

## Garden Project

Step	Description	Curricular Connection	Supplies	Cost
1: Pre-plan	<ul style="list-style-type: none"> <li><input type="checkbox"/> Decide on a possible location for your garden               <ul style="list-style-type: none"> <li><input type="checkbox"/> Does it get good light throughout the year?</li> <li><input type="checkbox"/> Does the location have access to irrigation or will you have to hand water?</li> <li><input type="checkbox"/> How will the location get water throughout the summer?</li> <li><input type="checkbox"/> Will the location add to the campus in a positive way?</li> <li><input type="checkbox"/> Is the location protected enough for your needs?</li> <li><input type="checkbox"/> Is it accessible to your classes?</li> <li><input type="checkbox"/> Is there a possibility to use rainwater?</li> <li><input type="checkbox"/> Does your district have limitations on digging? If so, how will this impact your timeline?</li> </ul> </li> <li><input type="checkbox"/> Depending on your admin, run the project by them first for approval (some admin may not need an in depth proposal, other structured admin may want a detailed proposal)</li> <li><input type="checkbox"/> Check in with grounds maintenance - will you need their help with maintaining the garden or with setting up irrigation?</li> <li><input type="checkbox"/> Outline how the project will align with your standards and curriculum plan.               <ul style="list-style-type: none"> <li><input type="checkbox"/> How many ways can you get students involved in the choice making?</li> </ul> </li> </ul>	Abiotic/biotic growth factors, macromolecules, nutrient cycling	n/a	\$0

2: Plan	<input type="checkbox"/> Plot the dimensions of your garden <ul style="list-style-type: none"> <li><input type="checkbox"/> Students can design a standardized way to plot the garden</li> </ul> <input type="checkbox"/> Collect abiotic & biotic data (for example) <ul style="list-style-type: none"> <li><input type="checkbox"/> Soil pH data at specific transects of your garden</li> <li><input type="checkbox"/> Nitrates and phosphates in soil</li> <li><input type="checkbox"/> Existing plants on campus</li> <li><input type="checkbox"/> Insects present on campus</li> <li><input type="checkbox"/> Average rainfall on campus</li> </ul> <input type="checkbox"/> Grid out water features and abiotic features with students <ul style="list-style-type: none"> <li><input type="checkbox"/> Use text resources focusing on your ecosystem to design water needs for your garden</li> <li><input type="checkbox"/> Plan around the data your students collected</li> </ul> <input type="checkbox"/> Select plants for the garden using previously collected data - connect to your driving question <ul style="list-style-type: none"> <li><input type="checkbox"/> Example: Driving question - How can we improve the biodiversity on our campus? Select diverse plants that attract diverse pollinators</li> </ul> <input type="checkbox"/> Grid out possible locations for plants in garden using plant biotic and abiotic needs <ul style="list-style-type: none"> <li><input type="checkbox"/> High water need plants go close to water sources</li> <li><input type="checkbox"/> High light requirement plants should get the most sun exposure</li> </ul>	Abiotic/biotic growth factors, photosynthesis, water quality, experimental design	Slates Markers Lab notebooks pH strips Nitrate testing kits Phosphate testing kits String Meter sticks Stakes	For 8 lab groups: \$100
3: Plant the garden	<input type="checkbox"/> Dig out water features first <ul style="list-style-type: none"> <li><input type="checkbox"/> Evaluate as you go to see where water is flowing - is it reaching the parts of your garden you need it to reach?</li> </ul> <input type="checkbox"/> For the following procedures, you can have students use text resources to create their own set of "planting	Water quality, SOPs	Plants Soil Mulch Spades Shovels Buckets Hose	\$600  (for all organic and native plants and soil)

	<p>procedures” to use</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Dig out holes for plants <ul style="list-style-type: none"> <li><input type="checkbox"/> Go 1-2 inches bigger than container</li> <li><input type="checkbox"/> Keep edges of the hole uneven not smooth</li> </ul> </li> <li><input type="checkbox"/> Plants go into designated spots <ul style="list-style-type: none"> <li><input type="checkbox"/> Loosen up root ball gently</li> <li><input type="checkbox"/> Fill empty space with a 5:1 mix of soil to mulch</li> <li><input type="checkbox"/> Create a berm around the plant stem</li> <li><input type="checkbox"/> Water slowly but deeply</li> </ul> </li> </ul>		<p>Water</p> <p>→ If possible, borrow gardening gear from maintenance or Agriculture class</p>	
4: Monitor	<ul style="list-style-type: none"> <li><input type="checkbox"/> Create teams of students with a weekly task of caring and monitoring the garden</li> <li><input type="checkbox"/> Periodically, the whole class collects data on the garden, for example: <ul style="list-style-type: none"> <li><input type="checkbox"/> Plant survivability/growth</li> <li><input type="checkbox"/> Soil quality &amp; nutrients</li> <li><input type="checkbox"/> Insect activity</li> <li><input type="checkbox"/> Public engagement with garden</li> </ul> </li> <li><input type="checkbox"/> Use data to make changes to your garden</li> </ul>	<p>Natural selection, biotic and abiotic factors, experimental design</p>	<p>See above</p>	<p>-</p>