

Equipment list for Pflu lab protocol:

The following list will help the teacher plan for class of 16- 24 students) Teachers will need to identify how many lab stations and groups per class when considering supplies.

Students will be working with lab partners and will need access to the following supplies:

- Mini bunsen burner for sterilization (@ school)
- 70% ethanol for prepping surfaces in a spray bottle (@ school)
- paper towels (@ school)
- parafilm (@ school)
- Dissecting Scopes (@ school)
- forceps (@ school)
- Gloves- nitrile, vinyl (@ school)
- Beaker with 70% ethanol (for sterilizing/ storing spreaders, forceps, inoculation loop) (@ school)
- lysol liquid for clean up/ beaker for solutions/ tubs for test tubes and glassware (@ school)
- Student lab tubs w/ test tube rack per team
- Tub for cleaning/ test tube brush

These are great options if on hand at your school.

- Incubator optional
- autoclave (this is necessary for preparation of materials)

teacher resource sites on evolution:

<http://www.pbs.org/wgbh/evolution/educators/index.html> - case studies, other classroom activities

http://evolution.berkeley.edu/evolibrary/misconceptions_teacherfaq.php - misconception information

Shopping list for Materials and supplies:

Carolina Biological order numbers and suggested amounts (prices may have changed since this was researched. Carolina was chosen because we have a school account for this company)

product #	name	quantity	cost	other notes	quantity needed for an 6- 8 lab station run
703413	glass spreader bar	1/ lab team	5.65	metal spreader bars are available but slightly more expensive (~\$6.50 #703412)	8
703058	wire inoculating loops	1/ lab team	3.56	re-usable with sterilization	4
703039	sterile/ disposable inoculating loops	30/ package	5.94 / pk of 30	disposable	1
731038	Test tubes w/ screw tops for media/ beads	24/pk	12.75/pk	sterile on arrival, disposable, autoclavable	144 for both large and small = 6 pkg
741246	sterile petri dishes	sleeve of	6.35		3 x

		20			
	Portable bunsen burners	1 per lab table		Many options, many prices	
215088	sterile culture tubes/ caps, 25/ pack (for PBS dilutions)	total for 8 lab stations	9.93/ pk of 25	Disposable after use	112 large 32 small = 6x
701075D	vortex head for up to 6 tubes		29.33		1
701075	vortex mixer		266.00		1 or more
214627	20-200 ul pipettor	1	149.95	<i>Option - syringes of correct volume</i>	3-4 would be ideal
215052	micro pipette tips up to 200ul/ sterile	rack of 96	13.82		2 x
215062	micropipette tips for up to 1000 ul/ sterile	rack of 100	16.95		2 x
214629	Micropipetteor 100ul to 1 ml	1	149.95		3-4 would be ideal
736879	manual control pipettor (.1 - 100 ml) = covers much of the liquids other than the 50 µL	for media set ups (teacher use)	46.55	if teacher does media set up 1-2	2
736124	sterile 5 ml serological pipetting tubes	pk of 50	27.64	needed if teacher/ students are preparing media tubes	1
731980	test tube racks		10.60	to stabilize glassware during experiment and autoclaving	4-6/ class

Media can potentially be made at school from your chemistry store room. Assistance from a local university is even better, if a biology lab will adopt your class, and assist with media prep and autoclaving processes of bulk items.

- King's B media recipe is available through Matt Herron labs.

- Agar is tryptic soy prep with Xgal addition for colormetric. (xgal is a special component, needed special ordering)

- PBS (phosphate buffer solution) recipe also available through Matt Herron

- Styrene beads are also special order; if a few teachers are doing the activity it is worth sharing the expense; they are autoclavable once used, can be re-used.

****Plates with ancestor strain LacZ- and Lac Z+ (Day -1)