

# Organic or Conventional

## Fact, Opinion, Propaganda

Skills: Social Studies, Language Arts

Objective: Students will examine the differences between organic and conventional farming and learn to identify fact, opinion and various propagandas techniques.

### Background

Organic foods are showing up all over grocery shelves, not just in the produce section but in breakfast cereals, boxes of macaroni and cheese, even prepared frozen foods.

What makes a product organic, and how is it different from those that are not labeled organic? Why are there more organic foods available now than in the past? Are foods not labeled organic unsafe? Are organic foods better for you? Is organic production better for the environment?

### What is organic?

According to the International Federation of Organic Agriculture Movements (IFOAM), organic farming “enhances soil structures, conserves water and ensures the conservation and sustainable use of biodiversity. . . . Pests and diseases are controlled with naturally occurring means and substances according to both traditional as well as modern scientific knowledge, increasing both agricultural yields and disease resistance.”

To be certified organic in the US, farmers must pay a fee to have their facilities and food annually inspected by certified organic inspectors. For at least three years in a row the land and crops must not be treated with any synthetic pesticides, insecticides, herbicides or certain fertilizers, such as sewage sludge and most chemical fertilizers. (Some chemical fertilizers are considered organic and are permitted.) Organic livestock cannot be confined to feedlots or battery cages, and cannot have hormones or antibiotics implanted or added to their feed.

There are also regulations regarding the way the food is processed. No radiation or artificial preservatives can be used during organic food processing. Biotechnologies such as genetic engineering and cloning cannot be used in foods certified organic.

In Oklahoma, farms (or parts of farms) meeting all the requirements of the Oklahoma Organic Food Act may be issued a license by the Oklahoma State Board of Agriculture. There are two classes of certification—Organic Certification and Organic Certification-Transitional. The transitional certification is for farmland that has not yet been under three continuous years of organic management but otherwise meets the requirements of the Oklahoma



### P.A.S.S.

#### GRADE 6

##### **Reading**—1.1;

3.1b,2a,3a,4df; 5.1ab,2ac

##### **Writing**—1.2;

2.2abcd,3abc,7

**Oral Language**—1.2; 2.1,2

##### **Visual Literacy**—3

**Social Studies**—1.1,3; 4.2

#### GRADE 7

##### **Reading**—1.1;

3.1a,2a,3a,4d; 5.1ab,2ac

##### **Writing**—1.2;

2.21bc,3abc,8

**Oral Language**—1.1,2;

2.1,2

**Visual Literacy**—3.2

**Social Studies**—1.1; 5.2

#### GRADE 8

##### **Reading**—1.1;

3.1a,2ab,3ab,4a; 5.1a,2ab

##### **Writing**—1.2;

2.2abcd,3abc,8

**Oral Language**—1.1,2;

2.1,2,3

**Visual Literacy**—3.1,2

**Social Studies**—1.1,6; 2.1

### Resources Needed

computer/library access

## Vocabulary

**antibiotics**—chemicals used to kill bacteria; also used as a growth stimulant in livestock

**artificial**—made, produced, or performed by human beings

**battery cages**—small cages used to hold several hens for long periods of time

**beneficial insects**—insects that perform valued services like pollination and pest control

**biodiversity**—biological variety in an environment as indicated by numbers of different species of plants and animals

**certified**—guaranteed to have met a standard

**chemical**—a substance (as an element or compound) obtained from a chemical process or used to get a chemical result

**clone**—an individual grown from a single body cell of its parent and having the same genes as its parent

**conservation**—a careful preservation and protection of something; especially planned management of a natural resource to prevent exploitation, pollution, destruction, or neglect

**consumer**—a person who buys and uses up goods

**contamination**—to soil, stain, or infect by contact or association

**conventional**—following, agreeing with, or based on a way of doing things that is widely accepted and followed

**E coli**—a bacterium in the shape of a short rod that sometimes causes an intestinal illness

**erosion**—the state of wearing away by or as if by the action of water, wind, or glacial ice

Continued on next page.

Organic Food Act.

### **How is organic different from other food?**

Only 3 percent of the farms in the US are certified organic. Most of the food available to consumers in the US and around the world is produced by methods that are not completely organic. These methods are called “conventional” because they are the most widely accepted and most commonly used methods for growing food. Although conventional methods make use of available technologies such as inorganic chemical pesticides and fertilizers and genetically-modified organisms, they also include some methods aimed at protecting soil structures, conserving water and ensuring conservation and sustainability. No-till farming, which leaves stubble in the fields after a crop is harvested, is a conventional practice which helps prevent soil erosion. Integrated Pest Management is a conventional technique which takes into account several factors to minimize the use of insecticides in order to protect beneficial insects and preserve some biodiversity.

Most farmers, whether organic or conventional, are concerned about maintaining the health of the land because the land is their livelihood.

### **Why are there more organic foods available now than in the past?**

Consumer demand has led to the increase in organic foods available. Sales of organic food in the US totaled \$5.4 billion in 1998, \$6.5 billion in 1999, \$7.8 billion in 2000, \$13.8 billion in 2005, and was expected to hit \$16 billion by the end of 2006. Demand for organic foods is on the rise in Europe as well.

### **Is organic food better for you?**

Many people choose organic foods because they believe they are safer. Probably the most prevalent concern is the fear of pesticide residues. While some scientists believe the allowed levels of pesticides in our foods can be harmful, especially to young children, others think there is not enough evidence to prove this.

Three federal government agencies share responsibility for the regulation of pesticides in the foods we eat. The Environmental Protection Agency approves the use of pesticides and sets the maximum amounts of residues (tolerances) permitted in or on a food. The Food Safety and Inspection Service of the US Department of Agriculture (USDA) is responsible for inspecting meat, poultry, and certain egg products. The Food and Drug Administration (FDA) enforces tolerances in imported foods and in domestic foods shipped in interstate commerce. FDA also collects incidence/level data on particular commodity/pesticide combinations. Since 1991, the USDA’s Agricultural Marketing Service, through contracts with participating states, has carried out a residue testing program directed at raw agricultural products and various processed foods. All these agencies are charged with making sure the food we eat is safe.

Under organic certification regulations, chemical pesticides are

allowed, but they must be from natural sources. Pesticides from natural sources break down more quickly into harmless materials and are less likely to show up in food that is on grocery shelves.

In some cases organically-grown foods may pose their own health risks. Recent concerns over E. coli bacteria in spinach and other produce have caused some to question the possibility of contamination by livestock manure used as fertilizer in organically-produced foods.

A few small studies have shown that some organic foods contain higher nutrient levels than conventional ones but more research is needed before the claim can be made that organically-grown foods are better for you.

### **Is organic production better for the environment?**

Although farming organically helps the environment by promoting soil health, biodiversity and conservation, there are some who believe there are other factors to consider. Organic farming yields only 75 to 90 percent of the crop of conventional systems. For this reason, more land is necessary for growing food using organic methods.

Background Sources: Oklahoma Department of Agriculture, The Organic Trade Association; "Environmental Benefits of Organic Agriculture," International Federation of Organic Agriculture Movements (IFOAM), [http://www.ifoam.org/organic\\_facts/benefits/index.html](http://www.ifoam.org/organic_facts/benefits/index.html)

### Activities

1. Read and discuss background and vocabulary.
  - Divide students into groups.
  - Assign one section of the background to each group.
  - Students will read and discuss their sections in groups.
  - Each group will teach its assigned section to the class, using visual aids and other presentation methods to summarize the main points.
2. Provide copies of the "Fact and Opinion?" worksheet included with this lesson.
  - Discuss the difference between fact and opinion.
  - Students will determine which of the statements on the worksheet are fact and which are opinion.
3. Provide copies of the "Propaganda Techniques" worksheet included with this lesson.
  - Discuss propaganda techniques.
  - For each of the statements on the worksheet, students will identify the propaganda technique(s) used.
  - As a class, students will discuss and justify their answers. Some students may have different answers than others.
  - Students will identify examples of propaganda from other sources: their peers, the news media, advertising, etc.
  - Students will write their own statements about organic and conventional food production methods, using a variety of propaganda techniques.
4. Students will use online search engines and library resources to research the impact of organic vs. conventional agriculture on the natural environment:
  - Students will select one of the following topics: synthetic vs. natural

### Vocabulary (Cont.)

**facility**—something (as a hospital) that is put up for a particular purpose

**feedlots**—large pens of livestock kept confined and usually fed grain until large enough to harvest

**fertilizer**—a substance (as manure or a chemical) used to make soil produce larger or more plant life

**genetic engineering**—introducing DNA from other species in order to get new characteristics such as vitamin production, disease resistance, etc.

**herbicides**—chemicals that kill plants

**hormones**—chemicals made in one part of the body that act on another part of the body; part of the body's chemical message system; used to make livestock grow faster or produce more milk

**implants**—usually small plastic pieces with embedded hormones that are inserted under an animal's skin for slow-release of the chemicals

**inorganic**—being or composed of matter that does not come from plants or animals either alive or dead

**insecticides**—chemicals that kill insects

Continued on next page.

## Vocabulary (Cont.)

**Integrated Pest Management**—ecological approach to pest management, incorporating all available techniques in a plan to manage the pest in such a manner that economic damage is reduced and adverse side effects are minimized

**livestock**—farm animals kept for use and profit

**natural**—existing in or produced by nature

**no-till**—a way of growing crops from year to year without disturbing the soil through tillage

**nutrient**—a substance or ingredient that furnishes nourishment

**pesticides**—chemicals that kill “pests,” e.g., worms, insects, etc.

**preservative**—something that preserves or has the power of preserving

**radiation**—gamma rays, high energy electrons, and other particles used to kill bacteria in order to lessen the chances of food poisoning, sprouting of vegetables, etc.

**residue**—whatever remains after a part is taken, set apart, or lost or after the completion of a process

**sewage sludge**—sewage solids (manure, etc.) used as fertilizer

**stubble**—the stem ends of herbs and especially cereal grasses remaining attached to the ground after harvest

**sustainable**—use for the practice of agriculture which supports sustained economic profitability, sustained quality and well-being of the environment, efficient use of natural resources, and the overall quality and availability of food and fiber

**synthetic**—produced artificially

**yield**—something produced as a result of effort

pesticides and herbicides; synthetic fertilizers vs. natural fertilizers such as manure and compost; bio-diversity vs. monoculture

—Provide students with copies of “How Reliable Are Your Sources?” included with this lesson, for review and discussion.

—Students will use the chart provided to evaluate the validity of sources.

—Students will use a variety of media to present their findings and discuss them as a class.

5. Students will write persuasive essays on the benefits of organic farming or conventional farming.
6. Students will research and write reports about one of the following pioneers in the organic agriculture movement: Sir Albert Howard, R.I. Rodale, Lady Eve Balfour, Rudolf Steiner.

## Extra Reading

Burnie, David, and Tony Juniper, *Endangered Planet*, Kingfisher, 2004.

Morgan, Sally, *Life Science in Depth: Green Plants*, Heinemann Library, 2006.

Spangenburg, Ray and Kit Moser, *Genetic Engineering*, Marshall Cavendish, 2005.

Stewart, Keith, and Flavia Bacarella, *It's a Long Road to a Tomato: Tales of an Organic Farmer Who Quit the Big City for the (Not So) Simple Life*, Marlowe & Co., 2006.

Winchester, William Paul, *A Very Small Farm*, University of Oklahoma, 2006.

# Fact or Opinion?

---

---

Facts are statements that can be verified or proven to be true or false. Factual statements from reliable sources can be accepted and used in drawing conclusions, building arguments, and supporting ideas. Opinions are statements that express feelings, attitudes, or beliefs and are neither true nor false. Opinions must be considered as one person's point of view that you are free to accept or reject. The exception is informed opinion—the opinion of an expert or authority—which may be used as supporting evidence.

For each of the statements below, decide which is fact and which is opinion.

1. Organic food differs from conventionally-produced food simply in the way it is grown, handled and processed.  
fact or opinion?
2. Organic meat, poultry, eggs, and dairy products come from animals that are given no antibiotics or growth hormones.  
fact or opinion?
3. Trust me, once you try some organic produce and taste an apple the way it should be, you will never go back to mass produced fruit again.  
fact or opinion?
4. Organic is not just another lifestyle choice: it is a better agriculture and a better kind of food to eat.  
fact or opinion?
5. Biotechnology is a very good thing. It is perhaps the only thing in the world that can save large numbers of people from starvation.  
fact or opinion?
6. Using organic farming to feed the developing world remains a pipe dream.  
fact or opinion?
7. To be certified organic in the US, farmers must pay a fee to have their facilities and food annually inspected by certified organic inspectors.  
fact or opinion?
8. Sales of organic food in the US totaled \$5.4 billion in 1998, \$6.5 billion in 1999, \$7.8 billion in 2000, \$13.8 billion in 2005, and was expected to hit \$16 billion by the end of 2006.  
fact or opinion?
9. Organic farming provides a healthier workforce on the farms because farm workers are protected from the harmful effects of chemicals.  
fact or opinion?

# Fact or Opinion? (answers)

---

---

Facts are statements that can be verified or proven to be true or false. Factual statements from reliable sources can be accepted and used in drawing conclusions, building arguments, and supporting ideas. Opinions are statements that express feelings, attitudes, or beliefs and are neither true nor false. Opinions must be considered as one person's point of view that you are free to accept or reject. The exception is informed opinion—the opinion of an expert or authority—which may be used as supporting evidence.

For each of the statements below, decide which is fact and which is opinion.

1. Organic food differs from conventionally produced food simply in the way it is grown, handled and processed.  
fact
2. Organic meat, poultry, eggs, and dairy products come from animals that are given no antibiotics or growth hormones.  
fact
3. Trust me, once you try some organic produce and taste an apple the way it should be, you will never go back to mass produced fruit again.  
opinion
4. Organic is not just another lifestyle choice: it is a better agriculture and a better kind of food to eat.  
opinion
5. Biotechnology is a very good thing. It is perhaps the only thing in the world that can save large numbers of people from starvation.  
opinion
6. Using organic farming to feed the developing world remains a pipe dream.  
opinion
7. To be certified organic in the US, farmers must pay a fee to have their facilities and food annually inspected by certified organic inspectors.  
fact
8. Sales of organic food in the US totaled \$5.4 billion in 1998, \$6.5 billion in 1999, \$7.8 billion in 2000, \$13.8 billion in 2005, and was expected to hit \$16 billion by the end of 2006.  
fact
9. Organic farming facilitates a healthier workforce on the farms in that farm workers are protected from the harmful effects of chemicals.  
fact

# Propaganda Techniques

---

Propaganda is used to spread ideas that further a cause—political, commercial, religious, etc.

Propaganda techniques manipulate a person's reason and emotions by persuading him/her to believe in something or someone, buy an item, or vote a certain way. The following are some common propaganda techniques:

## BANDWAGON

Bandwagon is an appeal to the subject to follow the crowd, to join in because others are doing so as well. Example: Everyone knows pesticides are perfectly safe.

## GLITTERING GENERALITIES

This technique uses important-sounding "glad words" that have little or no real meaning. These words are used in general statements that cannot be proved or disproved. Words like "good," "honest," "fair," and "best" are examples of "glad" words.

Example: Organically grown food tastes better and is better for the environment.

## TRANSFER

In this technique, an attempt is made to transfer the prestige of a positive symbol to a person or an idea. For example, using the American flag as a backdrop for a political event makes the implication that the event is in the best interest of the US.

Example: Using all available technology in farming is the American way.

## TESTIMONIAL

This technique is when "big name" personalities are used to endorse a product. Whenever you see someone famous endorsing a product, ask yourself how much that person knows about the product, and what he or she stands to gain by promoting it.

Example: The rock star Beyonce drinks organic milk to stay healthy.

## EITHER/OR FALLACY

This technique is also called "black-and-white thinking" because only two choices are given. You are either for something or against it; there is no middle ground or shades of gray. It is used to polarize issues, and negates all attempts to find a common ground. Example: Farmers must use pesticides or we will all starve.

## NAME CALLING (AD HOMINEM)

This technique consists of attaching a negative label to a person or a thing rather than supporting a statement with facts.

Example: Farmers who use pesticides are agents of death.

## PLAIN FOLKS

This technique uses a folksy approach to convince us to support someone or something. These ads depict people with ordinary looks doing ordinary activities.

Example: Conventional farmers are your neighbors.

## FAULTY CAUSE AND EFFECT

This technique suggests that because B follows A, A must cause B. Remember, just because two events or two sets of data are related does not necessarily mean that one caused the other to happen. It is important to evaluate data carefully before jumping to a wrong conclusion.

Example: Healthy people eat organic food so organic food must be good for you.

## APPEAL TO FEAR

The idea is to present a dreaded circumstance and usually follow it up with the kind of behavior needed to avoid it.

Example: If we don't stop using pesticides we will all die.

# Propaganda Techniques

---

---

For each of the statements below, write the name or names of the propaganda techniques used.

1. Conventional farmers don't care about the earth and just want to kill everything with chemicals.
2. The pesticides in our food are going to kill us.
3. Without pesticides farmers could not make a living and we would all starve.
4. Everyone is switching to organic food because organic food is better for you and better for the environment.
5. The singer Carrie Underwood will only eat organic food.
6. People who eat organic food are just weird treehuggers.
7. People who eat organic food are unAmerican because they don't appreciate American agriculture.
8. Taste the down home natural goodness of organic food.
9. Farmers are either organic or conventional. They can't be both.
10. Organic food is grown on small family farms.
11. People have been using pesticides for years and they haven't killed us yet, so they must be safe.

# Propaganda Techniques (answers)

---

---

For each of the statements below, write the name or names of the propaganda techniques used. Discuss your answers with your classmates.

1. Conventional farmers don't care about the earth and just want to kill everything with chemicals.  
name calling
2. The pesticides in our food are going to kill us.  
appeal to fear
3. Without pesticides farmers could not make a living and we would all starve.  
appeal to fear, faulty cause and effect
4. Everyone is switching to organic food because organic food is better for you and better for the environment.  
bandwagon, glittering generalities
5. The singer Carrie Underwood will only eat organic food.  
testimonial
6. People who eat organic food are just weird treehuggers.  
name calling
7. People who eat organic food are unAmerican because they don't appreciate American agriculture.  
name calling, transfer, faulty cause and effect
8. Taste the down home natural goodness of organic food.  
plain folks, glittering generalities
9. Farmers are either organic or conventional. They can't be both.  
either/or fallacy
10. Organic food is grown on small family farms.  
plain folks, transfer
11. People have been using pesticides for years and they haven't killed us yet, so they must be safe.  
faulty cause and effect

# How Reliable Are Your Sources?

---

When conducting research, make sure you use reliable information from legitimate sources. Reliable information is well-researched from sources that are well-respected and as objective, or neutral, as possible. The best way to find legitimate sources is to go to the library and use scholarly journals, reference books and other well-researched sources.

Another place to find information is the Internet. Conducting research on the Internet is convenient, but it can also be tricky. There are many thousands of Web pages that have little actual content and are mainly links to other pages, which may be links to other pages, and so on. Anyone can post anything to the Internet. To make sure you have found a reliable source of information, ask yourself these questions:

1. Who is responsible for the Web site? Is the Web page associated with a reliable organization, such as a university or a government agency? What interest does the organization responsible have in the information presented. For example, will the organization profit from the information presented?
2. Who wrote the information? If the author is not listed or has no credentials, it may not be a credible source. Pay attention to the author's credentials or experience. Is the source really an authority on this particular matter or someone with an impressive title that has no connection to the subject matter?
3. When was the information written? Is it current? Is it still relevant?
4. Are there other sources that agree with statements made on the site, or do other sources contradict this source? In that case you may need to search further. It's always a good idea to gather more than one source.
5. Are any sources cited? If the author does not document anything, then the information may simply be someone's opinion. If statistics used come from a survey, how was the data gathered? Who conducted the survey or poll? Was the sample representative of the population? How many were surveyed? What percent of the population?

When choosing between the library and the Internet keep in mind that up to 90 percent of the contents of college library collections are not on the Internet. Because of copyright laws it is too expensive to put all scholarly work on the Internet. This means that the most comprehensive source of information is still the library.