

Reading



Cloning:

Where is it leading us?

By Helen.Shi

Enjoy the Comics



Mom, where
was I from?



How could it be
possible?



You are a clone of
your father!



Look at your father and
picture yourself sitting
there after thirty years



Read between the lines



- "You are a clone of your father."
- clone n. an exact copy...
- v. make an exact copy.....
- Is the mother serious? What does the mother imply?
- It's just a joke and the mother implies that the son and his father are identical in lifestyle and appearance.

**In scientific terms,
cloning is not a joke!**



**The world's
first cloned cat,
Copy Cat**



cloned rabbit



cloned pig



**cloned
horse"**



湖恩教育
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Dolly

Dolly's appearance
is a breakthrough.

?

Dolly is the first
mammal to be cloned.



Read for structures

Part 1: (para1) The definition of cloning.

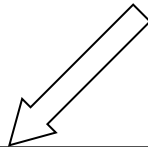


Part 2: (para2) The major uses and procedures of cloning

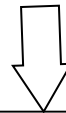


Part 3 : (para3-5) People's reactions to the cloning of Dolly

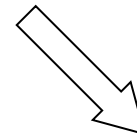
from



para4: the
scientific world



para5:
the media and
public



para6: all walks
of people

Read for details Para1.

Cloning has always been with us and is here to stay. It is a way of making an exact copy of another animal or plant. It happens in plants when gardeners take cuttings from growing plants to make new ones. It also happens in animals when twins identical in sex and appearance are produced from the same original egg. The fact is that these are both examples of natural clones.

What's cloning?

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a way of exactly copying another animal or plant

examples

cuttings
of plants

twins of
animals

natural clones

man made clones

Para2.

Cloning has two major uses. Firstly, gardeners use it all the time to produce commercial quantities of plants. Secondly, it is very easy for research on new plant species and for medical research on animals. Cloning plants is straightforward while cloning animals is very complicated. It is a difficult task to undertake. Many attempts to clone mammals failed. But at last the determination and patience of the scientists paid off in 1996 with a breakthrough - the cloning of Dolly the sheep.

How many major uses does cloning have? What are they?

**not only.....commercial but also.....research
production**

Para2.

Cloning has two major uses. Firstly, gardeners use it all the time to produce commercial quantities of plants. Secondly, it is valuable for research on new plant species and for medical research on animals. Cloning plants is straightforward while cloning animals is very complicated. It is **a difficult task** to undertake. Many attempts to clone mammals failed. But at last the determination and patience of the scientists paid off in 1996 with a breakthrough - the cloning of Dolly the sheep.

Is cloning a difficult task to undertake?
It is such a difficult task to undertake **that** many attempts...failed.
 ...**such/so...that...**
It is so difficult a task to undertake **that** many attempts...failed.

Para2.

Cloning has two major uses. Firstly, gardeners use it all the time to produce commercial quantities of plants. Secondly, it is valuable for research on new plant species and for medical research on animals. Cloning plants is straightforward while cloning animals is very complicated. It is a difficult task to undertake. Many attempts to clone mammals failed. But at last the determination and patience of the scientists paid off in 1996 with a breakthrough - the cloning of Dolly the sheep.

Did the attempt of cloning succeed at last?

Yes!

pay off: to be successful and bring good results

Para2.

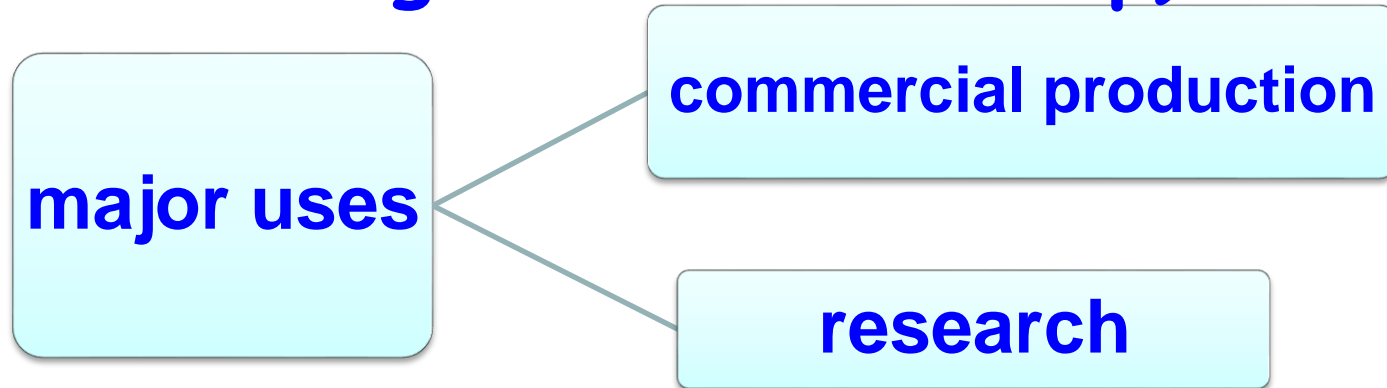
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What was it that made the scientists succeed in cloning mammals?

It was their determination and patience that made the scientists succeed in cloning mammals.

Para2.

Oral practice:(retell the paragraph by referring to the mind map)



cloning animals is difficult



many attempts failed

determination & patience



the breakthrough

Procedure

What are the roles that female sheep A, B and C play in the cloning?

donator of the egg cell
卵细胞

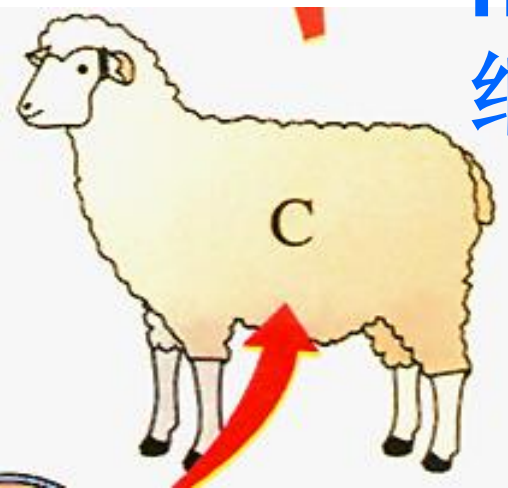
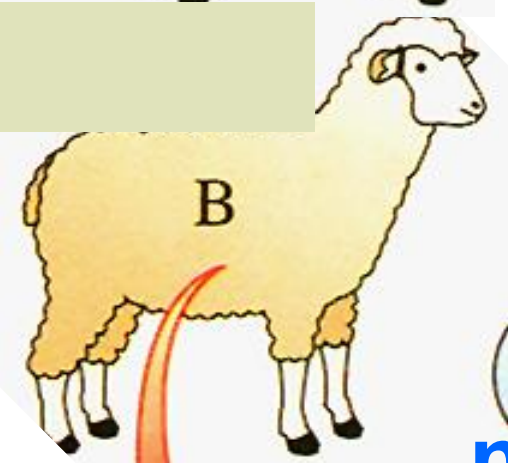
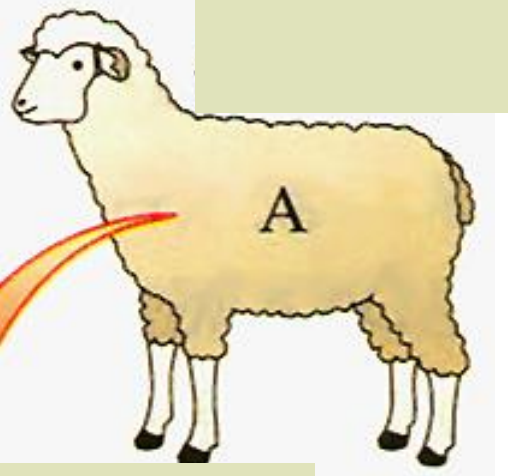
donator of the somatic cell
躯体干细胞

The lamb is the clone of _____?

nucleus
细胞核

embryo 胚胎

carrier (代孕) of the clone





- **Paragraph 3—5:**

- **People's reactions to the cloning of Dolly**

Where are the reactions from?

- **scientific world**

the media and the public

religious leaders and governments

all walks of life(各行各业)

Feelings of the scientific world:



encouraged ?

develop
normally

become
seriously ill

develop the illnesses more
appropriate to older animal

The same arbitrary fate affected
other species

a cloned animal lives shorter than the original one
die young

disturbed ?

depressed

cast down?

sad?

Para 4:

The word "**controversial**" in para 4 probably means : _____.

A. complicated

Why is it controversial?



B. arguable

On the one hand....

C. important

D. traditional

On the other hand....

....raised a storm of objections

Many people **object** to the idea of cloning.

It also opened everybody's eyes to the **possibility**...

Para 5

Who	Attitudes and Responses
evil leaders	try to attain their ambitions
religious leaders	raise moral questions
governments	become nervous and conservative
some other countries	accumulate evidence of the abundant medical aid
scientists	still wonder whether...

author's attitude?

CLONING: WHERE IS IT LEADING US?

objective (considering only facts)



Your attitude?

Discussion

Cloning: Twice as nice or double trouble?

be in favor of it be against it



Cloning: Twice as nice or double trouble?

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be in favor of it:

- medical research;
- more quantities of plants;
- new plant species;
- save endangered animals
- provide cure for serious illness

be against it

- develop illness of older animals;
- die younger;
- evil leaders;
- moral objection;
- ...

"Science is a powerful instrument. How it is used, whether it is a blessing or a curse to mankind, depends on mankind and not on the instrument. A knife is useful, but it can also kill."

- Cloning is a double-edged sword
- Anyway, whether cloning is helpful or harmful depends on whether we humans develop and use it in a wise way.

- No matter how advanced the technology is, there is still something that can **never be cloned**, including **love, friendship, experience, etc.**
- Whatever happens tomorrow, we've had today.

----- From a movie <One Day>

Yesterday is history. Tomorrow is a mystery. Today is a a gift. That's why we call it the present

Assignment

- 1. Search the internet for the latest information of Cloning.
- 2. Write a composition about the class discussion "twice as nice or double trouble?"
 - 1) topic introduction
 - 2) opinions from your classmates
 - 3) your opinion

That's all!
Thank you!

