



Materials and Tools for Chill Out Invention Kit

This materials and tools list is sufficient for 20 students to complete the activities in teams of five students. This list can be used to purchase and/or supply materials and tools *without* purchasing the kit.

Materials and tools that are not supplied in the kit are listed separately and identified as *required* or *optional* to complete the activities.

All activities require safety items: safety glasses, disposable latex-free gloves, and dust masks.

Materials and Tools (required; supplied in the purchased kit)	Size and Quantity	Notes
Shipping tape, clear	2 small rolls	Suggest rolls of 1.88 inch x 22.2 yard
Cardstock	25 sheets of 8 1/2-inch x 11-inch	Suggest 110 lb. weight
Aluminum foil	1 roll	
Metal lunchbox	2	
Nylon-insulated lunch bag	2	
Neoprene lunch bag or beverage cooler	2	
Glass measuring cups	2, 4-cup capacity	Need to hold 2 1/2 cups of liquid
Funnel	1	For transfer of hot liquid to narrow bottles
Electric tea kettle	1	Boiling water needed

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Clear plastic bottles with caps	20, 2 oz. bottles	
Clear plastic storage bin	4, 6 quart	Shoe box size
Insulated or Styrofoam cup	4, 16 oz.	
Reclosable plastic bags	20, 1 gallon-size	
Food coloring	4 bottles, 1 fluid ounce total	Two different colors
Vegetable shortening	4, 16-ounce cans	Store brand
Styrofoam packing peanuts	1 bag	
Feathers	1 bag of approximately 500	
Felt squares	50 pieces, 9-inch x 12-inch	
Plastic wrap	1 roll	
Wax paper	1 roll	
Masking tape	5 rolls	
Plastic or paper plates	1 package of 25	

String	1 roll	
Spray bottle	5	
AA battery holder with wire leads	5, 4 battery capacity	
AA batteries	20	
D battery holder	5, 4 battery capacity	
D batteries	20	
Peltier tile	5	
Masonite board	5, 16 x 20-inch	
Cardboard	10 sheets, 20-inch x 20-inch	
Arctic alpine plus 11 CPU fan	10	Newegg
Glass immersion thermometer	10	Record in degree C and degree F
Infrared thermometer	2	
Indoor/outdoor thermometer	5, 8-inch	

Wire cutter/stripper	5 for class	
Safety Items (required; supplied in the purchased kit)	Description	Notes
Latex-free disposable gloves	1 box of 100; medium	
Safety glasses	22 regular	
Safety glasses	3 over prescription safety glasses	
Dust masks, disposable		

Materials and Tools (required; <i>not</i> supplied in the purchased kit)	Size and Quantity	Notes
Cardboard and scrap materials		Commonly found in recycling bins
Scissors, sharp	1 pair for each class member	From classroom
Utility knife	5 for class	For cutting cardboard
Ruler	5 for class	From classroom
Gooseneck lamp with incandescent light bulb	1 for class	From school

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Chocolate bar	1 for class	Vending machine or grocery store
Calculator	1 for each team	From classroom
Paper towel	1 roll	From school bathroom
Paper or newsprint	1 stack	From classroom
Plastic spoon	10	Check school cafeteria
Flattened cardboard	1 piece	Size of cereal box
Empty soda can	4, 7.5-oz.	From recycling bin
Empty plastic water bottle	10, 16-oz.	From recycling bin
Ice	2 bags	Grocery store
Scrap 20-gauge wire	1 spool	For students to practice stripping wire

Materials and Tools (optional ; <i>not</i> supplied in the purchased kit)	Size and Quantity	Notes
Scrap cloth	10 pieces	Size of dish towel
Terra cotta pot	1, 20 inch	Clay, not plastic

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Terra cotta pot	1, 12 inch	Clay, not plastic
Playground sand	1 bag	
Light-colored wet cloth	1	Must cover the width of a 20 in. diameter pot
Duct tape	1 roll	
Alligator clamps	5	