

Smithsonian

Organic Farming



Dona Herweck Rice

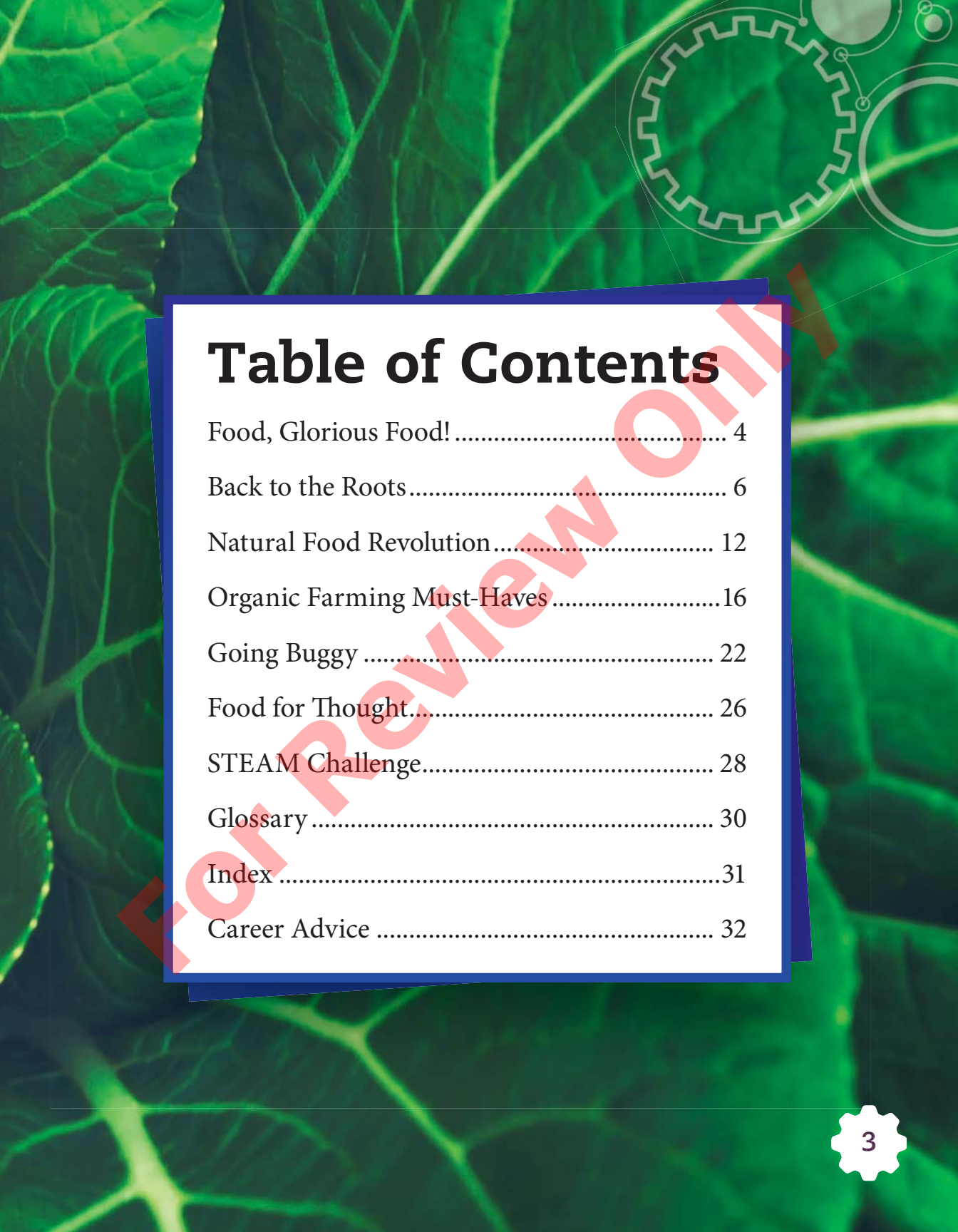


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Food, Glorious Food!

There are few things in life that everyone thinks about every day. Food is one of them. Throughout the day, a person often thinks: *What is there to eat? I wonder what we're having for dinner. My stomach is growling. Oh, that smells good! I'm hungry!*

Food is necessary for life, but it can also be one of life's pleasures. People like food that tastes good! More than anything, though, healthy bodies need **nutritious** food. Unfortunately, a lot of foods that people eat are not nutritious. They may taste good and provide fuel for the body, but they are not nourishing. Sometimes, they are downright unhealthy.

Over time, a growing number of people have chosen more healthy food choices. They want food to be delicious *and* nutritious.



A woman works with lettuce in a garden.

About 1 in 10 workers in the United States works in the food industry.

Preparing healthy foods can be fun!

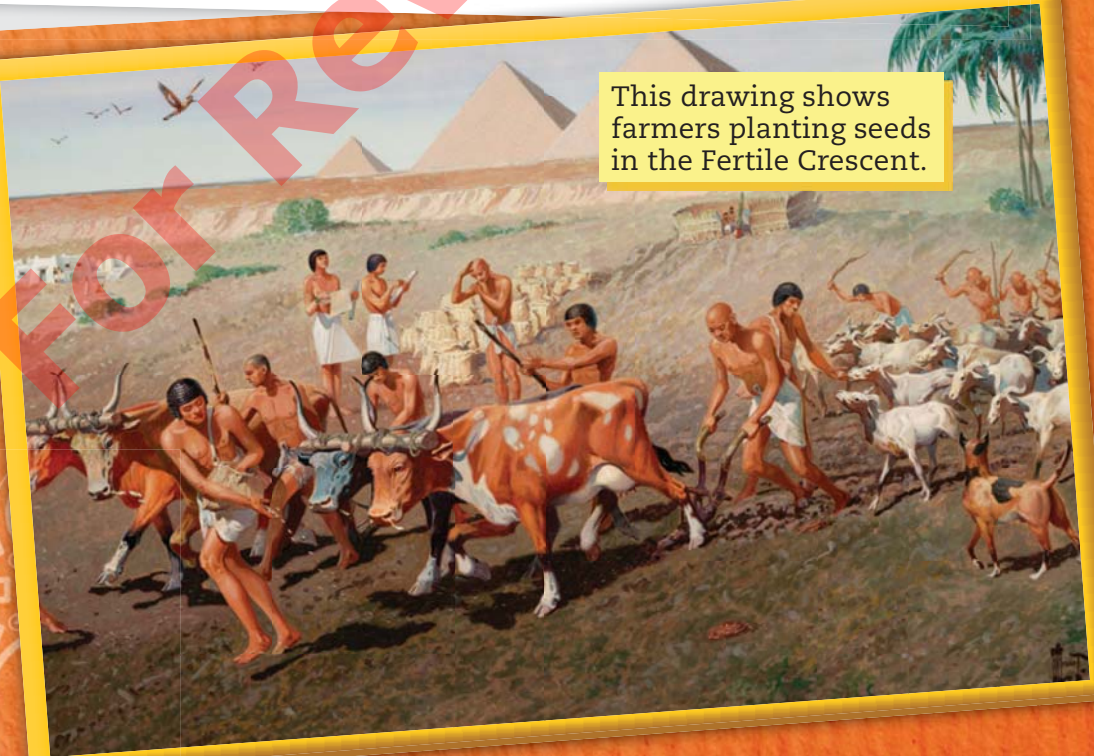
Back to the Roots

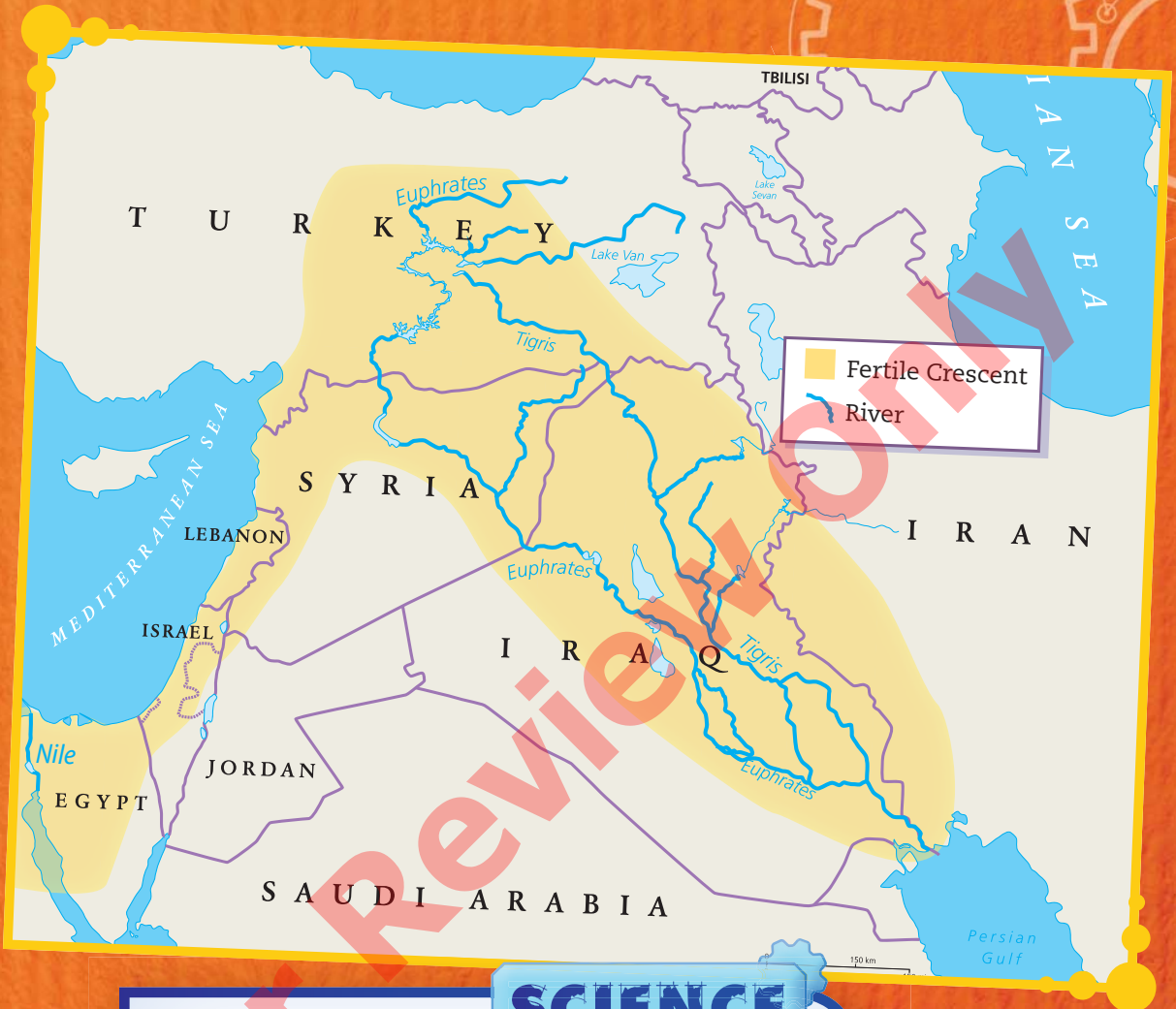
Foods we think are healthy may be made or grown in unhealthy ways. More and more people are worried about this fact. So, researchers studied how people farm today. They compared current methods to how people used to farm. Today's **organic** farmers are going back to the roots of farming.

History of Farming

Farming is one of the biggest industries in the world. But people have not always farmed. In ancient times, people found food by **foraging**. These people were called hunter-gatherers. Then, thousands of years ago, people began to farm.

Farming did not start in just one place with one group of people. Several groups began to farm around the same time. The first farmers lived throughout the so-called **Fertile Crescent**. It is a large area of land in the Middle East. It has rich soil and plenty of water.





SCIENCE

Fertile Crescent

Plants need soil that is rich with **nutrients**. The soil in the Fertile Crescent has nutrients that are needed for a variety of plants to grow. **Sediment** from the flowing rivers fertilizes the soil. The climate is right for year-round growing cycles. An abundant water supply brings needed water to crops.

Most early farming was done by hand. People buried seeds in soil, pulled weeds, and **harvested** plants without machines.

As time went on, people developed basic farming tools. They used sticks and bones to dig into soil. When they learned to work with metal, people made hoes, scythes (SIGHTHS), and plows. These tools could do more than hands could. People also used animals to help them farm.

Farming continued this way for thousands of years. Most people farmed or lived near farms and grew crops for their families and communities. Nature nourished and watered plants. Farmers worked with nature to grow the plants just as they would grow naturally. They learned to work with natural processes to grow healthy plants that would, in turn, keep them healthy, too.



prehistoric hoe



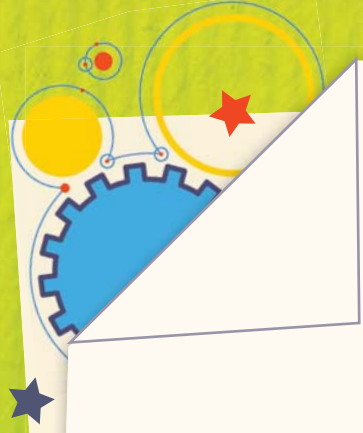
modern hoe with a metal blade



TECHNOLOGY

Which Tool to Use?

Machetes (muh-SHEH-teez) and scythes have long been used to harvest crops. The size, weight, and structure of each tool make them easier to swing at a certain height. A machete is a wide and sturdy blade with a short handle. It is best used to harvest crops that grow waist high. A scythe is a hooked blade attached to a long wooden pole. It is best for cutting crops close to the ground.



STEAM CHALLENGE

Define the Problem

Your school's garden club is having trouble growing organic crops in the winter. They are asking students to present possible solutions. Create a model structure that will provide safe growing conditions for crops during the winter.



Constraints: The length, width, and height of your model must be between 0.75 and 1 meter (2.5 and 3 feet).



Criteria: The protective structure must allow sunlight in, include an entryway, and withstand a 30-second wind test.





Research and Brainstorm

What are the crops' basic needs? How will your structure meet these needs? How can you make your structure stable?



Design and Build

Sketch your design. What materials will work best? What purpose will each part serve? Build the model.



Test and Improve

Present your model to your classmates to evaluate the first two criteria. Use a large fan to conduct a 30 second wind test. Get feedback. Does your model meet all of the criteria? How can you improve it? Modify your design and try again.



Reflect and Share

How can you make your structure visually appealing? Will your model produce crops in all weather conditions?