

The Apprentice's Companion for Environmental Science Science

Materials List

See HomeScienceTools.com for a kit designed to accompany ACEnS.

Several activities call for a smartphone with apps. We do not list this in the table below.

Activities	Materials	Amount	Source	Cost	Notes
1, 12	hula hoop	1/lab group	check online	\$ 6.00	Check for local shops.
1, 8	measuring tape	1/lab group	hardware/garden supply	\$ 1.70	
1, 3, 6	string	roll	hardware/garden supply	\$ 9.97	mason's twine works well for everything
1	stakes	4/group	amazon	\$ 4.99	this price is for 10 tent stakes.
2	camera (optional)	1/lab group	electronics store		It's easiest to use a smartphone with Seek app. Otherwise, use a digital camera.
2	field guides (optional)	as needed	amazon		It's easiest to use a smartphone with Seek app. Otherwise, research field guides for your area.
3	cards	5 x 7	amazon	\$ 5.99	price is for 40 cards. See also office supply, Target, etc.
4, 16, 24, 25	spoons	4/group	home	—	
4, 15	skewers	4/group	amazon	\$ 5.99	price is for box of 100.
4	fish crackers	bag	grocery	\$ 2.75	
4	lentils	5 1-lb bags	grocery	\$ 10.50	price is for 5 bags at \$2.10 ea.
4	large bowl	1/lab group	home	—	If you don't have a bowl, amazon has a 13 qt ss bowl for \$23.85
5	timer/clock	1	home/smartphone	—	
6, 20, 21, 24, 25	mass balance	1	Home Science Tools	\$ 39.95	The BS-DBX0300 from homesciencetools.com is our standard recommendation for all science courses.
6, 9, 15	thermometer	2	Home Science Tools	\$ 10.95	The ME-therdig from homesciencetools.com is an economical choice. Price shown is each.
6	potted geranium plants	2	hardware/garden supply	\$ 10.00	Check online. Price shown is typical for one potted plant.
6, 7	grow-lamp, 9 W LED	1/lab group	hardware/garden supply	\$ 15.00	This is bulb only for a standard E26 lamp base.
	10 W equivalent LED	1/lab group	hardware/garden supply	\$ 14.00	This is bulb only for an E17 base.
6	digital temp and humidity indicator	1	amazon	\$ 10.00	
6	large fan	1	hardware/garden supply	\$ 25.00	
6	large food storage bag	2	grocery	\$ 6.00	Price is typical for a box of 80 gallon bags.
6	clear plastic sheet	2 m x 2 m	hardware/garden supply	\$ 3.00	Typical price for 9 x 12, 0.7 mil dropcloth.
6	towels	2	home	—	
7	pond water	1 L	local pond or creek	—	
7, 9	collecting bottle	1 L (1)	amazon	\$ 10.00	There are many online options. Amazon has a 3-pack of 17-oz bottles for this price. To use for Activity 9 you'll need two packs.
7	black paper	1 m x 1 m	amazon	\$ 30.00	There are many options; price shown is for a 36-in-wide roll. You can make do with smaller sheets for <\$10 if necessary.
7, 26	dissolved-oxygen probe or test kit	1/lab group	LaMotte	\$ 54.35	At lamotte.com, the Earth Force low cost monitoring kit covers the DO test as well as all tests for Activity 27.
8	corn-hole set, 2 boards + 8 bags	2	athletic supply or amazon	\$ 80.00	Many options, most come with 8 bags. This price is typical for each for economy model.
8	meter stick (opt)	1/lab group	Home Science Tools	\$ 15.00	A yard stick may be substituted.
8, 11	white beans (opt)	100	grocery	\$ 2.00	These are great northern beans. Price shown is typical for a 1-lb bag.
8, 10	colored paper (opt), brown, red, blue, yellow, gr	1 pack	office supply or amazon	\$ 8.00	At amazon there is a pack of various colored card stock for this price.
9	small containers	6	grocery	\$ 16.00	Use bottles from Activity 9, or get a 6-pack of breast milk bottles from grocery for this price.
9	aquarium fish net	1	Home Science Tools	\$ 2.95	
9	kick net (optional)	1	Carolina Biological	\$167.50	
9	scrub brush	1	grocery	\$ 4.50	
9	waterproof boots (optional)	1 pair	sports store	\$ 25.00	
9	ice cube tray	2	grocery	\$ 5.00	Price is typical for a 2-pack.
9, 17, 19, 20, 24, 25	Petri dishes	10	Home Science Tools	\$ 9.95	Price is for a 20-pack.
9, 20	tweezers	1	Home Science Tools	\$ 2.60	Price is for SS forceps.
9	probe	1	Home Science Tools	\$ 3.95	Price is for "probe and seeker".
9, 22	magnifying glass	1	Home Science Tools	\$ 6.15	Price os for 3-in glass.
9, 17	stereo microscope (opt)	1	Home Science Tools	\$269.95	The MI-24STERX is a good value.
10	butcher paper	1 roll	amazon	\$ 15.00	Price is for 18" x 150' roll.
10, 15, 16, 17, 19, 24, 29	scissors	1	home	—	
10	glue stick	1	home	—	
10	markers	1 pack	home	—	
10, 17, 19, 22, 23, 25, 29	metric rule	1	Home Science Tools	\$ 1.25	Price is for 15-cm rule.

10	calculator	1	home	—	
11	yogurt cups	1 pack	grocery	\$ 4.00	Price is typical for a 4-pack.
11	white beans	100	grocery	\$ 2.00	These are great northern beans. Price shown is typical for a 1-lb bag. Reuse from Activity 8, if possible.
11, 12, 20, 23	stopwatch	1	Home Science Tools	\$ 6.95	Or use a smartphone.
12	bubble solution	1	amazon	\$ 10.00	Price is for 6-pack.
14	electricity usage monitor (optional)	1	amazon	\$ 27.49	"TP-Link Tapo Smart Plug WiFi Mini" uses an app to monitor 4 appliances from 4 included plug points.
15	pizza box	1	home	—	
15, 29	aluminum foil	6 ft	grocery	\$ 4.25	Price is typical for a 12' roll.
15	black construction paper	4 sheets	amazon	\$ 3.79	Price is for pack of 50 sheets.
15	clear plastic wrap	6 ft	home	—	
15	utility knife (opt)	1	hardware/garden supply	\$ 10.00	Many options, blades typically included.
15, 18	marker pen	1	home	—	
15	straightedge	1	home	—	
15, 16	tape, clear	roll	home	—	
15	glue	1	home	—	
15	paper plate	1	home	—	
15	graham crackers	2	grocery	\$ 2.50	Typical price for a box.
15	chocolate bar	1	grocery	\$ 6.74	Typical price for 6-pack of Hershey bars.
15	marshmallows	1 bag	grocery	\$ 2.79	Typical price for bag of large ones.
16	large foil baking pan	1	grocery	\$ 4.50	Typical price for 20" x 12".
16	rock	1	outdoors	—	
16	vegetable oil	100 mL	grocery	\$ 2.00	Typical price for 16 oz (473 mL).
16	coffee grounds	50 mL	home	—	
16	cocoa (opt)	50 mL	grocery	\$ 4.00	Typical price for 8 oz.
16	straws	a few	grocery	\$ 5.00	Typical price for 100-pack of compostable straws.
16	cotton swabs	a few	grocery	\$ 3.00	Typical price for pack of Q-tips.
16	yarn	roll	amazon, Hobby Lobby	\$ 5.00	
16, 19, 24, 28	pipettes	10-pack (2)	Home Science Tools	\$ 3.95	Get 2 packs to cover all the activities.
16	sponge	1	grocery	\$ 3.50	
16, 21, 23, 29	graduated cylinder, 100 mL	1	Home Science Tools	\$ 9.95	
16, 19, 21, 25	beaker, 250 mL	4	Home Science Tools	\$ 3.95	Jars may be substituted.
16, 23	sand (optional)	1 L	hardware/garden supply	\$ 5.98	Price is for a bag of play sand.
17	index cards	4	office supply or amazon	\$ 5.00	
17	graph paper	1 sheet	home	—	
17, 18, 19, 24	masking tape	roll	amazon or hardware	\$ 3.50	
17	petroleum jelly	dab	home	—	
18	tube socks	4 pair	amazon, Walmart	\$ 24.00	Price is for 6 pairs, cotton.
18, 23, 29	gloves	1 pair	home	—	
18	rubber bands	few	home	—	
18, 23	plastic bags, resealable	8	home	—	
19, 24	safety goggles	1	Home Science Tools	\$ 5.45	
19, 24	paper towels	1 roll	grocery	—	
19, 24	distilled water	1 gal	grocery	\$ 1.50	
19, 24	radish seeds	1 pack	garden/seed supply	\$ 4.95	
19, 21	white vinegar	few drops	grocery/home	\$ 1.75	Price is for 16 oz.
19, 21	pH test strips	1 pack	Home Science Tools	\$ 2.95	Price is for a pack of 80 strips.
20, 24	table sugar	6 oz	home	—	
20	coffee grounds	2 oz	home	—	
20	LED clamp lamp, with 60 W equiv bulb	1	amazon or hardware	\$ 21.86	Price is for Woods Clamp Lamp Light with Aluminum Reflector, 150W; + 4 pack of bulbs
20	sea shell, small	4	online	\$ 15.00	Many sources; price is typical for 1 bag.
20	deionized water	1 L	amazon	\$ 18.00	Price is for 1 gal.
22	tree cookie	1	local Christmass tree retail	—	Home Science Tools has Tree Ring Kit for \$7.95
22	dissection pins	1 pack	Home Science Tools	\$ 7.95	Price is for box of 100.

22	sticky note page markers	1 pack	amazon, Walmart	\$ 3.99	
23	hand trowel	1	hardware/garden supply	\$ 5.00	
23, 29	clay	small sample	online	\$ 10.00	Many suppliers; price is typical for 5 lb block.
23	soil test kit	1	Home Science Tools	\$ 19.95	Price is for Rapitest kit.
23	beaker, 400 mL	1	Home Science Tools	\$ 5.45	A jar can be used.
23	coffee filter	3	home	—	
23	ring stand	1	Home Science Tools	\$ 16.95	
23	ring supprt, 3 inch	1	Home Science Tools	\$ 6.90	
23	funnel, 90 mm	1	Home Science Tools	\$ 5.75	
23	soil sieve	1	garden supply	\$ 12.00	Price is typical.
23, 24	mason jar with lid	1	grocery	\$ 15.00	Price is typical for 12-pack. Get wide-mouth jars for Activity 24.
23	large foil baking pan	1	grocery	\$ 4.50	Typical price for 20" x 12".
24	bromothymol blue indicator	40 mL	Home Science Tools	\$ 5.10	Price is for 100 mL.
24	graduated cylinder, 25 mL	1	Home Science Tools	\$ 3.50	Price is for 50 mL plastic GC.
24	white paper	1 sheet	home	—	
24, 29	soil sample	300 mL	home or garden supply	—	A small bag can be purchased for \$5 from a garden center.
25	table salt	10 g	home	—	
25, 28	graduated cylinder, 10 mL	1	Home Science Tools	\$ 6.50	You can use the 50 mL GC used in Activity 24.
26	water test kit	1	LaMotte	\$ 54.35	See Teacher Notes.
28	test tubes with caps	6	Home Science Tools	\$ 4.50	Price is for 6-pack of tubes with caps.
28	test tube rack	1	Home Science Tools	\$ 5.25	
28	beaker, 100 mL	1	Home Science Tools	\$ 3.30	A jar can be used.
28	dry yeast	1 pack	grocery	\$ 1.90	Price is typical for 3-pack.
28	milk	10 mL	grocery	\$ 1.10	Price is typical for 1 pt.
28	methylene blue	a few drops	Home Science Tools	\$ 4.50	Price is for 30 mL.
28	dropper bottle	1	Home Science Tools	\$ 3.15	
29	beaker, 500 mL	1	Home Science Tools	\$ 3.95	
29	spray bottle	1	grocery	\$ 2.00	Price is typical.
29	dry-erase marker	1	grocery, amazon, office	\$ 2.60	Price is typical for 4-pack.
29	bathroom scale	1	home, amazon	\$ 20.00	Many suppliers; price is typical.