TECHNOLOGY AND FOOD

Reading 1

Skills:

- Details
- Connect information
- Recognize cause-effect

Getting started:

What is the most bizarre food you have ever eaten?

FOOD TECH

THE FUTURE OF FOOD

In 2050, dining at your favorite restaurant will be a different experience. Your robot waiter will greet you and take you to your table, and you will look at a holographic menu. As you check the options, you'll notice the usual dishes are still there but with some unusual modifications. For the starter, we have a delicious Caesar salad containing protein-rich worms with bread made using cricket flour. Next, your android waiter will bring the main course: a burger with lab-grown meat decorated with lettuce freshly selected from an underground farm and juicy tomato that was genetically modified to contain extra vitamins. If you want a dessert, you can choose some sweet options that were designed on a computer and printed directly onto the plate. These dishes may seem bizarre, but in the future, they could solve a global food crisis.

Over the next 35 years, the world's population is expected to reach nine billion, meaning two billion hungry mouths more to feed. To satisfy this demand, the food we grow will need to increase by 70%, but with lots of farmland already being used, and billions of inhabitants with bad nutrition habits, this will represent a major challenge. Today's global food industry is unsustainable, with agriculture responsible for almost a third of all human-caused greenhouse gas emissions. From the nitrous oxide caused by crop fertilizers to the carbon dioxide generated to transport the food around the world, these gases are trapping heat in the atmosphere and warming the surface. In turn, the changing climate makes it difficult to grow more crops, so scientists will need to do more to help.

By genetically modifying the plants we grow, the more vulnerable species could survive difficult environments, and the strongest species could also be made more nutritious to ensure we get the vitamins and minerals we need. Although growing fruit and vegetables generates a great deal of greenhouse gas, livestock production is the biggest contributor to global emissions. Actually, producing one 230-gram hamburger generates the same amount of greenhouse gas as driving a passenger car for 16 kilometers. Among these gasses is methane, which is about 25 times more effective at warming the planet than carbon dioxide. As demand for meat grows, so does the list of negative consequences for our planet.

Of course, one simple solution to the problem is to eat less meat, but for a mostly carnivorous global population, this idea is unlikely to work. Therefore, tasty alternatives need to be found, and our idea of what we consider to be meat may need to change, too. For example, the beef and chicken in your burgers could soon be substituted for crickets and worms, or perhaps be grown in a lab. In fact, even traditional farms are likely to look different in a few decades. Gone will be the days of farmers driving tractors and milking cows, as autonomous machines are already being implemented to make the industry more efficient.

Once these ecofriendly and sustainable foods have been harvested, we might not recognize the products that we will find in the stores. Instead of packets and cans, your local supermarket will sell ingredients in cartridges that you can load into your 3D printer at home. Then, just by pressing a button, you can sit back and relax while the machine builds a delicious dish, which is sure to impress your dinner guests.

*Adapted from How it Works – World of Tomorrow. Fifth Edition. DK Publishing.

Complete the following charts based on the information presented in the text:

Cause	Problem
Irresponsible agricultural practices / livestock	
	Nitrous oxide
Food being transported	

Problem	Solution
	Unconventional dishes that don't affect the environment.
Not many opportunities to have more crops.	
There are species at risk	
	Substitute beef and chicken for crickets or worms. / Grow meat in labs.

The Present	The Future
Diner, a waitress, a paper menu, and a typical burger.	
A tasty dessert made by the chef.	
	Machines doing these jobs autonomously.
You find food in the supermarket.	

What do you think?

Would you feel comfortable if you ate printed food?