

LAB-GROWN MEAT AND THE FUTURE OF FOOD

6TH, 7TH, 8TH GRADE READING

Improve students'
literacy skills

Sub Plan

Science Applicability



Reading Comment



★★★★★ Extremely satisfied - Great resource to work on student reading comprehension and it tied into the topic I was teaching. My students have been struggling with reading and I've been incorporating more reading into my lessons. Thank you for the resource.



SCROLL
to take a look inside!

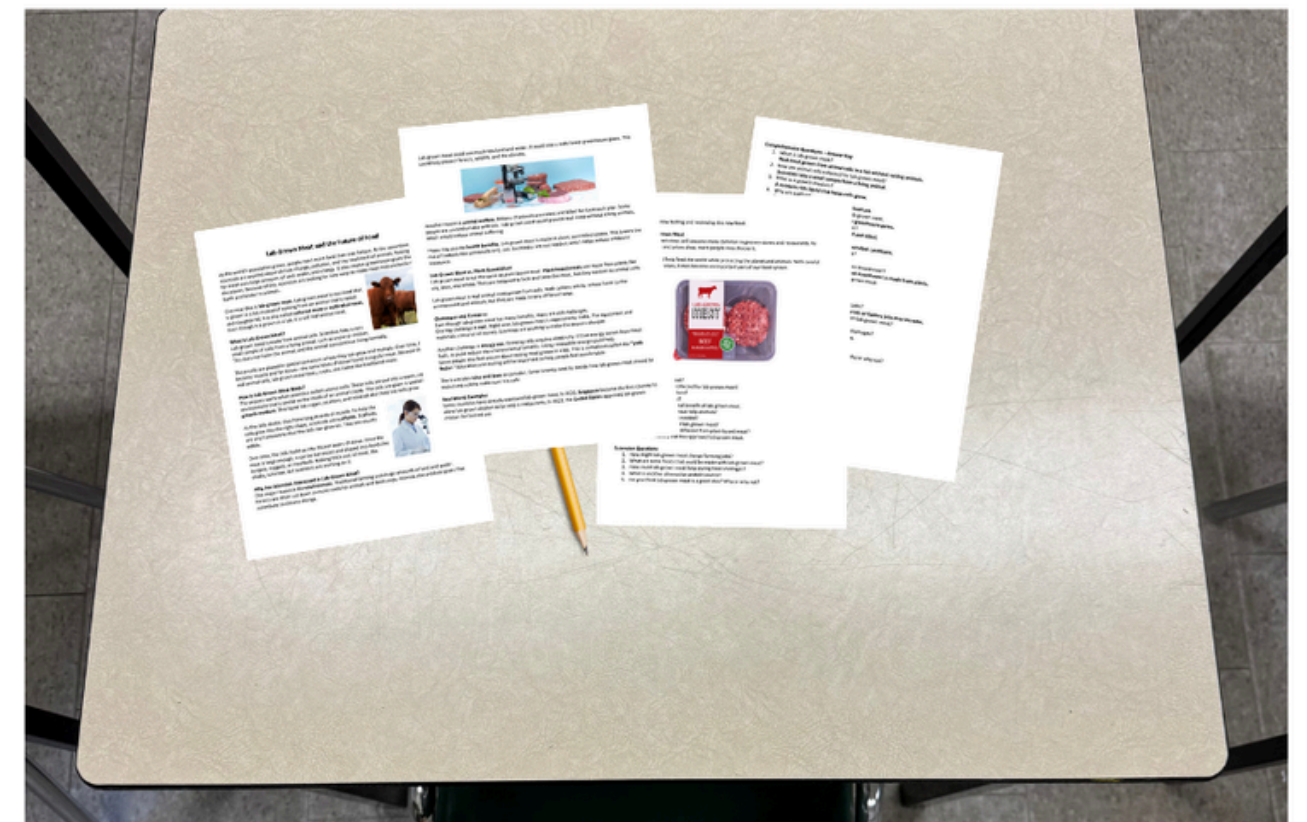


THE PROBLEMS YOU FACE

- Limited time to teach scientific literacy and strengthen students' reading and analysis skills.
- Need meaningful extension activities to engage fast-moving learners.
- Difficulty creating effective last-minute sub plans that still support student learning.

NO-PREP - PRINT/UPLOAD

- Questions and Answer Key
- **No Prep, Ready-to-Use:** Print or assign digitally with Google Docs, Microsoft Word, and PDF formats for flexible classroom use
- **Includes Varied Question Types:** Knowledge, thinking, connecting, application, and open-ended questions.



What Will Your Students Learn?

READING COMPREHENSION ARTICLE & QUESTIONS

- What Is Lab-Grown Meat?
- How Lab-Grown Meat Is Made (Cells, Growth Medium, Scaffolds)
- Why Scientists Are Developing Lab-Grown Meat
- Environmental Impact of Traditional Meat Production
- Animal Welfare and Ethical Concerns
- Lab-Grown Meat vs. Plant-Based Meat
- Health and Safety Benefits
- Challenges and Limitations
- Real-World Examples and Current Use
- The Future of Food and Sustainable Protein

Article with
Comprehension
Questions

6th, 7th, 8th Grade

Print & Digital

Comprehension Questions

1. What is lab-grown meat?
2. How are animal cells collected for lab-grown meat?
3. What is a growth medium?
4. Why a
5. Name
6. How
7. Why
8. What
9. How
10. Name

Extension

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2. W
3. Ho
4. W
5. D

Lab-Grown Meat and the Future of Food

As the world's population grows, people need more food than ever before. At the same time, many scientists are worried about climate change, pollution, and the treatment of animals. Raising animals for meat uses large amounts of land, water, and energy. It also creates greenhouse gases that warm the planet. Because of this, scientists are looking for new ways to make meat that are better for the Earth and kinder to animals.

One new idea is **lab-grown meat**. Lab-grown meat is real meat that is grown in a lab instead of coming from an animal that is raised and slaughtered. It is also called **cultured meat** or **cultivated meat**. Even though it is grown in a lab, it is still real animal meat.



What Is Lab-Grown Meat?

Lab-grown meat is made from animal cells. Scientists take a very small sample of cells from a living animal, such as a cow or chicken. This does not harm the animal, and the animal can continue living normally.

These cells are placed in special containers where they can grow and multiply. Over time, the cells become muscle and fat tissue—the same kinds of tissue found in regular meat. Because the cells are real animal cells, lab-grown meat looks, cooks, and tastes like traditional meat.

How Is Lab-Grown Meat Made?

The process starts when scientists collect animal cells. These cells are put into a warm, clean environment that is similar to the inside of an animal's body. The cells are given a special liquid called a **growth medium**. This liquid has sugars, vitamins, and minerals that help the cells grow.

As the cells divide, they form long strands of muscle. To help the cells grow into the right shape, scientists use **scaffolds**. Scaffolds are tiny frameworks that the cells can grow on. They are usually edible.



Over time, the cells build up into thicker layers of tissue. Once the meat is large enough, it can be harvested and shaped into foods like burgers, nuggets, or meatballs. Making thick cuts of meat, like steaks, is harder, but scientists are working on it.

Why Are Scientists Interested in Lab-Grown Meat?

One major reason is the **environment**. Traditional farming uses huge amounts of land. Forests are often cut down to make room for farms. Animals also

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Your Reading

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Why Are Scientists Interested in Lab-Grown Meat?

One major reason is the **environment**. Traditional farming uses huge amounts of land. Forests are often cut down to make room for animals and feed crops. Animals also contribute to climate change.

Lab-grown meat could use much less land and water. It could also create fewer greenhouse gases, which could help protect forests, wildlife, and the climate.



Another reason is **animal welfare**. Billions of animals are raised and killed for food each year. Many people are uncomfortable with this. Lab-grown meat could provide real meat without killing animals, which would reduce animal suffering.

There may also be **health benefits**. Lab-grown meat is made in clean, controlled spaces. There is no risk of bacteria like salmonella or E. coli. Antibiotics are not needed, which helps reduce antibiotic resistance.

Lab-Grown Meat vs. Plant-Based Meat

Lab-grown meat is not the same as plant-based meat. **Plant-based meats** are made from soy, peas, and wheat. They are designed to look and taste like meat, but they contain no animal cells.

Lab-grown meat is real animal meat grown from cells. Both options aim to reduce harm to the environment and animals, but they are made in very different ways.

Challenges and Concerns

Even though lab-grown meat has many benefits, there are still challenges. One big challenge is **cost**. Right now, lab-grown meat is expensive to make. The equipment and materials cost a lot of money. Scientists are working to make the process cheaper.

Another challenge is **energy use**. Growing cells requires electricity. If that energy comes from fossil fuels, it could reduce the environmental benefits. Using renewable energy could help. Some people also feel unsure about eating meat grown in a lab. This is sometimes called the **yuck factor**. Education and testing will be important to help people feel comfortable.

There are also **rules and laws** to consider. Governments need to decide how lab-grown meat should be tested and sold to make sure it is safe.

Real-World Examples

Some countries have already approved lab-grown meat. In 2020, **Singapore** became the first country to allow lab-grown chicken to be sold in restaurants. In 2023, the **United States** approved lab-grown chicken for limited use.

More countries are now testing and reviewing this new food.

The Future of Lab-Grown Meat

In the future, lab-grown meat will become more common in grocery stores and restaurants. As technology improves and prices drop, more people may choose it.

Lab-grown meat could help feed the world while protecting the planet and animals. With careful research and smart choices, it may become an important part of our food system.



Comprehension Questions

1. What is lab-grown meat?
2. How are animal cells collected for lab-grown meat?
3. What is a growth medium?
4. Why are scaffolds used?
5. Name one environmental benefit of lab-grown meat.
6. How could lab-grown meat help animals?
7. Why are antibiotics not needed?
8. What is one challenge of lab-grown meat?
9. How is lab-grown meat different from plant-based meat?
10. Name one country that has approved lab-grown meat.

Extension Questions

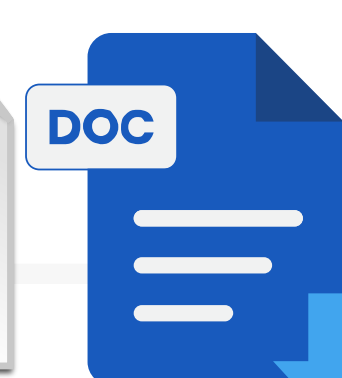
1. How might lab-grown meat change farming jobs?
2. What are some foods that could be made with lab-grown meat?
3. How could lab-grown meat help during food shortages?
4. What is another alternative protein source?
5. Do you think lab-grown meat is a good idea? Why or why not?

Answer Key

1. **Real animal cells in a lab without raising animals.**
2. **Collected from a living animal.**
3. **Growth medium.**
4. **Scaffolds.**
5. **It helps cells grow.**

6. **Reduces the need for antibiotics.**
7. **Reduces the need for antibiotics.**
8. **Shape and structure.**
9. **One benefit of lab-grown meat.**
10. **Reduces the need for antibiotics.**
11. **Use, or fewer greenhouse gases.**
12. **That help animals?**
13. **Not needed to be raised and killed.**
14. **Not needed.**
15. **Grown in clean, controlled conditions.**
16. **Lab-grown meat?**

Answer Key Included Office, Google, and PDF Versions

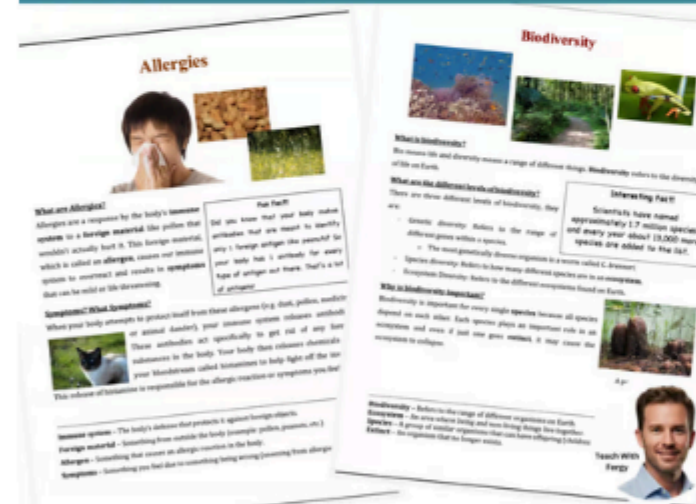


Comprehension and Extension Questions

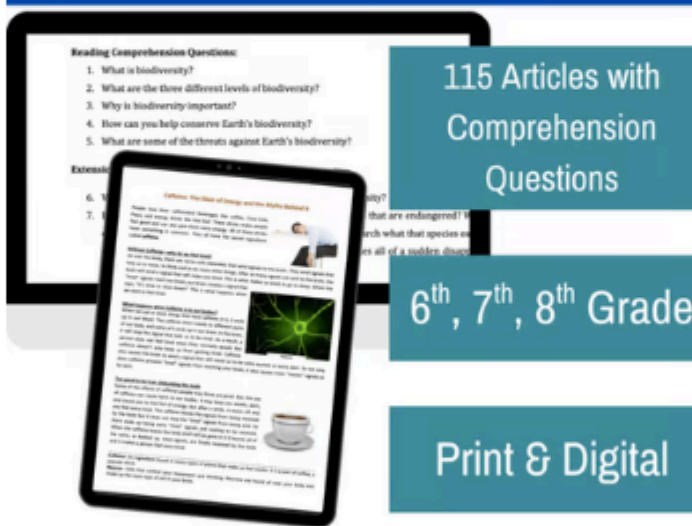
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READING COMPREHENSION ARTICLE & QUESTION MEGA BUNDLE



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115 Articles with
Comprehension
Questions

6th, 7th, 8th Grade

Print & Digital

★★★★★ Extremely satisfied - So many comprehensive readings for all science fields. PDF and DOCX versions included so they can be edited if needed. Each one includes short answer questions at the end, the first set are easy to find the answers to in the readings, the second set require a bit more critical thinking. Includes an answer key. Great to use to fill in time or for sub plans.

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