

Join the national conversation!



Word Generation - Unit 1.04

Focus Words

design | feature | impact | potential | transfer



Weekly Passage

What makes you who you are? Both your genes and your experiences have an impact on your identity. Your genes contain information about your own unique design. They help determine many of your features, such as your eye color, your height, and which hand you use to write.

Scientists have invented a process called cloning that allows them to copy the genes of living things, or organisms. Scientists transfer some of an adult organism's genes to a new egg. After the transfer, a clone or copy of the original organism starts to develop. Researchers are using one type of cloning to study new treatments for diseases like cancer. They believe that cloning has the potential to help people with serious illnesses. Many farmers are cloning plants to produce crops featuring qualities that people like, such as juiciness in tomatoes. Some farmers are interested in cloning animals,

too. For instance, they want to clone cattle that produce particularly tasty and tender beef.

In the future, scientists may be able to clone a person. This process could create identical twins born at different times. But is that a good idea? Many people worry about how cloning will impact our lives. What would happen if people could design other people? What if, for example, leaders could choose the features they wanted their soldiers to have and then make an army of clones? What if parents could clone their children? Should people be allowed to clone their pets? How might we take advantage of the benefits cloning offers while preventing potential problems?

Unit 1.04**Cloning: Threat or opportunity?****Focus Word Chart**

Word	Meaning	Forms	Examples of Use	Notes
design	(n.) - plan; blueprint			
feature	(n.) - quality, trait, characteristic			
impact	(v.) - to affect or influence			
potential	(n.) - possibility			
transfer	(v.) - to move something from one place to another			

Unit 1.04

Cloning: Threat or opportunity?

Problem of the Week

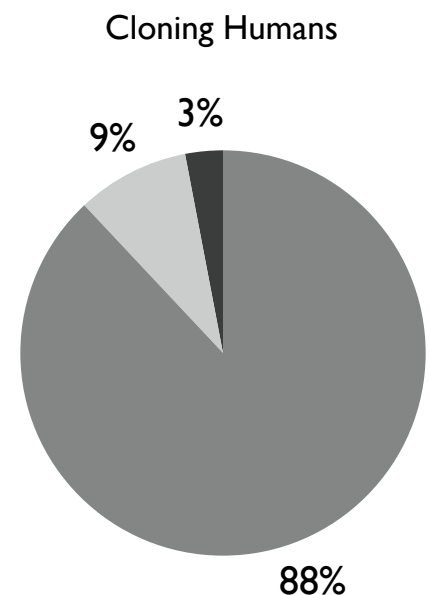
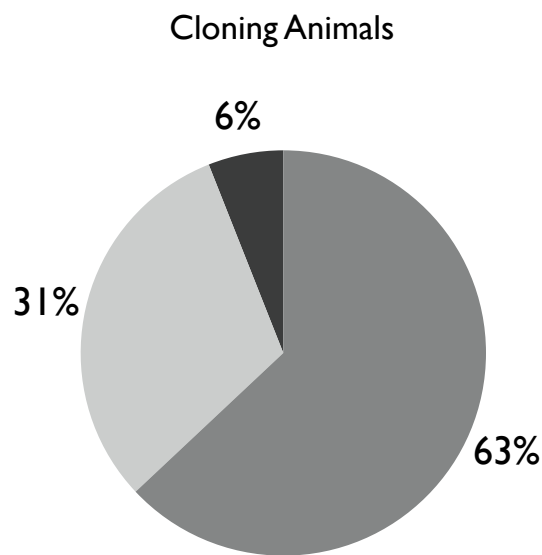
Cloning an organism means **transferring** its genes to a new egg, and allowing a copy to develop with the same **design** as the original. Scientists are already cloning cows for the beef industry. They choose cows with especially tender meat, or other desirable **features**. There are many other **potential** applications of cloning. Should we clone endangered species? Many people need new organs to survive. Are human clones the answer? Despite the potential for good, many people worry about the **impact** of this new technology on our society.



Here are the results of a 2010 Gallup poll that told how Americans felt about cloning.

Option 1: Based on the graphs, which of the following statements is true?

- A) Most Americans think that cloning humans is morally okay.
- B) Most Americans believe that cloning humans is morally equivalent to (or the same as) cloning animals.
- C) Most Americans think that neither animals nor humans should be cloned.
- D) Most Americans think that cloning animals is morally okay.



Option 2: True or False: Based on the graphs, 25% of Americans believe that cloning animals is okay, but cloning people is not.

Math Discussion Question: Many people believe that each human being is uniquely **designed** by God. Our society is built on the idea that each human is a special creature with special responsibilities and rights. Are these ideas in danger? Are you a unique and special individual, or are you simply a collection of **features**, like hair color, height, and IQ? What **impact** would human cloning have on the idea of human rights? Would human rights **transfer** to human clones? Why do so many Americans think cloning is wrong? What are some **potential** problems with cloning humans?

Cloning: Threat or opportunity?

Debating the Issue



1. Get ready...

Pick one of these positions (or create your own).

A Cloning of any kind should be forbidden.

B Cloning of plants should be allowed, but cloning of animals should be forbidden.

C Cloning of plants and farm animals should be allowed, but cloning of humans should be forbidden.

D Cloning should be allowed for research purposes related to treating disease (therapeutic cloning), but cloning of people (reproductive cloning) should not be allowed.

E _____

GO!

Be a strong participant by using phrases like these.

I believe that...

I agree with you because. . .

You make a good point, but have you considered...

Can you show me evidence in the text that supports what you said?

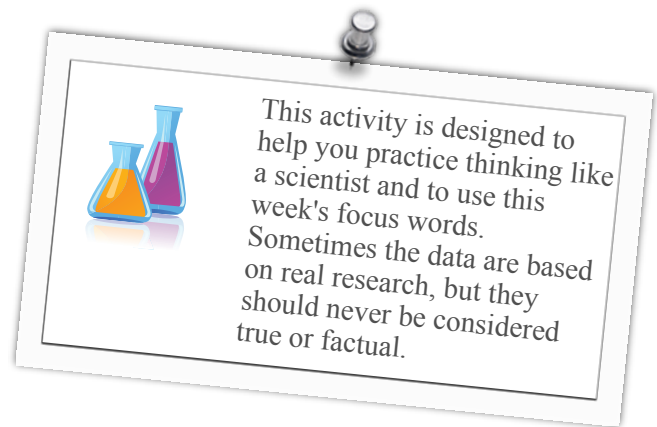
2. Get set...

Be ready to provide evidence to back up your position during your class discussion or debate. Jot down a few quick notes:

Unit 1.04

Cloning: Threat or opportunity?

Science Activity



Professor Seemy just read a newspaper article about cloning expert Lou Hawthorne and his two cloned dogs. The dogs were both cloned from Missy, a dog who died in 2002. Hawthorne **transferred** Missy's DNA to eggs taken from other dogs. The two clones have similar **features** and exactly the same genetic **design**. Hawthorne thinks dog cloning has the **potential** to be a big business.

“This could have a huge **impact** on the relationship between people and pets,” thinks Professor Seemy. “But will people buy cloned dogs?”

Question:

Will people buy cloned dogs?

Hypothesis:

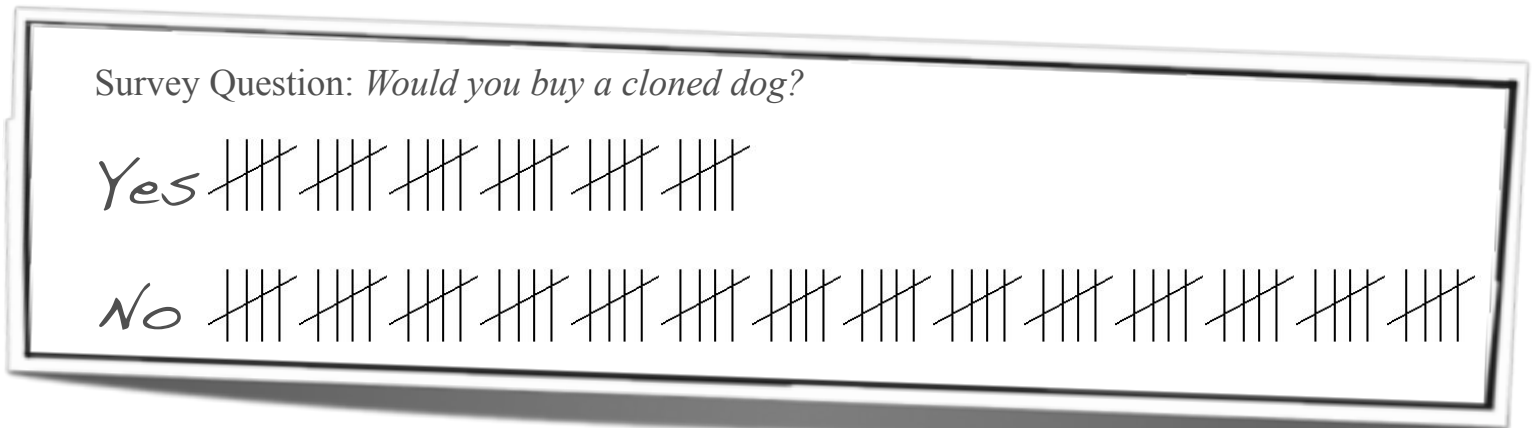
Most people will say that they would not buy a cloned dog.

Materials:

- ▶ 100 people

Procedure:

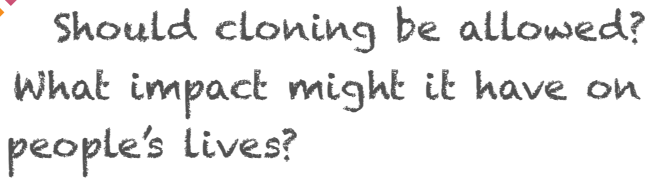
1. Ask 100 people if they would buy a cloned dog.
2. Tally results.

Data:**Conclusion:**

Is the hypothesis supported or not by the data?

What evidence supports your conclusion?

How would you make this a better experiment?



design | feature | impact | potential | transfer

- ☐ Stated my own position clearly
- ☐ Included 1-2 arguments
- ☐ Included 1 counterargument
- ☐ Used 2-5 focus words

- ☐ Stated my own position clearly
- ☐ Included 1-2 arguments
- ☐ Included 1 counterargument
- ☐ Used 2-5 focus words

[illegible]