



Paired Texts

LEXILE
400L-500L

SEEING

DOUBLE

If you could use science to make an exact copy of your favorite pet, would you do it? BY TOD OLSON

There has been a death in the family. Your dog Max has died. You loved Max. What do you do?

You don't want another dog. He wouldn't look the same. He wouldn't act the same. No dog could take the place of Max.

But wait. What if you could have a copy

of Max? Your new dog would look like Max. He could act like Max. He would be Max 2. Why? He would be made from Max!

Making Copies

Is this a horror movie? Where's the creepy music? Where's the evil laugh? Where's the monster dog?

Don't worry. This is not a horror movie.

This is a story about science. Scientists know how to copy animals. It's called **cloning**. Some people clone their pets.

Here's how cloning works. Scientists cut a small piece of skin from a pet, like

VOCABULARY

cloning: growing a plant or animal from one cell of its parent

cell: a tiny, basic part of a plant or animal; all living things are made up of cells

embryo: an unborn human or animal in the earliest stages of growth

productive: doing or achieving a lot

breed: mate two animals to produce babies

JOHN DANIELS/ARDEA



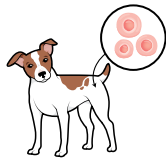


VIDEO

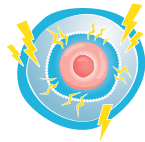
**GO TO
WEB VIEW**



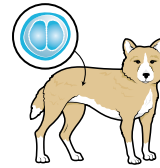
HOW DOES CLONING WORK?



1 Scientists cut a small piece of skin from a dog. From that piece of skin, they take a single cell.



2 In a lab, scientists combine the cell and an egg from another dog. Together the cell and egg form an embryo.



3 The embryo is placed inside another female dog. It grows inside its new “mother.”



4 About two months later, a puppy is born. This puppy is a clone.

Max. They take one **cell** from the skin. Then they remove an egg from a female dog. They combine the egg and the cell. The egg and the cell turn into an **embryo**. An embryo is the start of growth for humans and animals.

Next, the embryo is placed inside a female dog. It grows inside its “mother.” Two months later, a puppy is born. The puppy is a copy of the original dog.

Cloned Cows

The first animal was cloned about 20 years ago. Since then, not many clones have been made. Cloning is complicated. It works about once every five times. And it costs a lot of money. ViaGen Pets clones pets. The company is in Texas. A dog costs \$50,000. A cat costs \$25,000.

But cloning isn’t just for pet owners. Trans Ova Genetics is another cloning company. It is in Iowa. It clones farm animals. Some farm animals are more **productive** than others. For example, certain cows make more milk than others. Some farmers clone their best cows. Then they **breed** the clones. The calves may

produce a lot of milk too.

It costs about \$20,000 to clone a cow. To some farmers, the cost is worth it. A cloned cow can help a farm stay in business. It can also help produce more milk for the world.

To Clone or Not to Clone

Cloning a cow might make sense. But does it make sense to clone a pet?

Some people say “no.” They say cloning is cruel. Scientists perform surgery on female animals to get eggs. Other females have to carry the embryos. Often, the embryos don’t grow well. The scientists have to start all over.

And clones may not turn out like the original. Experiences affect animals. Max 2 will grow up with different experiences than Max 1. So Max 2 will be a different dog. Maybe Max 1 rubbed his head against your leg. But Max 2 might just put his chin on your lap.

Maybe science can’t solve the problem of death. There might only be one Max. And maybe that’s a good thing. •

MEET DOLLY!

In 1996, a sheep was cloned—and it shocked the world. Would humans be next?

Dolly was a very famous animal. She was a sheep. And she was a copy of another sheep.

Dolly was born in Scotland in 1996. She was cloned in a lab. Her birth was big news. The lab got 3,000 phone calls. Most callers were shocked about Dolly. They had one question: Were humans next?

Some people thought cloning humans was exciting. It could help cure diseases. And what about children who had died? Their parents could replace them with clones.

But other people thought it was scary. What if beautiful actors were cloned? What if rich parents bought cells from smart people to make smart kids?

The future seemed dangerous. Many



THE SHEEP THAT CHANGED THE WORLD
Dolly raised important questions about cloning.

countries made it illegal to clone humans.

More than 20 years have passed since Dolly was born. Scientists have cloned mice, cows, pigs, and goats. They have cloned rabbits, cats, and dogs. But no one has figured out how to clone a human. It may happen one day. But for now, the only clones walk on four legs. •

JEFF J MITCHELL UK/REUTERS (DOLLY)

Action
Activity

Put It Together

How do people feel about cloning animals and humans?

WHAT TO DO: Complete the sentences below using examples from the texts.

1. Some people are excited about cloning because

(Hint: Look in both articles. What are three reasons that people think cloning is a good idea?)

2. Other people don't agree with cloning because

(Hint: Look in both articles. What are two reasons that people think cloning is a bad idea?)

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