2

Aluminum (or glass) baking pan

Lemonade-flavored powdered drink mix

Sand (enough to fill the pan)

Straws

Glass of water

Misting bottle

*pH paper

*ph paper is a special tool used by people to determine how much acid can be found in a substance. Any store that provides garden or pool supplies will carry these paper strips. For this activity, you will only need 12 per child

Day 3

Clear plastic bag (zipper style, sandwich size works best)

Measuring spoon

Rubber band or twist-tie

Masking tape

Chapter 35

Day 2

Two small towels

One clear plate (glass or plastic is fine)
strips of cloth (wool is best, but cotton
works well too!)

salt and pepper

puffed rice cereal and small pieces of
paper (optional)

Day 3

any small plastic object like a credit card
or a ruler.

container of water

Chapter 36

Day 2

One large pinecone

Peanut butter

Birdseed

string

Day 3

Pencil/paper

Ruler

Kitchen Scale (optional)