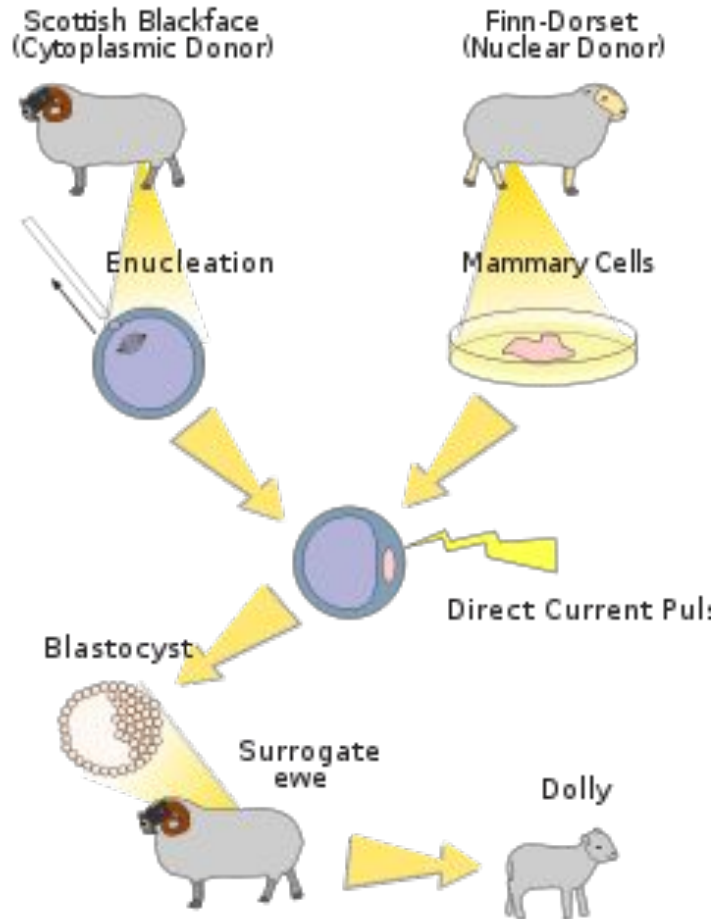


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# What are the Risks of Cloning?

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# What does “the cloning” mean?



The cloning is a process of creating a copy of a particular person or an animal.

# Who made the first clon?

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Tong Dizhou (May 28, 1902 – March 30, 1979) was a Chinese embryologist remembered for his contributions to the field of cloning.



In 1963, Tong inserted DNA of a male carp into the egg of a female carp and became the first to successfully clone a fish. He is regarded as "the father of China's clone".

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# Dolly

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Dolly (July 5, 1996 – February 14, 2003), was a female domestic sheep remarkable in being the first mammal to be cloned from an adult somatic cell, using the process of nuclear transfer. She was cloned by Ian Wilmut, Keith Campbell and colleagues at the Roslin Institute in Edinburgh, Scotland. She was dubbed "the world's most famous sheep" by Scientific American.

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# Task 1

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Divide the text into logical parts and to find the topic sentence of each part.

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# Task 2

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Answer the questions:

- What are the main risks of cloning?
  - What can cloning animal show us?
  - What does LOS mean?
  - What problems do clones with LOS have?
  - Are the clones really identical?
  - The programs for every type of different cell are different, aren't they?
  - What will incomplete programming cause?
  - Why do chromosomes get shorter?
  - What does "telomeres" mean?
  - Why are Dolly's cells aging faster than the cells from normal sheep?
-

# Task 3

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Study the text and write out the English equivalents to the following words and expressions:

- проблемы возникают позже
  - клонирование животных
  - “синдром большого потомства”
  - правильно развиваться
  - выживать
  - увеличенные органы
  - кровоток
  - идентичная Днк последовательность
  - отклонения в развитие мозга
  - ослабление иммунной системы
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# Task 4

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True or false:

- Cloned animals that do survive tend to be much bigger at birth than their natural counterparts.
  - LOS is the "Large Offspring System".
  - The success rate ranges from 10 percent to 30 percent.
  - The clones look like the originals.
  - For every type of differentiated cell program is same.
  - Incomplete programming will cause the embryo to develop normally or successful.
  - As cell divide, their chromosomes get shorter.
  - Dolly's cells were aging slower than the cells from a normal sheep.
  - To date, scientists are sure why cloned animals show differences in telomere length.
-



# Task 5

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Complete the sentences with the appropriate words or word combinations from the text:

- As cells divide, their chromosomes get\_\_\_\_\_.
  - The clones look like the originals, and their DNA sequences are \_\_\_\_\_.
  - Cloning animals through somatic cell nuclear transfer is\_\_\_\_\_.
  - Cloning animals shows us what might happen if we try to clone\_\_\_\_\_.
  - Cloned animals that do survive tend to be much bigger at birth than their\_\_\_\_\_counterparts.
  - \_\_\_\_\_will cause the embryo to develop abnormally or fail.
  - This means that Dolly's cells were aging\_\_\_\_\_than the cells from a normal sheep.
  - To date, scientists\_\_\_\_\_sure why cloned animals show differences in telomere length.
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# Home task

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1. To write a composition “What I think about human cloning”
- OR
- To prepare a report “Human cloning”
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