

araq

StartUp 7

Reading

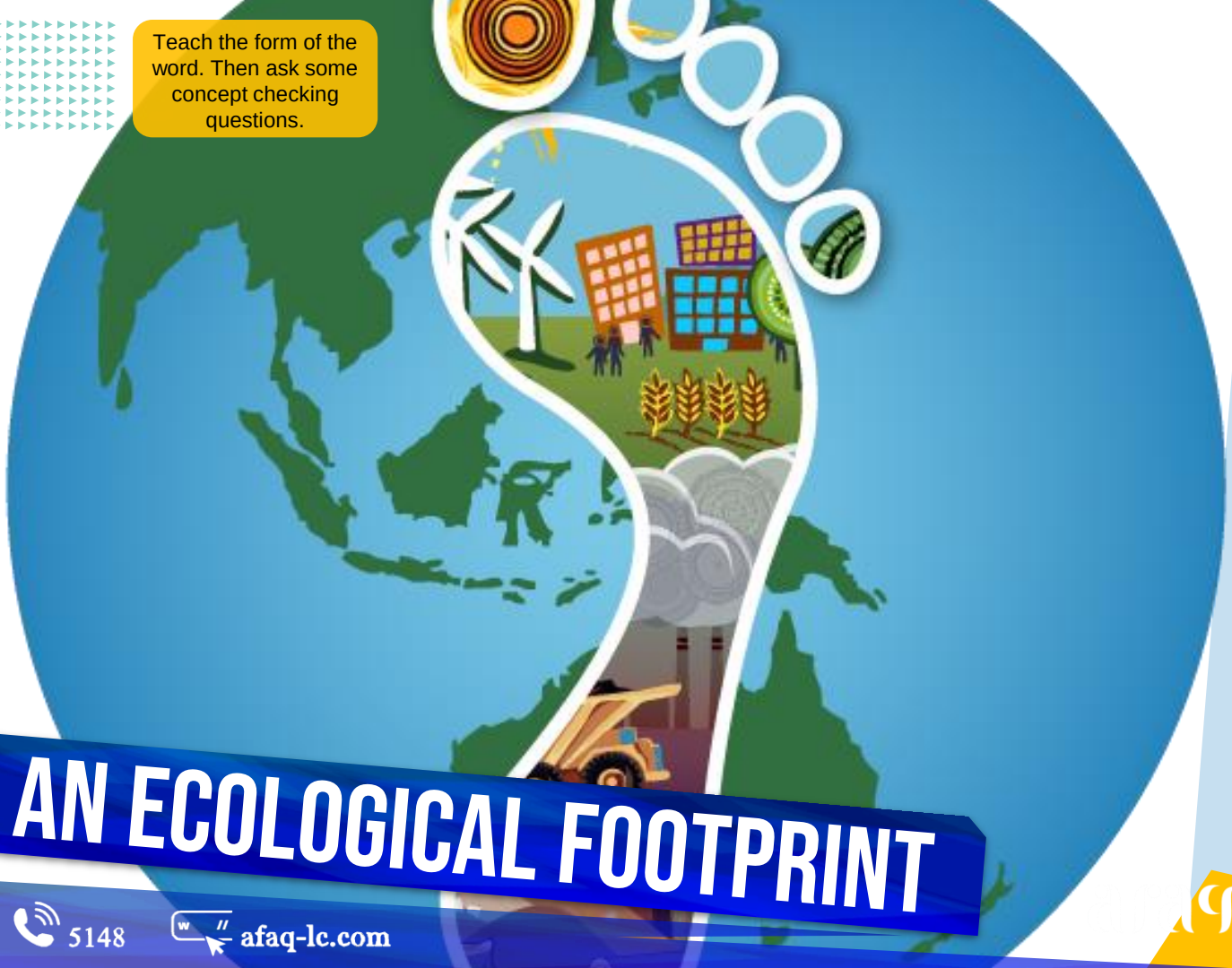
Unit5 – Lesson4

Page60



Have your Ss look at the picture. Convey the meaning and try to elicit the word. Then practice the pronunciation chorally and individually.

Teach the form of the word. Then ask some concept checking questions.



AN ECOLOGICAL FOOTPRINT

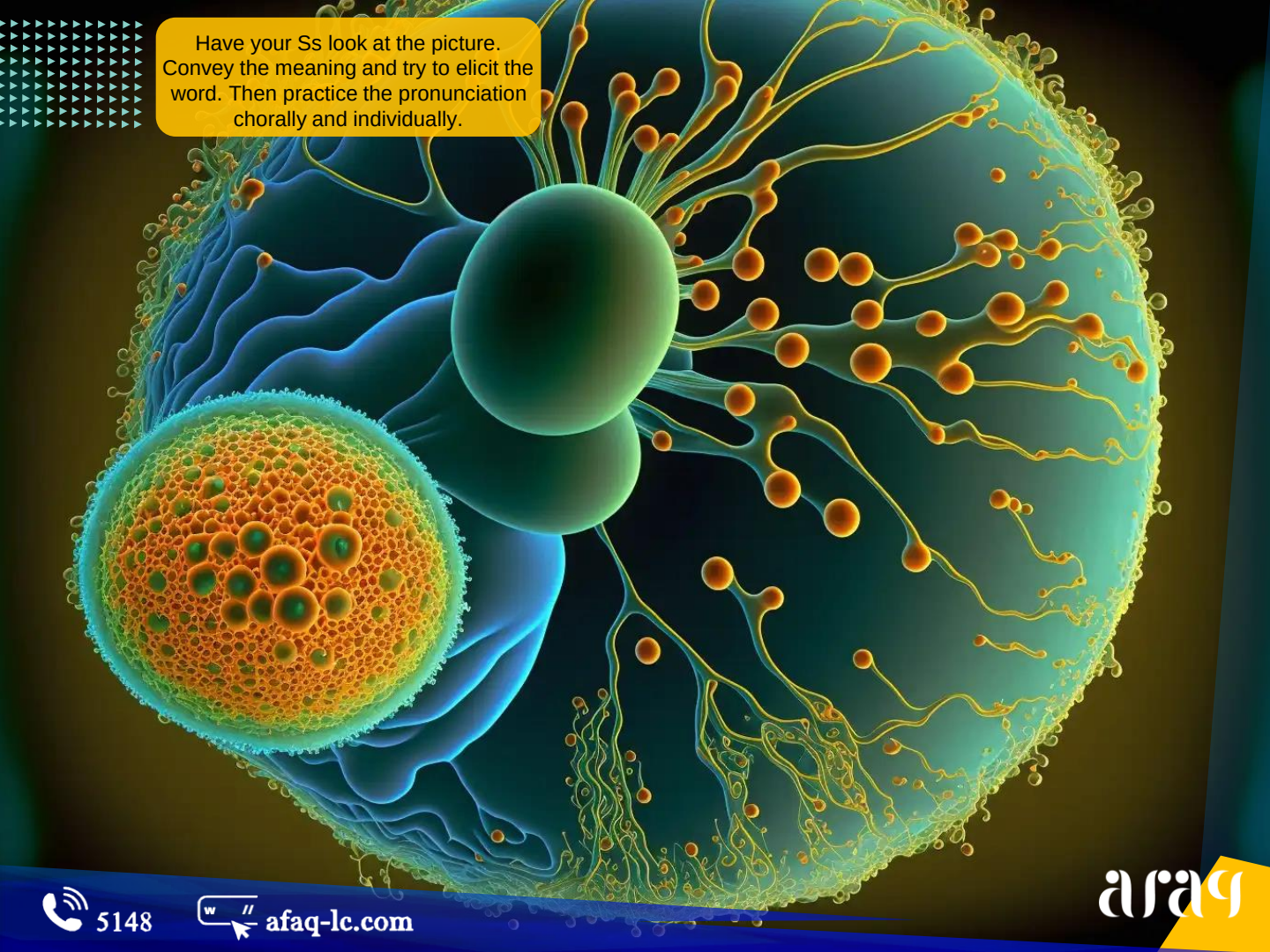


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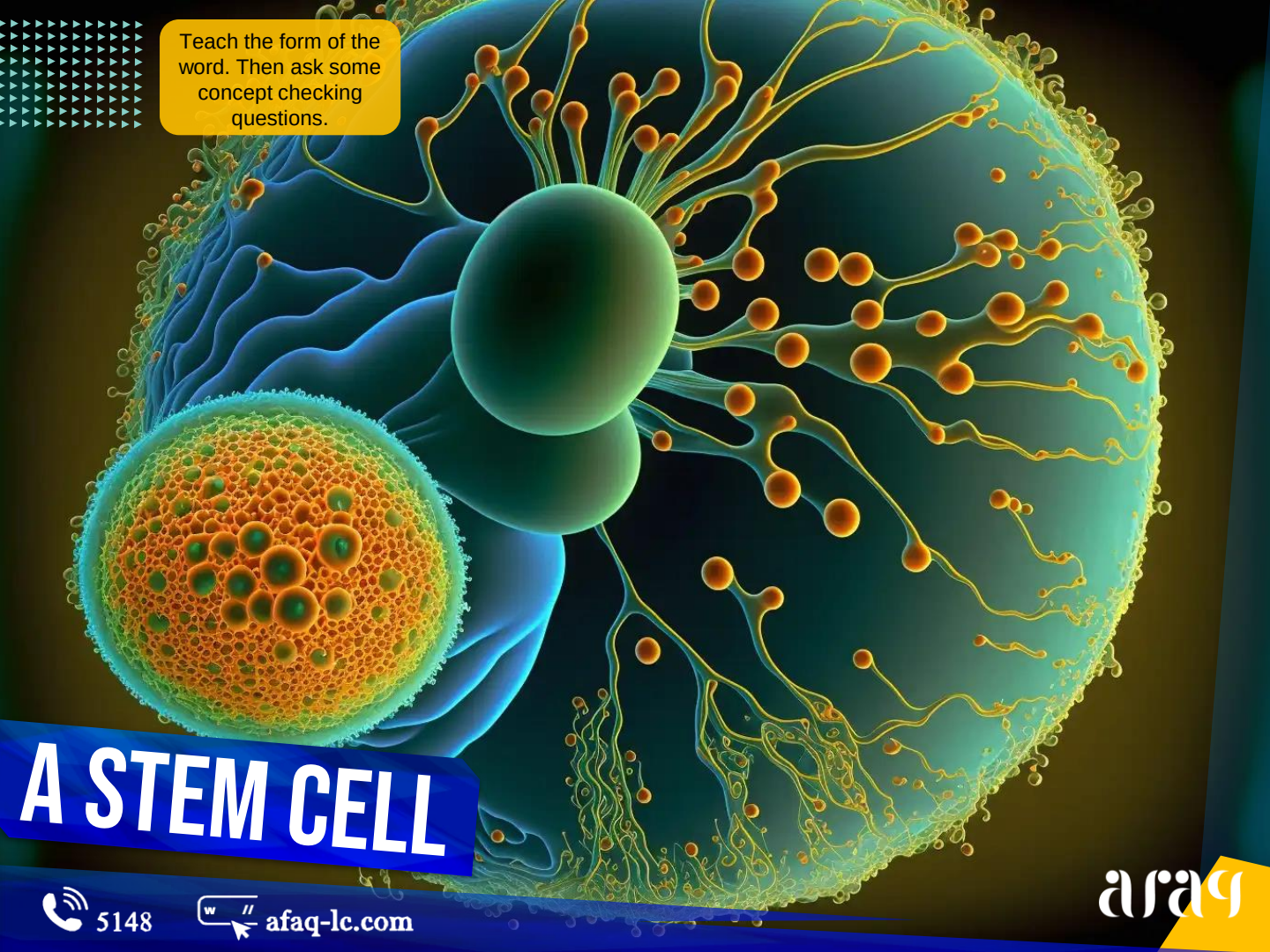

Teach the form of the word. Then ask some concept checking questions.
CULTURE


Have your Ss look at the picture. Convey the meaning and try to elicit the word. Then practice the pronunciation chorally and individually.


Teach the form of the word. Then ask some concept checking questions.
CULINARY


Have your Ss look at the picture. Convey the meaning and try to elicit the word. Then practice the pronunciation chorally and individually.

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A STEM CELL

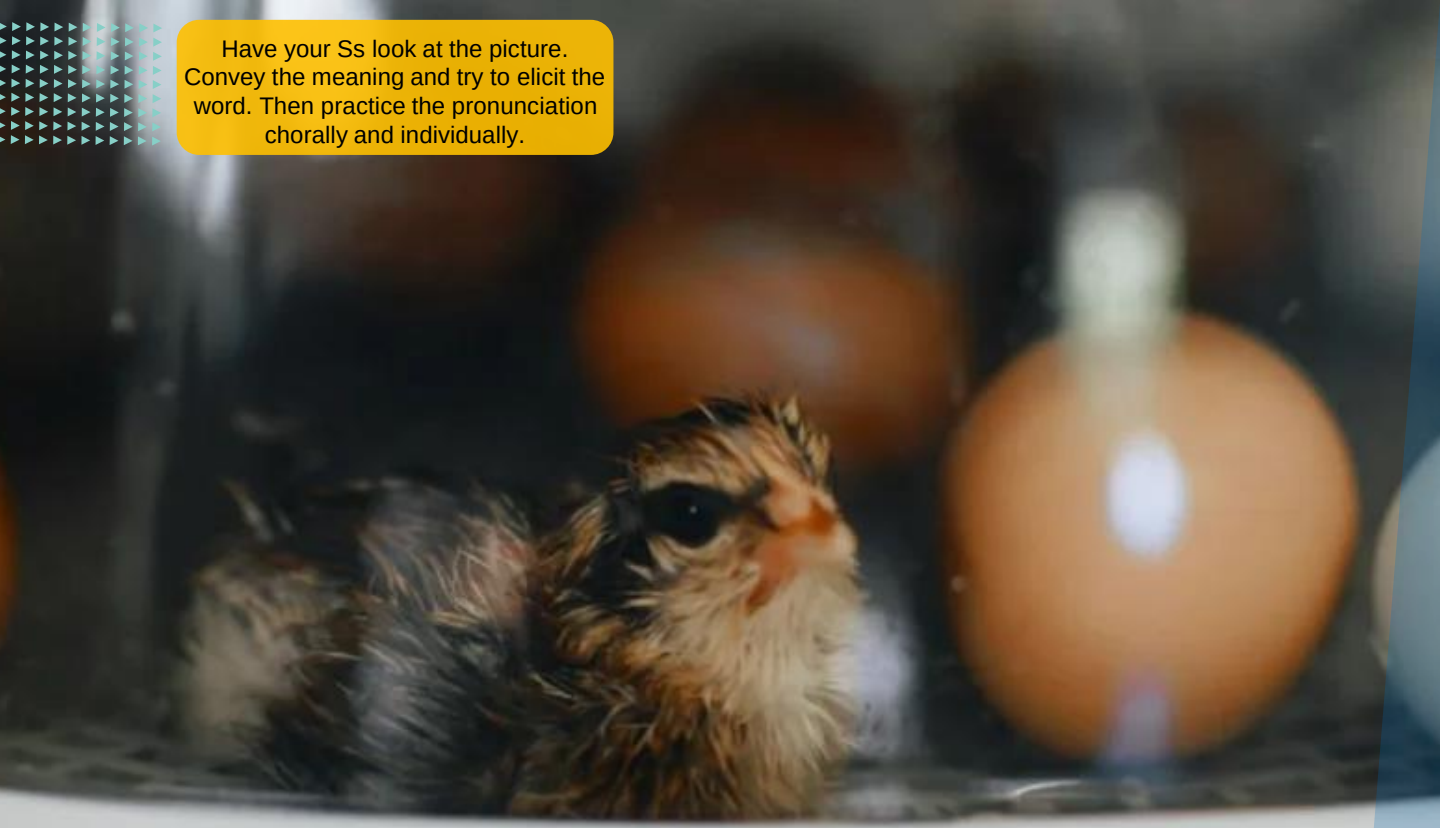
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Teach the form of the word. Then ask some concept checking questions.



A BIOPSY



Have your Ss look at the picture. Convey the meaning and try to elicit the word. Then practice the pronunciation chorally and individually.



Teach the form of the word. Then ask some concept checking questions.

INCUBATE

Have your Ss look at the picture. Convey the meaning and try to elicit the word. Then practice the pronunciation chorally and individually.

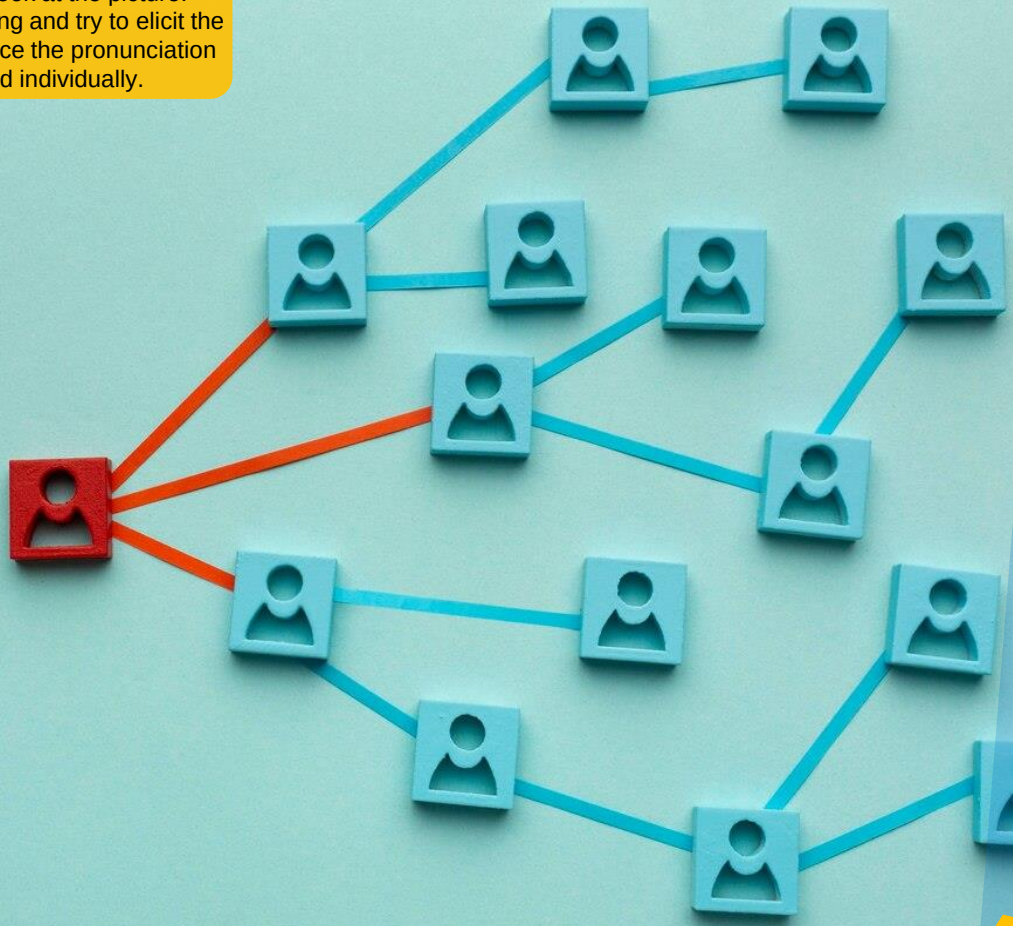


Teach the form of the word. Then ask some concept checking questions.

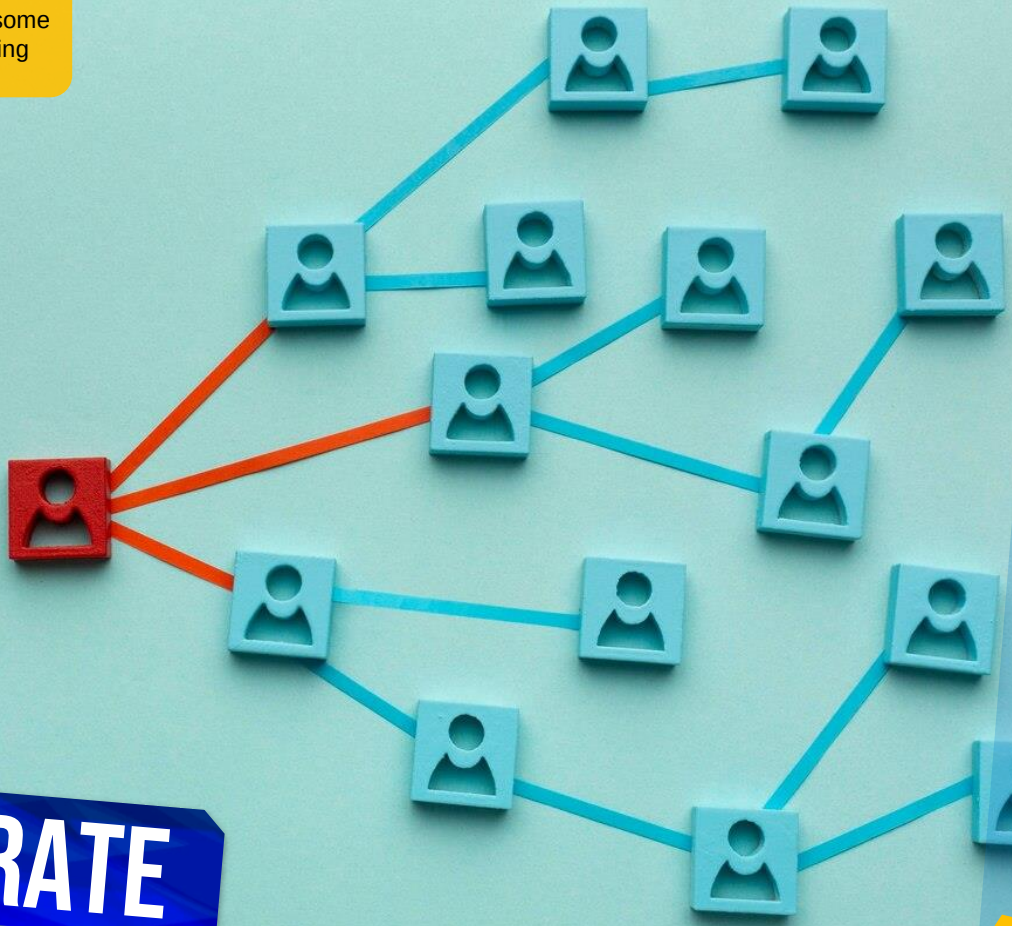


A SERUM

Have your Ss look at the picture. Convey the meaning and try to elicit the word. Then practice the pronunciation chorally and individually.



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PROLIFERATE

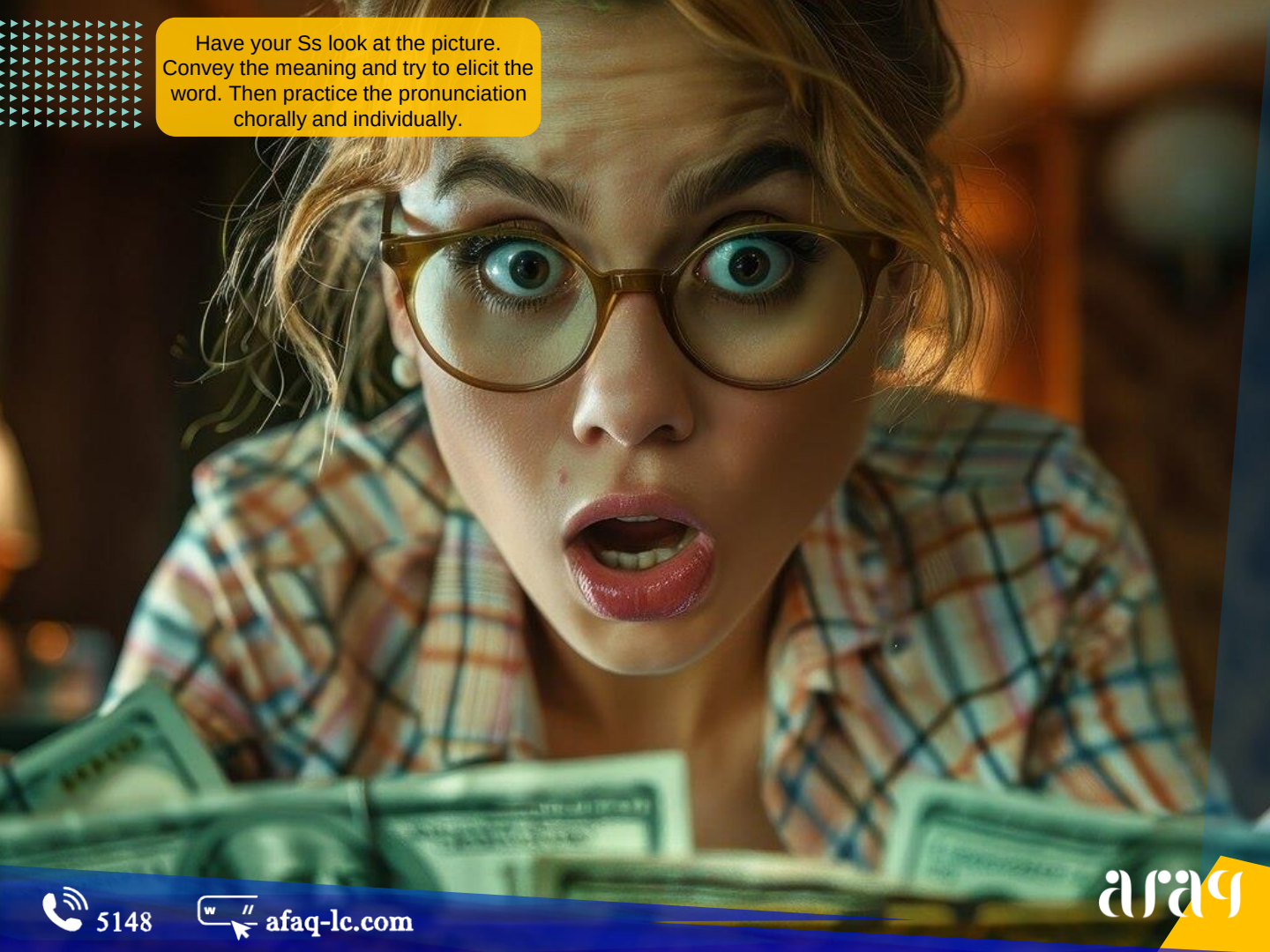
Have your Ss look at the picture. Convey the meaning and try to elicit the word. Then practice the pronunciation chorally and individually.



Teach the form of the word. Then ask some concept checking questions.



A HURDLE


Have your Ss look at the picture. Convey the meaning and try to elicit the word. Then practice the pronunciation chorally and individually.

Teach the form of the word. Then ask some concept checking questions.



RECOUP

FILL IN THE BLANKS.

Have your students do the task in class. Then check the answers right away.

an ecological footprint - culinary - a biopsy - a serum - a hurdle culture - a stem cell - incubate - proliferate - recoup

_____1_____: it can be easily understood
_____2_____: a special type of cell that can divide to form other types of cells that have particular qualities or purposes
_____3_____: the impact a business has on the environment expressed as the amount of land it needs to sustain its use of natural resources.
_____4_____: to grow by the rapid production of new cells
_____5_____: a problem or difficulty that you must deal with before you can achieve something
_____6_____: a protein-rich liquid that is part of blood
_____7_____: to grow bacteria or cells for medical or scientific use
_____8_____: to keep something warm so it can develop and grow
_____9_____: related to cooking
_____10_____: to get back an amount of money you have lost or spent
_____11_____: the surgical removal of cells or tissue from a human or animal body

A PREVIEW Read the title, look at the picture, and read the caption. What do you think the blog post will be about?

Blog | About | Food | Contact

A Food Alternative

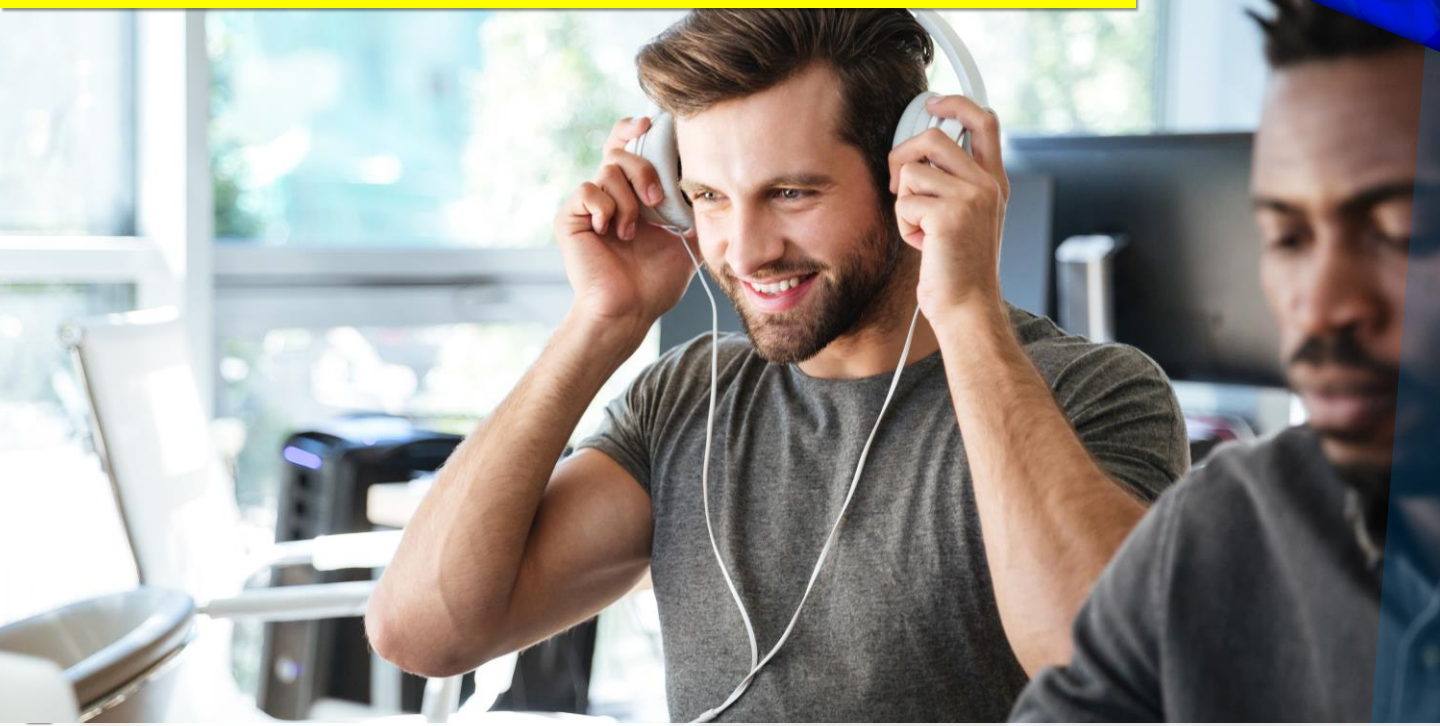


Clean meat, also known as *cultured meat, lab-grown meat, in-vitro meat, cell-based meat,* and *alt-meat*

Have your Ss listen to the audio and answer the question. Check the answers in class.

ANSWER THE QUESTIONS ACCORDING TO THE AUDIO.

5-18



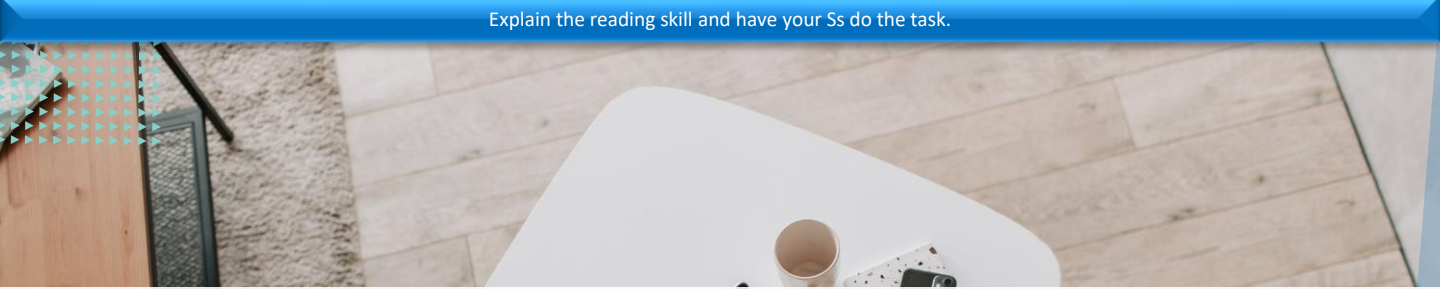
1. What key events in the history of clean meat research advanced its development?
2. How do chicken stem cells become "ground chicken" at Just, Inc.?
3. What obstacles stand between clean meat and mass acceptance?
4. What objections do critics have to clean meat?

Have Ss identify the correct meaning. Go over the answer as a class.

B CLOSE READING Reread the lines. Then circle the correct answers.

1. In lines 6–8, how is the second sentence connected to the first?
   a. It differentiates between an older idea and the one in the first.
   b. It explains the origins of the terms presented in the first.
   c. It adds more detailed information about the point made in the first.
2. In lines 15–21, how is the second sentence connected to the first?
   a. It presents the results of the process described in the first.
   b. It highlights an issue presented in the first.
   c. It provides a reason for the issue described in the first.

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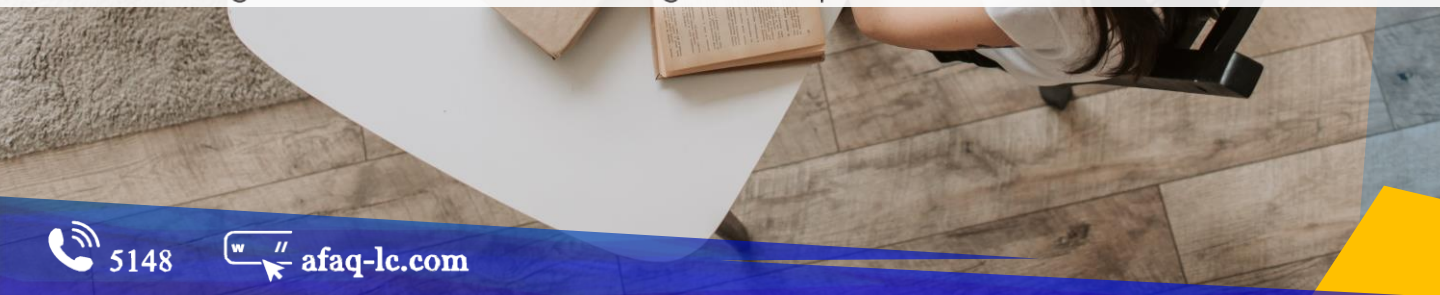


C Read the Reading Skill. Choose a challenging excerpt of several lines to paraphrase. Then follow the steps below.

1. Reread the excerpt until you feel you fully understand it.
2. Close your book and imagine explaining the excerpt.
3. Write a paraphrase of the excerpt.
4. Exchange paraphrases with a partner and compare them with the original excerpts.
5. Does your partner's paraphrase accurately reflect the excerpt?
6. Is it written in your partner's own style and not just a rearrangement of the words in the original excerpt?

READING SKILL Paraphrase

Paraphrasing is restating information in your own words. The ability to paraphrase text confirms and demonstrates that you understand it. Paraphrasing also allows you to take and use information from a source while avoiding plagiarism.



In pairs, have Ss take turns retelling the most important ideas in the article in complete sentences. Remind them to use their own words as they summarize.

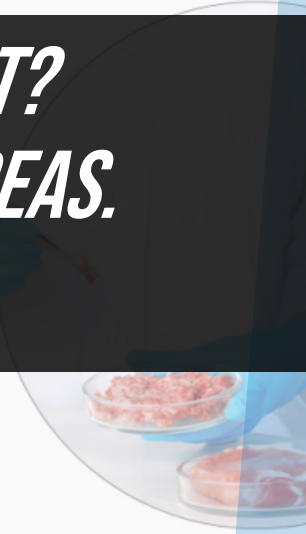
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WHAT WAS THE ARTICLE ABOUT? RETELL THE MOST IMPORTANT IDEAS. USE YOUR OWN WORDS.

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ng the texture right is one of the hurdles standing in the way of mass of clean meat, but developers remain confident that perfect chicken breasts, and lamb chops are just a few years away. A thornier issue is production costs, t yet competitive with farm-raised meat. One solution is to produce high-priced uch as bluefin tuna and wagyu beef to recoup research and development s. Another is to avoid the high cost of the serum the cells grow in by switching to erived from plants. However, even if these challenges are overcome, the process an e and cultured meat, which may leave clean meat unable to compete



Clean meat, also know
meat, lab-grown m
meat, cell-base

Have your students think about the question. You're suggested to brainstorm some ideas first.

A THINK Imagine the government is planning to massively fund clean meat production and completely ban the raising of animals for food. Think of positive and negative aspects of the plan. Take notes.



Have your Ss share what they have prepared in their breakout rooms. Monitor the groups and share your FEEDBACK afterwards.

B GROUPS Share your ideas and compile one list of the best points for the plan and another of the best points against it.



One of the latest developments in the food industry is "clean meat," which is essentially producing meat in a lab. I know meat grown in a laboratory may not appeal to everyone, but I find the idea fascinating and have been studying developments in the "clean meat" industry very closely. It promises, in the near future, to supply meat that's raised with a much smaller ecological footprint, though it isn't without controversy.

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The idea of clean meat—also known as *cultured meat*, *lab-grown meat*, *in-vitro meat*, *cell-based meat*, or *alt-meat*—is not new. In fact, the growing of animal parts in laboratories was predicted by Winston Churchill as early as 1930. However, it wasn't until 1999 that the first patent for a meat-culturing process was granted. In the 2000s, millions of research dollars began to flow into projects aimed at creating meat, fish, and even leather by culturing animal cells. Recently, start-ups have appeared that are creating prototype clean meat products, and they're betting that this new type of meat has a bright future.

One such company, Just, Inc. of San Francisco, has begun to allow culinary reporters to taste their prototype chicken nuggets, which begin as stem cells taken from a chicken by means of a humane biopsy. These stem cells are then transported to a lab and incubated in a warm, nutrient-rich serum, where they continue to proliferate indefinitely. After about two weeks, the technicians at Just, Inc. harvest several kilograms of chicken muscle, fat, and connective tissue cells and combine them in the correct proportions to create the "ground chicken" from which they make their tasty—if slightly mushy—chicken nuggets.



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Indeed, getting the texture right is one of the hurdles standing in the way of mass acceptance of clean meat, but developers remain confident that perfect chicken breasts, beef steaks, and lamb chops are just a few years away. A thornier issue is production costs, which are not yet competitive with farm-raised meat. One solution is to produce high-priced food items such as bluefin tuna and wagyu beef to recoup research and development expenditures. Another is to avoid the high cost of the serum the cells grow in by switching to one that is derived from plants. However, even if these challenges are overcome, the process still requires an enormous amount of energy, which may leave clean meat unable to compete with farm-raised alternatives.

> Although there are critics who say that clean meat offers no advantages over traditional meat in terms of its impact on the climate as well as vegetarians who say it encourages people to continue eating meat instead of switching to a healthier vegetable diet, I'm still optimistic. Even though I became a vegetarian a few years ago, I can still appreciate the potential benefits of lab-produced meat for both people and animals.

READ THE TEXT AND UNDERLINE ANY NEW WORDS YOU DO NOT KNOW.

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AS HOMEWORK USE A DICTIONARY TO LOOK UP THE WORDS AND LEARN THEM.

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