

Creek Freaks Activities-Materials List

This list includes materials needed for most of the Creek Freaks activities and an estimated price for each activity. Try to get as much material donated as possible. Some materials are used for multiple activities and therefore would only need to be purchased once (i.e. stopwatches). They are listed multiple times in case you are only doing selected activities.

The dollar store is your friend! Try to get as many items there as you can! Remember that while some materials will need to be purchased each time (i.e. celery) most of these items can be reused for multiple demonstrations. Ordering items online and buying in bulk can be significantly cheaper, but don't forget to add in shipping and handling charges, which could drive your price per item up. (This is inevitable for some of the chemical and biological monitoring materials.)

If you buy all materials, and share items such as stopwatches/cups/potting soil between the activities, you can expect to spend at most about \$750. This does not include the purchase of any boots or waders.

The indoor activities cost about \$250

**Dollar stores, donations, borrowing, and resourcefulness could significantly decrease this cost! Get Creative!

The monitoring equipment costs about \$500.

Have fun!

Questions please contact Leah Miller, leah@iwla.org or (301) 548-0150 x 219

Watershed Model

Item/Quantity	Cost
1 aluminum cake pan 9x13"	\$3.00
1 roll aluminum foil	\$3.00
2-3 blocks Florist Foam (various shapes) or empty soda cans	\$3.00 or Donated
1 package small farm animals	\$7.00
1 package Model houses and trees	\$10.00
1 empty spray bottle	\$2.00
1 packet cocoa powder (pudding or hot chocolate mix fine)	\$1.50
1 box red kool-aid mix (packets are fine- 2-3)	\$2.50
1 box blue kool-aid mix (packets are fine- 2-3)	\$2.50
A few small pieces artificial turf (Ask for scraps from a cut)	Donated or \$3.00 sq. ft.
1 sponge	\$1.00
1 bottle chocolate sprinkles	\$2.50
1 bottle rainbow sprinkles	\$2.50
Total	\$43.50

Putting on the Brakes

Item/Quantity	Cost
1 per student/group- plastic “take out” containers or shoe boxes (with flat bottoms)	Donated or \$2.00 each
1 centimeter ruler	\$1.00
1 package modeling clay (1-lb)	\$10.00
1 marble per student/group	\$1.00
1 bag cotton balls (small handful per group)	\$1.00
1 package pipe cleaners (small handful per group)	\$2.00
Additional craft supplies-q-tips, popsicles, straws, etc.	\$5.00
1 stopwatch (needs to go to hundredths of a second) per group	\$6.00
1 wooden block, book, or similar (to prop up container) per group	Donated
Total	\$28.00

Soil Texture and Percolation Tests

Item/Quantity	Cost
1 per student - Texture & Percolation test charts from Leader Guide (p. 24)	<\$1.00
1 per student - “Key to Soil Texture by Feel” from Green Zone addendum (pg. 13)	<\$1.00
1 roll paper towels	\$1.00
1 blender (cheap)	\$20.00
4 cups clay kitty litter ground up in blender	\$3.00
10 lbs. sand	\$5.00
20 lbs. local soil/potting soil	\$7.00
3 containers for different soils (Tupperware like)	Donated
3 clear 500-mL wide-mouth beakers/measuring cup	\$8.00
3 clear smaller beakers for soda bottles to sit in (2 cup or <4.5 in diameter) Norpro #3036 Plastic 2 Cup Measuring Cup	\$6.00
3 stopwatches (need to go to hundredths of a second)	\$12.00
1 bottle food dye (any color)	\$4.00
1 roll duct tape	\$5.00
6 pieces of window screen or other fine mesh to cut into circles, each approximately 10 cm in diameter	\$16.00
3 empty 2-litre soda bottles –bottoms cut off, mesh screens taped on with duct tape per Green Zone addendum	Donated
3 small clear plastic cups	\$1.00
1 package modeling clay (1-lb)	\$10.00
1 set of measuring cups	\$4.00
Total	\$104.00

Filter Plants –*Set up the night before!

Item/Quantity	Cost
1 centimeter ruler	\$1.00
1 bunch fresh celery with leaves	\$1.50
1 roll masking tape	\$1.00
1 bottle red food coloring	\$4.00
1 bottle white vinegar	\$2.00
2 sturdy (glass or hard plastic) cups to stand celery stalks in	\$4.00
1 knife to cut celery	Donated or \$1.00
1 roll paper towels	\$1.00
Cutting board/plate to cut celery on	Donated or \$2.00
Total	\$17.50

Erosion in the Zone

Item/Quantity	Cost
2 large empty coffee cans	Donated
2 fine strainers with handles that fit inside the coffee cans	\$18.00
4-6 coffee filters (to have extras)	\$2.00
2 large plastic kitty litter trays with a 3/8" hole drilled at the end of each tray at the center about 2 inches up from the bottom. Please measure – both need to be the same. Each of these will be filled with the soil and one will stay bare and the other will be covered with sod. Can be the next size up. Just a fairly small hole is needed.	\$6.00
Potting soil to fill kitty litter tray	\$7.00
2 wooden blocks to raise up one end of each tray	Donated
1 piece of sod large enough to cover one tray (don't get until a few days before)	Donated
2 large buckets to turn upside down on the floor and place the coffee cans on top of so they aren't too far below the trays that will be set up on a table top/ or boxes/ plastic tubs	\$8.00
2 plastic cups	\$1.00
1 box cutter/knife/scissors to cut plastic cups in half	Donated
2-3 empty gallon jugs (filled with tap water on site)	Donated
1 watering can with sprinkler head	\$12.00
Total	\$54.00

Can You See Water Pollution?

Item/Quantity	Cost
5 clear plastic cups	\$1.00
1 bottle of food coloring	\$4.00
1 bottle of white vinegar	\$2.00
1 cup stream/pond/lake water	N/A
1 bottle of bottled water	\$1.00
1 cup tap water	N/A
Total	\$8.00

Critter Cube Count

Item/Quantity

****You will need a full set of this for each group of students****

Cost

1 set of critter cubes	
9 1x1 wooden blocks www.craftparts.com	\$4.00
Critter Cube Templates printed from www.creekfreaks.net/library	<\$1.00
1 bucket to shake 8 cubes (e.g., ice cream bucket, Tupperware, large cup)	Donated or \$1.00
1 macroinvertebrate ID chart in Addendum pg. 10	<\$1.00
1 "Critter Key" sheet Addendum pg. 9	<\$1.00
1 laminated <i>Field Guide to Aquatic Macroinvertebrates</i> **	\$4.95 (each)
1 <i>A Guide to Aquatic Insects & Crustaceans</i> **	\$8.95 (each)
Total	\$20.00
**Items can be ordered from http://www.mwpubco.com/conservation.htm Call 1-800-233-8787 to ask for potential educational discounted price	

Other Items

Item/Quantity

Cost

Extra (sharpened) pencils for the data forms	\$2.00
1 Calculator	\$2.00
10 Sheets of blank computer paper for various activities	<\$1.00
1 pair Scissors	\$2.00
Total	\$7.00

WATER QUALITY MONITORING FIELD ACTIVITIES

Physical Monitoring

Item/Quantity

1 Physical Monitoring Form - Green Zone Binder or www.creekfreaks.net/library	<\$1.00
1 100-foot measuring tape	\$15.00
1 folding yard stick	\$4.00
1 stopwatch (need to go to hundredths of a second)	\$6.00
1 ball of string or twine	\$2.50
1 whiffle ball	\$2.00
Total	\$29.50

Biological Monitoring

Item/Quantity

Waders, water shoes (closed toed), or old sneakers for kids to get in the water	Donated/bring your own
1 Biological Monitoring Form - Green Zone Binder or www.creekfreaks.net/library	<\$1.00

1 SOS kick seine net, 1/32" mesh from Nichols Net&Twine 1-800-878-6387	\$41.40
2 wooden dowels (1 1/4 x 48in poplar)	\$9.20
1 plastic white tablecloth - 54" x 108"	\$3.00
2 white ice cube trays	\$4.00
1 F/ C thermometer (order in set of 12): Science Kit & Boreal Laboratories (67310M20) www.sciencekit.com	\$89.79
5 pairs forceps (Nasco #SB12628M)	\$11.50
3 handheld lenses/magnifying glasses	\$3.00
2 large magnifying boxes (Nasco #SB10305M)	\$5.30
5 small magnifying boxes (Nasco #SB10304M)	\$10.75
1 <i>Field Guide to Aquatic Macroinvertebrates</i> **	\$4.95
1 <i>A Guide to Aquatic Insects & Crustaceans</i> **	\$8.95
5 Key to Stream Macroinvertebrates- Addendum pg. 10	<\$1.00
1 clipboard	\$2.00
Shipping charges may increase price	Total
	\$106.05
**Items can be ordered from http://www.mwpubco.com/conservation.htm Call 1-800-233-8787 to ask for potential educational discounted price	

Chemical Monitoring

Item/Quantity

1 Chemical Monitoring Form - Green Zone Binder or www.creekfreaks.net/library	<\$1.00
1 Chemetrics Dissolved Oxygen kit: Chemetrics (K-7512) www.chemetrics.com	\$50.24
1 Extra dissolved oxygen comparators: Chemetrics (C-7512) www.chemetrics.com	\$18.05
1 Chemetrics Phosphate kit (ortho): Chemetrics (K-8510) www.chemetrics.com	\$58.82
1 Extra phosphate comparators: Chemetrics (C-8510) www.chemetrics.com	\$18.05
1 HACH pH test strip set: Fondriest Environmental (2745650) www.hach.com	\$11.25
1 HACH Nitrate/Nitrite test strip set: Fondriest Environmental (2745425) www.hach.com	\$19.95
1 HACH Chloride low-range test strip set: Fondriest Environmental (2744940) www.hach.com	\$44.95
1 Transparency tubes: Ben Meadows (111360) www.benmeadows.com	\$40.00
1 F/ C thermometer (order in set of 12): Science Kit & Boreal Laboratories (67310M20) www.sciencekit.com	\$89.79
1 stopwatch	\$6.00
1 Extra 25ml sleeve of plastic containers (A-0013) www.chemetrics.com	\$9.11
Shipping charges will increase price	Total
	\$366.21