SCIENCE AND ETHICS

Read the article, then answer the multiple-choice questions.

Artificial life forms... what can we make of them?

It's been over a decade since scientists made the first artificial life form in a laboratory. The announcement appeared in the *Guardian*'s 2010 article titled "Craig Venter Creates Synthetic Life Form." The article went on to say that it was a simple organism—a type of bacteria similar to another one that causes an illness in goats. Although the artificial bacteria were much like the real ones, the entire DNA sequence of the bacteria was made in a lab with chemicals. Bacteria can play an important role in balancing life on the planet. Some bacteria are able to absorb carbon dioxide—a gas that is causing our atmosphere to heat up. Scientists believe that these manufactured forms of life, which up to this day only exist inside a laboratory, could help us address some serious problems. Naturally, some believe this type of research goes against nature.

Scientists stress that with more research, artificial life forms can be the perfect tool to fix what's broken.

What do you think about artificial life forms? Are they a valuable solution or just a strange experiment? Share your thoughts with us below.

Donna, Albuquerque, New Mexico, USA

I believe this is something that scientists should be careful of because, if the bacteria escapes from a lab, it could get out of control and possibly harm humans. I also believe that there are systems in place that can protect us, but these are not perfect. However, I'm not terribly worried because I can't imagine that a team of scientists would be so irresponsible as to allow such a thing to destroy our planet. I think that scientists should explore the creation of artificial life, since we need something to fight things like climate change. Imagine if we created an organism that could improve air quality. I would welcome such a discovery.

1. What was the first artificial life form created in a laboratory?
a) A synthetic virus
b) A simple bacteria
c) An organism causing illness in goats
d) A complex multicellular organism

2. How was the DNA sequence of the artificial bacteria created?
a) It was synthesized using chemicals in a lab
b) It was extracted from a natural bacteria
c) It was obtained through genetic modification
d) It was a naturally occurring sequence

3. According to the passage, what positive role can bacteria play in the environment?
a) Absorbing oxygen from the atmosphere
b) Balancing the carbon dioxide levels in the atmosphere
c) Causing illnesses in humans and animals
d) Contributing to the heating of the atmosphere

4. What is the author's opinion about the creation of artificial life forms?
a) It is a dangerous experiment that should be avoided
b) Scientists should proceed with caution but explore the potential benefits
c) It is a great way to address climate change and improve air quality
d) Scientists are not capable of controlling artificial life forms

Questions based on Donna's opinion:

5. What is Donna's primary concern regarding artificial life forms?
a) She believes they have no potential benefits.
b) She is worried about the risk of them escaping from a lab.
c) She thinks they are a perfect solution to climate change.
d) She is excited about their potential for improving air quality.

6. How does Donna feel about the existing safety systems in laboratories?
a) She believes they are foolproof.
b) She thinks they are unreliable.
c) She has no opinion on them.
d) She believes they need improvement.

7. What does Donna think about the responsibility of scientists in creating artificial life forms?
a) She believes scientists should not be involved in such research.
b) She is confident that scientists will be responsible.
c) She thinks scientists should take more risks.
d) She is worried about scientists being careless.

8. According to Donna, why should scientists explore the creation of artificial life?
a) Because it has no potential benefits.
b) To address issues like climate change.
c) To cause harm to the environment.
d) Because it's an irresponsible endeavor.