

Unit 6.3 Materials List

Consumable and Non-consumable kits are available for order through Kendall Hunt.
To order or for more information, contact Sarah Zenner, sczenner@kendallhunt.com.

Consider this a “Teacher’s Shopping List”. This list contains the physical materials that must be acquired to complete the unit’s lesson activities. There are multiple hands-on activities that students do throughout this unit. Take some time to review the linked Setup Guides below to prepare; some materials are used in more than one lesson.

- [Optional] Lesson 2: [6.3_L02_Uncover1_Teacher_SetupSlides](#)
- Lesson 3: [6.3_L03_Uncover_Teacher_SetUpGuide](#)
- Lesson 4: [6.3_L04_Uncover_Teacher_SetupGuide](#)
- Lesson 5: [6.3_L05_Uncover2_Teacher_SetUpGuide](#)
- Lesson 7: [Carl's Pantry List](#)
 - *Items in bold with an asterisk are used in earlier lesson activities and need to be purchased ahead of time. We recommend waiting to purchase the rest of the grocery items in the Carl’s Pantry List document linked above until your students have finalized their recipes in the **Lesson 6 Connect phase**; if certain food items aren’t chosen by any group there is no need to purchase them.*
 - *Also review the “Substitutions and/or Eliminations” section of Carl’s Pantry List, in case of allergies, substituting for items already on-hand, item availability, etc.*

The materials are separated by consumables and non-consumables. Quantities per class listed are the maximum quantities you will need for one class assuming a class of 32 students.

A note on printed materials: Handouts, student guides, other paper materials and electronic resources are not listed here. Please refer to individual lesson plans for the most up-to-date links for these items to determine an actual page count of printed materials needed for a particular lesson.

Consumable Materials		
Description	Total Quantity Needed per class	Lesson
Markers	8	1, 4, 5, 7
Poster paper or whiteboards	8	1, 4, 5, 7
Baking soda	[Optional] ~4 tsp, divided	2

Notes: <ul style="list-style-type: none"> Epsom salt can be used as an alternative in the Lesson 2 water electrolysis demonstration. <u>Do not use table salt</u> - it can create poisonous chlorine gas. Baking soda must be used for the Lesson 5 demonstration. 	16 tsp, divided	5
Wooden coffee stirrers	2	2
[Optional] Bottled water (16.9 oz.) for the water electrolysis demonstration (Your tap water may contain substances that can affect the results of the experiment - it can affect the water color or precipitate out. Test this experiment ahead of time and substitute bottled water if necessary.)	2	2
Toothpicks <i>Gumdrops are used with toothpicks for this activity; alternative suggestion: styrofoam balls/clay & pipe cleaners; building blocks</i>	1 box	2
Disposable pipettes	40	3
Plastic spoon	24 2	3 5
Small containers (paper bathroom cups, 2 oz. plastic cups)	48 at least 10 per smoothie station/UC team	3 7
Benedict's reagent (assuming 2 stations)	30 mL	3
Lugol's iodine (assuming 2 stations)	30 mL	3
Biuret's reagent (assuming 2 stations)	30 mL	3
Isopropyl/rubbing alcohol (assuming 2 stations in Lesson 3)	30 mL 1/2 cup	3 5
Resealable bag, sandwich size	8 8	4 5
Quilted paper towels (standard school paper towel is likely not absorbent enough)	16-24 sheets 8 sheets	4 5

Effervescent tablets	8	5
Piece of paper or paper towel	1	5
Tarnished copper penny	8-16	5
Soap bubbles and wand <i>alternative suggestion:</i> <ul style="list-style-type: none"> • Dish soap/water solution • Straws • Clear glass, jar, or small beaker • Large container (waste collection) 	1 bottle 8 cups 8 1 1	5
2" x 2" pieces of steel wool (approximate size), with soap removed	8	5
Rubber bands	8	5
6" x 6" pieces of aluminum foil (approximate size)	8	5
Disposable gloves	8 pairs	5
<i>alternative suggestion: reusable work gloves</i>	<i>1 pair</i>	
[Optional] Elephant toothpaste small group activity or teacher demonstration	see linked resource	5
Consumables - Food <i>Review the setup guides linked at the top of this document for suggested alternatives to many of the foods listed below. We recommend using what you have on-hand in your classroom already if you can, to help minimize food costs.</i>		
Description	Total Quantity Needed per class	Lesson
[Optional] Prizes for most identified, such as Tootsie Rolls or Baby Ruth candy bars	varied	1
Gumdrops, 4 colors total Each group needs: <ul style="list-style-type: none"> • 14 - Gumdrops of one color (for hydrogen atoms) 	~300	2

<ul style="list-style-type: none"> 4-8 - Gumdrops of three other colors (for oxygen, carbon, nitrogen atoms) <p><i>Toothpicks are used with gumdrops for this activity; alternative suggestion: cotton balls & pipe cleaners</i></p>		
Vegetable oil	20 mL (4 tsp)	3
Light corn syrup (<i>also a possible smoothie ingredient substitute; see Carl's Pantry List for details</i>)	20 mL (4 tsp)	3
Egg white (uncooked)	20 mL (4 tsp)	3
Crackers (any kind)	32	4
Powdered cocoa or hot chocolate mix	8 tsp	4
[Optional] Lemon juice	8-16 drops	4
Vinegar	2 cups, divided 6.5 cups, divided	4 5
Ketchup, taco sauce, or BBQ sauce (packets are easy)	8 drops or 3-4 packets	5
Ground black pepper	4 tsp, divided	5
<p><i>Foods listed below are used in lesson activities AND are on Carl's Pantry List for the Unit Challenge smoothie-making in the Unit Closer lesson, therefore they need to be purchased before the Unit Closer lesson.</i></p>		
Applesauce, unsweetened	20 mL (4 tsp) variable (smoothie)	3 7
Plain greek yogurt (not low fat)	20 mL (4 tsp) variable (smoothie)	3 7
Wheat bran	20 mL (4 tsp) variable (smoothie)	3 7
Oatmeal	~2 cups, divided variable (smoothie)	4 7
Milk, whole	2 cups, divided variable (smoothie)	5 7
Salt	16 tsp, divided	5

	variable (smoothie)	7
<p><i>We recommend waiting to purchase the rest of the grocery items from Carl's Pantry List until your students have finalized their recipes in the Lesson 6 Connect phase.</i></p> <p><i>If certain food items aren't chosen by any group there is no need to purchase them.</i></p>		
<p>Other items from Carl's Pantry List, as determined by Unit Challenge team smoothie recipes.</p> <p>Team recipes are generated during the Lesson 6 Connect phase, using: Unit Challenge Organizer - Our Smoothie Recipe for Carl</p>	as needed, by UC team recipes	7

Non-consumable Materials		
Description	Quantity per class	Lesson
[Optional] Plastic cups or beakers	2 8	2, 3 4
[Optional] Metal push pins	4	2
[Optional] 9 volt batteries	2	2
[Optional] Glass test tubes with volume graduations	4	2
[Optional] Ruler, if test tubes do not have volume graduations	1	2
[Optional, suggested for demo] Apparatus to support test tubes, such as a ring stand or books	2	2
Safety glasses	32	3, 4
Timer (stopwatch or on cell phone)	4 1	3 5
Small test tubes with caps	56	3
Rack or other holding device (cups, beakers)	8	3
Beaker or glass to hold test tubes and hot water	2	3
Hot water	enough to fill beakers w/test	3

	tubes used above (for Benedict's test)	
Knee-high nylon sock (reusable)	8	4
[Optional] Scissors	8	4, 7
Clear glass, jar, or small beaker	8	5
Large plastic cup, or medium to larger sized beaker (250 mL or more)	8 2	4 5
Metal spoon	1	5
Small cup or bowl	2	5
Candle	1	5
Lighter/matches	1	5
Glass lab or candy thermometer	1	5
Sponge, small (or paper towel)	1	5
Access to a smooth surface (desk or lab table top; spot check with isopropyl prior to allowing students to experiment)	1	5
[Optional] Elephant toothpaste small group activity or teacher demonstration	see linked resource	5
Blender	8	7
Large spoon	8	7
Measuring cups/spoons	8	7