### **Supplies Included**

Alligator clip leads, Lab 17 A

Aluminum bar, Lab 13A

Balloon, Lab 1 OB

Battery, 9-volt, Labs 2B, 9A

Beaker, 15 mL, Labs 9C, 16A, 16B, 17B Beaker, 30 mL, Labs 13B, 16B, 17B

Beaker, 50 mL, Labs 4A, JOB, IIA, 17A, 17B

Beaker, 15 0 mL,

Labs 2A, 2B, 9A, 9C, 1 OB E, 13A, 15, 17B

Candle, tea, Labs 4A, 1 0A, 15, 19 Capillary tubes, Lab 1 0A

Clear vial with lid, 4 mL, Lab 12A

Color chart for O 2 test, Lab 12A Conductivity tester, Lab 6

Cork, Lab 19

Cups, 2 oz, Lab 19

Cups, 8 oz, foam, Labs 13A, 13B, 18A Cups, 9 oz, clear (6), Labs 12A, 17B, 18A Cup, 12 oz, clear, plastic, Lab 1 0A

Cylinder, graduated, 10 mL,

Labs 2A, 12B, 13B, 16B

Diffraction grating, Lab 4A

Digital scale, Labs 2A, 4B, 9B, 9C, 1 OB, 12A, 12B, 13A, 13B, 17B

Dry wall tape, 10. 5 'roll, Lab 3A Electrolysis device, Labs 2B, 9A Evaporating dish, 50 mL, Labs 2A, 9B Filter paper, Labs 2A, 12A

Foam cup cover, Labs 13A, 13B

Funnel, 85 mm, Labs 2A, 1 OB, 12A, 17B

Gloves, vinyl, Labs IIA, 17B

Goggles, safety, Labs JB, 2B, 4A, 6, 8, 9A, 9B, 9C, JOB, IIA, 12A, 12B, 13B, 14, 15, 16A, 16B, 17A, 17B, 19 Iron filings, Lab 6

Magnifying glass, Lab 11 B

Marble, 10 mm (4), Lab IIA

Measuring spoon, 1 cc, Labs 2B, 9A, 13B Mechanical pencil lead, Lab 17 A

Minerals (calcite, pyrite, quartz), Lab IIB Molecular model kit, Lab 7

Multimeter, Lab 17 A

Nail, galvanized, Lab 17A

Paraffin wax, Lab 6

Pipet, graduated,

Labs 2B, 9A, 9C, JJA, 15, 16B, 17B, 18A, 18B

Pipets, mini, Lab 16A

Plastic samples, PET, HDPE, PVC, LDPE, PP, PS, Lab 19

Reaction plate, 2 4-well, Labs 16B, 18B Reaction plate, 96-well, Labs 8, 14, 16A Rubber bands, small, Lab 1 0A

Ruler, Labs 3A, 3B, 5, 1 0A, 1 OB, 12B

Sand, Lab2A

Sandpaper, Lab 17 A

Safety data sheets (SDS), Lab JB

Steel wool, Lab 13B

Stir rod, Labs 9C, 1 0A, 12A, 12B, 15, 19 String, 2 4", Lab 1 OB

Tape measure, Lab 3A

Gloves, vinyl, Labs IIA, 17B

Goggles, safety, Labs JB, 2B, 4A, 6, 8, 9A, 9B, 9C, JOB, IIA, 12A, 12B, 13B, 14, 15, 16A, 16B, 17A, 17B, 19

Iron filings, Lab 6

Magnifying glass, Lab 11 B

Marble, 10 mm (4), Lab IIA

Measuring spoon, 1 cc, Labs 2B, 9A, 13B Mechanical pencil lead, Lab 17 A

Minerals (calcite, pyrite, quartz), Lab IIB Molecular model kit, Lab 7

Multimeter, Lab 17 A

Nail, galvanized, Lab 17A

Paraffin wax, Lab 6

Pipet, graduated,

Labs 2B, 9A, 9C, JJA, 15, 16B, 17B, 18A, 18B

Pipets, mini, Lab 16A

Plastic samples, PET, HDPE, PVC, LDPE, PP, PS, Lab 19

Reaction plate, 2 4-well, Labs 16B, 18B Reaction plate, 96-well, Labs 8, 14, 16A Rubber bands, small, Lab 1 0A

Ruler, Labs 3A, 3B, 5, 1 0A, 1 OB, 12B

Sand, Lab2A

Sandpaper, Lab 17 A

Safety data sheets (SDS), Lab JB

Steel wool, Lab 13B

Stir rod, Labs 9C, 1 0A, 12A, 12B, 15, 19 String, 2 4", Lab 1 OB

Tape measure, Lab 3A

Test tubes, 16xl 25 mm (9), Labs 6, JOB, 12B, 15, 18A

Thermometer, Labs 1 0A, 1 OB E, IIA, 12A, 12B, 13A, 13B, 18A

Toothpicks, plastic, Labs 14, 16B

Vernier caliper, Lab 3B

Wash bottle,

Labs 8, 9B, 9C, 14, 16A, 16B, 17B,

Wire, copper, Lab 19

Wood splints, Labs 2B, 4A, 9A



### **Supplies Included**

#### **CHEMICALS and INDICATORS**

Acetic acid, HC/f3O2, 0.1 M, Lab 16A Calcium nitrate, Ca(NO) 2, 0.1 M, Lab 8 Copper nitrate, Cu(NO) 2, 0.1 M, Lab 8 Distilled water, Lab 16B

Hydrochloric acid, HCl, 0.1 M,

Labs 9C, 14, 16A, 17B, 18A

Iron III chloride, FeC/3, 0.25 M, Lab 15 Methyl orange solution, Labs 9C, 16A

Methyl red solution, Lab 16A

Nickel nitrate, Ni(NO) 2'0.1 M, Lab 8

0<sub>2</sub> test tablets/color chart, Lab 12A pH paper, Lab 12A

Phenolphthalein indicator paper, Labs 2B, 16B

Potassium hydroxide, KOH, 0.1 M, Labs 8, 16B

Potassium iodide, KI, 0.JM, Lab 8

Potassium permanganate, KMnO4, 0.01 M, Lab 17B

Potassium thiocynate, KSCN, 0.25 M, Lab 15

Protein test strips, Lab 18B

Sodium oxalate, Na2C2O4, 0.1 M, Lab 8

Sodium sulfate, Nai8O4, 0.1 M, Lab 8 Sodium thiosulfate, Nai82O3, 0.1 M, Lab 14 Thymol blue solution, Lab 16A

Zinc nitrate, Zn(NO) 2, 0.1 M, Lab 8

#### **DRY CHEMICALS**

Ammonium chloride, NH4Cl, Lab 12B

Calcium Chloride, CaC/2, Lab 4A, 13B Copper II sulfate, CuSO4, Lab 9B Fertilizer, 10-10-10, Lab 12A

Magnesium sulfate, MgSO4, Lab 9A Magnesium dioxide, MnO2, Lab JOB Potassium chloride, KC/, Labs 4A, 15

Potassium sulfate, K2SO4, Lab 4A Strontium chloride, SrC/2, Lab 4A Sodium sulfate, Nai8O4, Lab



### **Supplies Needed**

Lab 1A	Apron, baking powder, biscuit cutter, butter, cookie sheets, cream of tartar, egg, flour, kitchen oven, knives or pastry blender, large bowls, milk, rolling pin, salt, shortening, spatula, sugar
Lab 1B	Digital camera, smart phone, or camcorder
Lab2A	Frying pan or skillet, hot plate or stove top, pot holder, shallow pan, table salt, tap water
Lab2B	Distilled water, matches, paper towel, table salt, transparent tape
Lab3A	Textbook
Lab3B	Calculator, nickels (11)
Lab4A	Colored pencils, fluorescent light, incandescent light, LED light, pie plate, table salt
Lab4B	Candy covered chocolates and candy covered chocolates with peanuts (50)
Lab 5	None
Lab 6	Acetone, aluminum foil, frying pan or skillet, hot plate or stove top, masking tape, salt, water
Lab 7	None
Lab 8	None
Lab9A	Distilled water, matches, paper towel, transparent tape
Lab9B	Frying pan or skillet, hot plate or stove top, pot holder, water
Lab9C	Baking soda, distilled water
Lab9D	Equipment determined by student, popcorn kernels
Lab 10A	Graph paper, ice cubes, pliers, spoon, transparent tape, vegetable oil, water
Lab 10B	Hydrogen peroxide, calculator, felt tip pen
Lab 10B Extension	Flour, local weather report, scissors, water
Lab 11A	Acetone, ethanol (denatured alcohol), food coloring, felt tip pen, masking tape, mineral oil, paper towel, pennies (4), stopwatch, water
Lab 11B	Computer with internet access
Lab 12A	Felt tip pen, masking tape, pan, paper towels, clear plastic wrap, pond water (dirty with algae), shallow plastic container, small pan, white paper
Lab 12B	Boiling water, ceramic coffee cup, distilled water, felt tip pen, masking tape, shallow bowl with ice if needed
Lab 13A	Hot tap water, ice cubes, paper towels, thread
Lab 13B	Baking soda, stopwatch, transparent tape, vinegar
Lab 14	Distilled water, graph paper, plain paper, stopwatch or a watch with a second hand
Lab 15	Felt tip pen, masking tape
Lab 16A	Distilled water, white vinegar

### **Supplies Needed**

Lab 16B	Distilled water, plain paper, white vinegar
Lab 17A	Transparent tape, white vinegar
Lab 17B	Baking soda, hydrogen peroxide, disposable plate, distilled water, graph paper
Lab 18A	Computer with internet access, felt tip pen, Jelly Bellies or other candies (orange, apple, pineapple, and apricot flavored), tablespoon, hot water, distilled water, baking soda, ethanol (denatured alcohol, available at Walmart or a drug store), white vinegar (5%)
Lab 18B	Egg white, fermented milk, fresh milk, water
Lab 19	Corn oil, felt tip pen, isopropyl (rubbing) alcohol (70%), lighter, masking tape, saturated salt water, tweezers
Lab20	Reference source, BJU web site

<sup>\*</sup>Items not included in the individual labs will be noted by an asterisk.