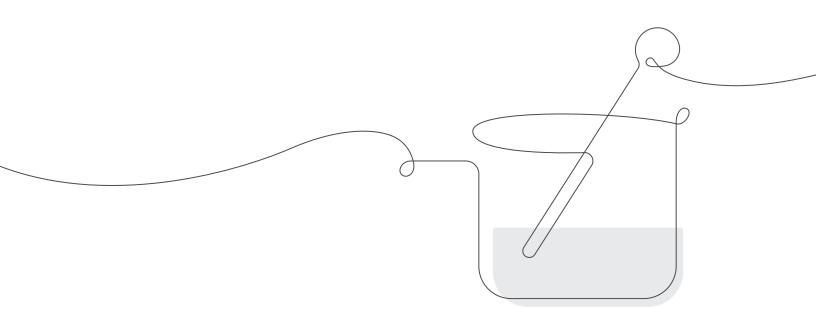
# Materials kit list

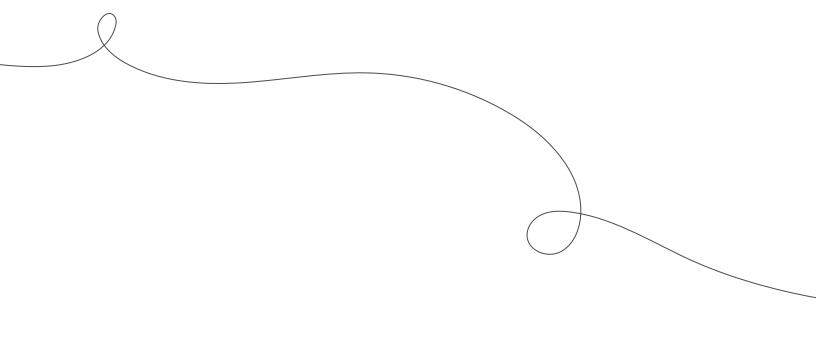






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# Hands-on inquiry

Hands-on learning is at the heart of Amplify Science, and is integrated into every unit. Each hands-on activity provides clear instructions for the teacher, while providing easily accessible materials in unit-specific kits.

Each kit contains hands-on materials, both consumable and nonconsumable, and various print materials (e.g., Vocabulary and Key Concept cards). Each kit contains sufficient materials for two uses by a class of 36 students. Refill kits are also available for consumable items. Please note, as improvements are made to hands-on activities, materials lists are subject to change. Check and follow your district's safety regulations pertaining to the use of safety goggles for students participating in hands-on science activities.

Amplify Science also offers a starter kit available for purchase. The starter kit includes general science materials needed to conduct most hands-on activities and experiments for all units in our curriculum program. Items in the starter kit can fulfill some of the teacher-provided kit materials needed for each unit.

With Amplify Science, students are able to actively participate in science, while acting like a scientist gathering evidence, thinking critically, making observations, and communicating their claims.



### Starter Kit

Quantity	Description
4	magnifying glass/hand lenses, (6/pack)
2	tub
12	paper, sticky note, pad
40	safety goggles
10	tape, masking
20	tray, plastic

# Animal and Plant Defenses: Spikes, Shells, and Camouflage

### Hands-on materials provided in the Animal and Plant Defenses kit

Quantity	Description	Used in lesson
1	pencil-top erasers, box of 144	2.3, 2.5, 2.8
2	clay, 16 oz package	2.3, 2.4, 2.5, 4.2, 4.3, 4.4
37	cups, plastic, 16 oz	1.1, 1.4
19	cups, paper, 9 oz	2.3, 2.4, 2.5, 2.8, 4.2
150	cups, plastic, 3 oz*	1.2, 2.1, 4.3
19	hair comb, plastic	2.3, 2.4, 2.5, 4.2, 4.3, 4.4
72	game token, plastic, 1¼" diameter disc	2.3, 2.4, 2.5, 2.6, 2.7, 4.4
40	rings, metal	1.4, 2.3, 2.5, 2.8, 3.1
4	tissue paper, various colors, pack of 25 sheets*	2.3, 2.4, 2.5, 2.8, 4.2
1	toothpicks, box of 750	2.3, 2.5, 2.8, 4.2
1 set	Structure-Function Language Frame cards: set 2 (6 cards)	2.2
1 set	Background Scene cards (9 cards)	2.6
18 sets	Parent and Offspring cards set (5 cards)	3.1, 3.2, 3.3
1 set	Explanation Language Frames cards: set 1(4 cards)	3.3

<sup>\*</sup>consumable item

### Print materials provided in the Animal and Plant Defenses kit

Quantity	Description	Used in lesson
1	Unit Question	1.1
4	Chapter Questions	throughout
2	section headers: Key Concepts, Vocabulary	throughout
9	Vocabulary cards	throughout
Student books		
18 + 1 big book	Tortoise Parts	1.2, 1.3, 2.4, 4.3
18 + 1 big book	Whose Lunch Is This?	2.1, 2.2, 4.3
18 + 1 big book	Parents and Offspring	3.2, 3.4, 3.5, 4.3
18 + 1 big book	Frog Models	4.1, 4.3
18 + 1 big book	Spikes, Spines, and Shells	1.3, 2.3, 2.4, 2.5, 2.6, 2.7, 4.2, 4.3, 4.4

# **Balancing Forces:**

# **Investigating Floating Trains**

### Hands-on materials provided in the Balancing Forces kit

Quantity	Description	Used in lesson
1	aluminum foil, roll*	1.5, 4.1
38	bags, plastic, gallon, freezer, self-sealing*	1.2, 2.2, 2.3
20	bags, plastic, quart, self-sealing*	1.5
18	balls, rubber, small	2.2
3	balloons, medium size, packs (12/pack)	1.2, 1.5
2	battery, D-volt*	4.1
38	blocks, wooden	1.2, 2.1, 2.2
1	bolt, iron	4.1
20	cardboard, sheets, 8.5" x 11"*	1.8
1	clothespins, wood, with wire hinges, pack (24/pack)	1.2
18	cups, plastic, 16 oz	3.2
19	dominoes, plastic, small	1.2, 2.1, 2.2
1	fasteners (brads), brass plated, box (30/box)	1.5
10	fasteners (brads), solid brass	1.5
40	hooks, with pointed screw tips	1.2
1	index cards, 3" x 5", pack (100/pack)*	1.2, 2.2
1	magnets, ball, pack (20/pack)	2.2
19	magnets, ring, boxes (2/box, one magnet with red side)	1.4, 1.5, 1.6, 1.8, 2.2, 2.5, 3.1, 3.2, 4.2
2	paper clips, small, packs (100/pack)	1.2, 1.5, 1.8, 2.1, 2.3, 3.2, 4.1
1	sandpaper, small piece*	4.1
10	spoons, steel	1.5
16	steel wool, pieces	1.5
15	sticks, craft, wooden	1.5
1	string, cotton, white, ball, 105 feet	3.1, 3.2
20	twist ties, iron cores	1.5
10	washers, metal	1.5
1	wire, magnet, copper, roll	4.1

<sup>\*</sup>consumable item

### Print materials provided in the Balancing Forces kit

Quantity	Description	Used in lesson
1	Balancing Forces: Investigating Floating Trains Investigation Notebook	throughout
18 sets	Word Relationships cards: set 1 (12 cards/set)	1.8, 2.4, 3.4
18 sets	Word Relationships cards: set 2 (3 cards/set)	2.4, 3.4
18 sets	Word Relationships cards: set 3 (2 cards/set)	3.4
Print materials f	or the classroom wall	
4	Chapter Questions	throughout
14	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	throughout
1	Unit Question	throughout
14	Vocabulary cards	throughout
Student books		
18	Explaining a Bridge	4.4
18	Forces All Around	1.3, 2.1, 4.2
18	Handbook of Forces	1.5, 2.3, 3.2, 4.1
18	Hoverboard	3.4, 3.5
18	What My Sister Taught Me About Magnets	1.7

# **Changing Landforms:** The Disappearing Cliff

### Hands-on materials provided in the Changing Landforms kit

Quantity	Description	Used in lesson
72	bags, plastic*	1.3
9	bottles, plastic spray	2.2, 2.5, 4.2
4	chalk, white, blocks*	2.2, 2.5, 4.2
18	containers, clear, plastic	2.2, 2.5, 4.2
16	hard candies*	1.6
74	index cards, 3" x 5"*	1.3
1	jar, clear plastic, with lid	1.6
500	pom-poms, black	3.2
18	rocks, pumice	2.5
2	sand, jagged black, cups*	1.3
2	sand, jagged white, cups*	1.3
2	sand, kinetic, boxes	4.2
2	sand, rounded multi-colored, cups*	1.3
3	sand, rounded sandbox, cups*	1.3, 4.2

<sup>\*</sup>consumable item

### Print materials provided in the Changing Landforms kit

Quantity	Description	Used in lesson
1	Changing Landforms: The Disappearing Cliff Investigation Notebook	throughout
12 sets	Erosion Card Set (8 cards/set)	3.3
18 sets	Island Maps Card Set (4 cards/set)	3.4
Print materials for t	he classroom wall	
4	Chapter Questions	throughout
10	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	throughout
1	Unit Question	throughout
11	Vocabulary cards	throughout

### Print materials provided in the Changing Landforms kit (continued)

Quantity	Description	Used in lesson
Student books		
18	Gary's Sand Journal	1.4, 1.5
18	Handbook of Land and Water	1.2, 3.1, 3.3, 3.5, 4.1, 4.2, 4.4
18	Landform Postcards	1.1, 4.4
18	Making Models of Streams	4.3
18	What's Stronger? How Water Causes Erosion	2.3, 2.4

# The Earth System:

# Investigating Water Shortages

### Hands-on materials provided in the The Earth System kit

Quantity	Description	Used in lesson
2	aluminum foil, rolls*	2.7, 3.4
3	baking soda, bottles*	5.1, 5.4
2	calcium chloride, bottles*	5.1, 5.4
18	droppers	2.4, 3.4, 4.5
2	foam cups, 8 oz	3.1
1	food coloring, bottle*	2.7, 3.4
18	graduated cylinders, 25 ml	5.1, 5.4
1	inflatable globe	1.1, 2.2, 2.3, 4.2
18	labels: "baking soda"	5.1, 5.4
18	labels: "calcium chloride"	5.1, 5.4
18	labels: "phenol red + water"	5.1, 5.4
9	labels: "water"	5.4
18	measuring spoon, multi-measure	2.4, 5.1, 5.4
1	phenol red concentrate, bottle*	5.1, 5.4
18	plastic containers, 16 oz*	2.1, 2.4, 2.7, 3.4
2	plastic lids	5.1, 5.4
36	plastic cups, ½ oz*	2.7, 3.4, 4.5
92	plastic cups with lids, 9 oz*	2.1, 2.2, 2.4, 2.7, 3.1, 3.4, 5.1, 5.4
20	plastic cups, 16 oz*	2.7, 3.1, 3.4
2	plastic wrap, rolls*	2.7, 3.4
218	self-sealing plastic bags, quart size*	2.2, 5.1, 5.4
18	squeeze bottles	5.1, 5.4
1	tissue paper, pack	4.1
18	wooden sticks	5.1, 5.4

<sup>\*</sup>consumable item

### Print materials provided in the *The Earth's System* kit

Quantity	Description	Used in lesson
1	The Earth System: Investigating Water Shortages Investigation Notebook	throughout
9 sets	Word Relationships cards: set 1 (4 cards/set)	3.3
9 sets	Word Relationships cards: set 2 (8 cards/set)	4.4
9 sets	Word Relationships cards: set 3 (6 cards/set)	5.5
Print materials f	or the classroom wall	
5	Chapter Questions	throughout
14	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	1.1
1	Unit Question	1.1
21	Vocabulary cards	throughout
Student books		
18	Chemical Reactions Everywhere	5.2
18	Drinking Cleopatra's Tears	2.5, 2.6, 3.1
18	Engineering Clean Water	2.8, 3.4
18	How the Earth System Explains Dinosaur Extinction	4.4

### Earth's Features:

# Mystery in Desert Rocks Canyon

### Hands-on materials provided in the Earth's Features kit

Quantity	Description	Used in lesson
18	conglomerate rock	1.4, 2.2
6	gravel, cups	1.4, 1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1
2	plaster of paris, powdered dry mix, 4.5 lb box	1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1
29	plastic cups, 16 oz, clear	1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1
54	plastic cups, 3 oz, clear	1.5, 2.3, 3.1
18	plastic spoons	1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1
6.5	sand, cups	1.5, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1
9	sandstone rock	2.2
1	Stream Table Erosion kit	4.3, 4.4

### Print materials provided in the Earth's Features kit

Quantity	Description	Used in lesson
1	Earth's Features: Mystery in Desert Rocks Canyon Investigation Notebook	throughout
9	Evidence Cards: set 1 (3 cards/set)	1.6
9	Evidence Cards: set 2 (4 cards/set)	3.5
9	Evidence Cards: set 3 (5 cards/set)	4.5
9	Fossil cards (2 cards/set)	1.3
Print materials for the	ne classroom wall	
4	Chapter Questions	1.2, 2.1, 3.1, 4.1
11	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	1.1
1	Unit Question	1.1
16	Vocabulary cards	throughout

### Print materials provided in the Earth's Features kit (continued)

Quantity	Description	Used in lesson
Student books		
18	Arguing to Solve a Mystery	3.3
18	Clues from the Past	1.2, 1.3, 1.5
18	Fossil Hunter's Handbook	2.2, 2.3, 2.4, 2.5, 3.2, 3.4
18	Rocky Wonders	4.1, 4.2, 4.3
18	Through the Eyes of a Geologist	2.1

# **Ecosystem Restoration:**

# Matter and Energy in a Rain Forest

### Hands-on materials provided in the Ecosystem Restoration kit

Quantity	Description	Used in lesson
1	bags, plastic, self-sealing, roll of 150	1.7
1	balloons, pack of 10*	2.1
2	bottles, spray	1.2, 3.1
10	containers, plastic, large, with lids	1.2, 1.4
1	cubes, plastic, interlocking, blue, pack of 400	1.4, 1.7, 2.3
1	cubes, plastic, interlocking, green, pack of 50	1.7
1	cubes, plastic, interlocking, red, pack of 50	1.7
1	cubes, plastic, interlocking, white, pack of 400	1.4, 1.7, 2.3
125	cups, clear, plastic	2.6
1	pipe cleaners, brown, pack of 100	2.3
1	pipe cleaners, green, pack of 100	2.3
1	seeds, alfalfa, package*	1.2
1	seeds, grass, package*	1.2
2	Soil A: Nutrient Rich, bags*	1.2, 3.1
2	Soil B: Nutrient Poor, bags*	3.1
1	spoons, plastic, box of 48	3.1
1	sticks, wooden, pack of 50	3.1
1	tokens, plastic, yellow, pack of 360	2.3
1	yarn, ball	1.7, 2.5

<sup>\*</sup>consumable item

### Print materials provided in the Ecosystem Restoration kit

Quantity	Description	Used in lesson
1	Ecosystem Restoration: Matter and Energy in a Rain Forest Investigation Notebook	throughout
9 sets	Evidence Cards: Animals (5 cards/set)	1.8
9 sets	Evidence Cards: Plants (5 cards/set)	2.7
9 sets	Evidence Cards: Decomposers (6 cards/set)	3.6
18	Leaves and Roots Game board	2.3

### Print materials provided in the *Ecosystem Restoration* kit (continued)

Quantity	Description	Used in lesson
9 sets	Leaves and Roots Game cards (28 cards/set)	2.3
1 set	Organism Name cards: set 1 (36 cards)	1.7
1 set	Organism Name cards: set 2 (36 cards)	2.5
Print materials	for the classroom wall	
3	Chapter Questions	1.2, 2.1, 3.1
13	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	1.1
1	Unit Question	1.1
19	Vocabulary cards	throughout
Student books		
18	Energy Makes It All Go	2.2, 2.4, 2.5
18	Matter Makes It All Up	1.3, 1.6
18	Restoration Case Studies	2.5, 3.5
18	Walk in the Woods	3.2
18	Why Do Scientists Argue?	2.6

# **Energy Conversions:** Blackout in Ergstown

### Hands-on materials provided in the Energy Conversions kit

Quantity	Description	Used in lesson
9	bags, plastic, small, self-sealing	1.3, 1.5, 2.3, 3.4, 3.5, 4.1
9	buzzers	1.5, 2.3 3.4, 3.5
1	cherry pitter	1.2
100	cups, plastic, 2 oz*	3.4, 3.5
18	fan blades, plastic, small	1.3, 1.5, 3.2, 3.4, 3.5, 4.1
1	lamp, clamp	2.3, 4.2
9	LEDs, bicolor	1.5, 3.2, 3.4, 3.5
1	light bulb, incandescent, 150 watt	2.3, 4.2
18	motors	1.3, 1.5, 3.2, 3.4, 3.5, 4.1
125	plates, plastic, small*	3.4, 3.5
9	solar panels	1.3, 1.5, 2.3, 4.1
400	sticks, craft, wooden*	3.4, 3.5
1	wire, two-conductor, spool, 25 feet	4.2
2	wire, with clip leads, packs (10/pack)	1.3, 1.5, 2.3, 3.2, 3.4, 3.5, 4.1
1	wire cutter	4.2

<sup>\*</sup>consumable item

### Print materials provided in the Energy Conversions kit

Quantity	Description	Used in lesson
1	Energy Conversions: Blackout in Ergstown Investigation Notebook	throughout
1 set	Changes in Ergstown Cards (7 cards/set)	2.3
Print materials fo	or the classroom wall	
4	Chapter Questions	throughout
9	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	throughout
1	Unit Question	throughout
18	Vocabulary cards	throughout

### Print materials provided in the *Energy Conversions* kit (continued)

Quantity	Description	Used in lesson
Student books		
18	Blackout!	4.1, 4.2, 4.3
18	Energy Past and Present	2.2
18	It's All Energy	1.5, 1.6, 2.1, 2.4, 3.1, 3.2, 3.3, 3.4, 3.6, 4.3
18	Sunlight and Showers	3.3, 3.5
18	Systems	1.2, 1.3, 4.1

# Environments and Survival: Snails, Robots, and Biomimicry

### Hands-on materials provided in the Environments and Survival kit

Quantity	Description	Used in lesson
36	baggies, gallon*	4.2
36	cardstock, black, sheets	3.1
36	cardstock, white, sheets	3.1
5	clay, blocks (1 lb. each)*	4.3
1	cubes, probability, pack of 18	1.4, 2.4
36	cups, plastic	1.4, 2.1, 2.4, 3.1
1	cylinders, graduated, pack of 36	2.1
1	droppers, plastic, pack of 36	2.1
1	model pieces, pack of 36 (18 blue, 18 red)	1.4, 2.4
1	pipe cleaners, pack of 576*	4.2
3	sticks, craft, boxes of 500 each*	4.2
1	sticks, skill, pack of 432*	4.2
8	straws, boxes of 100 each*	4.2
3	string, rolls*	4.2
36	tape, masking, rolls*	2.1
1	tape, packing, clear, roll*	2.1
1	tokens, black, pack of 600	1.4, 2.4, 3.1
1	tokens, white, pack of 360	2.4, 3.1

<sup>\*</sup>consumable item

### Print materials provided in the Environments and Survival kit

Quantity	Description	Used in lesson
1	Environments and Survival: Snails, Robots, and Biomimicry Investigation Notebook	throughout
18 sets	Grove Snail cards (9 cards/set)	2.3
18 sets	Grove Snail data cards: set 1 (4 cards/set)	1.5
18 sets	Grove Snail data cards: set 2 (6 cards/set)	2.6
18 sets	Grove Snail data cards: set 3 (3 cards/set)	3.4
2 sets	Neck Test posters (4 cards/set)	4.2, 4.3

### Print materials provided in the *Environments and Survival* kit (continued)

Quantity	Description	Used in lesson
9 sets	Needs for Survival Environment Cards (4 cards/set)	1.2
9 sets	Needs for Survival Organism Cards (4 cards/set)	1.2
Print materials fo	r the classroom wall	
4	Chapter Questions	1.1, 2.1, 3.1, 4.1
9	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	1.1
1	Unit Question	1.1
19	Vocabulary cards	throughout
Student books		
18	Biomimicry Handbook	1.1, 2.4, 2.7, 3.3
18	Cockroach Robots	4.1
18	Earthworms Underground	1.3
18	Environment News	3.2, 3.3
18	Mystery Mouths	2.2

### Inheritance and Traits:

### Variation in Wolves

### Hands-on materials provided in the Inheritance and Traits kit

Quantity	Description	Used in lesson
3	clay, green, packs*	2.4
3	clay, red, packs*	2.4
3	clay, yellow, packs*	2.4
30	cups, clear, plastic	2.4, 3.3
18	food coloring, blue, bottles*	3.3
18	food coloring, red, bottles*	3.3
300	stickers, round, blue*	3.3
300	stickers, round, red*	3.3

<sup>\*</sup>consumable item

### Print materials provided in the Inheritance and Traits kit

Quantity	Description	Used in lesson
1	Inheritance and Traits: Variation in Wolves Investigation Notebook	throughout
9 sets	Animal Cards (10 cards/set)	1.3
1 set	Bear Cards (20 cards)	1.3
18 sets	Bird Cards (8 cards/set)	1.3, 1.4
9 sets	Bison Valley Pack data cards (6 cards/set)	2.1, 2.5
9 sets	Elk Mountain Pack data cards (6 cards/set)	1.5 2.1, 2.5
9 sets	Flamingo Family data cards (4 cards/set)	3.1
9 sets	Fruit Fly Family data cards (4 cards/set)	2.1
9 sets	Sparrow Family data cards (3 cards/set)	4.2, 4.3
9 sets	Wolf Family data cards (2 cards/set)	2.5
9 sets	Word Relationships cards: set 1 (4 cards/set)	1.6
9 sets	Word Relationships cards: set 2 (6 cards/set)	2.5
9 sets	Word Relationships cards: set 3 (4 cards/set)	3.6

### Print materials provided in the *Inheritance and Traits* kit (continued)

Quantity	Description	Used in lesson		
Print materials for t	Print materials for the classroom wall			
4	Chapter Questions	1.4, 2.1, 3.1, 4.1		
10	Key Concepts	throughout		
2	section headers: Key Concepts, Vocabulary	1.1		
1	Unit Question	1.3		
14	Vocabulary cards	throughout		
Student books				
18	Blue Whales and Buttercups	1.2		
18	Handbook of Traits	1.1, 1.6, 2.2, 2.6, 3.4, 3.5		
18	How the Sparrow Learned Its Song	3.2, 3.4, 3.5		
18	Scorpion Scientist	4.1		
18	The Code	2.3, 2.6		

# Light and Sound: Puppet-Theater Engineers

### Hands-on materials provided in the Light and Sound kit

1         acetate, sheets, box (100 sheets/box) (representing clear plastic)*         2.3.44           1         batteries, AA, pack (24 batteries/pack)*         1.5           22         cardstock, blue, sheets (representing cardboard)*         2.3           19         cardstock, white, sheets         2.3.24, 3.1, 3.5, 3.6, 4.5           2         clips, binder, large, boxes (12/box)         2.3.24, 3.1, 3.5, 3.6, 4.5           4         clips, binder, medium, boxes (12/box)         4.1           4         crayons, black, boxes (12/box)         4.1           4         crayons, black, boxes (12/box)         3.3           4         crayons, gray, boxes (12/box)         3.3           8         crayons, silver, boxes (12/box)         4.1           9         crayons, silver, boxes (12/box)         4.1           19         uces, plastic, 4 oz         4.1           10         envelopes, large, box (100/box)*         2.3           12         anxiloges, small*         2.3           2         fashlights, small         2.3           22         fashlights, small         2.3           23         fashlights, small         2.3           24         fashlights, smelts (representing tinted plastic)*         2.3           3	Quantity	Description	Used in lesson
22       cardstock, blue, sheets (representing cardboard)*       2.3         19       cardstock, white, sheets       2.3         2       clips, binder, large, boxes (12/box)       2.3, 2.4, 3.1, 3.5, 3.6, 4.5         4       clips, binder, medium, boxes (12/box)       2.3         1       containers, plastic, pack (5/pack)       4.1         4       crayons, black, boxes (12/box)       3.3         4       crayons, gray, boxes (12/box)       3.3         8       crayons, silver, boxes (12/box)       1.5, 2.5, 3.3         8       cups, plastic, 4 oz       4.1         19       cups, plastic, 9 oz       2.3, 2.4, 3.1, 3.5, 3.6, 4.5         1       envelopes, large, box (100/box)*       2.4         12       envelopes, small*       2.3         2       flashlights, large       2.1, 2.4, 3.5, 4.6         19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         24       1.2       2.3         1       foil, roll*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber band, s	1	acetate, sheets, box (100 sheets/box) (representing clear plastic)*	2.3, 3.4
19       cardstock, white, sheets       2.3         2       clips, binder, large, boxes (12/box)       2.3, 2.4, 3.1, 3.5, 3.6, 4.5         4       clips, binder, medium, boxes (12/box)       2.3         1       containers, plastic, pack (5/pack)       4.1         4       crayons, black, boxes (12/box)       1.2, 1.5, 2.5         4       crayons, gray, boxes (12/box)       3.3         4       crayons, silver, boxes (12/box)       1.5, 2.5, 3.3         8       cups, plastic, 4 oz       4.1         19       cups, plastic, 9 oz       2.3, 2.4, 3.1, 3.5, 3.6, 4.5         1       envelopes, large, box (100/box)*       2.4         12       envelopes, small*       2.3         2       flashlights, large       2.1, 2.4, 3.5, 4.6         19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         2.2       foam, yellow, sheets*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber bands, bag (36/bag)       4.1         100       sticks, wooden (tongue depressors)       4.1         1	1	batteries, AA, pack (24 batteries/pack)*	1.5
2         clips, binder, large, boxes (12/box)         2.3.24, 3.1, 3.5, 3.6, 4.5           4         clips, binder, medium, boxes (12/box)         2.3           1         containers, plastic, pack (5/pack)         4.1           4         crayons, black, boxes (12/box)         1.2, 1.5, 2.5           4         crayons, gray, boxes (12/box)         3.3           8         cups, plastic, 4 oz         4.1           19         cups, plastic, 9 oz         2.3, 2.4, 3.1, 3.5, 3.6, 4.5           1         envelopes, large, box (100/box)*         2.4           112         envelopes, small*         2.3           2         flashlights, large         2.1, 2.4, 3.5, 4.6           19         flashlights, small         1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5           22         foam, yellow, sheets*         2.3           22         foam, yellow, sheets*         2.3           4         lighting filter, sheets (representing tinted plastic)*         2.3           5         rings, binder, metal, packs (8/pack)         1.4           1         rubber band, super size         4.2           1         rubber bands, bag (36/bag)         4.1           100         sticks, wooden (tongue depressors)         4.1           1 <t< td=""><td>22</td><td>cardstock, blue, sheets (representing cardboard)*</td><td>2.3</td></t<>	22	cardstock, blue, sheets (representing cardboard)*	2.3
4       clips, binder, medium, boxes (12/box)       2.3         1       containers, plastic, pack (5/pack)       4.1         4       crayons, black, boxes (12/box)       1.2, 1.5, 2.5         4       crayons, gray, boxes (12/box)       3.3         8       cups, plastic, 4 oz       4.1         19       cups, plastic, 9 oz       2.3, 2.4, 3.1, 3.5, 3.6, 4.5         1       envelopes, large, box (100/box)*       2.4         112       envelopes, small*       2.3         2       flashlights, large       2.1, 2.4, 3.5, 4.6         19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         2.2       foam, yellow, sheets*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber bands, bag (36/bag)       4.1         100       sticks, wooden (tongue depressors)       4.1         1       sting, roll       4.1	19	cardstock, white, sheets	2.3
1         containers, plastic, pack (5/pack)         4.1           4         crayons, black, boxes (12/box)         1.2.1.5.2.5           4         crayons, gray, boxes (12/box)         3.3           4         crayons, silver, boxes (12/box)         1.5.2.5,3.3           8         cups, plastic, 4 oz         4.1           19         cups, plastic, 9 oz         2.3.24,31,35,36,4.5           1         envelopes, large, box (100/box)*         2.4           112         envelopes, small*         2.3           2         flashlights, large         2.1,24,35,4.6           19         flashlights, small         1.5,2,12,3,24,31,3.5,36,4.5           22         foam, yellow, sheets*         2.3           22         foam, yellow, sheets*         2.3           4         lighting filter, sheets (representing tinted plastic)*         2.3           5         rings, binder, metal, packs (8/pack)         1.4           1         rubber band, super size         4.2           1         rubber band, super size         4.2           1         vicks, wooden (tongue depressors)         4.1           1         sticks, wooden (tongue depressors)         4.1	2	clips, binder, large, boxes (12/box)	2.3, 2.4, 3.1, 3.5, 3.6, 4.5
4       crayons, black, boxes (12/box)       1.2.15, 2.5         4       crayons, gray, boxes (12/box)       3.3         4       crayons, silver, boxes (12/box)       1.5.25, 3.3         8       cups, plastic, 4 oz       4.1         19       cups, plastic, 9 oz       2.3, 24, 31, 3.5, 3.6, 4.5         1       envelopes, large, box (100/box)*       2.4         112       envelopes, small*       2.3         2       flashlights, large       2.1, 24, 3.5, 4.6         19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         22       foam, yellow, sheets (representing tinted plastic)*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber band, super size       4.2         1       rubber bands, bag (36/bag)       4.1         100       sticks, wooden (tongue depressors)       4.1         1       string, roll       4.1	4	clips, binder, medium, boxes (12/box)	2.3
4       crayons, gray, boxes (12/box)       3.3         4       crayons, silver, boxes (12/box)       1.5, 2.5, 3.3         8       cups, plastic, 4 oz       4.1         19       cups, plastic, 9 oz       2.3, 2.4, 3.1, 3.5, 3.6, 4.5         1       envelopes, large, box (100/box)*       2.4         112       envelopes, small*       2.3         2       flashlights, large       2.1, 2.4, 3.5, 4.6         19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber band, super size       4.2         1       rubber bands, bag (36/bag)       4.1         100       sticks, wooden (tongue depressors)       4.1         1       string, roll       4.1	1	containers, plastic, pack (5/pack)	4.1
4       crayons, silver, boxes (12/box)       1.5, 2.5, 3.3         8       cups, plastic, 4 oz       4.1         19       cups, plastic, 9 oz       2.3, 2.4, 3.1, 3.5, 3.6, 4.5         1       envelopes, large, box (100/box)*       2.4         112       envelopes, small*       2.3         2       flashlights, large       2.1, 2.4, 3.5, 4.6         19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber band, super size       4.2         1       rubber bands, bag (36/bag)       4.1         100       sticks, wooden (tongue depressors)       4.1         1       string, roll       4.1	4	crayons, black, boxes (12/box)	1.2, 1.5, 2.5
8       cups, plastic, 4 oz       4.1         19       cups, plastic, 9 oz       2.3, 2.4, 3.1, 3.5, 3.6, 4.5         1       envelopes, large, box (100/box)*       2.4         112       envelopes, small*       2.3         2       flashlights, large       2.1, 2.4, 3.5, 4.6         19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber band, super size       4.2         1       rubber bands, bag (36/bag)       4.1         100       sticks, wooden (tongue depressors)       4.1         1       string, roll       4.1	4	crayons, gray, boxes (12/box)	3.3
19         cups, plastic, 9 oz         2.3, 2.4, 3.1, 3.5, 3.6, 4.5           1         envelopes, large, box (100/box)*         2.4           112         envelopes, small*         2.3           2         flashlights, large         2.1, 2.4, 3.5, 4.6           19         flashlights, small         1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5           22         foam, yellow, sheets*         2.3           4         lighting filter, sheets (representing tinted plastic)*         2.3           5         rings, binder, metal, packs (8/pack)         1.4           1         rubber band, super size         4.2           1         rubber bands, bag (36/bag)         4.1           100         sticks, wooden (tongue depressors)         4.1           1         string, roll         4.1	4	crayons, silver, boxes (12/box)	1.5, 2.5, 3.3
1       envelopes, large, box (100/box)*       2.4         112       envelopes, small*       2.3         2       flashlights, large       2.1, 2.4, 3.5, 4.6         19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber band, super size       4.2         1       rubber bands, bag (36/bag)       4.1         100       sticks, wooden (tongue depressors)       4.1         1       string, roll       4.1	8	cups, plastic, 4 oz	4.1
112       envelopes, small*       2.3         2       flashlights, large       2.1, 2.4, 3.5, 4.6         19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         1       foil, roll*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber band, super size       4.2         1       rubber bands, bag (36/bag)       4.1         100       sticks, wooden (tongue depressors)       4.1         1       string, roll       4.1	19	cups, plastic, 9 oz	2.3, 2.4, 3.1, 3.5, 3.6, 4.5
2flashlights, large2.1, 2.4, 3.5, 4.619flashlights, small1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.522foam, yellow, sheets*2.31foil, roll*2.34lighting filter, sheets (representing tinted plastic)*2.35rings, binder, metal, packs (8/pack)1.41rubber band, super size4.21rubber bands, bag (36/bag)4.1100sticks, wooden (tongue depressors)4.11string, roll4.1	1	envelopes, large, box (100/box)*	2.4
19       flashlights, small       1.5, 2.1, 2.3, 2.4, 3.1, 3.5, 3.6, 4.5         22       foam, yellow, sheets*       2.3         1       foil, roll*       2.3         4       lighting filter, sheets (representing tinted plastic)*       2.3         5       rings, binder, metal, packs (8/pack)       1.4         1       rubber band, super size       4.2         1       rubber bands, bag (36/bag)       4.1         100       sticks, wooden (tongue depressors)       4.1         1       string, roll       4.1	112	envelopes, small*	2.3
foam, yellow, sheets* 2.3  foil, roll* 2.3  lighting filter, sheets (representing tinted plastic)* 2.3  rings, binder, metal, packs (8/pack) 1.4  rubber band, super size 4.2  rubber bands, bag (36/bag) 4.1  sticks, wooden (tongue depressors) 4.1  string, roll 4.1	2	flashlights, large	2.1, 2.4, 3.5, 4.6
foil, roll*  1 lighting filter, sheets (representing tinted plastic)* 2.3  5 rings, binder, metal, packs (8/pack) 1.4  1 rubber band, super size 4.2  1 rubber bands, bag (36/bag) 4.1  100 sticks, wooden (tongue depressors) 4.1  1 string, roll 4.1	19	flashlights, small	
4 lighting filter, sheets (representing tinted plastic)* 5 rings, binder, metal, packs (8/pack) 1 rubber band, super size 4.2 1 rubber bands, bag (36/bag) 4.1 100 sticks, wooden (tongue depressors) 4.1 1 string, roll 4.1	22	foam, yellow, sheets*	2.3
5 rings, binder, metal, packs (8/pack) 1.4  1 rubber band, super size 4.2  1 rubber bands, bag (36/bag) 4.1  100 sticks, wooden (tongue depressors) 4.1  1 string, roll 4.1	1	foil, roll*	2.3
rubber band, super size 4.2 rubber bands, bag (36/bag) 4.1 100 sticks, wooden (tongue depressors) 4.1 1 string, roll 4.1	4	lighting filter, sheets (representing tinted plastic)*	2.3
rubber bands, bag (36/bag) 4.1 100 sticks, wooden (tongue depressors) 4.1 1 string, roll 4.1	5	rings, binder, metal, packs (8/pack)	1.4
100 sticks, wooden (tongue depressors) 4.1  1 string, roll 4.1	1	rubber band, super size	4.2
1 string, roll 4.1	1	rubber bands, bag (36/bag)	4.1
	100	sticks, wooden (tongue depressors)	4.1
1 wax paper, roll* 2.3	1	string, roll	4.1
	1	wax paper, roll*	2.3

<sup>\*</sup>consumable item

### Print materials provided in the Light and Sound kit

Quantity	Description	Used in lesson
1	Light and Sound: Puppet-Theater Engineers Investigation Notebook	throughout
18	Let's Test! Bookmark	3.2
18	What Vibrates? Bookmark	4.3
1 set	Explanation Language Frames cards: set 1 (7 cards)	1.4
1 set	Explanation Language Frames cards: set 2 (3 cards)	1.5
1 set	Explanation Language Frames cards: set 3 (3 cards)	2.5
1 set	Explanation Language Frames cards: set 4 (4 cards)	3.2
1 set	Explanation Language Frames cards: set 5 (3 cards)	3.6
1 set	Materials Chart cards (15 cards)	2.3, 3.3
1 set	Results: Let's Test! cards (6 cards)	3.2
1 set	Results: Testing Materials cards (8 cards)	3.1
1 set	Shadow Cards: large (3 cards/set)	2.2
18 sets	Shadow Cards: small (12 cards/set)	2.2
36 sets	Word Ring cards (8 cards/set)	1.4, 2.2, 2.4, 4.3
Print materials for	the classroom wall	
4	Chapter Questions	throughout
1	Unit Question	throughout
2	section headers: Key Concepts, Vocabulary	throughout
8	Vocabulary cards	throughout
Student books		
18 + 1 big book	Can You See in the Dark?	1.2, 1.3, 1.4
18 + 1 big book	Engineering with Light and Sound	1.1, 2.5, 3.3, 4.1
18 + 1 big book	Let's Test!	3.2, 3.5
18 + 1 big book	What Made This Shadow?	2.2, 2.3
18 + 1 big book	What Vibrates?	4.2, 4.3

# Modeling Matter: The Chemistry of Food

### Hands-on materials provided in the Modeling Matter kit

Quantity	Description	Used in lesson
1	acetone (nail polish remover)*	2.6
1	balls, foam, cup	1.5
1	citric acid, container*	2.1, 2.12
1	cornstarch, container*	2.9
1	cumin, powder, bag*	2.1
270	cups, paper, 3 oz*	1.2, 2.1, 2.6, 2.9, 2.12
8	cups, plastic, 2 oz*	1.2, 1.4
92	cups, plastic, clear, 14 oz	1.4, 1.5, 2.1, 2.12
21	droppers, glass	2.6
1	felt, piece	1.5
1	foam peanuts, bag	1.5
1	food coloring, pack (blue, red, yellow, green)*	1.2, 1.4
1	funnel	2.9
1	hook-and-loop fastener, roll	1.5
30	labels, preprinted: citric acid*	2.1
10	labels, preprinted: cornstarch*	2.9
30	labels, preprinted: cumin*	2.1
10	labels, preprinted: flour*	2.9
10	labels, preprinted: lecithin*	2.9
30	labels, preprinted: pepper*	2.1
30	labels, preprinted: pepper*	2.1
30	labels, preprinted: sugar*	2.1
1	lecithin, powder, container*	2.9, 2.12
1	marker, permanent, black	2.9
2	oil, vegetable, bottle*	2.6, 2.9, 2.12
60	paper, chromatography, strips*	1.4
1	pasta, elbow macaroni, box*	1.4
1	pasta, orzo, bag*	1.4
1	pasta, shells, bag*	1.4

### Hands-on materials provided in the *Modeling Matter* kit (continued)

Quantity	Description	Used in lesson
1	pepper, container*	2.1
9	scoops, half-teaspoon	2.1, 2.9
1	spoons, plastic, box (48/box)	1.2, 2.12
3	sticks, wooden, packs (50/pack)*	2.1, 2.9
29	vials, with snap lids	2.6, 2.9
1	vinegar, white, container*	1.2, 2.6, 2.8, 2.12

<sup>\*</sup>consumable item

### Print materials provided in the Modeling Matter kit

Quantity	Description	Used in lesson
1	Modeling Matter: The Chemistry of Food Investigation Notebook	throughout
18 sets	Word Relationships cards: set 1 (8 cards/set)	1.9
18 sets	Word Relationships cards: set 2 (8 cards/set)	2.9
Print materials for th	ne classroom wall	
2	Chapter Questions	throughout
11	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	throughout
1	Unit Question	throughout
14	Vocabulary cards	throughout
Student books		
18	Break It Down: How Scientists Separate Mixtures	1.7, 1.8
18	Food Scientist's Handbook	1.1, 2.5, 2.9, 2.11
18	Made of Matter	1.3
18	Science You Can't See	2.7
18	Solving Dissolving	2.3

### Needs of Plants and Animals:

### Milkweed and Monarchs

### Hands-on materials provided in the Needs of Plants and Animals kit

Quantity	Description	Used in lesson
50	cups, 2 ounce, plastic	2.1, 2.3, 2.5, 2.6, 3.1
250	cups, 9 ounce, plastic*	1.7, 2.1, 2.3, 2.5, 2.6, 3.1, 3.2, 4.3
1	clamp lamp	throughout
1	grow light bulb	throughout
1	light timer	throughout
2	Nutrient Rich Soil coupons	throughout
4	plant misters	throughout
2	radish seeds, packets*	2.1, 2.3, 2.5, 2.6, 4.3
100	sticky notes, black*	3.1
5	sticky notes, electric blue, pads*	2.7
6	sunflower seeds, packets*	1.7, 2.3, 2.5, 2.6, 3.1, 4.3
5	trays, potting, plastic	1.7, 2.1, 2.3, 2.5, 2.6, 3.1, 4.3

<sup>\*</sup>consumable item

### Print materials provided in the Needs of Plants and Animals kit

Quantity	Description	Used in lesson
1	Needs of Plants and Animals Investigation Notebook	throughout
3 sets	Animals and Their Foods cards (9 cards)	1.5, 4.3
1 set	Animals Eating Station cards (9 cards)	1.4, 4.3
1 set	Animal Habitats Table cards (8 cards)	1.5, 4.3
1 set	Explanation Language Frames cards: set 1 (6 cards)	1.6, 1.7, 4.3
1 set	Explanation Language Frames cards: set 2 (5 cards)	2.4, 2.6, 2.7, 4.3
1 set	Explanation Language Frames cards: set 3 (2 cards)	2.6, 4.3
1 set	Explanation Language Frames cards: set 4 (2 cards)	2.7, 4.3
1 set	Explanation Language Frames cards: set 5 (4 cards)	3.2, 3.3, 4.3
1 set	Food Sorting cards (17 cards)	1.4, 1.5, 4.3
1 set	Habitat Pictures: Forest and Field of Weeds (2 cards)	1.5, 1.6, 4.3

### Print materials provided in the Needs of Plants and Animals kit (continued)

Quantity	Description	Used in lesson
1 set	Human Needs cards (12 cards)	4.2, 4.3
18 sets	Human Needs Student Cards (12 cards)	4.2, 4.3
1 set	Living/Nonliving Things cards (16 cards)	1.2, 1.3, 4.3
18 sets	Living Things Student Cards (11 cards)	1.2, 4.3
19 sets	Mariposa Grove cards (2 cards)	1.6, 1.7, 4.3
1 set	Monarch Habitats chart cards (6 cards)	4.1, 4.3
18 sets	Water in Habitat cards (4 cards)	2.4, 4.3
Print materials for	the classroom wall	
1	Unit Question	1.1
4	Chapter Questions	throughout
2	section headers: Key Concepts, Vocabulary	throughout
11	Vocabulary cards	throughout
Student books		
18 + 1 big book	A Plant in the Desert	2.4, 2.5, 4.3
18 + 1 big book	Above and Below	3.4, 4.3
18 + 1 big book	Handbook of Plants	1.5, 1.6, 1.7, 2.1, 2.6, 3.2, 3.3, 4.3
18 + 1 big book	Investigating Monarchs	4.1, 4.2, 4.3
18 + 1 big book	Science Walk	1.1, 1.2, 4.3

# Patterns of Earth and Sky: Analyzing Stars on Ancient Artifacts

### Hands-on materials provided in the Patterns of Earth and Sky kit

Quantity	Description	Used in lesson
1	ball, 15 cm diameter	1.5, 2.1, 2.3, 2.5, 3.2, 3.3, 3.4
18	dots, sticky, blue*	2.5
18	dots, sticky, green*	2.5
18	dots, sticky, red*	2.5
18	dots, sticky, yellow*	2.5
9	globes, inflatable	1.2, 2.5. 2.6
1	map, world, folded	1.2
24	paper, white, sheets (11" x 17")*	3.2, 3.4
5	spheres, small	1.4

<sup>\*</sup>consumable item

### Print materials provided in the Patterns of Earth and Sky kit

Quantity	Description	Used in lesson
1	Patterns of Earth and Sky: Analyzing Ancient Artifacts Investigation Notebook	throughout
9 sets	Word Relationships cards: set 1 (7 cards/set)	1.6
9 sets	Word Relationships cards: set 2 (7 cards/set)	2.3
9 sets	Explanation Cards (2 cards/set)	2.6
Print materials for the	ne classroom wall	
4	Chapter Questions	1.2, 2.1, 3.1, 4.1
10	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	1.1
1	Unit Question	1.1
16	Vocabulary cards	throughout

### Print materials provided in the Patterns of Earth and Sky kit (continued)

Quantity	Description	Used in lesson
Student books		
18	Dog Days of Summer	3.4
18	Handbook of Stars and Constellations	1.1, 1.6, 3.2, 3.5, 4.3
18	How Big Is Big? How Far Is Far?	1.3, 1.5, 2.4
18	Star Scientist	4.1
18	Which Way Is Up?	2.4

# Plant and Animal Relationships: Investigating Systems in a Bengali Forest

### Hands-on materials provided in the Plant and Animal Relationships kit

Quantity	Description	Used in lesson
2 bags	beans, kidney*	3.2, 3.3
1 bag	beans, lima	1.5
2 bags	beans, mung*	3.2, 3.3
2 bags	cotton balls*	4.2, 4.3
1	fan, small	4.2, 4.3
1	flashlight	2.3
24 oz	modeling clay, blue*	3.2, 3.3
24 oz	modeling clay, green*	3.2, 3.3
24 oz	modeling clay, pink*	3.2, 3.3
24 oz	modeling clay, purple*	3.2, 3.3
18	plastic bags*	3.2, 3.3
9	plastic containers	1.6
18	plastic cups, 3-oz	1.5, 1.6
6	plastic cups, 12-oz	3.2
18	probability cubes (dice)	2.3, 3.3
1 bag	seeds, alfalfa	1.5
1 bag	seeds, beet	1.5
1 bag	seeds, ginko tree	1.5
1 bag	seeds, marigold	1.5
2 bags	seeds, radish*	1.6
1 bag	seeds, sunflower	1.5
1 bag	seeds, sweet corn	1.5
40 cups	soil	1.6
6	spoons	3.2, 3.3
1 ball	string	1.3
9	tape measures	4.3
5	tongs	3.3

<sup>\*</sup>consumable item

### Print materials provided in the *Plant and Animal Relationships* kit

Quantity	Description	Used in lesson
1	Plant and Animal Relationships: Investigating Systems in a Bengali Forest Investigation Notebook	throughout
18	Bengal Tiger Reserve Sample Study Site Map (2015)	1.4
1 set	Concept Mapping cards: Set 1 (5 cards/set)	1.7
1 set	Concept Mapping cards: Set 2 (4 cards/set)	2.2
1 set	Concept Mapping cards: Set 3 (4 cards/set)	3.6
9 sets	Plants Parts cards (8 cards/set)	2.1
Print materials	for the classroom wall	
4	Chapter Questions	1.4, 2.1, 3.1, 4.1
10	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	1.1
1	Unit Question	1.3
14	Vocabulary cards	throughout
Student books		
18	A Plant Is a System	2.2
18	Habitat Scientist	3.1, 3.2
18	Handbook of Habitats	1.1, 1.4, 1.5, 2.4, 3.2, 4.4
18	Investigating Seeds	4.1, 4.2
18	My Nature Notebook	1.2

# Properties of Materials:

# Designing Glue

### Hands-on materials provided in the Properties of Materials kit

Quantity	Description	Used in lesson
54	bags, plastic	1.1, 3.3, 4.1
8	baking soda, containers*	1.5, 1.9
1	beans, kidney, bag*	1.3, 1.5, 1.9, 2.2
1	cinnamon powder, container	1.1
8	cornstarch, containers*	1.1, 1.5, 1.9, 2.2, 3.2, 3.5, 4.1, 4.2
8	corn syrup, bottles*	3.2, 3.5, 4.1, 4.2
344	cups, paper, 3 oz*	1.3, 1.5, 1.9, 3.5, 4.1, 4.2
300	cups, plastic, with lids, 9 oz*	1.5, 1.9, 2.2, 3.2, 3.5, 4.1, 4.2
6	gelatin powder, boxes (4 packages/box)*	3.2, 3.5, 4.1, 4.2
332	index cards, unlined, 4" x 6"*	1.3, 1.4, 1.7, 1.9, 3.2, 3.5
99	labels, preprinted	1.3, 1.5, 2.2, 3.2
2	salt, boxes*	1.5, 1.9
48	spoons, plastic	1.5, 1.9, 2.2, 3.5, 4.1, 4.2
400	sticks, craft, wooden, large*	4.1, 4.2
550	sticks, craft, wooden, small*	1.3, 1.5, 1.9, 3.2, 3.5, 4.1, 4.2
135	washers, metal	3.3, 4.1

<sup>\*</sup>consumable item

### Print materials provided in the Properties of Materials kit

Quantity	Description	Used in lesson
1	Properties of Materials: Designing Glue Investigation Notebook	throughout
18 sets	Word Relationships cards: set 1 (2 cards/set)	1.4, 1.9, 4.3
18 sets	Word Relationships cards: set 2 (3 cards/set)	1.9, 4.3
18 sets	Word Relationships cards: set 3 (4 cards/set)	4.3

### Print materials provided in the *Properties of Materials* kit (continued)

Quantity	Description	Used in lesson		
Print materials for	Print materials for the classroom wall			
4	Chapter Questions	throughout		
13	Key Concepts	throughout		
2	section headers: Key Concepts, Vocabulary	throughout		
1	Unit Question	throughout		
13	Vocabulary cards	throughout		
Student books				
18	Can You Change It Back?	2.1		
18	Handbook of Interesting Ingredients	1.6, 3.3		
18	Jelly Bean Engineer	1.7		
18	Jess Makes Hair Gel	3.1, 3.4, 4.1		
18	What If Rain Boots Were Made of Paper?	1.2		

### Pushes and Pulls:

# Designing a Pinball Machine

### Hands-on materials provided in the Pushes and Pulls kit

Quantity	Description	Used in lesson
93	baggies, plastic, quart size with zip*	1.3, 1.4, 2.3, 3.2, 3.4, 4.3, 5.1, 5.2, 5.3
1	ball, foam, 6"	1.2, 2.1, 2.2, 3.1, 3.3, 3.4, 4.1, 4.2
73	balls, table-tennis*	1.4, 2.3, 3.2, 3.4, 4.3, 5.1 5.2, 5.3
73	binder clips, large*	1.3, 1.4, 2.3, 3.2, 3.4, 4.3 5.1, 5.2, 5.3
1	cardboard box, 12" x 24" x 2"	1.2, 1.5, 2.3, 3.5, 4.3, 5.3
73	cardboard box, 11" x 17" x 2", with slots*	1.4, 2.3, 3.2, 3.4, 4.3, 5.1 5.2, 5.3
16	dowels, 2" long	1.5, 4.3
18	marbles, flat	1.3
2 rolls	masking tape*	throughout
18	nuts, large, metal	1.3
1	peg board, 1' x 2'	1.2, 1.5, 2.3, 3.5, 4.3, 5.3
81	rubber bands (large)*	1.4, 1.5, 2.3, 3.2, 3.4, 4.3 5.1, 5.2, 5.3
160	rubber bands (medium)*	4.3, 5.1, 5.2, 5.3
24	rubber bands (small)*	4.3, 5.3
73	shoelaces, 12"*	1.3, 2.1, 2.3, 3.2, 3.4, 4.3 5.1, 5.2, 5.3
19	tennis balls	2.1, 3.1, 3.3, 3.4, 4.1
200	wooden sticks (tongue depressors)*	1.3, 4.3, 5.1, 5.2, 5.3

<sup>\*</sup>consumable item

### Print materials provided in the Pushes and Pulls kit

Quantity	Description	Used in lesson
1	Pushes and Pulls: Designing a Pinball Machine Investigation Notebook	throughout
1 set	Explanation Language Frames cards: set 1 (7 cards)	1.3
1 set	Explanation Language Frames cards: set 2 (4 cards)	2.2

### Print materials provided in the Pushes and Pulls kit (continued)

Quantity	Description	Used in lesson
1 set	Explanation Language Frames cards: set 3 (8 cards)	3.2
1 set	Explanation Language Frames cards: set 4 (2 cards)	3.4
1 set	Explanation Language Frames cards: set 5 (4 cards)	4.2
1 set	Forces cards: large (8 cards)	2.2
18 sets	Forces cards: small (8 cards)	2.2
18 sets	Forces Cards set: headers (2 cards)	2.2
1 set	Pinball Machine Design Goals chart: diagrams 1–9 (9 cards)	1.5, 2.3, 3.5, 4.3
1 set	What We Know About Forces chart: icons 1–6 (5 cards)	1.3, 2.2, 3.2, 4.2
73	Box Model mat 1: long/short*	2.3
73	Box Model mat 2: left/right*	3.2
73	Box Model mat 3: Targets*	3.4
Print materials for	the classroom wall	
6	Chapter Questions	throughout
1	Unit Question	throughout
2	section headers: Key Concepts, Vocabulary	throughout
9	Vocabulary cards	throughout
Student books		
18 + 1 big book	A Busy Day in Pushville	6.1, 6.2
18 + 1 big book	Building with Forces	3.1, 3.2
18 + 1 big book	Forces in Ball Games	2.2, 3.5, 4.1, 4.2
18 + 1 big book	Room 4 Solves a Problem	5.1, 5.2
18 + 1 big book	Talking About Forces	1.2, 1.5

# Spinning Earth:

# Investigating Patterns in the Sky

### Hands-on materials provided in the Spinning Earth kit

Quantity	Description	Used in lesson
1	baking cup, paper, white, pack of 12*	3.3, 3.4, 4.1, 4.2
1	globes, inflatable, pack of 19	2.1, 2.2, 2.4, 3.6, 3.6, 5.3
1	magnets, ring, pack of 2	2.3, 2.4, 3.6, 3.6, 5.3
1	paper, black, sheet (36" × 24")*, pack of 2	2.3, 2.4, 3.6, 3.6, 5.3
1	paper, light blue, sheets (3' $\times$ 5'), pack of $2*$	3.2, 3.3, 3.4, 4.1, 4.2
1	pump, hand	2.1
5	rings, binder, metal, boxes of 8 each	1.5, 2.4, 3.6, 4.4
1	stickers, round, black (¾-inch, removable), pack of 200*	2.1, 2.2, 3.3
1	stickers, round, green (1-inch, removable), pack of 50*	2.1, 2.2
1	stickers, round, light blue (¾-inch, removable), pack of 200*	2.1, 2.2, 2.3
1	stickers, round, orange (1-inch, removable), pack of 50*	2.1, 2.2
1	stickers, round, pink (1-inch, removable), pack of 50*	2.1, 2.2
1	stickers, round, purple (1-inch, removable), pack of 50*	2.1, 2.2
1	stickers, round, red (1-inch, removable), pack of 50*	2.1, 2.2
1	stickers, round, yellow (1-inch, removable), pack of 50*	2.1, 2.2
1	stickers, round, yellow (½-inch, non-removable), pack of 60*	1.3, 2.3
1	stress ball, globe	2.3

<sup>\*</sup>consumable item

### Print materials provided in the Spinning Earth kit

Quantity	Description	Used in lesson
1 set	Lesson 1.4 Interpretation Language Frame cards (8 cards/set)	1.4, 2.3
1 set	Lesson 4.3: Explanation Language Frame cards (6 cards/set)	4.3
1 set	Sky Observation card set (large) (10 cards/set)	1.3
1	Spinning Earth: Investigating Patterns in the Sky Investigation Notebook	throughout
1 set	Sun Card and Stars card (2 cards/set)	2.2, 2.3, 2.4, 3.5, 3.6, 4.3, 5.2
36 sets	Word Ring cards (10 cards/set)	1.5, 2.4, 3.3, 4.4

### Print materials provided in the Spinning Earth kit (continued)

Quantity	Description	Used in lesson	
Print materials for the classroom wall			
5	Chapter Questions	1.1, 2.1, 3.1, 4.1, 5.1	
2	Section headers: Key Concepts, Vocabulary	1.1	
1	Unit Question	1.1	
10	Vocabulary cards	throughout	
Student books			
18 + 1 big book	After Sunset	1.2, 2.1	
18 + 1 big book	A Walk Through the Seasons	5.1	
18 + 1 big book	Nighttime Investigation	4.2	
18 + 1 big book	Patterns of Earth and Space	1.3, 3.5, 5.2	
18 + 1 big book	What Spins?	3.4, 3.5, 4.3, 5.3	

# Sunlight and Weather: Solving Playground Problems

### Hands-on materials provided in the Sunlight and Weather kit

Quantity	Description	Used in lesson
4	caps, water bottle, small	5.2
9	clamp lamps	2.1, 3.1, 4.1, 5.6
18	clay, soft plasticine, ounces	5.2
8	containers with lids, plastic, ½ ounce	5.2
90	cups, clear plastic, 10 ounce	1.2, 5.2
37	cups, paper	5.2
1	glue, super, bottle	5.2
2	gravel, cups	5.2
9	lightbulbs, 60 Watt, clear	2.1, 3.1, 4.1, 5.6
648	rubber sheets, black, square inches	2.1, 3.1, 4.1, 5.6
324	rubber sheets, white, square inches	4.1, 5.6
18	thermometers	1.2, 2.1, 2.2, 2.3, 3.1, 4.1, 5.6

<sup>\*</sup>consumable item

### Print materials provided in the Sunlight and Weather kit

Quantity	Description	Used in lesson
1	Sunlight and Weather: Solving Playground Problems Investigation Notebook	throughout
1 set	Colored Surfaces Graph Labels (6 cards)	4.2
1 set	Explanation Language Frames cards: set 1 (4 cards)	2.4
1 set	Explanation Language Frames cards: set 2 (4 cards)	3.4
set	Explanation Language Frames cards: set 3 (4 cards)	4.3
1 set	Nighttime and Daytime Illustration cards (2 cards)	2.4
1 set	Playground and Temperature data imags (2 pages)	5.6
1 set	Playground Weather calendars and graphs illustration cards (38 cards)	1.4
1 set	Sunlight Game card	2.3
18	Thermometer color strips	1.2
1 set	Think and Walk Severe Weather cards (2 cards)	5.1

### Print materials provided in the Sunlight and Weather kit (continued)

0 1:1	B 11	
Quantity	Description	Used in lesson
1 set	Think and Walk Temperature cards (2 cards)	2.4, 4.3
1 set	Think and Walk Weather cards (5 cards)	1.1
1 set	Time of Day cards (3 cards)	3.4
1 set	Types of Weather icons (5 cards)	1.1
1 set	Warming Graph labels (2 cards)	2.2
1 set	Warming Over Time graph labels (3 cards)	3.2
Print materials for	the classroom wall	
5	Chapter Questions	throughout
1	Unit Question	1.1
2	section headers: Key Concepts, Vocabulary	throughout
10	Vocabulary cards	throughout
Student books		
18 + 1 big book	Cool People in Hot Places	4.3
18 + 1 big book	Getting Warm in the Sunlight	3.1, 4.1
18 + 1 big book	Handbook of Models	2.2, 3.2, 4.2, 5.3
18 + 1 big book	Tornado! Predicting Severe Weather	5.1, 5.4
18 + 1 big book	What is the Weather Like Today?	1.1, 1.2

# Vision and Light: Investigating Animal Eyes

### Hands-on materials provided in the Vision and Light kit

Quantity	Description	Used in lesson
9	bag, small muslins	5.1, 5.2
18	bags, plastic, gallon-size	4.4, 4.5
36	bags, plastic, sandwich-size	5.1, 5.2
36	balls, soft foam	4.4, 4.5
1	binder clips, large, box of 12	1.4, 2.2
36	canisters, film	1.2, 1.3
36	cardboard boxes*	1.4, 2.2, 4.4, 4.5
1	cinnamon stick	1.3
2	containers, plastic, with lids	1.3
57	cup, plastic, 9oz	5.1, 5.2
1	faux fur, piece	1.2
1	garlic powder, container*	1.2
4	hook-and-loop dots, beige, packs of 200*	1.2
3	hook-and-loop strip, 3/4" wide, 5' rolls*	4.4, 4.5
72	pipe cleaners*	4.4, 4.5
720	pom-poms, yellow*	4.4, 4.5
9	probability cubes (dice)	1.2
9	tape, masking, 1" wide, rolls	4.4, 4.5
4	yarn, skeins*	1.3, 4.4, 4.5

<sup>\*</sup>consumable item

### Print materials provided in the Vision and Light kit

Quantity	Description	Used in lesson
1	Vision and Light: Investigating Animal Eyes Investigation Notebook	throughout
18 sets	Explanation Cards: set 1 (3 cards/set)	2.5
18 sets	Explanation Cards: set 2 (5 cards/set)	3.5

### Print materials provided in the Vision and Light kit (continued)

Quantity	Description	Used in lesson		
Print materials for	Print materials for the classroom wall			
5	Chapter Questions	1.1, 2.1, 3.1, 4.1, 5.1		
10	Key Concepts	throughout		
2	section headers: Key Concepts, Vocabulary	1.1		
1	Unit Question	1.4		
19	Vocabulary cards	throughout		
Student books				
18	Crow Scientist	3.2		
18	Handbook of Animal Eyes	2.1, 3.1, 3.3, 4.2, 4.3		
18	I See What You Mean	2.3		
18	Investigating Animal Senses	1.3		
18	Seeing Like a Shrimp and Smelling Like a Snake	4.1		

# Waves, Energy, and Information: Investigating How Dolphins Communicate

### Hands-on materials provided in the Waves, Energy, and Information kit

Quantity	Description	Used in lesson
1	rope, 100 feet	1.2
9	Slinkys	1.2, 2.4
80	straws*	3.2

<sup>\*</sup>consumable item

### Print materials provided in the Waves, Energy, and Information kit

Quantity	Description	Used in lesson
1	Waves, Energy, and Information: Investigating How Dolphins Communicate Investigation Notebook	throughout
Print materials for the	he classroom wall	
4	Chapter Questions	throughout
11	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	throughout
1	Unit Question	throughout
17	Vocabulary cards	throughout
Student books		
18	Patterns in Communication	1.2, 1.5, 3.3, 4.1, 4.2
18	Seeing Sound	3.4
18	Sound on the Move	2.1, 2.2, 2.3
18	The Scientist Who Cracked the Dolphin Code	3.5
18	Warning: Tsunami!	1.3, 1.4

## Weather and Climate:

# Establishing an Orangutan Reserve

### Hands-on materials provided in the Weather and Climate kit

Quantity	Description	Used in lesson
36	bags, self-sealing, sandwich size*	1.5, 1.6, 2.4, 2.5, 3.6, 3.7
9	containers, plastic, clear, rectangular	1.2, 1.5, 4.3
320	craft sticks*	1.2, 4.3
90	cubes, plastic, interlocking	1.2
9	cups, clear, plastic, 12 oz	1.2, 4.3
72	cups, clear, plastic, 9 oz*	1.2, 1.3, 1.5, 3.1, 4.3
9	cups, plastic, ½ oz	1.2
1	index cards, blank, 3" x 5" pack (300 cards/pack)*	4.3
1	rain gauge	throughout
1	sticky notes, yellow, 3" x 3", pads (100 notes/pad)*	1.1, 2.1
6	sticky notes, pink, 3" x 3", pads (100 notes/pad)*	1.1, 2.1
1	sticky notes, green, 3" x 3", pads (100 notes/pad)*	2.1
288	straws, plastic, unwrapped*	4.3
1	thermometer, indoor/outdoor, jumbo, wall mount	throughout
27	thermometers, small	1.3, 1.4
720	tokens, plastic, yellow	3.1

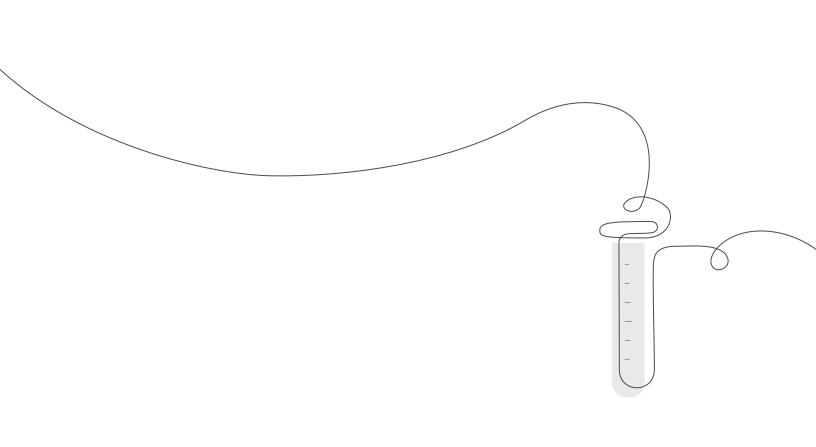
<sup>\*</sup>consumable item

### Print materials provided in the Weather and Climate kit

Quantity	Description	Used in lesson
1	Weather and Climate: Establishing and Orangutan Reserve Investigation Notebook	throughout
1 set	Temperature Chart cards (4 cards/set)	1.3
1 set	Orangutan data cards (36 cards/set)	2.1
18 sets	Evidence Cards: Chapter 4 (7 cards/set)	4.4
Print materials for the	ne classroom wall	
4	Chapter Questions	1.1, 2.1, 3.1, 4.1
9	Key Concepts	throughout
2	section headers: Key Concepts, Vocabulary	1.1

### **Print materials provided in the Weather and Climate kit** (continued)

Quantity	Description	Used in lesson	
1	Unit Question	1.1	
17	Vocabulary cards	throughout	
Student books			
18	Dangerous Weather Ahead	4.1, 4.2	
18	Seeing the World Through Numbers	2.2	
18	Sky Notebook	1.4	
18	What's Going On with the Weather?	3.4, 3.5	
18	World Weather Handbook	1.3, 3.3, 3.5, 4.1	



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