

Material Conversion Chart for Science Mastery and e-Science Programs

This document is for families using both the Science Mastery Program and the e-Science Online Learning Program together. These lists will help you match up the materials you already have with the Science Mastery Program and help you figure out which materials you still need to shop for with the e-Science Online Learning Program.

Here's how it works: **The lists below are for the materials that you already have!** There are three lists in this document: Science Mastery Silver (pages 1-3), Science Mastery Gold (pages 4-7), and Science Mastery Diamond (pages 5-11).

1. Determine which e-Science/e-Camp Unit you'll be working on: www.ScienceLearningSpace.com
2. Print out the e-Science/e-Camp Shopping List for that Unit.
3. Select the Science Mastery program that you own and go to that set of pages. The materials listed in this document are the materials you already have (along with which pack to find them in).
4. Scratch off the materials you already have on the e-Science Shopping List you just printed out.
5. The items left are the ones you still need to get to complete the e-Science/e-Camp Unit.

Science Mastery Silver These are the materials you'll find already in your Science Mastery Program. The Pack names are in the () so you'll know where to look for these items. Simply print off the shopping list from e-Science and scratch these items off your list:

Unit 1: Mechanics (K-12)

Balloon (Aeronautics Pack)
Ping Pong Ball (Aeronautics Pack)
Tissue paper or newspaper (Aeronautics Pack)
Ball (Aeronautics Pack)
Paper clips (Electricity Pack)
Magnet (Electricity Pack)
String or yarn (Aeronautics Pack)
Rope (Physics of Motion Pack)
Paper (Aeronautics Pack)
Neon bulb (Electricity Pack)
Wood skewer (Hovercraft Pack)
Wood popsicle sticks (Hovercraft Pack)
Straw (Hovercraft Pack)
3VDC motors (Hovercraft Pack)
propellers (Hovercraft Pack)
9V battery clip with wires (Hovercraft Pack)
SPST switch (Hovercraft Pack)
16 oz. styrofoam cup (Hovercraft Pack)
Foam hamburger container (Hovercraft Pack)
Foam meat tray (Hovercraft Pack)
Mirrors (Physics of Light Pack)
Laser (Physics of Light Pack)
Clothespin (Electricity Pack)

Unit 2: Motion (K-12)

Feathers (Physics of Light Pack)

Ping Pong Ball (Aeronautics Pack)
Rope (Physics of Motion Pack)
Straws (Aeronautics Pack)
Balloons (Aeronautics Pack)
Paper (Aeronautics Pack)
Index cards (Aeronautics Pack)
Wheels (Electricity Pack)
Film canister (Aeronautics Pack)
Alka-seltzer (Aeronautics Pack)

Unit 3: Matter (K-12)

Marbles (Physics of Motion Pack)

Unit 4: Energy Part 1 (K-12)

Rope (Physics of Motion Pack)
Pulleys (Physics of Motion Pack)
PVC Pipe (Physics of Motion Pack)
Disposable plastic cup (Physics of Motion Pack)
20+ tongue-depressor-size popsicle sticks (Physics of Motion Pack)
Syringes (Physics of Motion Pack)
Brass fasteners (Physics of Motion Pack)
5' of flexible tubing (Physics of Motion Pack)
Wheels (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Straws (Physics of Motion Pack)

Skewers (Physics of Motion Pack)

Unit 5: Energy Part 2 (K-12)

Marbles (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Plastic spoon (Physics of Motion Pack)
Popsicle sticks (Physics of Motion Pack)
Aluminum foil (Physics of Motion Pack)
Index cards (Physics of Motion Pack)
String (Physics of Motion Pack)

Unit 6: Sound (K-12)

Popsicle sticks (Physics of Motion Pack)
Index cards (Physics of Motion Pack)
Film canisters (Electricity Pack)
Straw (Physics of Motion Pack)
Balloons (Physics of Motion Pack)
Water balloons (Physics of Motion Pack)
3' string (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Disposable cup (Physics of Motion Pack)
Mirror (Physics of Light Pack)
Laser (Physics of Light Pack)

Unit 7: Astrophysics (K-12)

Paper (Aeronautics Pack)
Magnets (Electricity Pack)
Marble (Physics of Motion Pack)

Unit 8: Chemistry Part 1 (K-12)

None

Unit 9: Light (K-8)

Feather (Physics of Light Pack)
Index cards (Aeronautics Pack)
String (Physics of Motion Pack)
Tracing Paper (Physics of Light Pack)
Popsicle sticks (Physics of Motion Pack)
Red laser pointer (Physics of Light Pack)
Small mirrors (Physics of Light Pack)
Large paper clips (Physics of Light Pack)
Brass fasteners (Physics of Light Pack)
Index cards (Physics of Light Pack)

Unit 10: Electricity (K-8)

Balloon (Electricity Pack)
Tissue paper (Aeronautics Pack)
Film canister (Electricity Pack)
Aluminum foil (Electricity Pack)
Thumb tacks (Electricity Pack)

Paper clips (Electricity Pack)
Brass fasteners (Electricity Pack)
Index cards (Electricity Pack)
Clothespins (Electricity Pack)
AA Battery packs (Electricity Pack)
LEDs (Electricity Pack)
Neon lamp (Electricity Pack)
Buzzer (Electricity Pack)
Alligator clip leads (Electricity Pack)
SPST Switch (Electricity Pack)
Laser (Physics of Light Pack)
AA Batteries (Electricity Pack)
3V DC Motors (Electricity Pack)
Wheels (Electricity Pack)
Straws (Electricity Pack)
Foam blocks (Electricity Pack)
Gear pulley (Electricity Pack)
Skewers (Electricity Pack)
Propeller (Electricity Pack)

Unit 11: Magnetism (K-8)

Magnet wire (Electricity Pack)
Magnet for DC Motor Experiment (Electricity Pack)
Film canisters (Electricity Pack)
Long nails (Electricity Pack)
D-cell battery (Electricity Pack)
Sand paper (Electricity Pack)
Bare wire (Electricity Pack)
Paper clips (Electricity Pack)
Rubber band (Electricity Pack)
AA Battery packs (Electricity Pack)
AA Batteries (Electricity Pack)
LEDs (Electricity Pack)
Buzzer (Electricity Pack)
3VDC Motors (Electricity Pack)
Alligator clip lead (Electricity Pack)
Brass fasteners (Electricity Pack)
Straws (Aeronautics Pack)
String (Physics of Motion Pack)

Units 12-19: None

Summer e-Camp: Flight Lab

Straws (Aeronautics Pack)
Small lump of clay (Aeronautics Pack)
Balloons (Aeronautics Pack)
Thumbtack (Electricity Pack)
12" flexible tubing (Aeronautics Pack)
Clear plastic cups (Aeronautics Pack)
Plastic funnel (Aeronautics Pack)
Ping pong ball (Aeronautics Pack)
Plastic garbage bag (Aeronautics Pack)

8 ½" x 11" paper (Aeronautics Pack)
Small paper clips (Aeronautics Pack)
Flyer toy (Aeronautics Pack)
Index cards (Aeronautics Pack)
11"x17" sheet of paper (Aeronautics Pack)
String (Aeronautics Pack)
Donut stickers (Aeronautics Pack)
Tissue paper (Aeronautics Pack)
Crepe paper streamer (Aeronautics Pack)
Plastic garbage bags (Aeronautics Pack)
Foam plates (Aeronautics Pack)
Foam meat tray (Aeronautics Pack)
Wooden spring-type clothespin (Electricity Pack)
Popsicle sticks (Electricity Pack)
Skewers (Electricity Pack)
Wheels (Aeronautics Pack)
Foam pipe insulation (Aeronautics Pack)
Foam sheet (Aeronautics Pack)
Film canisters (Aeronautics Pack)
Rubber bands (Aeronautics Pack)
Effervescent tablets (Aeronautics Pack)
Car tire valve (Aeronautics Pack)

Summer e-Camp: Electric Lab

Balloon (Aeronautics Pack)
Ping pong ball (Aeronautics Pack)
Tissue paper (Aeronautics Pack)
Plastic grocery bag (Aeronautics Pack)
Large paper clips (Electricity Pack)
Brass fasteners (Electricity Pack)
Index card (Electricity Pack)
AA battery pack (Electricity Pack)
LEDs (Electricity Pack)
Neon Lamp (Electricity Pack)
Buzzer (Electricity Pack)
3VDC motor (Electricity Pack)

Alligator clip leads (Electricity Pack)
Wheels (Electricity Pack)
Foam blocks (Electricity Pack)
Clothespins (Electricity Pack)
Film Canister (Electricity Pack)
Skewers (Electricity Pack)
Propellers (Electricity Pack)
Popsicle sticks (Electricity Pack)
Aluminum foil (Electricity Pack)
Thin un-insulated wire (Electricity Pack)
SPST push-button switch (Electricity Pack)
DPDT switch (Physics of Light Pack)
Potentiometers (Physics of Light Pack)
Red laser pointer (Physics of Light Pack)
AA batteries (Electricity Pack)

Summer e-Camp: Physics Lab

Popsicle sticks (Physics of Motion Pack)
Index cards (Physics of Motion Pack)
Film canister (Physics of Motion Pack)
Straw (Aeronautics Pack)
Balloons (Physics of Motion Pack)
Water balloons (Physics of Motion Pack)
3' string (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Laser (Physics of Light Pack)
Feather (Physics of Light Pack)
Paper clips (Physics of Light Pack)
Brass fasteners (Physics of Light Pack)
Mirrors (Physics of Light Pack)
Marbles (Physics of Motion Pack)

NOTE: Some of the experiments in the e-Science program are also in e-Camp, so you might find a bit of overlap with the materials.

Science Mastery Gold These are the materials you'll find already in your Science Mastery Program. Simply print off the shopping list from e-Science and scratch these items off your list:

Unit 1: Mechanics (K-12)

Balloon (Aeronautics Pack)
Ping Pong Ball (Aeronautics Pack)
Tissue paper or newspaper (Aeronautics Pack)
Ball (Aeronautics Pack)
Paper clips (Electricity Pack)
Magnet (Electricity Pack)
String or yarn (Aeronautics Pack)
Rope (Physics of Motion Pack)
Paper (Aeronautics Pack)
Neon bulb (Electricity Pack)
Wood skewer (Hovercraft Pack)
Wood popsicle sticks (Hovercraft Pack)
Straw (Hovercraft Pack)
3VDC motors (Hovercraft Pack)
propellers (Hovercraft Pack)
9V battery clip with wires (Hovercraft Pack)
SPST switch (Hovercraft Pack)
16 oz. styrofoam cup (Hovercraft Pack)
Foam hamburger container (Hovercraft Pack)
Foam meat tray (Hovercraft Pack)
Mirrors (Physics of Light Pack)
Laser (Physics of Light Pack)
Clothespin (Electricity Pack)

Unit 2: Motion (K-12)

Feathers (Physics of Light Pack)
Ping Pong Ball (Aeronautics Pack)
Rope (Physics of Motion Pack)
Straws (Aeronautics Pack)
Balloons (Aeronautics Pack)
Paper (Aeronautics Pack)
Index cards (Aeronautics Pack)
Wheels (Electricity Pack)
Film canister (Aeronautics Pack)
Alka-seltzer (Aeronautics Pack)

Unit 3: Matter (K-12)

Marbles (Physics of Motion Pack)

Unit 4: Energy Part 1 (K-12)

Rope (Physics of Motion Pack)
Pulleys (Physics of Motion Pack)
PVC Pipe (Physics of Motion Pack)
Disposable plastic cup (Physics of Motion Pack)
20+ tongue-depressor-size popsicle sticks (Physics of Motion Pack)
Syringes (Physics of Motion Pack)
Brass fasteners (Physics of Motion Pack)

5' of flexible tubing (Physics of Motion Pack)
Wheels (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Straws (Physics of Motion Pack)
Skewers (Physics of Motion Pack)

Unit 5: Energy Part 2 (K-12)

Marbles (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Plastic spoon (Physics of Motion Pack)
Popsicle sticks (Physics of Motion Pack)
Aluminum foil (Physics of Motion Pack)
Index cards (Physics of Motion Pack)
String (Physics of Motion Pack)

Unit 6: Sound (K-12)

Popsicle sticks (Physics of Motion Pack)
Index cards (Physics of Motion Pack)
Film canisters (Electricity Pack)
Straw (Physics of Motion Pack)
Balloons (Physics of Motion Pack)
Water balloons (Physics of Motion Pack)
3' string (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Disposable cup (Physics of Motion Pack)
Mirror (Physics of Light Pack)
Laser (Physics of Light Pack)

Unit 7: Astrophysics (K-12)

Paper (Aeronautics Pack)
Magnets (Electricity Pack)
Marble (Physics of Motion Pack)

Unit 8: Chemistry Part 1 (K-12)

Chemistry glassware (C1000)

Unit 9: Light (K-12)

Feather (Physics of Light Pack)
Index cards (Aeronautics Pack)
String (Physics of Motion Pack)
Tracing Paper (Physics of Light Pack)
Popsicle sticks (Physics of Motion Pack)
Red laser pointer (Physics of Light Pack)
Small mirrors (Physics of Light Pack)
Large paper clips (Physics of Light Pack)
Brass fasteners (Physics of Light Pack)
Index cards (Physics of Light Pack)
3VDC motors (Physics of Light Pack)
Gear-pulley(s) (Physics of Light Pack)

Round mirrors (Physics of Light Pack)
 DPDT switches (Physics of Light Pack)
 Alligator clip leads (Physics of Light Pack)
 AA battery packs (Physics of Light Pack)
 AA batteries (Physics of Light Pack)
 Potentiometers (Physics of Light Pack)
 Zip-tie (Physics of Light Pack)
 Conduit hangers (Physics of Light Pack)
 ¼ " x 2" bolts, nuts, and washers(Physics of Light Pack)
 220-ohm resistor (Electronics 2)
 8-ohm audio transformer (Electronics 2)
 9V battery clip (Electronics 2)
 CdS cell (Electronics 2)
 SPST push-button switch (Electronics 2)
 Audio plug (Electronics 2)
 Bi-polar LED (Electronics 2)
 2 AA battery packs (Electronics 2)
 AA batteries (Electronics 2)
 Crystal earphone (Electronics 2)
 Soldering iron, wire cutters, pliers... (Toolkit)

Unit 10: Electricity (K-12)

Balloon (Electricity Pack)
 Tissue paper (Aeronautics Pack)
 Film canister (Electricity Pack)
 Aluminum foil (Electricity Pack)
 Thumb tacks (Electricity Pack)
 Paper clips (Electricity Pack)
 Brass fasteners (Electricity Pack)
 Index cards (Electricity Pack)
 Clothespins (Electricity Pack)
 AA Battery packs & batteries (Electricity Pack)
 LEDs (Electricity Pack)
 Neon lamp (Electricity Pack)
 Buzzer (Electricity Pack)
 Alligator clip leads (Electricity Pack)
 SPST Switch (Electricity Pack)
 CdS Photocell (Electronics 1)
 Laser (Physics of Light Pack)
 3V DC Motors (Electricity Pack)
 Wheels (Electricity Pack)
 Straws (Electricity Pack)
 Foam blocks (Electricity Pack)
 Gear pulley (Electricity Pack)
 Skewers (Electricity Pack)
 Propeller (Electricity Pack)
 Digital Multi-meter (Alternative Energy Part 1)
 Soldering iron, wire cutters, pliers... (Toolkit)
 1" pipe clamps (ROV Essentials Pack)
 Propellers (ROV Essentials Pack)
 12VDC motors (ROV Essentials Pack)
 Film canisters (ROV Essentials Pack)

DPDT switches (ROV Essentials Pack)
 zip ties (ROV Essentials Pack)
 Mesh screen (ROV Essentials Pack)
Unit 11: Magnetism (K-12)
 Magnet wire (Electricity Pack)
 Magnet for DC Motor Expt (Electricity Pack)
 Film canisters (Electricity Pack)
 Long nails (Electricity Pack)
 D-cell battery (Electricity Pack)
 Sand paper (Electricity Pack)
 Bare wire (Electricity Pack)
 Paper clips (Electricity Pack)
 Rubber band (Electricity Pack)
 AA Battery packs (Electricity Pack)
 AA Batteries (Electricity Pack)
 LEDs (Electricity Pack)
 Buzzer (Electricity Pack)
 3VDC Motors (Electricity Pack)
 Alligator clip lead (Electricity Pack)
 Brass fasteners (Electricity Pack)
 Straws (Aeronautics Pack)
 String (Physics of Motion Pack)
 12VDC motor (ROV Essentials Pack)

Unit 12: Alternative Energy (K-12)

Digital Multimeter (Alternative Energy Pack 1)
 Solar cell (Alternative Energy Pack 1)
 Solar motor (Alternative Energy Pack 1)
 Gear set (Alternative Energy Pack 1)
 Foam block (Alternative Energy Pack 1)
 2 straws (Alternative Energy Pack 1)
 2 wooden skewers (Alternative Energy Pack 1)
 Wheels (Alternative Energy Pack 1)
 Alligator clip leads (Alternative Energy Pack 1)
 LEDs (Alternative Energy Pack 1)
 Propeller (Alternative Energy Pack 1)

Unit 13: Thermodynamics (K-12)

Test tubes and test tube clamp (C1000)

Unit 14: Electronics (K-12)

Breadboard (Electronics 1)
 Digital Multi-meter (Alternative Energy Part 1)
 Hookup wire (Electronics 1)
 CdS Photocell (Electronics 1)
 100-ohm resistor (Electronics 1)
 1K-ohm resistor (Electronics 1)
 4.7K-ohm resistor (Electronics 1)
 5.6K-ohm resistor (Electronics 1)
 10K-ohm resistor (Electronics 1)
 100K-ohm resistor (Electronics 1)
 2N3904 (NPN) transistor (Electronics 1)

2N4403 (PNP) transistor (Electronics 1)
 0.47 μ f electrolytic capacitor (Electronics 1)
 10 μ f electrolytic capacitor (Electronics 1)
 0.01 μ f capacitor (Electronics 1)
 Bi-polar red/green LED (Electronics 1)
 Alligator clip wires (Electronics 1)
 Electric buzzer (Electronics 1)
 8-ohm speaker (Electronics 1)
 AA battery case (Electronics 1)
 9V battery snap (Electronics 1)
 AA batteries (Electronics 1)
 Police Siren Kit (Electronics 2)
 FM Transmitter Kit (Electronics 2)
 Soldering iron, wire cutters, pliers... (Toolkit)

Unit 15: Chemistry Part 2 (K-12)

C1000 (includes chemicals and glassware for intermediate level projects). If you're wanting to do the advanced projects, you'll need to additionally purchase the C3000.

Units 16-19: None

Summer e-Camp: Flight Lab

Straws (Aeronautics Pack)
 Small lump of clay (Aeronautics Pack)
 Balloons (Aeronautics Pack)
 Thumbtack (Electricity Pack)
 12" flexible tubing (Aeronautics Pack)
 Clear plastic cups (Aeronautics Pack)
 Plastic funnel (Aeronautics Pack)
 Ping pong ball (Aeronautics Pack)
 Plastic garbage bag (Aeronautics Pack)
 8 ½" x 11" paper (Aeronautics Pack)
 Small paper clips (Aeronautics Pack)
 Flyer toy (Aeronautics Pack)
 Index cards (Aeronautics Pack)
 11"x17" sheet of paper (Aeronautics Pack)
 String (Aeronautics Pack)
 Donut stickers (Aeronautics Pack)
 Tissue paper (Aeronautics Pack)
 Crepe paper streamer (Aeronautics Pack)
 Plastic garbage bags (Aeronautics Pack)
 Foam plates (Aeronautics Pack)
 Foam meat tray (Aeronautics Pack)
 Wooden spring-type clothespin (Electricity Pack)
 Popsicle sticks (Electricity Pack)
 Skewers (Electricity Pack)
 Wheels (Aeronautics Pack)
 Foam pipe insulation (Aeronautics Pack)
 Foam sheet (Aeronautics Pack)
 Film canisters (Aeronautics Pack)

Rubber bands (Aeronautics Pack)
 Effervescent tablets (Aeronautics Pack)
 Car tire valve (Aeronautics Pack)

Summer e-Camp: Electric Lab

Balloon (Aeronautics Pack)
 Ping pong ball (Aeronautics Pack)
 Tissue paper (Aeronautics Pack)
 Plastic grocery bag (Aeronautics Pack)
 Large paper clips (Electricity Pack)
 Brass fasteners (Electricity Pack)
 Index card (Electricity Pack)
 AA battery pack & batteries (Electricity Pack)
 LEDs (Electricity Pack)
 Neon Lamp (Electricity Pack)
 Buzzer (Electricity Pack)
 3VDC motor (Electricity Pack)
 Alligator clip leads (Electricity Pack)
 Wheels (Electricity Pack)
 Foam blocks (Electricity Pack)
 Clothespins (Electricity Pack)
 Film Canister (Electricity Pack)
 Skewers (Electricity Pack)
 Propellers (Electricity Pack)
 Popsicle sticks (Electricity Pack)
 Aluminum foil (Electricity Pack)
 Thin un-insulated wire (Electricity Pack)
 SPST push-button switch (Electricity Pack)
 DPDT switch (Physics of Light Pack)
 Potentiometers (Physics of Light Pack)
 CdS cell (Electronics 1 Pack)
 Red laser pointer (Physics of Light Pack)
 Breadboard (Electronics 1)
 Digital Multi-meter (Alternative Energy Part 1)
 Hookup wire (Electronics 1)
 100-ohm resistor (Electronics 1)
 1K-ohm resistor (Electronics 1)
 4.7K-ohm resistor (Electronics 1)
 5.6K-ohm resistor (Electronics 1)
 10K-ohm resistor (Electronics 1)
 100K-ohm resistor (Electronics 1)
 2N3904 (NPN) transistor (Electronics 1)
 2N4403 (PNP) transistor (Electronics 1)
 0.47 μ f electrolytic capacitor (Electronics 1)
 10 μ f electrolytic capacitor (Electronics 1)
 0.01 μ f capacitor (Electronics 1)
 Bi-polar red/green LED (Electronics 1)
 Alligator clip wires (Electronics 1)
 Electric buzzer (Electronics 1)
 8-ohm speaker (Electronics 1)
 AA battery case (Electronics 1)

9V battery snap (Electronics 1)
AA batteries (Electronics 1)
Police Siren Kit (Electronics 2)
FM Transmitter Kit (Electronics 2)
Soldering iron, wire cutters, pliers... (Toolkit)

Summer e-Camp: Physics Lab

Popsicle sticks (Physics of Motion Pack)
Index cards (Physics of Motion Pack)
Film canister (Physics of Motion Pack)
Straw (Aeronautics Pack)
Balloons (Physics of Motion Pack)
Water balloons (Physics of Motion Pack)
3' string (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Laser (Physics of Light Pack)
Feather (Physics of Light Pack)
Paper clips (Physics of Light Pack)
Brass fasteners (Physics of Light Pack)
Mirrors (Physics of Light Pack)

Marbles (Physics of Motion Pack)

Summer e-Camp: Chemistry Lab

Funnel (Aeronautics Pack)
Glassware (C1000)
Some chemicals are included with C1000 – check included workbook for detailed list.

Summer e-Camp: Microscope Lab

None

NOTE: Some of the experiments in the e-Science program are also in e-Camp, so you might find a bit of overlap with the materials.

Science Mastery Diamond These are the materials you'll find already in your Science Mastery Program. Simply print off the shopping list from e-Science and scratch these items off your list:

Unit 1: Mechanics (K-12)

Balloon (Aeronautics Pack)
Ping Pong Ball (Aeronautics Pack)
Tissue paper or newspaper (Aeronautics Pack)
Ball (Aeronautics Pack)
Paper clips (Electricity Pack)
Magnet (Electricity Pack)
String or yarn (Aeronautics Pack)
Rope (Physics of Motion Pack)
Paper (Aeronautics Pack)
Neon bulb (Electricity Pack)
Wood skewer (Hovercraft Pack)
Wood popsicle sticks (Hovercraft Pack)
Straw (Hovercraft Pack)
3VDC motors (Hovercraft Pack)
propellers (Hovercraft Pack)
9V battery clip with wires (Hovercraft Pack)
SPST switch (Hovercraft Pack)
16 oz. styrofoam cup (Hovercraft Pack)
Foam hamburger container (Hovercraft Pack)
Foam meat tray (Hovercraft Pack)
Mirrors (Physics of Light Pack)
Laser (Physics of Light Pack)
Clothespin (Electricity Pack)

Unit 2: Motion (K-12)

Feathers (Physics of Light Pack)
Ping Pong Ball (Aeronautics Pack)
Rope (Physics of Motion Pack)
Straws (Aeronautics Pack)
Balloons (Aeronautics Pack)
Paper (Aeronautics Pack)
Index cards (Aeronautics Pack)
Wheels (Electricity Pack)
Film canister (Aeronautics Pack)
Alka-seltzer (Aeronautics Pack)

Unit 3: Matter (K-12)

Marbles (Physics of Motion Pack)

Unit 4: Energy Part 1 (K-12)

Rope (Physics of Motion Pack)
Pulleys (Physics of Motion Pack)
PVC Pipe (Physics of Motion Pack)
Disposable plastic cup (Physics of Motion Pack)
20+ tongue-depressor-size popsicle sticks (Physics of Motion Pack)
Syringes (Physics of Motion Pack)
Brass fasteners (Physics of Motion Pack)

5' of flexible tubing (Physics of Motion Pack)
Wheels (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Straws (Physics of Motion Pack)
Skewers (Physics of Motion Pack)

Unit 5: Energy Part 2 (K-12)

Marbles (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Plastic spoon (Physics of Motion Pack)
Popsicle sticks (Physics of Motion Pack)
Aluminum foil (Physics of Motion Pack)
Index cards (Physics of Motion Pack)
String (Physics of Motion Pack)

Unit 6: Sound (K-12)

Popsicle sticks (Physics of Motion Pack)
Index cards (Physics of Motion Pack)
Film canisters (Electricity Pack)
Straw (Physics of Motion Pack)
Balloons (Physics of Motion Pack)
Water balloons (Physics of Motion Pack)
3' string (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)
Disposable cup (Physics of Motion Pack)
Mirror (Physics of Light Pack)
Laser (Physics of Light Pack)

Unit 7: Astrophysics (K-12)

Paper (Aeronautics Pack)
Magnets (Electricity Pack)
Marble (Physics of Motion Pack)

Unit 8: Chemistry Part 1 (K-12)

Chemistry glassware (C3000)

Unit 9: Light (K-12)

Feather (Physics of Light Pack)
Index cards (Aeronautics Pack)
String (Physics of Motion Pack)
Tracing Paper (Physics of Light Pack)
Popsicle sticks (Physics of Motion Pack)
Red laser pointer (Physics of Light Pack)
Small mirrors (Physics of Light Pack)
Large paper clips (Physics of Light Pack)
Brass fasteners (Physics of Light Pack)
Index cards (Physics of Light Pack)
3VDC motors (Physics of Light Pack)
Gear-pulley(s) (Physics of Light Pack)

Round mirrors (Physics of Light Pack)
 DPDT switches (Physics of Light Pack)
 Alligator clip leads (Physics of Light Pack)
 AA battery packs (Physics of Light Pack)
 AA batteries (Physics of Light Pack)
 Potentiometers (Physics of Light Pack)
 Zip-tie (Physics of Light Pack)
 Conduit hangers (Physics of Light Pack)
 ¼ " x 2" bolts, nuts, and washers(Physics of Light Pack)
 220-ohm resistor (Electronics 2)
 8-ohm audio transformer (Electronics 2)
 9V battery clip (Electronics 2)
 CdS cell (Electronics 2)
 SPST push-button switch (Electronics 2)
 Audio plug (Electronics 2)
 Bi-polar LED (Electronics 2)
 2 AA battery packs (Electronics 2)
 AA batteries (Electronics 2)
 Crystal earphone (Electronics 2)
 Soldering iron, wire cutters, pliers... (Toolkit)

Unit 10: Electricity (K-12)

Balloon (Electricity Pack)
 Tissue paper (Aeronautics Pack)
 Film canister (Electricity Pack)
 Aluminum foil (Electricity Pack)
 Thumb tacks (Electricity Pack)
 Paper clips (Electricity Pack)
 Brass fasteners (Electricity Pack)
 Index cards (Electricity Pack)
 Clothespins (Electricity Pack)
 AA Battery packs & batteries (Electricity Pack)
 LEDs (Electricity Pack)
 CdS Photocell (Electronics 1)
 Neon lamp (Electricity Pack)
 Buzzer (Electricity Pack)
 Alligator clip leads (Electricity Pack)
 SPST Switch (Electricity Pack)
 Laser (Physics of Light Pack)
 3V DC Motors (Electricity Pack)
 Wheels (Electricity Pack)
 Straws (Electricity Pack)
 Foam blocks (Electricity Pack)
 Gear pulley (Electricity Pack)
 Skewers (Electricity Pack)
 Propeller (Electricity Pack)
 Digital Multi-meter (Alternative Energy Part 1)
 1" pipe clamps (ROV Essentials Pack)
 Propellers (ROV Essentials Pack)
 12VDC motors (ROV Essentials Pack)
 Film canisters (ROV Essentials Pack)
 DPDT switches (ROV Essentials Pack)

zip ties (ROV Essentials Pack)
 Mesh screen (ROV Essentials Pack)
 Soldering iron, wire cutters, pliers... (Advanced Toolkit)
Unit 11: Magnetism (K-12)
 Magnet wire (Electricity Pack)
 Magnet for DC Motor Expt (Electricity Pack)
 Film canisters (Electricity Pack)
 Long nails (Electricity Pack)
 D-cell battery (Electricity Pack)
 Sand paper (Electricity Pack)
 Bare wire (Electricity Pack)
 Paper clips (Electricity Pack)
 Rubber band (Electricity Pack)
 AA Battery packs (Electricity Pack)
 AA Batteries (Electricity Pack)
 LEDs (Electricity Pack)
 Buzzer (Electricity Pack)
 3VDC Motors (Electricity Pack)
 Alligator clip lead (Electricity Pack)
 Brass fasteners (Electricity Pack)
 Straws (Aeronautics Pack)
 String (Physics of Motion Pack)
 12VDC motor (ROV Essentials Pack)
 Soldering iron, wire cutters, pliers... (Advanced Toolkit)

Unit 12: Alternative Energy (K-12)

Digital Multi-meter (Alternative Energy Pack 1)
 Solar cell (Alternative Energy Pack 1)
 Solar motor (Alternative Energy Pack 1)
 Gear set (Alternative Energy Pack 1)
 Foam block (Alternative Energy Pack 1)
 2 straws (Alternative Energy Pack 1)
 2 wooden skewers (Alternative Energy Pack 1)
 Wheels (Alternative Energy Pack 1)
 Alligator clip leads (Alternative Energy Pack 1)
 LEDs (Alternative Energy Pack 1)
 Propeller (Alternative Energy Pack 1)
 Germanium diode (Electronics 3)
 4.7k-ohm resistor (Electronics 3)
 Alligator clip test leads (Electricity Pack)
 100' stranded insulated wire (Electronics 3)
 Brass fasteners (Electronics 3)
 Crystal earphone (Electronics 3)
 Zinc electrode (Alternative Energy Part 2)
 Copper electrode (Alternative Energy Part 2)
 Fuel Cell Car Kit (Alternative Energy Part 2)
 Soldering iron, wire cutters, pliers... (Advanced Toolkit)

Unit 13: Thermodynamics (K-12)

Test tubes and test tube clamp (C3000)

Unit 14: Electronics (K-12)

Breadboard (Electronics 1)
 Digital Multi-meter (Alternative Energy Part 1)
 Hookup wire (Electronics 1)
 CdS Photocell (Electronics 1)
 100-ohm resistor (Electronics 1)
 1K-ohm resistor (Electronics 1)
 4.7K-ohm resistor (Electronics 1)
 5.6K-ohm resistor (Electronics 1)
 10K-ohm resistor (Electronics 1)
 100K-ohm resistor (Electronics 1)
 2N3904 (NPN) transistor (Electronics 1)
 2N4403 (PNP) transistor (Electronics 1)
 0.47 μ f electrolytic capacitor (Electronics 1)
 10 μ f electrolytic capacitor (Electronics 1)
 0.01 μ f capacitor (Electronics 1)
 Bi-polar red/green LED (Electronics 1)
 Alligator clip wires (Electronics 1)
 Electric buzzer (Electronics 1)
 8-ohm speaker (Electronics 1)
 AA battery case (Electronics 1)
 9V battery snap (Electronics 1)
 AA batteries (Electronics 1)
 Police Siren Kit (Electronics 2)
 Touch Door Alarm Kit (Electronics 3)
 FM Transmitter Kit (Electronics 2)
 Rolling Clock Kit (Electronics 3)
 Soldering iron, wire cutters, pliers... (Advanced Toolkit)

Unit 15: Chemistry Part 2 (K-12)

C3000 (includes all chemicals and glassware) – you do not need to purchase anything else for this unit. (By the way, the C3000 includes C1000.)

Summer e-Camp: Flight Lab

Straws (Aeronautics Pack)
 Small lump of clay (Aeronautics Pack)
 Balloons (Aeronautics Pack)
 Thumbtack (Electricity Pack)
 12" flexible tubing (Aeronautics Pack)
 Clear plastic cups (Aeronautics Pack)
 Plastic funnel (Aeronautics Pack)
 Ping pong ball (Aeronautics Pack)
 Plastic garbage bag (Aeronautics Pack)
 8 ½" x 11" paper (Aeronautics Pack)
 Small paper clips (Aeronautics Pack)
 Flyer toy (Aeronautics Pack)
 Index cards (Aeronautics Pack)
 11"x17" sheet of paper (Aeronautics Pack)
 String (Aeronautics Pack)
 Donut stickers (Aeronautics Pack)
 Tissue paper (Aeronautics Pack)
 Crepe paper streamer (Aeronautics Pack)

Plastic garbage bags (Aeronautics Pack)
 Foam plates (Aeronautics Pack)
 Foam meat tray (Aeronautics Pack)
 Wooden spring-type clothespin (Electricity Pack)
 Popsicle sticks (Electricity Pack)
 Skewers (Electricity Pack)
 Wheels (Aeronautics Pack)
 Foam pipe insulation (Aeronautics Pack)
 Foam sheet (Aeronautics Pack)
 Film canisters (Aeronautics Pack)
 Rubber bands (Aeronautics Pack)
 Effervescent tablets (Aeronautics Pack)
 Car tire valve (Aeronautics Pack)

Summer e-Camp: Electric Lab

Balloon (Aeronautics Pack)
 Ping pong ball (Aeronautics Pack)
 Tissue paper (Aeronautics Pack)
 Plastic grocery bag (Aeronautics Pack)
 Large paper clips (Electricity Pack)
 Brass fasteners (Electricity Pack)
 Index card (Electricity Pack)
 AA battery pack (Electricity Pack)
 LEDs (Electricity Pack)
 Neon Lamp (Electricity Pack)
 Buzzer (Electricity Pack)
 3VDC motor (Electricity Pack)
 Alligator clip leads (Electricity Pack)
 Wheels (Electricity Pack)
 Foam blocks (Electricity Pack)
 Clothespins (Electricity Pack)
 Film Canister (Electricity Pack)
 Skewers (Electricity Pack)
 Propellers (Electricity Pack)
 Popsicle sticks (Electricity Pack)
 Aluminum foil (Electricity Pack)
 Thin un-insulated wire (Electricity Pack)
 SPST push-button switch (Electricity Pack)
 DPDT switch (Physics of Light Pack)
 Potentiometers (Physics of Light Pack)
 CdS cell (Electronics 1 Pack)
 Red laser pointer (Physics of Light Pack)
 AA batteries (Electricity Pack)
 Breadboard (Electronics 1)
 Digital Multi-meter (Alternative Energy Part 1)
 Hookup wire (Electronics 1)
 100-ohm resistor (Electronics 1)
 1K-ohm resistor (Electronics 1)
 4.7K-ohm resistor (Electronics 1)
 5.6K-ohm resistor (Electronics 1)
 10K-ohm resistor (Electronics 1)
 100K-ohm resistor (Electronics 1)

2N3904 (NPN) transistor (Electronics 1)
2N4403 (PNP) transistor (Electronics 1)
0.47 μ f electrolytic capacitor (Electronics 1)
10 μ f electrolytic capacitor (Electronics 1)
0.01 μ f capacitor (Electronics 1)
Bi-polar red/green LED (Electronics 1)
Alligator clip wires (Electronics 1)
Electric buzzer (Electronics 1)
8-ohm speaker (Electronics 1)
AA battery case (Electronics 1)
9V battery snap (Electronics 1)
AA batteries (Electronics 1)
Police Siren Kit (Electronics 2)
FM Transmitter Kit (Electronics 2)
Soldering iron, wire cutters, pliers... (Toolkit)

Summer e-Camp: Physics Lab

Popsicle sticks (Physics of Motion Pack)
Index cards (Physics of Motion Pack)
Film canister (Physics of Motion Pack)
Straw (Aeronautics Pack)
Balloons (Physics of Motion Pack)
Water balloons (Physics of Motion Pack)
3' string (Physics of Motion Pack)
Rubber bands (Physics of Motion Pack)

Laser (Physics of Light Pack)
Feather (Physics of Light Pack)
Paper clips (Physics of Light Pack)
Brass fasteners (Physics of Light Pack)
Mirrors (Physics of Light Pack)
Marbles (Physics of Motion Pack)
Germanium diode (Electronics 3)
4.7k-ohm resistor (Electronics 3)
Alligator clip test leads (Electricity Pack)
100' stranded insulated wire (Electronics 3)
Brass fasteners (Electronics 3)
Crystal earphone (Electronics 3)

Summer e-Camp: Chemistry Lab

Funnel (Aeronautics Pack)
Glassware (C3000)
Some chemicals are included with C3000 – check included workbook for detailed list.

Units 16-19: None

NOTE: Some of the experiments in the e-Science program are also in e-Camp, so you might find a bit of overlap with the materials.