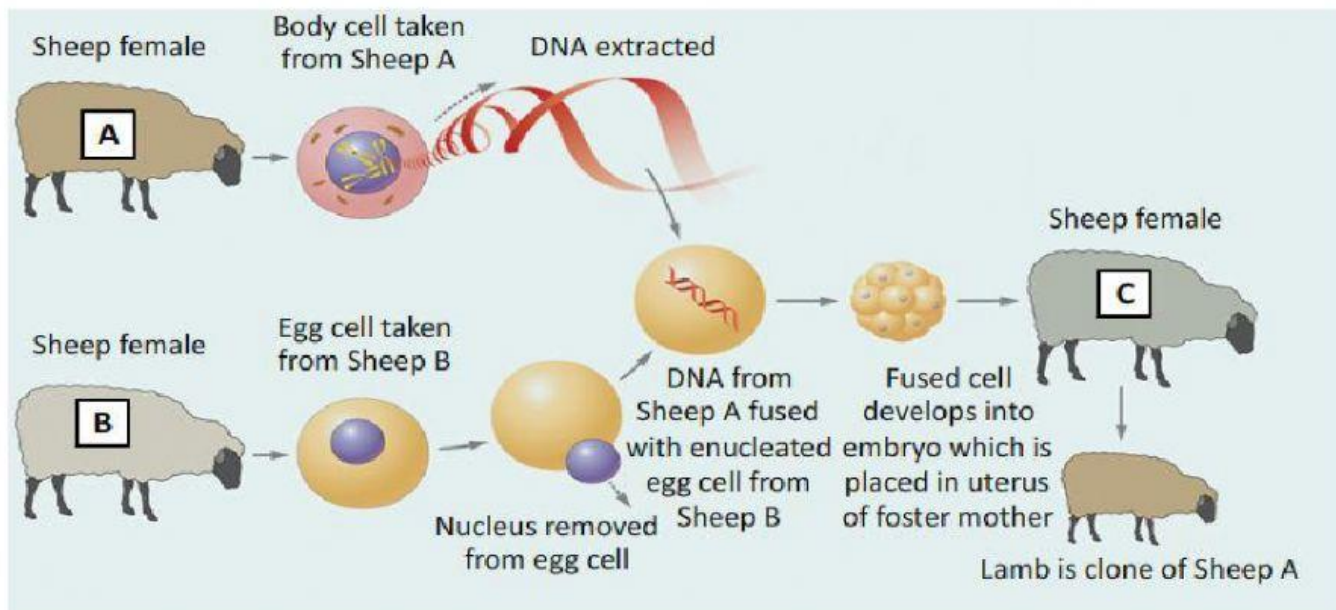


Name _____

Theme: Cloning

<https://youtu.be/ptvsklzFVL4>



2 Read the text and match the headings (A-E) to the gaps (1-4). There is one extra heading. **CHECK**

- A** How can we make clones of plants and animals?
- B** Is it a bad idea to clone animals?
- C** How can we clone an animal?
- D** What is cloning?
- E** Is it a good idea to clone animals?

1



3



2



4



1		
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Cloning is a process used to create a genetically identical copy of a living organism. So far, scientists have successfully cloned DNA, cells, tissues and whole plants and animals.

2		
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A lot of commercial plants are created by a process called plant tissue culture, where part of a plant is cut off and a new plant is grown from the cutting. But, it doesn't stop at plants. Scientists in the UK made history when they cloned Dolly the sheep. They extracted DNA from an adult sheep cell and inserted it into an unfertilised egg which they had removed the nucleus from. The egg was implanted into a female sheep to grow and Dolly the sheep was born.

3		
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Cloned animals may have some benefits. They could be used in medicine for testing new drugs and medical treatments. They may also be useful in agriculture as clones of animals that produce a lot of meat or milk. Cloning could also be used to save certain animal species from extinction. Nevertheless, the cloning process is so expensive that none of these options are very practical at the moment.

4		
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Cloning has not yet been perfected and many cloned animal embryos do not survive. Dolly the sheep was the only clone to be born after 276 attempts. Cloned animals also often have defects such as large organs and problems with their immune systems. They also age fast and die young. Dolly only lived for 6 years – half the average lifespan of a normal sheep. As for cloning endangered species, that idea is not a good one because producing a population of genetically identical organisms would only mean that they would lack the genetic variation necessary for species survival.

Complete the text with the words below.

breakthroughs

process

techniques

cloning

chain

surgical

when

technology

medicines

genetically

Cloning 1) is constantly moving forward. This is because scientists are developing new

2) and systems all the time.

In recent years, there have been some significant

3) in the field of cloning. One example is the new 'ZeBRa' system developed by scientists at the university of Bayreuth in Germany. When we clone 4) engineered bacteria in order to produce a medicine or substance, not all of the clones are successful. What's more, an expensive and time-consuming screening 5) is required to identify and eliminate unsuccessful clones. ZeBRa solves this issue.

It ensures that successful clones are able to grow and even produce colonies, meaning that 6) can be done more quickly and efficiently.

Cloning and genetic engineering are incredibly useful in that they allow us to quickly produce life-saving 7) , such as insulin, in a more ethical way. Furthermore, cloning can also be used to grow new human tissue, which has a variety of applications in 8) procedures. That said, we

are unsure whether there will be any negative consequences. For example, its potential effects on the food **9)** ☐ , ecosystem and gene pool are largely unknown, and this is something that should be kept in mind.

Not everyone is in agreement **10)** ☐ it comes to the topic of cloning. However, there's no denying that it certainly is an interesting topic!