

**RECOMMENDED MINIMUM CORE INVENTORY
TO SUPPORT STANDARDS-BASED INSTRUCTION IN
BIOLOGY AND LIFE SCIENCES**

developed by California Science Teachers Association

Qty per lab group	Qty per classroom/ adjacent work area	Description	Comments
SAFETY EQUIPMENT			
	1	acid cabinet	
	classroom set	aprons	
		chemical spill kit	
	1	eye wash station	
	1	fire blanket	
	1	fire extinguisher	
	1	first aid kit	
	1	flammables cabinet	
	1	goggles sanitizer (holds 36 pairs of goggles)	
	1/person	safety goggles	
	1	television or digital projector	
	1	VCR	
WORKROOM EQUIPMENT			
	1	autoclave or pressure cooker	
1		balances (accurate to 0.1g or better)	
2		beaker tongs	
2		beakers, 50 mL or 100 mL	
2		beakers, 250 mL	
1		beakers, 400 or 600 mL	
	2	beakers, 1000 mL	
	1	blender	
	1	centrifuge	
1		dissecting scopes (or hand lenses)	
2		* dissection kit (scalpel, scissors, forceps, probes, tray, ruler)	
	100	dropping bottles, plastic (reusable)	
	1 box of 100	droppers (glass or disposable transfer pipettes)	
2		Erlenmeyer flasks, 250 mL	
	2	Erlenmeyer flasks, 1000 mL	
2		fermentation chamber (for anaerobic respiration)	
2		forceps	
2		funnels, small, long-stem	
1		gel electrophoresis chamber	
	2	glove, heat-proof (resistant from extreme heat to 399 °C)	
2		graduated cylinder - 10 mL	
2		graduated cylinder - 100 mL	
	1	graduated cylinder - 1000 mL	
1		hot plates and/or Bunsen burners	
	1	incubator	
	1	magnetic stirrers	
2		meter sticks	

Recommendations based on 4-student lab group; Total # of lab groups will be based on class size

**Optional--dissection is not part of the standards but could be used in studying systematics*

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Qty per lab group	Qty per classroom/ adjacent work area	Description	Comments
2		metric rulers	
2		microscopes (compound)	
	20	onion root tip slides	
	1	periodic table	
	50	Petri dishes (100 mm x 15 mm, glass or plastic)	
	1	refrigerator (specimen)	
2		respirometer (measuring CO ₂ production)	
2		ring stands w/ rings	
2		rubber stoppers, 2-hole; for 250 ml flasks	
2		scissors	
2		stirring rods	
2		stop watches	
	1 per sink	test tube brushes	
2		test tube holders	
2		test tube racks	
	200	test tubes (standard size, about 16 mm x 150 mm)	
2		thermometers (alcohol; -10 to 110 degrees C)	
	4 boxes of 100	* vinyl or latex-free gloves	
	1 per sink	washing bottles, plastic	
	1	water bath, 2.5 liter	
CONSUMABLES			
	500 grams	agar	
	1 liter	alcohol, 95% methanol or isopropyl	
	500 grams	amylase	
	3-500 ml bottle	Benedict's solution	
	1 roll	chromatography paper	
	10 grams	Congo Red	
	1 roll	dialysis tubing	
	3 boxes	filter paper, discs	
	1 bottle	glucose (Karo syrup)	
	500 grams	lipase	
1 vial		litmus paper (neutral)	
	5 boxes of 100	microscope cover slips	
	3 boxes of 100	microscope slides	
	500 grams	peptidase	
1 vial		pH paper (0-14)	
	3-500 ml bottle	phenolphthalein solution	
	3-500 ml bottle	potassium iodide solution	
1 vial		PTC paper	
1 vial		sodium benzoate paper strips	

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Qty per lab group	Qty per classroom/ adjacent work area	Description	Comments
	500 grams	sodium bicarbonate	
	500 grams	starch	
1 vial		thiourea paper strips	
FACILITIES			
A source of water and access to waste disposal (i.e., lab stations/sinks) are essential for classrooms in which biology is taught.			