



Your Shopping Experience Educator Guide

Using this Digital Exploration, students assume the role of a consumer interested in making healthy, nutritional choices for his or her family. They will investigate food product label claims by choosing a specific product from a virtual grocery store featuring produce, meat, and cereal. As they select different products, they will examine the science behind the labeling of genetically modified crops, grass-fed proteins, and what the USDA Organic certification means for farmers and consumers.

Important Takeaways:

- Product labels often include different claims and information such as “Cage Free,” “All Natural,” and “Organic”.
- Product label claims may not always reflect factual product information.

Time Required: 20-25 minutes

Topics

- Food & Nutrition
- Consumer Science
- Agriculture
- Ranching/Livestock/Fisheries

Suggested Grade Level

This exploration is designed for students in grades 9-12 but may be modified for younger students.

Hardware Recommendation

- **Discovering Farmland** is accessible on any device; however, for optimal user experience it is recommended explorations are accessed via desktop or tablet. This exploration is functional for use on mobile devices (iOS and Android).
- **Technical Specifications:** While the **Discovering Farmland** exploration will function in all browsers, including Internet Explorer, Safari, Chrome, and Firefox, browser load speeds will vary. For best performance, it is recommended that the most current version of your browser of choice is used when accessing the modules. Please note, connection speeds may be impacted by factors such as highly trafficked shared Wi-Fi access, public Wi-Fi, and accessing modules behind a firewall.

Procedure

This exploration is designed to be flexible to meet the needs of many different learning environments.

- **One-to-One Environment:**
Students using the exploration for independent, self-paced learning can simply move through the exploration at their own pace.
- **Working in Pairs or at Centers:**
Students can take turns answering the questions throughout the exploration, or they can work together to answer the questions. As students may have different reading levels, you will want to guide them to provide each group member with an opportunity to read and comprehend the information before moving on.
- **Class Environment:**
If you are leading a group in a one-to-many environment, you can use a projector and screen or whiteboard to make the exploration the focus of instruction and discussion. Use the questions in this guide and a show of hands during each topic to gauge student comprehension.
- **Customized Instruction:**
You may also choose to use discrete elements from the exploration that fit your timeframe and curriculum.

Path to Discovery

In this exploration, students will discover that many of the labels they see on food such as “all natural” or “USDA Organic” do not tell us much about how that food was raised. Most of these labels are applied by food marketers who seek to appeal to an increasingly health conscious consumer base. Most of the terms listed on these labels are standard practices carried out on any farm or marketing terms that are not backed by regulations. This module encourages students to think beyond the labeling they see at the grocery store and demonstrates that sound agricultural practices are far more widespread than they might realize.

1. Read the discussion questions before starting the Digital Exploration.
2. Guide students to respond to the questions, in writing, using evidence from the Digital Exploration.
3. Explain that you will be available to support students as they work.
4. Review student responses to the discussion questions after they have completed the exploration.

Discussion Questions

1. Why have labels like “certified USDA organic” and all natural” become so common in our grocery stores?
2. Do these labels help us to make healthier choices when it comes to eating? Use evidence from the exploration to support your response.
3. How does food marketing impact the farming industry? What are the effects on a large farm? How about a small farm?

Activities

Two activities are designed to be completed with support from the digital exploration.

Activity 1: Get to Know GMOs

In this companion activity, students explore how genetically modified crops maximize profitability, maintain the land and mitigate pests. Students will research genetically modified crops to dispel four common misconceptions. Students will use the knowledge gained through this activity and the **digital exploration** to collect evidence to refute each claim.

Activity #2: Water Budget

In this companion activity, students will be given a prompt that asks them to prepare a water budget for a new farm that has been planned. They will utilize the data given in the prompt to calculate the water budget and determine if the new farm will face either a water deficit or surplus. Students will use the information they learn from this activity and the **digital exploration** to construct an argument about how crops that are genetically modified to resist drought make farmers' livelihoods more secure and keep our food supply stable.

Key Vocabulary

- **Grass-fed:** Meat products with the “grass fed” label mean that the animal that product comes from grazed primarily on grass and have continuous access to a pasture during the entire life cycle of the animal.
- **Genetic modification:** Genetic modification refers to the process used to enhance crops to give them more favorable traits like pest resistance and drought resistance.
- **All-natural:** The Food and Drug Administration (FDA) requires that foods with the “AllNatural” label contain no artificial flavors, colors, or substances.
- **Antibiotics:** Livestock animals are treated with antibiotics when they are sick in order to keep them healthy. This prevents harmful bacteria from entering our food supply.
- **Cage free:** Cage free birds have access to the outdoors. There are no requirements for the amount, duration, and quality of outdoor access.
- **USDA Organic:** Foods that are certified USDA Organic follow a specific set of guidelines set by the USDA. Organic crops cannot be grown with synthetic fertilizers, synthetic pesticides, or sewage sludge. Organic crops cannot be genetically engineered or irradiated. Animals must eat only organically grown feed (without animal byproducts) and can't be treated with synthetic hormones or antibiotics. Animals must have access to the outdoors, and ruminants (hoofed animals, including cows) must have access to pasture. Animals cannot be cloned.)

Extended Learning

Students and educators can continue the learning on agriculture and farmland by exploring these additional resources:

- [Beginning Farmers: A Resource Guide from FarmAid](#)
- [American Farm Bureau Foundation for Agriculture: My American Farm](#)
- [USDA Beginning Farmer and Rancher Development Program](#)
- [Farm & Wilderness Camps and Apprenticeships](#)
- [Modern Farmer: 6 Great Farm Reads for Young Adults](#)