

6TH GRADE SCIENCE LAB MATERIALS

In 6th Grade Science, labs are found in three places: embedded into the Knowledge Unit®, a separate lab manual, and video labs with a video lab manual. This document shows two tables for all the materials needed for the labs in the lab manual and in the KnowledgeUnits®. Supply lists for video labs are not given as students can complete the labs without physically doing them.

Following the two tables are descriptions of each lab/activity by Unit.

LAB/ACTIVITY SUPPLY LIST FOR ENTIRE LAB MANUAL			
Materials (ALL activities)	Unit/s Used	Supplies easily found in home or local store	Substitute/Notes
aluminum foil	4,6	yes	
antacid tablet	2	yes	
apple core	4	yes	
baking powder	2	yes	
balloon—large	8	yes	
balloon—medium-sized long	8	yes	
balloon—oval	8	yes	
beakers—100 mL (x10)	2	no	any container large enough to fit item
beans—92 pinto beans and 8 lima beans	4	yes	
black permanent marker	9,10	yes	
bleach	9	yes	
blindfold	4	yes	
board with a hook on its surface (It should be mounted to a structure that allows it to hang a few feet above the table.)	3	no, unless one is made	
bread	4	yes	
calculator	4	yes	can use app on cell phone
clean tuna can	6	yes	
cola	2	yes	
complex pulley system	3	no	easily ordered online (Amazon)
cotton swabs (x4)	9	yes	
crayons	6	yes	
dish soap	2	yes	
distilled water	2	yes	
dry tempura paint	7	yes	
eyedroppers (x10)	2	no	easily ordered online (Amazon); look for plastic disposable eyedroppers
flour	7	yes	
foil pan	7	yes	
frosting	5	yes	
golf ball	7	yes	

graduated cylinder – 100 mL	2,4,10	no	can use any container with measurements marked on the side or large enough to hold items; easily ordered online (Amazon)
graham crackers (x3)	5	yes	
gummy bears (BRACH'S® brand works well)	2	yes	
hand sanitizer	9	yes	
hot plate	6	no	can use kitchen stove
ice cubes (x5–6)	6	yes	
irrigation flags	10	yes	can use any type of marker that sticks in the ground
labels	2	yes	
leaves (x2)	4	yes	
lemon juice	2	yes	
litmus paper	2	no	easily ordered online (Amazon)
marble	7	yes	
masking tape	3,9	yes	
mason jars (x6)	4	yes	
meter stick	3,7,8,10	no	can use a yard stick or measuring tape and convert measurements
metric ruler	2,3,4,10	yes	can use a standard ruler and convert measurements
milk	2	yes	
minerals (two different kinds)	6	no	easily ordered online (Amazon); look for mineral science kit
Mohs Hardness testing kit	6	no	easily ordered online (Amazon)
mortar and pestle	2	no (depends)	easily ordered online (Amazon)
newspaper	6	yes	
orange juice	2	yes	
paper	4	yes	
paper plate	5	yes	
paper towel	2	yes	
pencil sharpener – small	6	yes	
Petri dishes prepared with agar solution (x4)	9	no	easily ordered online (Amazon)
pH paper	2	no	easily ordered online (Amazon)
pipette	7	no	can use eyedropper
plastic (one piece)	4	yes	
plastic bag	4	yes	
plastic foam cup – large	2	yes	
plastic resealable bags – small (x4)	9	yes	
plastic resealable bags – large (x4)	9	yes	
plastic cup – any color	7,10	yes	
plastic cup – clear (x5)	10	yes	
plastic knife	5	yes	
potting soil	10	yes	
rice treat	5	yes	

rope	3	yes	
seeds: fast-germinating like radish (x125)	10	yes	
simple-pulley system	3	no	easily ordered online (Amazon)
soil from outside (not from store)	4	yes	
spring scale	3	no	easily ordered online (Amazon)
steel ball	7	no	easily ordered online (Amazon)
stopwatch (x2)	3,8	yes	can use clock app on phone
string – 11 meters, 48 meters	8,10	yes	
straws	8	yes	
tap water	2	yes	
tape	8	yes	
thermometer	2	yes	
triple beam balance	2,4	no	can use a kitchen scale
unglazed tile	6	yes	
vinegar	2	yes	
wax paper (2 pieces)	6	yes	
weight 50-gram mass	3	no	easily ordered online (Amazon)
weight 100-gram mass	3	no	easily ordered online (Amazon)

LAB/ACTIVITY SUPPLY LIST FOR LABS EMBEDDED IN THE KNOWLEDGE UNITS®

Materials (ALL activities)	Unit/s Used	Supplies easily found in home or local store	Substitute/Notes
Bouncing ball	1	yes	
Earth model (student chooses materials to create a model of the Earth)	5	yes	
meter stick	1	no	can use a yard stick or measuring tape and convert measurements

LABS/ACTIVITIES BY UNIT

Unit	Activity Name	Activity Description	Materials Needed	Finished Before	Homeschool Friendly
1	Bouncing Ball	Experiment: Students will test how high a ball can bounce on different surfaces.	bouncing ball, meter stick, three different surfaces	Quiz 2	yes
2	Water Gummy Bears	Lab Manual Investigation: Students will practice the scientific method and take measurements with gummy bears.	gummy bears (BRACH'S® brand works well), triple beam balance, 100 mL graduated cylinder, large plastic foam cup, metric ruler, thermometer, paper towel	Quiz 1	yes, with substitutions
2	Household Acid and Base Items	Lab Manual Investigation: Students will test different household items to determine which are acids and which are bases.	orange juice, lemon juice, cola, milk, tap water, distilled water, dish soap, vinegar, antacid tablet, baking powder, 10 beakers (100 mL), labels, 10 eyedroppers, litmus paper, pH paper, mortar and pestle, graduated cylinder	Quiz 3	
3	Speed	Lab Manual Investigation: Students will practice calculating the average speed for different activities.	meter stick, masking tape, 2 volunteers, 2 stopwatches	Quiz 3	yes
3	Pulleys	Lab Manual Investigation: Students will perform a test to determine whether an "up" or "down" pulley system makes work easier, and whether a simple or complex pulley system makes work easier.	board with a hook on its surface (It should be mounted to a structure that allows it to hang a few feet above the table.), rope, simple pulley system, complex pulley system, 100-gram mass weight, 50-gram mass weight, spring scale, ruler	Quiz 1	
4	Renewable vs. Non-Renewable	Lab Manual Investigation: Students will compare renewable and non-renewable energy resources.	2-3 teammates, plastic bag containing 92 pinto beans and 8 lima beans, blindfold, plastic cup, calculator	Quiz 1	yes
4	Nuclear Fission Essay	Writing: Students write their opinion about using nuclear fission at power plants.	Paper or word processing software/app	Lesson 3	yes

4	Trash to Soil	Lab Manual Investigation: Students will investigate different types of materials to see which are best for composting.	apple core, piece of plastic, 2 leaves from outside, piece of bread, piece of aluminum foil, piece of paper, 6 mason jars, metric ruler, triple beam balance, graduated cylinder, soil from outside (not from store)	Quiz 3	yes
4	Energy Resource Plan	Activity: Students will create a plan to manage energy resources for themselves, their school, and their community.	none	Quiz 3	yes
5	Earth Model	Model: Students will build a physical model that shows each layer of the Earth.	Materials can vary	Quiz 1	yes
5	Plate Tectonics	Lab Manual Investigation: Students will create a model showing the different plate boundary types and what happens at each boundary type.	3 graham crackers, rice treat, frosting, paper plate, plastic knife, small cup of water	Quiz 1	yes
6	The Rock Cycle	Lab Manual Investigation: Students will create a model of the rock cycle.	1 teammate, newspaper, 2 pieces of wax paper, small pencil sharpener, crayons, aluminum foil, clean tuna can, hot plate, 5–6 ice cubes	Quiz 2	yes, with substitutions
6	Minerals	Lab Manual Investigation: Students will test two unknown substances to determine if they are the same mineral or different.	two minerals, an unglazed tile, Mohs Hardness testing kit	Quiz 3	
7	Meteorites and Craters	Lab Manual Investigation: Students will investigate the factors that create large craters.	marble, steel ball, golf ball, foil pan, pipette, ruler, meter stick, flour, dry tempura paint, plastic cup	Quiz 3	yes
8	Balloon Rockets	Lab Manual Investigation: Students will test the effect of balloon shape on the speed of balloon rockets.	large balloon, medium-sized long balloon, small oval balloon, 11-meter string, 3 drinking straws, tape, stopwatch, meter stick, 2 volunteers	Quiz 3	yes
8	Future Space Exploration	Activity: Students will research a future space exploration project that interests them.	Computer with internet access	Quiz 3	yes

9	Bacteria	Lab Manual Investigation: Students will investigate places where bacteria can be found and how hand sanitizer affects bacteria.	4 Petri dishes prepared with agar solution, 4 cotton swabs, 4 small and 4 large zipper-lock bags, hand sanitizer, masking tape, black permanent marker, water, bleach	Quiz 3	
10	Population Density	Lab Manual Investigation: Students will calculate population density in an ecosystem.	meter stick, 48 meters of string, irrigation flags, field journal	Quiz 2	yes, with substitutions
10	Drought and Plant Growth	Lab Manual Investigation: Students will investigate water amounts on plant growth.	5 clear plastic cups, black permanent marker, 125 fast germinating seeds (e.g., radish), potting soil, water, graduated cylinder, ruler	Quiz 2	yes, with substitutions