

## The Foundation of Life

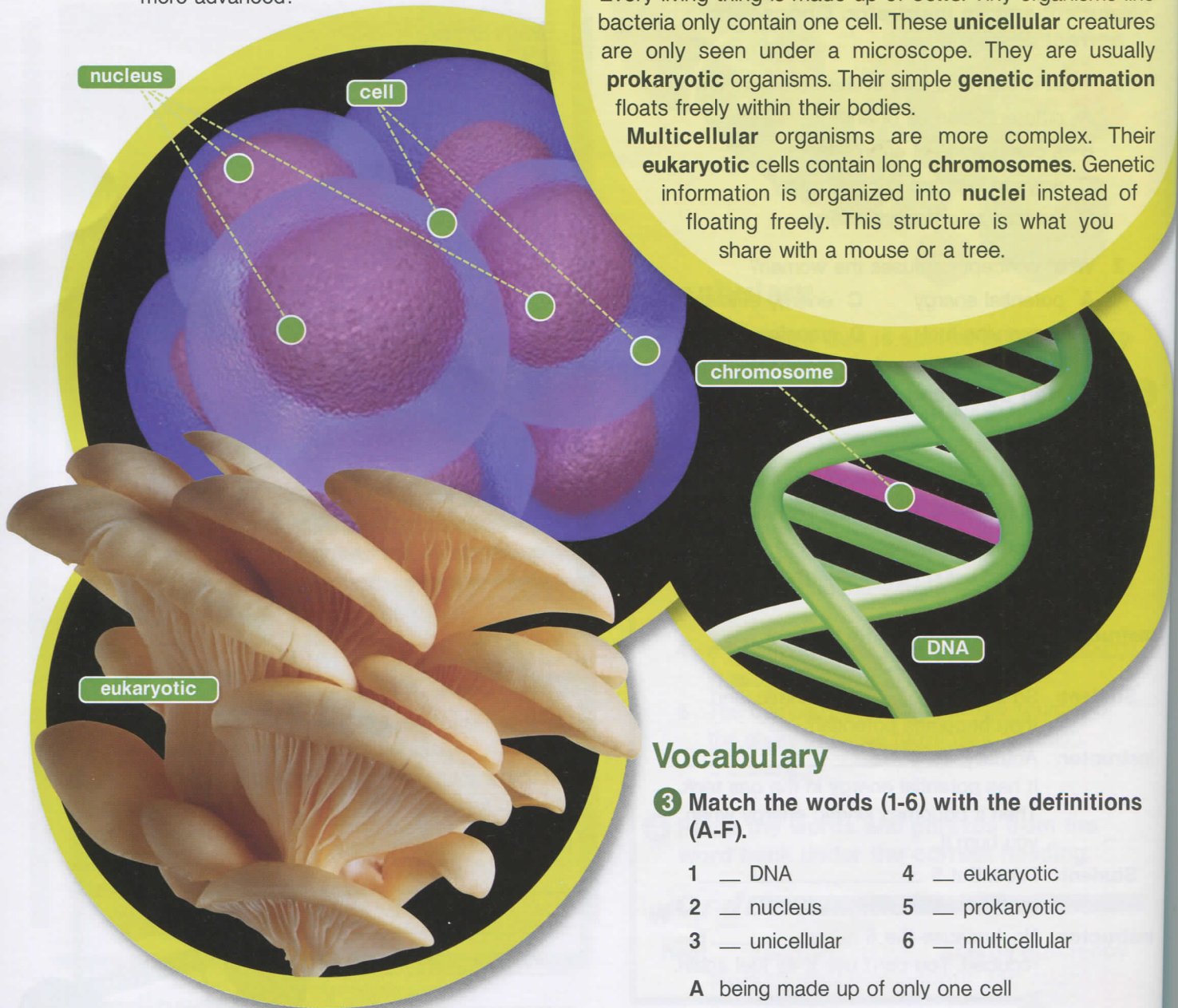
## Get ready!

1 Before you read the passage, talk about these questions.

- 1 Where is a nucleus located?
- 2 Are prokaryotic or eukaryotic organisms more advanced?

You don't look much like a leaf or a bacterium. The **genes** in your **DNA** set you apart from other organisms. But all organisms share the same basic parts. Every living thing is made up of **cells**. Tiny organisms like bacteria only contain one cell. These **unicellular** creatures are only seen under a microscope. They are usually **prokaryotic** organisms. Their simple **genetic information** floats freely within their bodies.

**Multicellular** organisms are more complex. Their **eukaryotic** cells contain long **chromosomes**. Genetic information is organized into **nuclei** instead of floating freely. This structure is what you share with a mouse or a tree.



## Vocabulary

3 Match the words (1-6) with the definitions (A-F).

- |                   |                     |
|-------------------|---------------------|
| 1 ___ DNA         | 4 ___ eukaryotic    |
| 2 ___ nucleus     | 5 ___ prokaryotic   |
| 3 ___ unicellular | 6 ___ multicellular |

- A being made up of only one cell  
 B having genetic information floating freely within an organism  
 C a molecule that carries genetic information  
 D the center of a cell that contains genetic information  
 E being made up of more than one cell  
 F having genetic information organized in a central part of an organism

## Reading

2 Read the article. Then, mark the following statements as true (T) or false (F).

- 1 \_\_\_ DNA is present in humans and bacteria.
- 2 \_\_\_ Human cells are typically prokaryotic.
- 3 \_\_\_ A unicellular organism has eukaryotic cells.



4 Read the sentence pairs. Choose where the words best fit the blanks.

1 genetic information / chromosomes

A Short strips that carry genes are called \_\_\_\_\_.

B DNA contains an organism's \_\_\_\_\_.

2 gene / cell

A A \_\_\_\_\_ is a piece of information that determines a trait.

B Genetic information is stored in the nucleus of the \_\_\_\_\_.

5 Listen and read the article again. Is a mouse a prokaryotic organism?

## Listening

6 Listen to a conversation between two scientists. Choose the correct answers.

1 What is the main idea of the conversation?

A the difference between types of cells

B types of genetic information in nuclei

C how to identify eukaryotic cells

D which organisms are present in a sample

2 What does the woman see under the microscope?

A multicellular organisms

C prokaryotic organisms

B eukaryotic DNA

D dangerous chemicals

7 Listen again and complete the conversation.

Scientist 1: What do you have under that microscope?

Scientist 2: It's the 1 \_\_\_\_\_ from Primo Lake.

Scientist 1: Oh, I bet you see lots of 2 \_\_\_\_\_.

Scientist 2: Actually, you'd 3 \_\_\_\_\_. Here, take a look.

Scientist 1: Let's see. Wow. All I see is a few 4 \_\_\_\_\_ organisms.

Scientist 2: I know. I don't think I saw anything that was 5 \_\_\_\_\_.

Scientist 1: Neither did I. Why do you 6 \_\_\_\_\_?

## Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

*What do you have ...?*

*You'd be surprised ...*

*Why do you think ...?*

**Student A:** You are a scientist. Talk to Student B about:

- organisms in a water sample
- the types of organisms
- why the sample does or does not contain particular organisms

**Student B:** You are a scientist. Talk to Student A about organisms in a water sample.

## Writing

9 Use the article and the conversation from Task 8 to fill out the water quality report.

### Water Quality Report

Sample of water from: \_\_\_\_\_

Types of organisms present: \_\_\_\_\_

What do the organisms indicate about the water quality?



prokaryotic

