

Physical Science

(2008-2009 ACADEMIC YEAR)
Scope and Sequence

Triple Beam Balance: OHAUS Model 750-SW, 2610-g capacity and 0.1-g sensitivity. Other balances may be used as long as they are marked in tenths of a gram so that the hundredths-of-a-gram digit may be interpolated.

Calculator: The only calculator used in class by the teacher is the TI-83 Plus. Although students may use other calculators, they must be familiar with the keystroke differences between their calculator and the TI-83 Plus. Since a TI-83 Plus is required in BJ LINC math classes, it may be advisable to purchase that model.

Additional Items: A number of household items will be needed from time to time. Hot and cold water and ice cubes will be needed periodically as well. A hot plate will be required for several experiments. Students must have access to a table. Three groups could easily work at a standard 8-foot table.

Science Fees: Many of the items on the physical science materials list are also included in the list for physics or chemistry. Gas and running water in the classroom are not needed. Many schools already have some of the equipment, which lowers the initial investment. Some parents who are interested in expanding the science department of your school may be interested in funding the expansion of your science lab. A note to your school family regarding this may prove to be worthwhile. Most schools charge a student lab fee to help defray the cost of science materials. Because most of these supplies are reusable, the cost could be retrieved.

The following list provides information regarding the materials for both semester labs which need to be ordered. None of the items which can be purchased from a local grocery store (such as alcohol, vinegar, and red cabbage) are listed. The schedule for the labs, which is in the Facilitator Packet, will let you know when to purchase specific items. The Chemlab1100 cannot be exchanged for other lab kits. Items on the following table marked with an "SK" item number are available from Science Kit which can be contacted at 800-828-7777, www.sciencekit.com, or P.O. Box 5003, Tonawanda, NY 14151-5003. The item number from Frey Scientific Supply Company is included for the remaining items. Frey can be contacted at 800-225-3739, www.freyscientific.com, or 80 Northwest Blvd., Nashua, NH, 03063. It is best to initially use their Web site as the item numbers can be entered into the "Search" box and will return information on each item. This will save the time needed to locate the items in a catalog. However, it is recommended that you obtain a catalog from Frey and use it to view the pictures on any items on which the specifications listed on the Web site are not clear. Items then may be ordered from any scientific supply company. We do not suggest suppliers based upon whether or not they are the best but rather because they are well known and because they have traditionally given reasonably good service. You will need to shop around in order to get the best price. If your order is of significant size, you can send it to several suppliers with a request that they submit a bid. Items listed below with supplier information are simply for the purpose of helping you find a typical item. The suppliers mentioned above have pictures of the item in question in their catalogs. Order a free catalog, look at the picture of the item, and then compare the same item in catalogs from other suppliers. Order from the company that you feel best meets your needs.

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Scope and Sequence (continued)

Quantity/group	Item	Lab Use	Item #
3	Beaker, 250 mL (or glass cup)	2A, 4A, 7, 10, 17B	Frey—1559397621
1	Triple Beam Balance	3C, 15B, 16B	Frey—1557209021
1	Metal specific gravity cylinders	3C, 16B	Frey—1552803221
4	Thermometer	3C, 10, 16B	Frey—15-1017385-21
2	Beaker, 100 mL	4A	Frey—1559397021
1	Graduated cylinder, 100 mL	4A	Frey—15-593379-21
1	Tripod (or ring stand and iron ring)	4A, 7, 10, 16B	SK—6346800
1 piece	Wire gauze	4A, 7, 10, 16B	SK—6192005
1 small piece	Antimony (optional)	7	SK—9600404
1 small piece	Bismuth (optional)	7	SK—9404404
1 small piece	Carbon (coal)	7	Frey—1557833421
1 small piece	Copper wire, insulated, 22 gauge, 1 lb	7	Frey—1557708921
1 small piece	Iodine crystals (optional), 100 g	7	Frey—1557900921
1 small piece	Silicon (powdered, optional), 100 g	7	Frey—1557895021
1 small piece	Sulfur (powdered, available at pharmacies), 500 g	7	Frey—1558044621
1	Beaker tongs or hot mitt	7, 10, 16B	Frey—1556363021
1	Multimeter, digital (optional)	7, 17B	Frey—1553197821
3	Beakers (600mL)	10	Frey—1559398221
2	Stirring rods	10, 16B, 17A, 18B	Frey—1552552721
5	Beakers (50 mL)	11	Frey—1559396721
10	Eyedroppers (2 mL)	11, 15B	Frey—1559437821
10	Test tubes (28 mL)	11, 15B	Frey—1559348121
1	Test tube rack	11, 15B	Frey—1556834621
	Litmus paper, blue	11	Frey—1556986721
	Litmus paper, red	11	Frey—1556987021
	pH paper, 0-14	11	Frey—1558437621
	Bromothymol blue indicator (optional), 100 mL	11	Frey—1556798021
	Phenolphthalein indicator (optional), 100 mL	11	Frey—1557962121
1	Laboratory mass set, 9 pieces	13B, 14A, 14B	Frey—1559540121
4	Knife-edge clamp	14A, 14B	Frey—1559908521
1	Lever apparatus support (Demo balance support)	14A, 14B, 17A	Frey—1559063421
1	Flat spring scale, 10N	14B	Frey—1559571021

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Quantity/group	Item	Lab Use	Item #
1	Graduated cylinder, 10 mL	15B	Frey—1559337021
1	Test tube brush	15B	Frey—1556009821
	Glycerol (glycerin), 500 mL	15B	Frey—1556801321
1	Beaker, 1000 mL	16B	Frey—1559404521
1	Ring stand	17A	Frey—1556899721
2	Alligator clip	17B	Frey—1556088421
4	Battery holder (optional)	17B	Frey—1552778721
1	Insulated shorting wire, heavy—16 gauge copper wire	17B	Frey—1558108821
1	Knife switch	17B, 18B	Frey—1557165821
4	Miniature light bulb, 6V	17B	Frey—1556363321
4	Miniature light bulb receptacle	17B	Frey—1556360321
	Steel wool	17B	Frey—15193434421
	Wire, various lengths	17B	Frey—1558110321
2	Bar magnets	18A, 18B	Frey—1556840621
1	Lodestone (optional)	18A	Frey—1556883521
	Iron filings, 500 g	18A, 18B	Frey—1556440121
1	Plane mirror	20B	Frey—1556360621
1	Candle holder	20C	Frey—1559910621
1	Convex lens	20C	Frey—1558466421
1	Complete Optical Bench—includes: meter stick, lens holder, meter stick supports, screen and mm scale, screen support, and object marker	20C	Frey—1556465321

Selected Sources of Scientific Supplies:

ARBOR, www.arborsci.com, 1-800-367-6695
CAROLINA BIOLOGICAL, www.carolina.com, 1-800-334-5551
C&S SALES, www.cs-sales.net 1-800-292-7711
CYNMAR, www.cynmar.com, 1-800-223-3517
DAIGGER, www.daigger.com, 1-800-621-7193
FREY, www.freyscientific.com, 1-800-225-3739
FLINN, www.flinnsci.com, 1-800- 452-1261

KELVIN, www.kelvin.com, 1-800-535-8469
NASCO, www.eNASCO.com, 1-800-558-9595
PASCO, www.pasco.com, 1-800-772-8700
SARGENT WELCH, www.sargentwelch.com, 1-800-727-4368
SCIENCE KIT AND BOREAL LABS, www.sciencekit.com, 1-800-828-7777
HOME SCIENCE TOOLS, www.HomeTrainingTools.com, 1-800-860-6272