Classroom Supplies for PLTW Launch Classrooms

For each PLTW Launch module, additional supplies are needed beyond those in the module kit. This resource includes compiled lists of additional supplies for all modules and supplies by module.

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Supplies for All Modules

The table lists additional items necessary for all PLTW Launch modules. These readily available classroom items are omitted from the PLTW kits to help control costs and prevent excess or waste. Classrooms are assumed to have these general supplies on hand regardless of module or grade.

Item	Quantity
Pencils, standard #2	30
Markers, crayons, or colored pencils	30 sets
Cellophane tape	Varies
Masking tape	Varies
Scissors	30
Chart paper	Varies
Liquid glue or glue sticks	Varies

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Supplies by Grade and Module

This section includes lists of specific supplies that are not in the kit for each PLTW Launch module. The lists are grouped by the recommended grade level for each module. The lists include items that are not possible to ship in kits, such as eggs.

Note For more detail about the use of a specific supply item, see the Teacher Guide for the corresponding module.

The lists also include suggestions for the types of materials that students need for learning experiences, as well as suggested materials for students to use when designing a solution to a problem. The Teacher Guide for each module includes a Family Letter template that you can use to request some of the items from students' families.

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Pre-Kindergarten Modules

Healthy Habits

Item	Quantity
Heavy items for students to hold, such as a book, ball, or backpack	2 or 3 items
Small marshmallows	20 per student
Container	1
Small objects, such as a book, piece of paper, or block	2
Hand soap	1

Life Science: Living and Nonliving Things

Item	Quantity
Variety of classroom items to demonstrate living and nonliving things	30
Measurement tools, such as cubes or blocks	30 sets
Old magazines or grocery ads	Varies
Items of various textures	Varies
Baskets or containers	30
Variety of common materials to create bird feeders, such as: • Recyclables, such as toilet paper/paper towel rolls, milk jugs, cardboard boxes, cans, water bottles • Natural items, such as pinecones, sticks • Sticky foods, such as peanut or other nut butters, flour and water paste, shortening, honey • Other items, such as bird seed, sugar-free cereal, stale bread, stale bagels	Varies
Optional: Food or drink items	Varies

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Matter: Floating and Sinking

Item	Quantity
Variety of items to demonstrate texture: • Soft • Smooth • Bumpy • Rough • Fuzzy	Varies
Items that dissolve, such as: • Sugar cubes • Sugar • Salt • Lemonade powder	Varies
Water	Varies
Clear plastic cups	Varies
Old magazines or grocery ads	Varies
Loaf pan or medium-size container	1
Small items for freezing, such as: • Marbles • Toys • Plastic cubes	Varies
Various fabrics, water resistant and absorbent	Varies
Cooking oil	Varies
Food coloring	1
Clear jars or containers with lids	1 per group
Heavy whipping cream	5 cups
Measuring cup	1
Variety of common materials that will sink and float	Varies
Raisins	1 or 2 per student
Clear carbonated beverage	2 cups per student

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Spatial Sense and Coding

Item	Quantity
Dividers or folders	1 or 2 per student
Loose parts, such as blocks, buttons, or other craft supplies	Varies
Dry-erase markers	1 per group
Sticky notes	1 pad
Storage containers or plastic bags	Varies
Optional items: • Cardstock • Feathers (assorted colors) • Felt fabric sheets (assorted colors) • Googly eyes (assorted sizes) • Pom-poms (assorted colors and sizes)	Varies
Optional: Ribbon	1 spool

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Kindergarten Modules

Animals and Algorithms

Item	Quantity
Dry-erase markers	1 per group
Dry-erase erasers or tissues	1 per group

Living Things: Needs and Impacts

Item	Quantity
Old magazines	Varies
Items to represent stones and mud, such as leaves or balls	20 items minimum
Containers or bags	6
Hundreds chart	1
Reusable materials, such as: • Paper: Cardboard boxes, bags, scraps, toilet paper/paper towel rolls • Plastic: Bottles, food containers, bags, milk jugs, bubble wrap • Foam, such as packing peanuts or disposable coffee cups • Cans • Fabric • Buttons	Varies

Pushes and Pulls

Item	Quantity
Chairs	4
Heavy books	6
Empty containers, such as a box, bucket, or basket	6
Yardsticks	2
Connecting cubes	Varies
Ruler	1
Hole punch	1

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Item	Quantity
Measuring tape	1
Old magazines	Varies
Shoeboxes	4
Large rocks	40
Ramps made from materials, such as cardboard or plywood	2
Thick books	4 per group
Various materials for students to choose from, such as: • Shoeboxes • Copy paper boxes • Moving boxes	
Optional: Rolling scooters with handles	Varies
Optional: GoldieBlox™ and the Spinning Machine	1

Structure and Function: Exploring Design

Item	Quantity
Variety of classroom items to demonstrate structure and function	Varies
Nonstandard forms of measurement, such as blocks or connecting cubes	Varies
Coins or other small items to add weight to the hollow plastic eggs	Varies
Paper for painting on, such as construction paper, butcher paper, or copy paper	Varies
Variety of household and classroom items, such as pencils, sticks, pinecones, foam, yarn, floss, cotton balls, buttons, sponge	
Hot glue gun and hot glue sticks (operated by an adult)	Varies

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Structure and Function: Human Body

Item	Quantity
Resealable, sandwich-size plastic bags	1 box
Resealable, gallon-size plastic bags	1 box
Water	Varies

Sunlight and Weather

Item	Quantity
Measuring cup	1
Sand	8 qt
Soil	8 qt
Pea gravel	8 qt
Photographs of local seasons	1 set for the teacher, 1 set per group
Resealable plastic bags	1 box
Materials to use in the problem, such as: • Fabric scraps • Cardboard • Building blocks	Varies

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First Grade Modules

Animal Adaptations

Item	Quantity
Assorted art supplies	Varies

Animated Storytelling

No additional items needed for this module.

Designs Inspired by Nature

Item	Quantity
Resealable plastic bags	1 box
Stapler	1
Spray bottle	1
Water	Varies

Light and Sound

Item	Quantity
Water	Varies
White paper	1 sheet per center
Small pieces of paper or small stickers	1 per student
Translucent, transparent, and opaque materials to test, such as: paper, books, cardboard, wax paper, plastic wrap, aluminum foil	1 of each material per group

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Observing the Sun, Moon, and Stars

Item	Quantity
Compass (digital or physical)	1 per group
Materials for playground construction, such as modeling clay, poster board, construction paper, or butcher paper	Varies
Optional: Dime or similar diameter circular item	1 per student
Optional: Drinking straws	1 per student
Optional: Clay	1/4 pound
Optional: Heat source for testing UV beads, such as a hair dryer or lamp	1 item

Living Things: Needs and Impacts

Item	Quantity
Old magazines	Varies
Items to represent stones and mud, such as leaves or balls	20 items minimum
Container or bag	6
Hundreds chart	1
Reusable materials, such as: • Paper: Cardboard boxes, bags, scraps, toilet paper/paper towel rolls • Plastic: Bottles, food containers, bags, milk jugs, bubble wrap • Foam, such as packing peanuts or disposable coffee cups • Cans • Fabric • Buttons	Varies

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Second Grade Modules

Grids and Games

Item	Quantity
Sticky notes	1 pad

Living Things: Diversity of Life

Item	Quantity
Blank paper	1 piece per student
Potting soil	40 quarts
Water	Varies
Rulers with centimeters	1 per group
Assorted plants, flowers, and seeds	1 per group

Form and Function

Item	Quantity
Flour, powdered sugar, or other fine powder	1/4 cup per class
Napkins or paper towels	1 package or roll
Small containers of water	1 per group
Items to represent seeds, such as lima beans, dried beans, any variety of pea-sized seeds	Enough to test each group's prototype
Optional: Paper plates	15

Materials Science: Properties of Matter

Item	Quantity
Water	Varies
Small building materials, such as blocks, snap cubes, connecting blocks, modeling clay	8 sets

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Item	Quantity
Common objects with different colors and textures, such as sandpaper, fleece, salt, crepe paper, a squeaky pet toy	1 of each item
Water	Varies
Leaves	1 per pair of students
Freezer or cooler with ice	1
Common materials for building prototypes: • Cloth, such as old jeans, shirts, jackets, socks • Plastic, such as bubble wrap, plastic wrap, sandwich bags • Foam, such as packing peanuts or disposable coffee cups • Metal, such as aluminum foil • Other items, such as pipe cleaners, paper, cardboard	Varies
Construction materials to assemble prototypes, such as tape, glue, string, hot glue and glue gun (operated by an adult)	Varies
Optional: Opaque bag to place objects inside	1 bag
Optional: Cup with room temperature water	8 cups
Optional: Paper towels	1 roll
Optional: Additional materials for testing, such as plastic sandwich bags or T-shirt material	1 of each item per group

The Changing Earth

Item	Quantity
Sand	Varies
Plastic spoons or small plastic shovels	1 per group
Ice cubes	3 per group
Water	500 ml per group
Pebbles	Varies
Rocks	Varies
Ruler (Distance Learning)	1

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Third Grade Modules

Environmental Changes

Item	Quantity
Water	Varies
Chart paper or white butcher paper, to represent icebergs	35 pieces
Items to represent food, such as small pieces of colored paper, plastic blocks, plastic game chips	100 pieces minimum
Yellow paper cut into strips or small squares	60 pieces
Scrap paper cut into strips or small squares	80 pieces
Paper cut into round pieces	20 circles

Life Cycles and Survival

Item	Quantity
Aquarium gravel	1 small bag

Programming Patterns

Item	Quantity
Sticky notes	1 pad

Stability and Motion: Forces and Interaction

Item	Quantity
Right triangles made from paper	1 per group
Ramp, such as plywood, cardboard, box lid	1 per class
Craft sticks	1 per group
Paper clips, steel	1 per group
Opaque divider, such as card stock, poster board, construction paper	1 per group
Magnetic item (Distance Learning)	1 item
Nonmagnetic item (Distance Learning)	1 item

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Stability and Motion: Science of Flight

Item	Quantity
Rulers	1 per group
Balls, such as soccer ball, basketball, or softball	1 per class
Boxes	1 per group
Balls	1 per group
Books	1 per group
Paper	1 per student

Variation of Traits

Item	Quantity
Dry-erase board eraser	1 per group

Weather: Factors and Hazards

Item	Quantity
At least two different Earth materials, such as: sand, topsoil, clay, sandy soil, rocky soil	Varies
Water	Varies

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Fourth Grade Modules

Earth: Human Impact and Natural Disasters

Item	Quantity
Natural resources, such as: • Wood • Water • Plants • Rocks • Empty water bottle (to represent air)	Varies
Assorted materials to upcycle, such as: • Milk cartons • Plastic bottles • Tissue boxes • Fabric scraps	Varies

Earth: Past, Present, and Future

Item	Quantity
Water	Varies
White vinegar	Varies
Optional: Lemon juice	Varies

Energy Exploration

Item	Quantity
Rubber bands	2
Measuring tool, such as a ruler, measuring tape, or yardstick	8
Potatoes	At least 10
Pennies	10
Labels	2
Additional materials for the windmill blades, such as: • Construction paper • Card stock • Cardboard	

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Item	Quantity
Additional materials for the design problem, such as: • Aluminum foil • Plastic wrap • Cardboard box	
Optional: Ramp	1
Optional: Eggs, real for testing	1 per group plus extra
Optional: Eggs, plastic for students who have egg allergies	Varies
Optional: Materials for the vehicle restraint system, such as: • Rubber bands • Bubble wrap • Pipe cleaners • Cotton balls	Varies

Input/Output: Computer Systems

No additional items needed for this module.

Input/Output: Human Brain

Item	Quantity
Hot glue gun and hot glue sticks (operated by an adult)	1
Variety of sensory items, such as candy in wrappers, jacks, toy cars, clay	Varies
Classroom objects, such as pencils, pens, erasers, books	10–15

Organisms: Structure and Function

Item	Quantity
Sticky notes or scrap paper	Varies
Fine sand	1 lb
Box or plastic tub	2
Baby carrots	1 or 2 per student
Plastic sheeting or other protective cloth	Varies

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Item	Quantity
Water	Varies
Rulers	3 or 4
Assorted books	3 per student pair
Clean socks or plastic/paper bags	2 per student pair
Blindfolds or clean handkerchiefs	1 per student pair

Waves and the Properties of Light

Item	Quantity
Salt, rice, sand, or sugar	1 pinch per group
Container, such as a shallow baking dish	1
Water	Varies
Protractors	4
Boxes or baskets	2
Transparent materials, such as glass or clear plastic	At least 4
Translucent materials, such as frosted plastic, ice, or tissue paper	At least 4
Opaque materials, such as blocks or cardboard	At least 4
Games with rule books, such as board games or card games	Varies
Optional: Materials for the problem, such as: • Paper • Dice • Cards	Varies

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Fifth Grade Modules

Earth's Water and Interconnected Systems

Item	Quantity
Index cards	1 pack
Fast-growing seeds, such as: • Alfalfa • Radish • Chia • Lettuce • Basil • Marigold • Morning Glory	2 packs
Potting soil	Varies
Water	Varies
Spray bottle	1
Salt	26 oz
Measuring cups	1
Empty gallon jugs or containers	2
Earth materials, such as sand or soil	Varies

Ecosystems: Flow of Matter and Energy

Item	Quantity
Permanent marker	1
Bowl	1
Tablespoon	1
Water	Varies
Bucket, bin, or hat	1
Optional: Materials for the photosynthesis models: • Colorful beads • Poster board	Varies
Optional: Grid chart paper	1 piece

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Infection: Detection

No additional items needed for this module.

Infection: Modeling and Simulation

Item	Quantity
Red construction paper	8 pieces
Blue construction paper	8 pieces

Matter: Properties and Reactions

Item	Quantity
Water	Varies
Pure cane granulated sugar	1 lb
Iodized salt	26 oz
Rubbing alcohol	32 fl oz
All-purpose flour	5 lb
Liquid dish soap	1 bottle
Paper clips	8
Cooking oil	16 fl oz
Sand	Varies
Baking soda	1 lb
Plastic grocery bags	8
Paper grocery bags	8
Cloth grocery bags	8
Heavy book	2
Dry-erase markers	4
Poles, dowels, or brooms	2
Desks or chairs	4

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Item	Quantity
Measurement tools, such as rulers, meter sticks, or yardsticks	8
Other materials to use as weights, such as milk jugs or jars	Varies

Patterns in the Universe

Item	Quantity
Grid chart paper	1 piece
Resealable plastic bags	1 box
Sticky notes	1 pad
Display boards, such as: • Poster board • Tri-fold board • Project board • Foam board	Varies

Robotics and Automation

Item	Quantity
Materials to create the problem site, such as butcher paper, poster board, or construction paper	Varies

Robotics and Automation: Challenge

Item	Quantity
Rulers	1 per group
Chair or box	1
Optional: Red construction paper	Varies

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