



Bio/Diversity Project
Local Fast Foods

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Grade Level: 7th grade – 12th grade

Common Core Standard:	<p><i>Strand 3, Concept 1: Describe the interactions between human populations, natural hazards, and the environment.</i></p> <ul style="list-style-type: none"> • <i>PO1. Analyze environmental risks (e.g., pollution, destruction of habitat) caused by human interaction with biological or geological systems.</i> <p><i>Strand 3, Concept 2: Develop viable solutions to a need or problem.</i></p> <ul style="list-style-type: none"> • <i>PO1. Propose viable methods of responding to an identified need or problem.</i>
Content Objective: Science	<ul style="list-style-type: none"> • <i>Students will be able to explain the harm caused to the environment by current human agricultural practices and eating habits.</i> • <i>Students will develop a solution to current agricultural practices and eating habits by constructing a food menu that fits more environmentally friendly parameters.</i>
Language Objective: (Optional)	N/A

Vocabulary	Materials
<ul style="list-style-type: none"> • Agriculture • Invasive • Monoculture • Native • Nonnative 	<ul style="list-style-type: none"> • List of native Arizona food plants and animals • Menus of various fast food restaurants • Desert plants to taste (optional)

Seasonality: (If more specificity is required, please note date/time range under the season)

Lesson might be more relevant during the Spring and Dry Summer when native plants are flowering and producing fruit.

<i>Monsoons</i> July-Sept.	<i>Autumn</i> Oct.-Nov.	<i>Winter</i> Dec.- Feb.	<i>Spring</i> Mar.-Apr.	<i>Dry Summer</i> May-June
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Guiding Questions:

- What do you eat on a daily basis?
- Where does this food come from?
- What do plants need to grow and how does this differ between (for instance) a cactus and an apple tree?
- Do certain nonnative plants harm the environment? How so?
- What native plants do we already eat?
- What small changes in your diet can you make to be more environmentally friendly?

Engagement/Introductory Activity:

Students will be shown a presentation that displays where the majority of our food comes from, where it originated, and how we grow it on a large scale and transport it all over the world. This portion of the presentation should focus on the damaging effects of clear cutting native ecosystems and installing nonnative monocultures as well as chemical inputs in the form of fertilizers, pesticides, and preservatives. The presentation should also introduce students to foods and ingredients native to the area and how they can be used in modern cooking.

Exploratory Activity:

- Students will be separated into groups and given a list of native and sustainable desert foods as well as assigned a popular restaurant.
- They will be instructed to recreate two entrees from the menu as well as drinks and desserts that are made entirely from ingredients that can be sustainably grown in the desert.
- The students will have access to the internet so they can look up more information on how to make the food (i.e. tortillas, buns).
- The students will then share their menus with the class and discuss whether or not people would eat their food, and how growing food locally can reduce the harmful effects of commercial agriculture on the environment.

Explain:

Students should be asked the following:

- What are parts of your menu that you couldn't make without desert-friendly ingredients?
- Are there any parts of your menu that you would actually like to try?
- What kind of resources can be conserved by using the desert alternatives as opposed to what the foods are usually made of?
- Do you think that we can continue growing food like we currently do forever?

Extension Activity/Questions:

Students will be asked to brainstorm ways that they can eat desert plants on a daily basis and discuss ways to affordably obtain locally grown food (Produce on Wheels, local Community Supported Agriculture [CSAs], home/school gardens, etc.).

Evaluation Activity:

The students will be asked to write down a dish that they learned about and that they could make with desert-friendly ingredients at home with their families.