

Instructional Scenario

Low-Maintenance Landscaping Considerations



Course/Duty Area: Biological Applications in Agriculture/Understanding Basic Plant Structures, Functions, and Nutrition

Scenario:

Your school wants to revamp its plant beds at the front entrance of the school. These beds should be appealing but also easy to care for. The groundskeepers are looking for multiple qualities in the replacement plants: the plants should resist pests without requiring pesticides, last for multiple years to avoid frequent replacement costs, and reproduce vegetatively to provide plants for use in other areas. These plants should also be well-suited to your area's growing zone.

Big Questions:

- How does a plant's structure and function impact suitability in landscapes?
- What are the benefits of using native plants in the landscape?

Focused Questions:

- How do plants store food?
- How do plants repel and/or withstand pests?
- What structures enable asexual reproduction in plants?
- How do native plants improve soil fertility, reduce erosion, and often require less fertilizer and pesticides than non-native plants?

Student Project or Outcome:

The student will create a list of replacement plants that meets the stated qualifications. The plant structures that support and allow these qualifications to be met will be identified for each plant listed.

Teacher Resource:

- [Natural Defenses Help Make Plants Pest-Resistant](#), Texas A&M AgriLife Extension
- [Benefits of Native Plants](#), Virginia Department of Conservation and Recreation

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