

Join the national conversation!



## Focus Words

controversy | justify | perspective | bias | debate



## WEEKLY PASSAGE

In room 207, Mr. Smith is teaching his students about the civil rights movement. He asks the students questions such as, “Who were the freedom riders?” or “What year was the Montgomery bus boycott?” It is easy for students to find the answers in their textbooks. Mr. Smith tells the students whether they are right or wrong. On Friday, they will have a quiz about these facts.

In room 209, Ms. Miles is also teaching about the civil rights movement. She asks her students, “Is peaceful protest the best way to make things change for the better?” The students have a **debate**. Some think Martin Luther King was right to tell protesters to avoid violence. Others believe that sometimes violence is necessary when people will not listen to reason. They ask Ms. Miles for the right answer, but she says there is no right answer.

Some people believe that kids in school should only learn about facts. These people think students should get information from their textbooks or teacher and memorize it. That way, some argue, everybody will learn the same things and they can all do well on tests.

Other people think debates can be hard because there are no right answers. Sometimes everybody learns different things from a debate. This makes it hard for teachers to give a test to find out what students have learned. Debates also take a lot of time. Teachers who

have debates may not be able to cover as many topics in class. Then, students may not learn all of the facts in the textbook.

However, debates may help students understand why the facts they learn in school are important. We live in a democracy, where everyone needs to know how to form and **justify** opinions in order to make decisions. Students will not always have a teacher or a textbook to give the right answers, so young people need to learn to think for themselves. Each person has a unique **perspective** defined by his or her knowledge, experience, and attitudes. Even teachers and textbook authors have their own perspectives. Through a classroom debate, students hear their classmates’ opinions. Students justify their opinions with evidence from texts and based on their own experiences. Sometimes, hearing from classmates who disagree with them makes students learn about their own **biases** and understand a problem in a new way. Hearing classmates’ perspectives during a debate can help students understand the complexity of many important issues. Whether it is better to have teachers teach from the text or to have students engage in debates is a continuing **controversy** in education.

What do you think? Should students learn only facts in school? Or should debates be an important part of their education?

# Should school be a place for debate?

## FOCUS WORDS OF THE WEEK

**debate** : (noun) a discussion of a problem where both sides are presented

FORMS:

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EXAMPLES OF USE:

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**controversy** : (noun) a great difference of opinion; an ongoing disagreement

FORMS:

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EXAMPLES OF USE:

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**perspective** : (noun) point of view, way of looking at things

FORMS:

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EXAMPLES OF USE:

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**justify** : (verb) to defend, explain, or show to be right

FORMS:

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EXAMPLES OF USE:

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**bias** : (noun) tendency to prefer or favor one position or side over another

FORMS:

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EXAMPLES OF USE:

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# Should school be a place for debate?



## PROBLEM OF THE WEEK

**Option 1:** In the Urban Debate League, students from city schools **debate controversial** issues. A skillful debater can **justify** more than one **perspective**. For example, a debater might start by arguing that her school should have a dress code. Then, she can change positions and argue that her school should not have a dress code. The debater puts personal **biases** aside.

In April, 2008, debaters met at the national Urban Debate Championships. Four Boston Public School students competed.

They were:

- ▶ a 10th grader from Mattapan
- ▶ a 10th grader from Dorchester
- ▶ a 10th grader from the South End
- ▶ a 12th grader from Charlestown

What percent of the Boston Public School students were in tenth grade?

- A) 25%
- B)  $\frac{3}{4}$ %
- C) 55%
- D) 75%

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**Option 2:** Urban Debaters **debate controversial** issues in teams of two. In each debate, a team either argues from an affirmative or negative **perspective**. Teams must be affirmative in some debates, and negative in others. Even if a debater is **biased** toward one opinion, she must skillfully argue both sides. Judges choose the winning team based on how well team members **justify** each perspective.

In a debate round, each of the four debaters talks three times: an 8-minute speech, a 5-minute response, and a 6-minute question period. Gabriel is organizing a school debate. He wants to know how many whole debate rounds can happen in 4 hours if everybody uses all their time. Write an inequality that would help him figure this out. You can let  $r$  = the number of debate rounds.

**Discussion Question:** High school debaters tend to get good grades and go to college. Some people say this is good **justification** for using debate in the classroom. Others have a different, and **controversial**, **perspective**. They say that kids join debate teams because they are already smart and motivated. They say debate won't help regular kids. What do you think?

## Should school be a place for debate?

### THINKING SCIENTIFICALLY

Ms. Lexie Kahn and Mr. Paul E. Seemy are two science teachers who work together. Being science teachers, they encourage their students to be curious and ask a lot of questions. Some of their students like to ask questions about national **controversies**. Others ask questions about experiences that have made them wonder about something.

Ms. Kahn and Mr. Seemy themselves often have different **perspectives**, and they like to debate each other. They try not to let personal **biases** get in the way of exchanging ideas so they try to use evidence to **justify** their opinions.

Both teachers believe that debating develops intelligence just as physical exercise develops muscles. They think that you become smarter by working through challenging problems. Some of their students agree with this, but others do not. The doubtful students seem to believe that people have a fixed amount of intelligence that stays the same no matter what.

→ Mr. Seemy's student Joon found this topic very interesting, so he decided to survey the students at his school.

#### Joon wants to find out:

Have middle school students developed a mindset about whether or not intelligence grows?

Joon designed a survey with one item.

#### Procedure:

1. Distribute surveys to all the students at school.
2. Ask students to place completed surveys in a box in the library labeled "completed surveys."
3. Tally the survey results.

Check the box that matches what you think:

- People have a certain amount of intelligence and it doesn't change.
- People can get more intelligent over time if they work at it.

#### Data:

	<b>Fixed Mindset</b> (intelligence does not change)	<b>Growth Mindset</b> (intelligence can change with effort)
<b>Sixth Grade</b>	122	75
<b>Seventh Grade</b>	99	110
<b>Eighth Grade</b>	80	78

 What do the data from Joon's survey tell you?

 How would you answer Joon's survey? Why?

 Do you think that Joon's survey provides enough information to determine a student's mindset? Why or why not?

 Stanford University professor Dr. Carol Dweck reports from her research that people with a "growth mindset" live less stressful and more successful lives. Discuss this idea with your class.





# Should school be a place for debate?

## DEBATING THE ISSUE

### Get ready...

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

**A** Debates do not belong in schools. They take too much time and students need to learn so much material for the state test.

**B** Debates should be used in schools so students can practice public speaking and forming opinions. However, most of the time spent in school should be on reading and listening to lectures. Teaching reading and listening skills will prepare students for college.

**C** Debates are necessary in schools. Since voting is a right of citizenship in the U.S., citizens need to be able to form and justify their opinions. The nation's future depends on the intelligence of its people.

**D** Debates should be used in schools. Reading from textbooks and listening to lectures is boring for students so they do not learn the material. Debates would get students interested so they would learn more.

**E** \_\_\_\_\_  
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### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

*I believe that...*

*I agree with you, but...*

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

*Can you show me evidence in the text that...*



Join the national conversation!

SHOULD OUR USE OF PAPER OR PLASTIC  
BE AN INDIVIDUAL CHOICE OR BE  
REGULATED BY THE GOVERNMENT?

Word Generation - Unit 3.02

## Focus Words

strategy | research | cite | phase | data

### WEEKLY PASSAGE



“Paper or plastic?” asks a grocery clerk in Boston. You no longer hear that question in San Francisco. In 2007, the San Francisco Board of Supervisors banned grocery stores from using plastic bags to bag groceries. Groceries are put in paper bags or bags customers bring from home. Many applaud San Francisco for creating the bag law and urge other cities to follow the northern California city’s example. Others say that the city government has overstepped its bounds. They feel the city took action that it should not have taken.

Supporters say banning plastic bags is a good **strategy**. They **cite research** that says plastic bags are bad for the environment. Our country uses 30-100 billion plastic bags per year, and the bags are piling up in landfills. Plastic is not biodegradable, so the plastic bags will stay in the landfills for hundreds of years. Plastic bags also litter the streets. Some drift out to sea and kill turtles and other sea creatures. Plastic bags are made from petroleum, or oil, a costly resource. People who support the ban say that our earth is being polluted and its resources

are being wasted. These people argue that we need government intervention to protect the earth and its resources.

Opponents state that city governments have no authority to ban plastic bags. They argue that storeowners are doing their part to help the environment. Some storeowners are **phasing** in recycling strategies, such as placing recycling bins for the plastic bags in their stores. People against the ban also point out that plastic bags do not pose any immediate danger. They claim that there are no **data** that prove that paper is better. After all, we chop down trees to make paper bags. In addition, paper bags weigh more than plastic bags, so it costs more to transport them from the factory to the store. They are not as strong as plastic, so we use more of them. Finally, people against the ban argue that private industry pays for the bags, not the taxpayers, so private industry should decide.

What is your opinion? Should city governments ban plastic bags or should the grocery stores decide?

# Should our use of paper or plastic be an individual choice or be regulated by the government?

## FOCUS WORDS OF THE WEEK

**cite** : (verb) to refer to as an example or as proof

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EXAMPLES OF USE:

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NOTES:

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**research** : (noun) systematically collecting information about a subject

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**data** : (noun) facts

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**phase** : (verb) to do in steps according to a plan

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**strategy** : (noun) a systematic plan or method

FORMS:

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EXAMPLES OF USE:

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NOTES:

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# Should our use of paper or plastic be an individual choice or be regulated by the government?

## PROBLEM OF THE WEEK

**Option 1:** The Washington Post wrote an article about cities that are **phasing** out plastic shopping bags and switching to paper bags. The people in these cities think that this **strategy** will help the environment. However, the article **cites data** that might make them change their minds. Researchers discovered that 2511 BTUs of energy are used to make a paper bag and just 594 to make a plastic bag. Therefore, the article recommends that a better **strategy** to save energy is for shoppers to bring reusable bags from home.

How much more energy is spent making a paper bag than making a plastic bag?

- A) 2,000 BTUs
- B) 817 BTUs
- C) 1,918 BTUs
- D) 1,917 BTUs

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**Option 2:** Taylor is making her weekly trip to the grocery store. Despite the **research** on the benefits of reusable bags, she still uses paper and plastic. She bags her own groceries in two **phases** using a special **strategy**: meats and cheeses in plastic bags, fruits and vegetables in paper.

Write an equation that shows the relationship between the number of paper and plastic bags Taylor uses and the total number of BTU's it took to make those bags. Use the **data cited** in problem one. Let  $p$  = the number of paper bags,  $c$  = the number of plastic bags, and  $b$  = the total number of BTU's.

**Discussion Question:** **Researchers** have pointed out problems with using paper bags as well as plastic bags. The **data cited** above illustrate one of those problems: making bags takes energy. To protect the environment, some cities passed laws to **phase** out plastic bags. Was this the best **strategy**? Can you think of a better one?

\* BTU (British Thermal Unit) is a standard measurement for heat energy.

## Should our use of paper or plastic be an individual choice or be regulated by the government?



### THINKING SCIENTIFICALLY

Mr. Seemy and his class were talking about the plastic and paper bags that most people get from the grocery store each time they go. Chantel **cited** her reason for using paper bags instead of plastic, “Most plastic bags take at least a hundred years to break down and be absorbed by the earth.” “Interesting point, Chantel,” responded Mr. Seemy, “but I just read about a new kind of plastic made from corn that is supposed to break down more quickly. It’s biodegradable.”

“Switching to corn plastic could be a **strategy** to help with the problem of too much trash in landfills,” said Chantel. “I think we should **phase** out regular plastic bags.”

“Not so fast, Chantel,” said Mr. Seemy. “You shouldn’t make a claim just because your teacher mentioned an article. Let’s do some **research** to find out more. Maybe someone in our class can help by doing an experiment and collecting some **data**. Anyone interested?”

→ Chantel was very interested and quickly volunteered with her friend Angelo to create an experiment that buried bags in dirt.

#### Question:

Do paper bags, regular plastic bags, and biodegradable plastic bags break down at different rates?

#### Hypothesis:

Paper and biodegradable plastic will break down faster than regular plastic.

#### Materials:

- ▶ Samples of each bag material
- ▶ Work gloves, shovel, labels to stick in dirt, small plot of land
- ▶ Scale

#### Procedure:

1. Cut out a portion a paper bag with a mass of 250 grams. Do the same with regular plastic and with biodegradable plastic.
2. Bury them in the same area and label each spot.
3. Every two weeks, dig up each sample and measure the mass. Then rebury each sample.

	Paper	Regular Plastic	Biodegradable Plastic
<b>Starting mass</b>	250g	250g	250g
<b>After 2 weeks</b>	196g (moist)	260g (couldn't get all the dirt off)	224g
<b>After 4 weeks</b>	75g (difficult to find all pieces)	246g	116g
<b>After 6 weeks</b>	can't get good measurement - traces of paper only	248g	41g

Chantel and Angelo's Data

Do Chantel and Angelo’s data tell you anything that relates to their hypothesis?

In step 1 of the procedure, the students decided to cut out 250 gram samples of each bag material. Why is it important that the samples have the same mass? How is mass different from size? Do you think their three 250g samples were all the same size?

*Even if paper bags biodegrade quickly, it doesn't necessarily mean that they are the best choice for the environment. Why do you think these issues are so complex? Do you think scientists can help?*



# Should our use of paper or plastic be an individual choice or be regulated by the government?

## DEBATING THE ISSUE

### Get ready...

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

**A** City governments should ban plastic bags. There is enough research to show that we are hurting the future of the earth. It is the government's responsibility to ensure our safety.

**B** City governments should limit the number of plastic bags grocery stores give out. People should be encouraged to use paper bags or bring their own.

**C** City governments should not regulate bags. Grocery stores are private, so the government should not be able to tell them how to operate their business.

**D** City governments should ban paper bags instead of plastic. Paper bags are more harmful to the environment.

**E** \_\_\_\_\_  
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### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

*I believe that...*

*I agree with you...*

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

*Can you show me evidence in the text that...*



Join the national conversation!



Word Generation - Unit 3.03

## Focus Words

whereas | capable | ongoing | compatible | notion



## WEEKLY PASSAGE

Davonte Reese wanted a dog, but his parents didn't think he was **capable** of taking care of one. Then they heard about a company that rents pets. Davonte's parents were glad the pet rental company gave them the chance to rent a Dalmatian for a day. Renting a Dalmatian helped them realize that Davonte was ready to own a dog. His parents then took Davonte to an animal shelter and adopted a mixed-breed dog named Lucky.

Some people say renting a dog should be illegal. They believe rental businesses are harmful to dogs. To be happy, they say, a dog needs ongoing contact with one person. People who are against pet rentals give several other reasons to support their position. For example, a dog likes to know its home. Dogs and people evolved together, so dogs depend on their human "family." They have some social skills that are like those of humans. People domesticated dogs to be socially **compatible** and live with

humans. Therefore, people have a special responsibility to ensure dogs have stable homes. Dogs have a special right to a permanent home with **ongoing** companionship. Also, who will want rental dogs when they are sick or old?

Marlena Davis disagrees with the **notion** that pet rental is bad for dogs. She has a pet rental business. She buys mostly purebred dogs and then rents them for \$50 or more a day. A dog can spend time with a different family every day of the week. **Whereas** people who own dogs leave them home alone, Marlena says people who rent dogs give the animals lots of attention. Also, families like Davonte's can use pet rentals to make an informed decision about whether to own a dog or not. Marlena's business also creates jobs.

Some states may make it against the law to rent pets. If you were going to write to a member of your state assembly, what would you say? Should it be illegal to rent a pet?

# Do the benefits of renting a pet outweigh the potential harm it can cause the animals?

## FOCUS WORDS OF THE WEEK

**whereas** : (conjunction) although, on the contrary

FORMS:

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EXAMPLES OF USE:

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**capable** : (adjective) able to do a job well

FORMS:

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EXAMPLES OF USE:

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**ongoing** : (adjective) continuing without interruption

FORMS:

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EXAMPLES OF USE:

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**compatible** : (verb) able to be together happily

FORMS:

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EXAMPLES OF USE:

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**notion** : (noun) idea or belief

FORMS:

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EXAMPLES OF USE:

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# Do the benefits of renting a pet outweigh the potential harm it can cause the animals?

## PROBLEM OF THE WEEK

**Option 1:** The **notion** of putting unwanted pets to sleep is a sad one, but millions of dogs and cats are put to sleep in shelters each year. People disagree about whether pet rental can help save these animals. Some people say that rescuing a shelter pet is better than renting, **whereas** others say pet rental keeps pets from going to the shelter in the first place. Pet renters can return a pet if it is **incompatible** with the renter's lifestyle, or if the renter is **incapable** of giving the pet **ongoing** care. This way, the unwanted pet goes back to the store instead of the shelter.

About 12 million pets are put to sleep in U.S. shelters each year. Which of the following shows 12 million written in standard form?

- A) 12,000
- B) 120,000
- C) 12,000,000
- D) 12,000,000,000

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**Option 2:** A fact found on the internet:

“Two humans could produce a maximum of 6 babies in 6 years, **whereas** a pair of dogs and their puppies can produce up to 67,000 dogs in the same time period.”

Could this possibly be true? How could you figure it out?

Some facts to help you:

- ▶ A dog's gestation period (pregnancy) is nine weeks.
- ▶ A typical litter contains 6 puppies.

**Discussion Question:** Pets are **incapable** of defending their rights. **Whereas** people have many rights, pets have very few. Do pets have a right not to be put to sleep? A right to be spayed or neutered? A right to **ongoing** care? Does the **notion** of pets' rights make sense, or are rights something that only people have? If pets have rights, are those rights **compatible** with pet rental?

# Do the benefits of renting a pet outweigh the potential harm it can cause the animals?



## THINKING SCIENTIFICALLY

People think dogs are happy when they are wagging their tails, **whereas** they think dogs are afraid when they lower their body and look down. Ms. Kahn’s student Shatara agreed with this **notion**. She shared, “Our poodle, Toots, wags his tail whenever we take him for a walk around the neighborhood. But Rusty, our sheepdog, always cowers and is never happy about going for walks. My mom says that Rusty’s fear of city noises has been an **ongoing** problem since Rusty was a puppy.”

Ms. Kahn chimed in, “My family’s dog, Rex, is totally **compatible** with urban life, but he is afraid of new people inside our apartment. He’ll actually hide when we have guests.”

→ This got Shatara thinking about observing the behaviors of dogs. She sketched different ways that dogs held their bodies as she observed them. She was curious about how much she could infer from the posture of dogs. Examine Shatara’s sketches to see if there is enough information for you to make an inference. If so, write it down.

Here are some of Shatara’s sketches:

	Possible Dog Feeling	Inference Statements
1 	<input type="checkbox"/> submissive <input type="checkbox"/> fearful <input checked="" type="checkbox"/> neutral/relaxed <input type="checkbox"/> aggressive <input type="checkbox"/> playful	Example: I think that sketch #1 shows a neutral/relaxed posture because the ears and tail are drooping down instead of pointing up.
2 	<input type="checkbox"/> submissive <input type="checkbox"/> fearful <input type="checkbox"/> neutral/relaxed <input type="checkbox"/> aggressive <input type="checkbox"/> playful	Your inference: _____ _____ _____
3 	<input type="checkbox"/> submissive <input type="checkbox"/> fearful <input type="checkbox"/> neutral/relaxed <input type="checkbox"/> aggressive <input type="checkbox"/> playful	Your inference: _____ _____ _____
4 	<input type="checkbox"/> submissive <input type="checkbox"/> fearful <input type="checkbox"/> neutral/relaxed <input type="checkbox"/> aggressive <input type="checkbox"/> playful	Your inference: _____ _____ _____
5 	<input type="checkbox"/> submissive <input type="checkbox"/> fearful <input type="checkbox"/> neutral/relaxed <input type="checkbox"/> aggressive <input type="checkbox"/> playful	Your inference: _____ _____ _____

 Some people might say that sketching is not a very scientific way for Shatara to take notes about her observations. What do you think?



# Do the benefits of renting a pet outweigh the potential harm it can cause the animals?

## DEBATING THE ISSUE

### Get ready...

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

**A** Dog rental is not good for dogs. All rent-a-pet businesses should be against the law.

**B** Dog rental is good for dogs and people. All rent-a-pet programs should be allowed.

**C** Rent-a-pet businesses should be allowed, but there should be rules to ensure that rental dogs are treated well.

**D** Rent-a-pet businesses should be allowed, but if a family likes a dog it rents, the family should have the right to adopt it.

**E** \_\_\_\_\_  
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### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

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*Can you show me evidence in the text that...*



Join the national conversation!



# SHOULD ADOPTION INFORMATION BE KEPT PRIVATE OR MADE PUBLIC?

Word Generation - Unit 3.04

## Focus Words

adopt | ensure | tension | consent | duration



## WEEKLY PASSAGE

Twelve-year-old Phelan is **adopted**. He loves his adoptive parents, but he has questions they cannot answer. Will he be tall or short when he grows up? Do diseases like diabetes, high cholesterol, or cancer run in his biological family? He wishes he could ask his birth mother, but he is not allowed to know who she is.

Phelan's situation is called a closed adoption. This means that the child and the adoptive parents have no contact with the birth family. Birth records are kept secret for the **duration** of the child's life.

People prefer closed adoptions for a variety of reasons. Sometimes, birth parents believe it will be too painful to see the child they gave up. In some cases, a birth mother may not tell friends or family that she has had a baby. A closed adoption **ensures** that the child cannot appear someday and reveal her secret.

Sometimes adoptive parents are the ones who want adoptions to be closed. They might fear **tension**

between the two families. They worry that the birth parents will disagree with the adoptive parents' parenting decisions. They also worry that the birth parents may be involved with drugs or alcohol, or may disappoint the child.

Other people, however, believe that adoptions should be open. This means that the child can have contact with the birth parents. In many cases, the child and the birth parents exchange letters and photographs. Some adoptive parents choose open adoptions because they want to be straightforward with their child about the adoption. They want to be able to answer all the child's questions. Some birth parents **consent** to open adoptions because they still want to be involved in the child's life.

Should all adopted children, like Phelan, have the right to know their birth parents? Or should some parents be allowed to keep adoption information private?

# Should adoption information be kept private or made public?

## FOCUS WORDS OF THE WEEK

**adopt** : (verb) take into one's family as one's own

FORMS:

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EXAMPLES OF USE:

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**ensure** : (verb) to make sure; to make certain

FORMS:

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EXAMPLES OF USE:

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**tension** : (noun) a state of stress or unfriendliness between individuals or groups

FORMS:

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EXAMPLES OF USE:

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**consent** : (verb) to agree to

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**duration** : (noun) the length of time something exists or lasts

FORMS:

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EXAMPLES OF USE:

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NOTES:

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# Should adoption information be kept private or made public?

## PROBLEM OF THE WEEK

**Option 1:** In the past, the secrecy surrounding closed **adoptions** was a source of great **tension**. Today, laws protect a child's right to information. In Massachusetts, for example, adopted children must be given their birth family's medical records. They do not need their birth parents' **consent**. This helps **ensure** that adopted children have information about inherited conditions that can help them stay healthy for the **duration** of their lives.

If a parent has a disorder called Familial Hypercholesterolemia, or FH, there is a 50% chance that his or her child will also have FH. Angelina is adopted, and her birth mother has FH. What are the odds that Angelina will have FH?

- A) 1/2
- B) 1/4
- C) 1/5
- D) 1/50

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**Option 2:** Mr. and Mrs. Ruiz want to **ensure** that their family members have the best possible chances of staying healthy for the **duration** of their lives. Consequently, they think carefully about health risks. They **adopted** three siblings, and, at the time, did not **consent** to have them tested for FH. Since then, they found out that their three children have a birth parent with FH. Now, **tension** is growing in the Ruiz house. Mr. Ruiz wants to have the children tested. Mrs. Ruiz wants to avoid an extra trip to the doctor.

If each child has a 50% chance of having FH, what are the odds that at least one of the three children has FH?

**Discussion Question:** In most cases, no one can see your medical records without your **consent**. But Massachusetts law **ensures** that **adopted** children have access to the medical records of the birth parents. The law resolved the **tension** between the privacy rights of the parent and the information rights of the child in favor of the child. Why might people want their medical records to be private?

## Should adoption information be kept private or made public?



### THINKING SCIENTIFICALLY

Mr. Seemy's class is discussing closed and open **adoptions**. Imani thinks that adoption records should not be opened without the **consent** of the biological parents. "We should **ensure** privacy for biological parents who don't want to be contacted," she says.

Raul disagrees, "It is unfair to keep adopted children from knowing their biological parents for the **duration** of their life."

Mr. Seemy commented, "Excellent! Raul and Imani identified a **tension** that exists between a right to privacy and a right to know the truth. But I wonder if we are making an assumption here? Do all adopted children want to find their biological parents? How could we go about researching this?"

→ Mr. Seemy's students Raul and Imani found this topic very interesting and decided to work together to do some research on the internet. They found that the United States has open records in some states, but not in others. In England, records have been open for quite some time. They examined statistics about the number of English adopted children who have requested information about their biological parents.

Here is a write-up of their work:

#### Question:

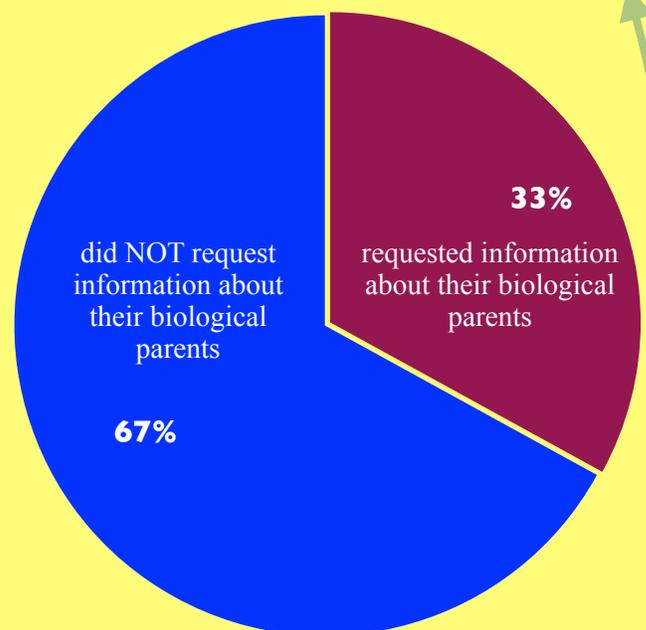
Is it common for adopted children to search for their biological parents?

#### Data Source:

- Records from adoption agencies in England (where adoption records are open).

#### Procedure:

- From the records, figure out the number of adopted children who asked at least once to see information about their biological parents.
- From the records, figure out the total number of adopted children.
- Calculate the percentage of adopted children who have asked about their biological parents.



Raul and Imani found out that, in England, over 70,000 adopted children requested information about their biological parents after they turned 18 when it is legal for them to do so. At first, they thought it had to be over half because it's such a large number, but that's not true. With a little more research and some careful calculations, they were able to make the graph above to share with the class.

Raul and Imani **do not have a title** for their graph yet. Can you help them? They want people to know the following when reading their graph:

- The information is from England.
- The data used is from 1975 to 2008.
- The graph is about requests made by adopted children after they turned 18.



# Should adoption information be kept private or made public?

## DEBATING THE ISSUE

### Get ready...

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

**A** It is important to let people have closed adoptions. Forcing birth families and adoptive families to exchange information may cause tension.

**B** All adoptions should be open. It is wrong to deny people information about their family.

**C** It is okay to have closed adoptions, but children should have the right to know their birth parents once they turn 18.

**D** It is okay to have closed adoptions, but adoptive or birth parents should have the right to change to an open adoption when the child turns 18.

**E** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

*I believe that...*

*I agree with part of what you are saying...*

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

*Can you show me evidence in the text that...*



Join the national conversation!



Word Generation - Unit 3.05

## Focus Words

wiretapping | notwithstanding | eliminate | suspicious | source



## WEEKLY PASSAGE

Alina Woods was talking to her cousin in Mexico over the phone. She remembered hearing about **wiretapping** on the news. She had heard that the government was listening to international telephone conversations. Government officials were doing this so they could know if terrorists were planning attacks. Alina wondered if someone was listening to her conversation.

After the September 11th attacks, President Bush told the National Security Agency (NSA) to pay attention to conversations between Americans and foreigners who the government thought were **suspicious**. The NSA could tap phone calls, email accounts, and text messages as **sources** of information. He told the NSA officials to do this in secret, **notwithstanding** the fact that they were supposed to ask a court for permission. But President Bush said this secret wiretapping was necessary to keep the country safe. He called his new rules the Protect America Act.

Some people defend the Protect America Act because they think it will protect Americans from terrorists. They think that if a person seems

suspicious, it is important to listen to that person's conversations and read his or her e-mail messages. People who support the President's new rules point out that the Protect America act **eliminates** any possible delays in getting information about possible terrorists because the government does not have to wait for a judge's permission. They believe it ensure America's safety.

Other people are against the Protect America Act, notwithstanding the need for safety and security. They think wiretapping violates a person's right to privacy. The main problem for opponents is that the Protect America Act allows the President the power to spy without warning or court permission. These people think the price we are paying for security is too high and that we are giving up some of the personal freedom provided by the Constitution.

What do you think? Should secret wiretapping to help the government catch terrorists be legal? Or do you think, notwithstanding the risks of a possible attack, nobody should be able to spy on our conversations without telling us? Where do you stand? Remember someone may be listening!

# Should secret wiretapping be legal?

## FOCUS WORDS OF THE WEEK

**wiretapping** : (noun) the act of listening in on a telephone conversation to get information.

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**notwithstanding** : (preposition) despite

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**eliminate** : (verb) to get rid of, remove

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**suspicious** : (adjective) believed to be potentially dangerous

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**source** : (noun) something or someone that supplies information

FORMS:

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EXAMPLES OF USE:

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NOTES:

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# Should secret wiretapping be legal?

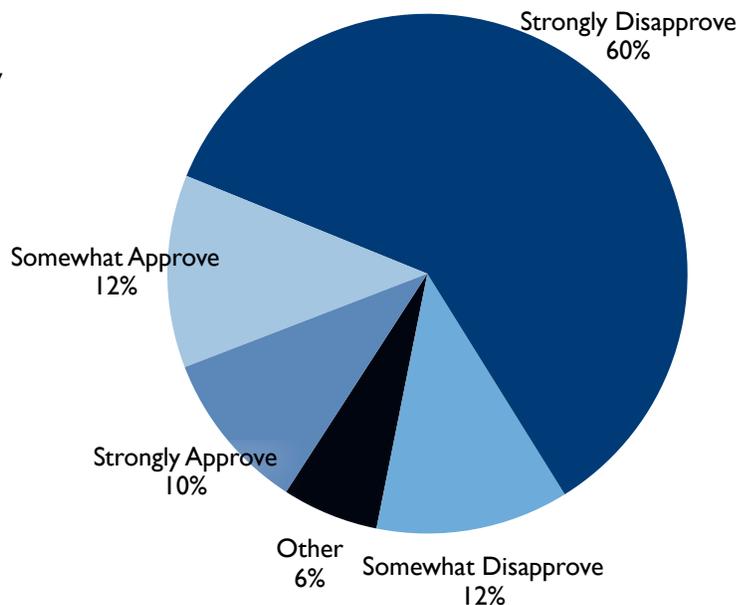


## PROBLEM OF THE WEEK

**Option 1:** After 9/11, the National Security Agency began **wiretapping** American telephones and e-mail messages in secret. Government officials decided it was important keep watch over people who seem **suspicious**. They said that secret wiretapping would help eliminate terrorist attacks. **Notwithstanding** this **explanation**, many Americans oppose secret wiretaps. They believe it takes away the right to privacy that the Constitution provides.

Twenty-two percent of people approve of secret wiretapping. What fraction is closest to 22%?

- A)  $\frac{1}{2}$
- B)  $\frac{1}{5}$
- C)  $\frac{1}{4}$
- D)  $\frac{1}{3}$



Source: International Communications Research

**Option 2:** In March of 2010 a judge ruled that **wiretapping** without a warrant was illegal. Before the trial, the U.S. Justice Department had requested that the case be thrown out of court. **Notwithstanding** this request, the judge heard the case and made his ruling. He said that allowing the government to spy on **suspicious** people without warrants would **eliminate** an important limit on executive power. The judge wrote a 45-page opinion on the case.

Luka just wrote a 10-page paper on wiretapping. He used government documents as **sources** of information. His 10-page paper took him a total of 36 hours. If he worked at the same rate, how long would it take him to write a 45-page paper?

**Discussion Question:** The judge mentioned above says the warrantless **wiretap** program must be **eliminated** because it breaks a federal law made in 1978. In 1978, people were **suspicious** that allowing spying on U.S. citizens would allow the government to become the **source** of too much power. Government officials must follow the rules, the judge said, **notwithstanding** the threat of terrorist attacks or other dangers. Do you agree with his decision? Or, in times of national trouble, should we allow the government to bend the rules?

## Should secret wiretapping be legal?



### THINKING SCIENTIFICALLY

Students in Ms. Kahn's class were reading an article about how many Americans are upset that the United States government could be reading their email or **wiretapping** their phones. However, there are other **sources** of threats to our privacy besides the government! Criminals sometimes try to steal money or learn personal information about people by guessing the passwords for their online accounts. **Notwithstanding** this danger, many **unsuspicious** internet users choose passwords that are very easy to guess. One study found that some of the most common passwords are "password," "password1," "123abc," and "abc123"! Experts about online privacy have come up with ways to help **eliminate** the chance that a stranger could guess your password. The best passwords are longer than 12 letters, are not words you can find in the dictionary, and include some numbers and symbols.

"We should probably look at the passwords we use and make sure they are safe!", said Ryan after reading about this issue. "I wonder how many other internet users also have unsafe passwords?", asked Eva. To find out, Eva examined data from a time when about 33,000 people were tricked by criminals into typing their password into a fake login page. The criminals later published all the passwords that they stole.

Question:

How safe are the passwords chosen by internet users?

Hypothesis:

Since safety is a concern, most people will create passwords with 10 or more characters.

Materials:

- List of 33,340 stolen passwords published by criminals.

Procedure:

1. Sort the passwords by length.
2. Count the number of passwords that have a length of 6 or fewer characters, 7 characters, 8 characters, 9 characters, 10 characters, 11 characters, and 12 or more characters.
3. List the quantities of each length, and calculate the percentage of passwords with each length.

6 or fewer	5,196	15.6%
7	7,821	23.5%
8	8,449	25.3%
9	5,904	17.7%
10	4,420	13.3%
11	918	2.8%
12 or more	632	1.9%

Is Eva's hypothesis supported by the data she examined? How do you know?

Eva decided to round to the nearest tenth when calculating the percentages. You may have noticed that her percentages total 100.1. Do you think this is acceptable?

Does Eva's data table show whether the passwords have a mix of letters and numbers? Does that matter?



# Should secret wiretapping be legal?

## DEBATING THE ISSUE

### Get ready...

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

**A** Secret wiretapping should be allowed. The government should have the right to listen to people's conversations and read their e-mails or keep track of their Internet history. Wiretapping will keep the United States safe from possible attacks.

**B** Secret wiretapping is not acceptable. The government invades our privacy by reading our email and listening to our conversations. We should be able to write and talk about what we want, as long as we do not hurt anyone.

**C** If the United States is in danger and there are people who might harm our country, secret wiretapping should be used. The government needs to ask a court first before doing it, though.

**D** Wiretapping should only be allowed if the government warns people first. People have the right to know whether the government is recording their phone conversations and reading their email messages.

**E** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Get set...

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# GO!

Be a strong participant by using phrases like these.

*I believe that...*

*I agree with you, but...*

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

*Can you show me evidence in the text that...*



Join the national conversation!



Word Generation - Unit 3.06

## Focus Words

displace | regime | diminish | stable | estimate



## WEEKLY PASSAGE

Less than a month after the September 11 attacks, the U.S. military began a war in Afghanistan. This country provided a safe place for the terrorists to plan and organize its attack on the United States. Because nearly 3000 people died as a result of 9/11, most of the people in the U.S. supported this war. They believed that military action was the only way to make sure that the terrorists could not plan more attacks against the U.S. More than ten years later, nearly 2000 U.S. troops have died trying to make Afghanistan a **stable** country where terrorists can never plan another attack on the U.S.

In 2003, the United States also went to war in Iraq. Members of the U.S. government claimed that the Iraqi **regime** had weapons of mass destruction that could be used against Americans. Many people in the U.S. were not convinced that these weapons existed and did not support this war. Some people believed that the war in Iraq was more about protecting an oil supply to support the American economy. In the end, the weapons of mass destruction were never found and 4487 members of the military died fighting for this cause.

Some people believe that the U.S. government should only send troops into a war when there is a clear threat to the safety and welfare of its people. They think that American men and women should only be asked to sacrifice their lives if there is a known threat, as was the case after 9/11. They think that wars that are not clearly protecting the safety of the American people are also too costly. They point to the expense of the Iraq war.

According to some **estimates**, the cost of this war to the U.S. government was \$1 trillion dollars. Many Americans think that this money should have been used for domestic issues, like improving American schools.

Other people think that the U.S. should consider military action when the safety of people from other countries is threatened by violent government actions. For example, during much of the time that Americans were fighting in Iraq, people in the Darfur region of Sudan were being murdered and forced to leave their villages by their government. Approximately 2.7 million people were **displaced** by these actions, resulting in nearly 300,000 deaths from disease and starvation. Many Americans thought that U.S. military action in Sudan could have **diminished** the suffering of the Sudanese people. They claim that there was not U.S. military action because this African country offered little economic benefit to the American economy.

What do you think? When should the U.S. government send troops to another region of the world? Should we only get involved when our safety is threatened? Should we commit troops when our economic interests are threatened? Or should we engage in military action when the safety of others is threatened?

# When should the U.S. send troops to other countries?

## FOCUS WORDS OF THE WEEK

**displace** : (verb) to force from home or homeland

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**regime** : (noun) a government in power

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**diminish** : (verb) to make smaller or to seem smaller

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**stable** : (adjective) not easily changed

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**estimate** : (noun) a rough calculation

FORMS:

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EXAMPLES OF USE:

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NOTES:

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# When should the U.S. send troops to other countries?

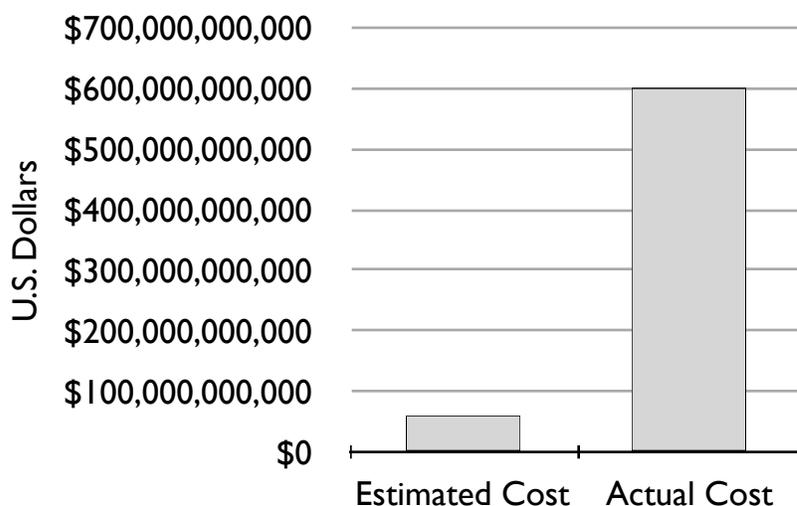
## PROBLEM OF THE WEEK

**Option 1:** At the beginning of the Iraq war in 2003, the administration of President George W. Bush **estimated** that it would cost sixty-billion dollars to end Saddam Hussein's **regime** and bring **stability** to Iraq. By March of 2008, Iraq was still **unstable**. Millions of Iraqi refugees who had been **displaced** by the war were still unable to return home. American support for the war had **diminished**. At that point, the war had already cost six hundred billion dollars.

Which of the following shows six hundred billion written in standard form?

- A) 600,000
- B) 600,000,000
- C) 60,000,000
- D) 600,000,000,000

Estimated vs. Actual Costs of the Iraq War



**Option 2:** According to some **estimates**, there were over 2 million internally **displaced** people, or IDP's, in Iraq. IDP's are refugees who have fled their homes, but stayed within Iraq. Another 2 million Iraqi refugees sought **stability** in neighboring countries. Returning these people to their homes is one of many problems faced by the new Iraqi **regime**. As time goes on, the chances that these people will be able to resume their old lives **diminishes**. The population of Iraq is about 30 million. What percentage of the population was **displaced** according to the **estimates** above?

**Discussion Question:** Who is responsible for **displaced** people? The **regime** of the home country? The **regime** of the country to which they flee? Hundreds of thousands of Iraqi refugees on the streets of Syrian and Jordanian cities are threatening the **stability** of these countries. (While it is difficult to count refugees, it is **estimated** that 1.2 million refugees fled to Syria, and around half a million fled to Jordan.) Resources are **diminishing**. The U.S. has ended its operation in Iraq, but should we help these people return home?



# When should the U.S. send troops to other countries?

## THINKING SCIENTIFICALLY

Ms. Kahn and her class became interested in how U.S. soldiers are being trained. The U.S. military is one of the most highly trained militaries in the world. An elite Army unit called Army Rangers conducts special missions, like helping to **displace** enemy **regimes** in Panama, Iraq, and Somalia. The Rangers' nine-week intense training prepares them to lead a group of soldiers even while working in **unstable**, unpredictable, and physically challenging situations. They get an **estimated** 3.5 hours of sleep and eat two meals or less each day during training sessions.

Raj asks, "Wouldn't lack of sleep and hunger cause slower reaction times?" Ms. Kahn responds, "I doubt the intense training would **diminish** the quick-thinking skills of these elite members of the service. But we could test to see if our reaction times might be affected!"

→ Raj enjoyed setting up experiments, so he set up an experiment that would help find an answer to his question.

### Question:

Does hunger affect reaction time?

### Hypothesis:

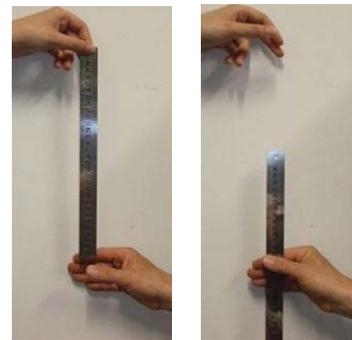
Students have better reaction times when they are not hungry.

### Materials:

- ▶ 30 cm ruler

### Procedure:

1. Set up testing sessions with test subjects right before lunch and right after lunch.
2. Have the subjects hold their fingers and thumb at the zero mark of the ruler without actually touching it.
3. Let go of the ruler without warning and see how quickly they can catch it as it falls.
4. Record data by reading the mark where each subject caught the ruler.
5. Repeat same test after lunch.



Here are Raj's data so far:

Person tested	Alan	Bak	Cherise	Dava	Eldridge	Fernando	Gisela
Before lunch	5	17	3	6	6	20	12
After lunch	8	5	5	10	4	13	15

Raj is a bit concerned about his experiment. He is wondering if it is fair. Here are his two main concerns:

1. He tested everybody only one time before lunch and one time after lunch.
2. People were already familiar with the reaction test when he tested them after lunch.

Have a class discussion about how seriously Raj should take his concerns. Do you have advice for Raj about a way he could improve his experiment?



# When should the U.S. send troops to other countries?

WRITE ABOUT IT

## Get ready...

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

**A** The United States must be willing to take military action when both the safety and economic stability of the country is threatened.

**B** The United States should only take military action when there is a clear threat to its physical safety and its citizens may be harmed.

**C** The United States must be willing to take military action when people in other countries are being murdered or **displaced** by a violent government.

**D** The United States must be willing to take military action when the people of another country appear to be in danger by a violent government.

**E** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Get set...

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

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# GO!

Be a strong participant by using phrases like these.

...because...

An example might help convince me. Can you give me an example?

What part of the passage makes you think that?

I disagree with part of that...



Join the national conversation!



Word Generation - Unit 3.07

## Focus Words

voluntary | literacy | impose | allocate | rigid



### WEEKLY PASSAGE

The year is 2012. Omar has graduated from high school. He plans to go to college to become a teacher. However, he must wait. A new law requires that all young people **allocate** one year to community service after high school. Teens can help clean up parks, register voters, or build houses for the poor. Omar chooses to spend his year doing literacy tutoring in an after-school program which will be good experience before he begins teaching.

Some people, like John Edwards, who ran for president in 2008, want to create a mandatory service program. In a speech he gave on May 12, 2007, he said, “One of the things we ought to be thinking about is some level of mandatory service to our country, so that everybody in America, not just the poor kids who get sent to war, are serving this country” (Elliot, 2007).

Some Americans dislike the notion of mandatory service because it limits individual freedom. They point out that a **rigid** requirement to spend time doing service could disrupt career or family plans. Some think that young people would get more out of going to college or entering a job-training program. In addition, some young people might need to earn money to help support their families.

Even some people who support national service think that young people should be free to choose not to participate. For example, President Barack Obama wants to develop national service programs. However, he believes participation should be **voluntary**.

People who do want youth service to be mandatory give several reasons. They explain that mandatory service can be a tool for improving **literacy** and helping to protect the environment. Mandatory service could help young people become better citizens. Some people predict that youth service would help reduce youth crime. People who support mandatory youth service point out that we all enjoy freedoms and protections as Americans. **Imposing** a requirement for each person to serve the country, supporters suggest, is only fair.

Mandatory youth service could help young people, too. While they plant trees or build homes, they would be learning valuable skills. Youth service might help them decide on a career, or make contacts that could lead to a job.

What do you think? Should you be required to serve your country after high school?

# Should the government impose a mandatory year of service?

## FOCUS WORDS OF THE WEEK

**voluntary** : (adjective) by your own choice; not forced

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**literacy** : (noun) the ability to read or write

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**impose** : (verb) to force somebody to accept

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**allocate** : (verb) to set apart for a specific purpose

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**rigid** : (adjective) strict or unbending

FORMS:

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EXAMPLES OF USE:

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NOTES:

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# Should the government impose a mandatory year of service?



## PROBLEM OF THE WEEK

**Option 1:** Some people think the government should **impose** a **rigid** service requirement on young people. But many young people already **allocate** time to **voluntary** service.

Fifty-five percent of youth ages 12-18 volunteer. Say that 10% of these volunteers are **literacy** volunteers (people who help others learn to read and write). What percentage of youth ages 12-18 would be **literacy** volunteers?

- A) 5.5%
- B) 10%
- C) 5%
- D) .55%

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**Option 2:** Youth perform **voluntary** service for many reasons. Sometimes, schools **impose** a service requirement. Many students argue that this kind of “voluntary” service isn’t voluntary at all! Some schools have **rigid** service rules, and require students to **allocate** a certain number of hours to service before they can graduate. Others require service as part of a class or a special project.

10.6 million youth, or 38% of the youth population, have performed service as part of a school activity.

If this is true, what is the youth population?

**Discussion Question:** Should schools be **imposing** service requirements? Is it okay for a teacher to **allocate** a few hours of class time to service for a special reason, like reading to kids for a unit on **literacy**, or cleaning up a park for a unit on pollution? What about a **rigid** requirement for all students, like 100 hours of service before graduation? Is it wrong to make **voluntary** service mandatory?

# Should the government impose a mandatory year of service?



## THINKING SCIENTIFICALLY

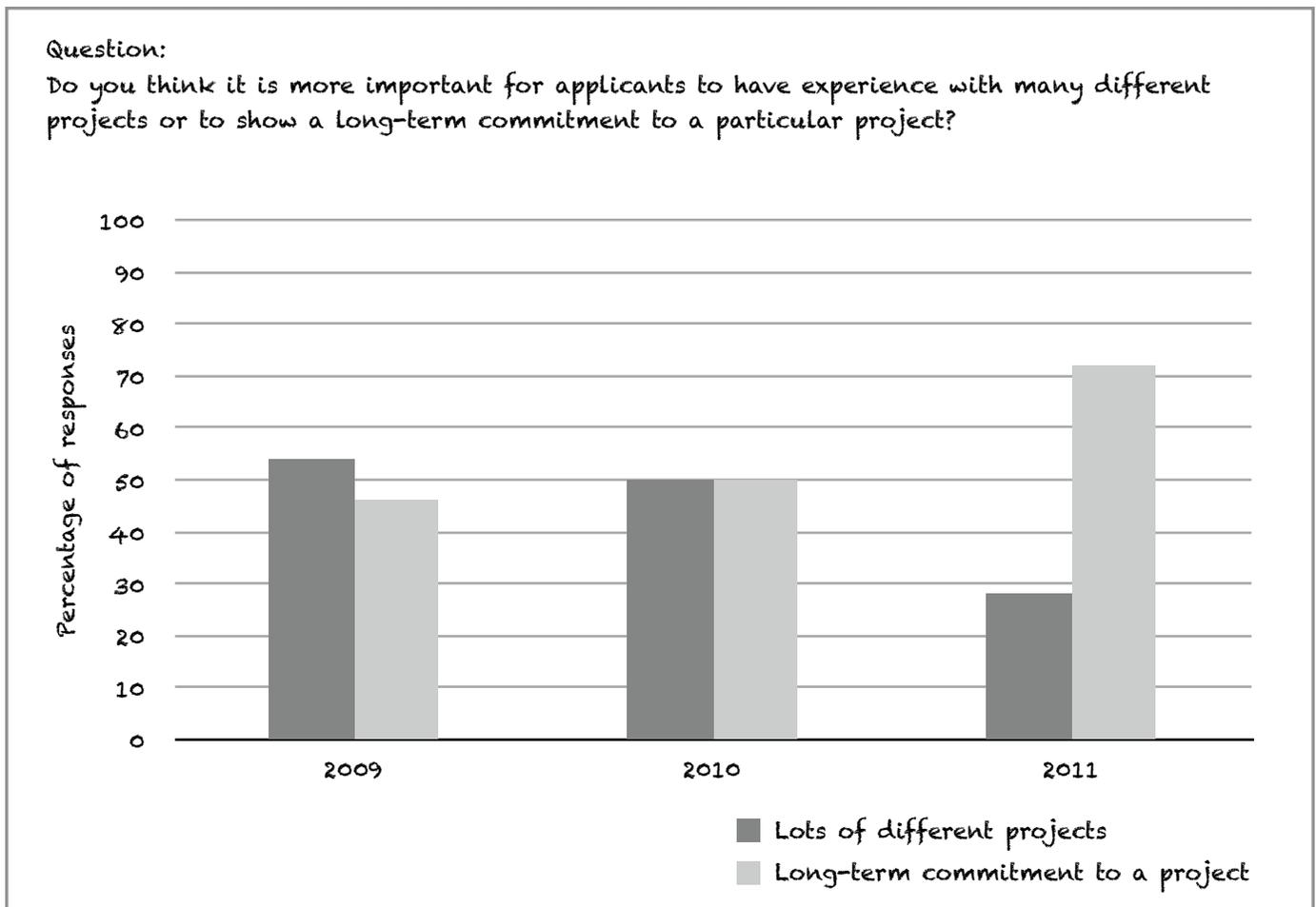
Students in Mr. Seemy's class are talking about community service. The class is divided on the question of whether the government should **impose** a service requirement for all young people. Malik commented, "That seems kind of **rigid** to me. I think service should be **voluntary**." Halley responded, "I basically agree, but our school should **allocate** more time for community service, that way students could really commit to projects. Right now I help at the library tutoring little kids to build up their **literacy** skills, but I feel like I could do a better job if I could be there more."

Mr. Seemy commented, "That kind of attitude might just get you into your favorite college!"

Halley questioned her teacher: "What are you talking about, Mr. Seemy? You usually push us to study harder, not to volunteer more."

Mr. Seemy decided to share results from a survey he saw in U.S. News and World Report.

"DoSomething.org is an organization that helps young people take action on things that they care about. They gave surveys on admissions and volunteering to 32 top colleges. Results led the people who conducted the surveys to see that there is a shift happening. Let me draw a graph for you on the whiteboard."



Can you summarize the results of DoSomething.org's survey question?

From your point of view, how would you answer the survey question? Why?

Do you think these data will be relevant when you apply for college?

# Should the government impose a mandatory year of service?



## DEBATING THE ISSUE

### Get ready...

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

**A** The United States should impose mandatory national service. Requiring volunteer work is a good way to help fight social problems and keep the country strong.

**B** The United States should impose mandatory national service. Requiring volunteer work will help young people become good citizens.

**C** The United States should have national service programs, but participation should be voluntary.

**D** The United States should not impose mandatory national service. It is wrong for the government to force young people to volunteer. Some people may want to attend college or earn money right after high school graduation.

**E** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

*In my experience...*

*That's similar to what I think.*

*What makes you think that?*

*When I re-read the text, it reminded me...*



Join the national conversation!



Word Generation - Unit 3.08

## Focus Words

range | regulate | circumstance | conception | genetic



### WEEKLY PASSAGE

For years Michelle and Demarcus Kingston have dreamed of having one son and one daughter. Now that their first child, a son, is two years old, they want to ensure that their next child is a daughter. They do not want to leave the sex of their baby to chance. Current medical science allows them to choose the sex of their child before **conception**.

Scientists developed **genetic** screening to help families avoid having a child with fatal genetic disorders. Now, many families are using genetic screening to balance the number of boys and girls in their families. Scientists believe people will be able to screen for other traits within the next 10 to 20 years. In the future, parents may be able to determine a **range** of traits including their child's height and eye color, whether or not the baby will have attention deficit disorder, and even personality type.

Groups opposed to genetic screening think people are "playing God" when they use science to choose a baby's traits. Science fiction authors have created worlds in which ongoing genetic testing is common. For example, in the movie *Gattaca*, people with less-than-perfect genes were denied good jobs and became a lower class of citizens called "Invalids."

In the world today, many people fear having a baby will soon turn into a shopping trip as parents choose their baby's genes for eye and hair color or height and IQ, creating "designer babies." Because genetic screening is very expensive, some people worry that genetic screening will widen the gap between rich and poor. The rich may have future access to genetic screening, but the poor will not.

Supporters of genetic testing say our world is changing and people should change with it. However, few doctors consent to using genetic testing to select for traits such as eye color or height. They use the procedure only under certain **circumstances**. For example, doctors can use genetic screening to help families prepare for a child with special needs.

Countries around the world are dealing with the issue differently. England allows genetic testing for colon and breast cancer. Italy does not allow any type of genetic testing. The United States government does not **regulate** genetic testing. Only doctors and their patients make decisions about genetic screening. Do you think the government should regulate genetic testing?

# Should the government regulate genetic testing?

## FOCUS WORDS OF THE WEEK

**range** : (noun) the extent covered

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**regulate** : (verb) to bring under control with rules or laws

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**circumstance** : (noun) a condition or fact accompanying another

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**conception** : (noun) the beginning of a pregnancy; beginning of an idea

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**genetic** : (adjective) relating to or involving genes

FORMS:

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EXAMPLES OF USE:

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NOTES:

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# Should the government regulate genetic testing?



## PROBLEM OF THE WEEK

**Option 1:** After **conception**, a fetus can undergo genetic testing. Doctors can test for a **range** of conditions, from breast cancer to Down Syndrome. Parents in different **circumstances** make different choices about whether to test. In some countries, the government **regulates** genetic testing.

One condition that can be discovered through genetic screening is Down Syndrome. Most people have 23 pairs of chromosomes. People with Down Syndrome have one extra.

The “false positive” rate for Down Syndrome screening is 2%-5%. This means that between two and five percent of the time, testing indicates that the fetus has Down Syndrome, but, in fact, the fetus does not have Down Syndrome.

Which of the following is equivalent to 2% - 5%?

- A)  $1/50 - 1/20$
- B)  $1/5 - 1/2$
- C) 10% - 20%
- D)  $1/10 - 1/5$

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**Option 2:** A **range** of **genetic** tests can be done before **conception**, too. For example, some people who are thinking about having children get tested for a mutation in a gene known as the CFTR gene. This mutation can lead to cystic fibrosis, or CF. The CFTR gene helps **regulate** sweat, mucus, and digestive fluids. If one parent does NOT have the mutation, then the other parent does not need to get tested – under these **circumstances**, their children will not have CF. If both parents have the mutation, each child they produce has a 25% chance of having cystic fibrosis.

Mr. and Mrs. Stein both have the CFTR mutation. If they have two children, what are the chances that both the children will develop CF?

**Discussion Question:** Either before or after **conception**, many parents consider a **range** of possible **genetic** tests. Others decide not to do any testing. Some people’s decisions about these kinds of questions are **regulated** by their moral or religious beliefs. What **circumstances** might make people decide not to do genetic testing?

# Should the government regulate genetic testing?



## THINKING SCIENTIFICALLY

Ms. Kahn is teaching her science class about **genetic** testing. Her students have a **range** of opinions about whether or not genetic screening should be **regulated** by the government.

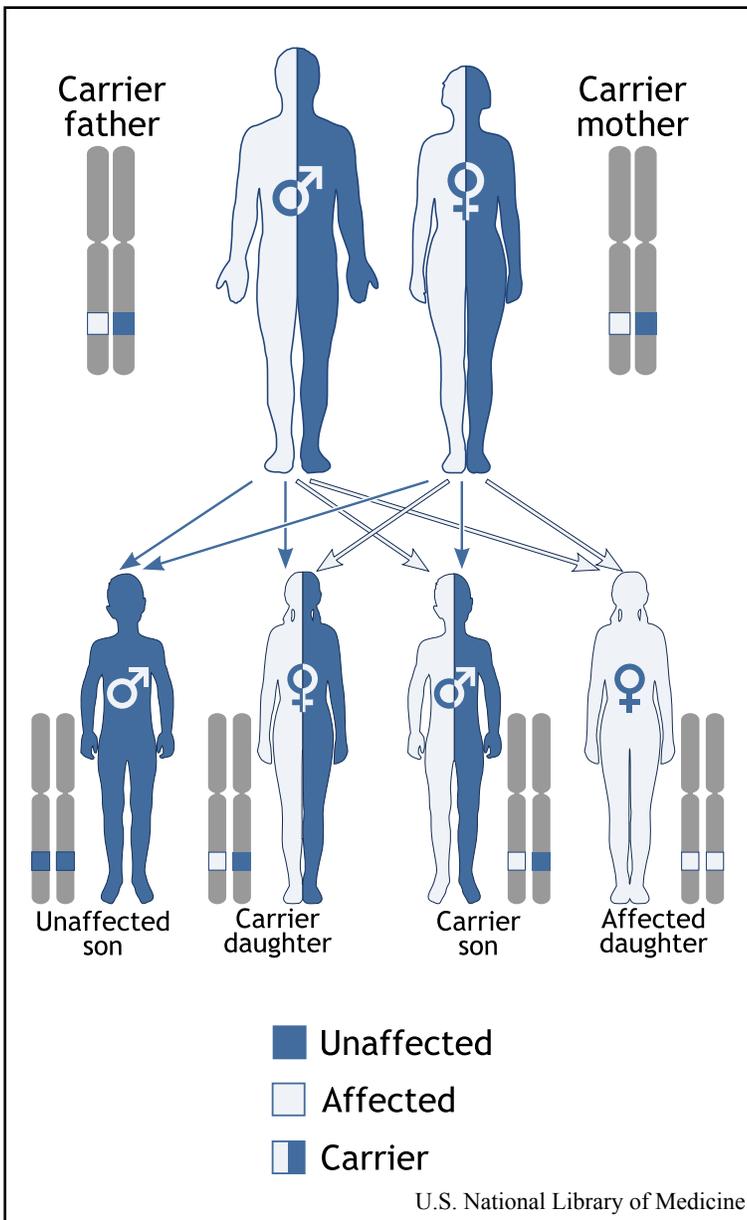
“I don't think that pregnant women should have genetic tests for their babies,” says Shana. “It's wrong to make choices about a baby's future based on his or her genes.”

“I agree with you about a baby who is already **conceived**, Shana,” Colleen replies, “but some people might want to be tested even before they decide to have a child. Some genetic tests can tell adults if they are *carriers* for a fatal genetic disease like Spinal Muscular Atrophy (SMA). In the **circumstance** that both parents carry the gene, their child might have the disease when it is born. The parents might choose to adopt instead.”

Shana asks, “What does it mean to be a 'carrier' of the gene?”

“Maybe one of you can do some research to find out?” asks Ms. Kahn.

→ Shana found this topic very interesting and decided to investigate this question. She found a graphic representation for the public posted by the U.S. National Library of Medicine. It helped her understand the way genes can move from generation to generation.



✍ Does the graphic help you understand more about genetics? What does it tell you?

✍ What questions do you still have about genetics?

💬 *Science can help us understand reasons for things, but decisions about whether something is right or wrong is much more complicated. Have a class discussion about why issues related to genetics are controversial.*

# Should the government regulate genetic testing?



## DEBATING THE ISSUE

### Get ready...

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

**A** If the scientific technology is available, people should use it to improve their child's genes. Doing this will help our country to be stronger, healthier, and maybe even smarter.

**B** Genetic screening should not be allowed in the U.S. until it is available to everyone. Until genetic screening is affordable for all citizens, it should be outlawed.

**C** People should be able to choose the sex of their baby, but they should not be able to choose the baby's hair color or personality traits.

**D** Genetic screening should be illegal under all circumstances. People should let nature take its course and not interfere.

**E** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

*In my experience...*

*That's similar to what I think.*

*What makes you think that?*

*When I re-read the text, it reminded me...*



Join the national conversation!



# SHOULD THE U.S. SUPPORT THE DEVELOPMENT OF MORE BIOTECHNOLOGY TO GENETICALLY MODIFY FOOD?

Word Generation - Unit 3.09

## Focus Words

consequence | undernourish | extract | modify | DNA



## WEEKLY PASSAGE

What do canned soup, Doritos, and bacon bits have in common? They all have genetically **modified** ingredients. Seventy percent of processed foods are made with genetically modified ingredients. The **consequences** of eating genetically modified foods are unclear. Currently, companies do not have to tell consumers if they use genetically modified ingredients.

Engineers genetically modify foods to make them tastier, healthier, or easier to grow. Engineers **extract** a gene from one plant and put it into another plant's **DNA**. The plant is slightly different than before it was genetically modified. For example, engineers are able to create rice that has vitamin A and iron. The modified rice is more nutritious.

Genetic engineering can also make plants that resist harmful insects and diseases. Insects can destroy millions of crops each year. Insect damage costs millions of dollars and can cause starvation in some countries. Genetically engineering food could help feed the 800 million **undernourished** people in the world. The United Nations estimates that the world population will grow from 6 billion to 9 billion by 2050. Some say we need to use new biotechnology to produce enough food for poor countries.

However, many European countries ban or regulate genetically modified foods. Others require labels on them. Europeans are concerned about their food containing unnamed ingredients. For example, if a banana gene is added to corn, then it could cause an allergic reaction in people with rare banana allergies.

Twenty-five percent of U.S. corn is genetically modified. The United States is the largest producer of genetically modified food in the world. Many people in the United States are pressuring the Food and Drug Administration to force companies to label foods with any genetically modified ingredients. This would allow consumers to use their own discretion when buying food.

The United States Food and Drug Administration (FDA) insists that genetically modified plants are not very different from the original plants. FDA officials believe genetically modified foods are safe. The FDA requires companies to label their products only when the genetically modified ingredients contain common food allergens.

Genetically modified foods could be helpful in feeding the hungry. They could help poor countries produce more food. But do we have enough research to ensure the modified food is safe? Should the United States support the production of genetically modified food?

# Should the U.S. support the development of biotechnology to genetically modify food?

## FOCUS WORDS OF THE WEEK

**consequence** : (noun) a result or an effect of something

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**undernourished** : (adjective) to not provide enough food for health or growth

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**extract** : (verb) to remove

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**modify** : (verb) to make changes, alter

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**DNA** : (noun) an abbreviated name for the part of plants and animals that carries genetic information inside each cell

FORMS:

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EXAMPLES OF USE:

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NOTES:

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# Should the U.S. support the development of more biotechnology to genetically modify food?



## PROBLEM OF THE WEEK

**Option 1:** One argument for genetically **modified** foods is that they can help us feed the world's rapidly growing population. If we don't produce more food, the **consequence** will be billions of **undernourished** people. **Extracting** a gene or two from one organism and adding it to the **DNA** of a corn or soybean seed, some say, can help us create crops that will feed the hungry.

By 2050, the world's population is expected to grow from 6 billion to 9 billion. How much of an increase is this?

- A) a 3% increase
- B) a 30% increase
- C) a 50% increase
- D) a 20% increase

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**Option 2:** Genetically **modifying** a crop can have unplanned **consequences**. For instance, alfalfa is cross-pollinated by bees. When bees fly from plant to plant **extracting** nectar for **nourishment**, they transport sticky pollen from one plant to another. Bees can spread **DNA** from a field of genetically modified (GM) alfalfa to other fields of alfalfa, even if the other farmers don't want GM crops.

U.S. farmers planted GM alfalfa before a judge told them to stop in 2007. Out of the 24.7 million acres of alfalfa harvested in 2006, about 300,000 acres were GM. What percentage of the 2006 alfalfa crop was GM?

**Discussion Question:** There are many possible **consequences** of **modifying** the **DNA** of our food. Simply **extracting** a few genes here and inserting a few genes there could help feed millions of **undernourished** people. It could also result in the unintended spread of these genetic modifications. Who should decide whether GM is worth the risk? Scientists? Farmers? Politicians? Why?

# Should the U.S. support the development of more biotechnology to genetically modify food?



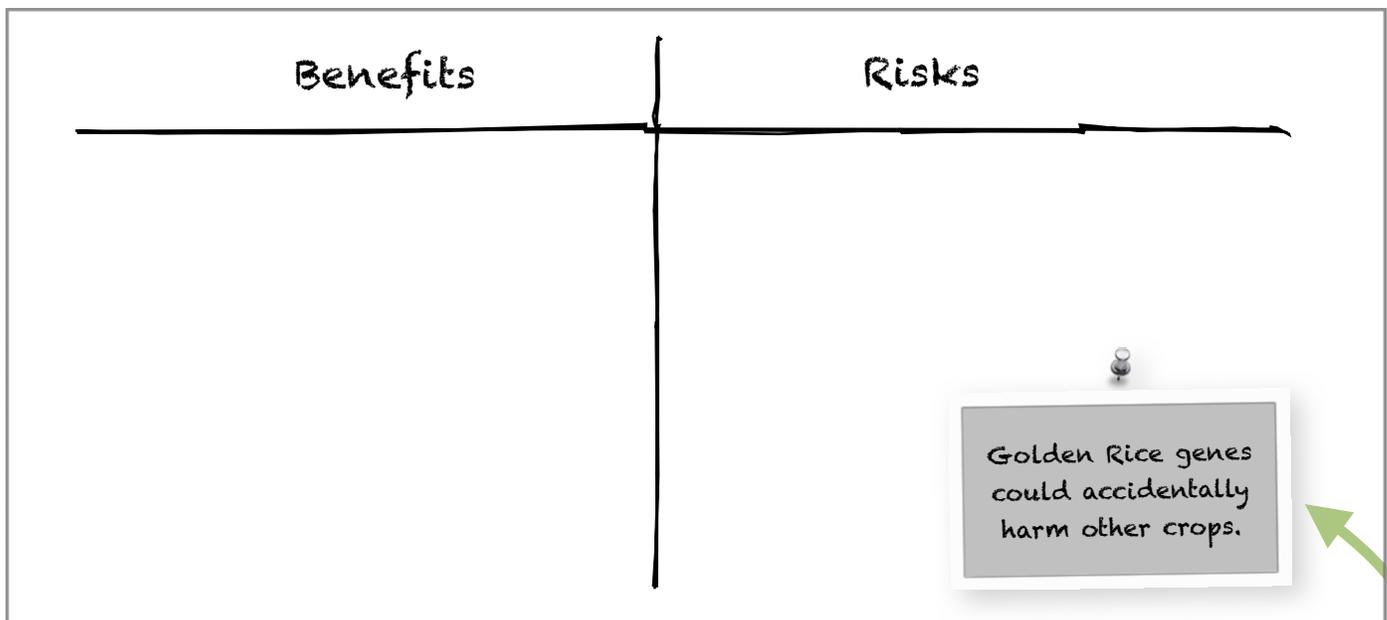
## THINKING SCIENTIFICALLY

Every living thing has **DNA**. DNA has the genetic codes necessary for life. Scientists can **modify** the DNA of living things by **extracting** the genes from one living thing, such as a carrot, and inserting them into another living thing, such as a tomato. Scientists do this to combine the helpful traits of different plants. Foods that have been genetically engineered are called transgenic foods.

For example, rice is an important food for lots of people around the world, but it doesn't include very many vitamins. On the other hand, daffodil flowers are full of vitamin A but are not good to eat. Mr. Seemy's class read an article about a group of scientists who invented a transgenic rice called "Golden Rice" that includes a daffodil's gene for making vitamin A. The author of this article claimed that eating Golden Rice instead of regular rice would make people healthier by preventing them from being **undernourished**.

On a different day, Mr. Seemy assigned his class to read an article that was critical of transgenic foods. This skeptical author thought that producing more genetically modified food could have unexpected and dangerous **consequences**.

→ Mr. Seemy drew a T-chart on the whiteboard. He also passed out slips of paper with statements about Golden Rice.



Here are the statements about Golden Rice. Can you and a partner sort them into the correct section of the T-chart? One has already been done for you as an example.

- People might have allergic reactions to Golden Rice.
- Golden Rice is easy to grow in many places around the world.
- Golden Rice can serve as a source of supplementary Vitamin A.
- Golden Rice might have more Vitamin A, but less of other important nutrients.
- Getting enough Vitamin A reduces the risk of heart disease, specific cancers, and serious eye problems.



# Should the U.S. support the development of more biotechnology to genetically modify food?

## DEBATING THE ISSUE

### Get ready...

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

**A** If the consequences of eating genetically modified foods are unclear, then the foods should be illegal. Until we know the consequences, no one should be eating genetically modified foods.

**B** We should allow companies to continue to grow genetically modified crops only in well-regulated settings. Scientists should study these crops a lot before they are allowed in foods.

**C** We cannot get rid of genetically modified foods because they account for many of the U.S. crops. Many companies would lose a lot of money if we outlawed genetically modified ingredients.

**D** The Food and Drug Administration says there is not much difference between genetically modified foods and the original foods. People are over-reacting. If we require companies to label their food, they will just raise their prices.

**E** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

*In my experience...*

*That's similar to what I think.*

*What makes you think that?*

*When I re-read the text, it reminded me...*



Join the national conversation!



# CONSIDERING THE POSSIBLE BENEFITS AND RISKS, IS BECOMING A VEGETARIAN A SMART DECISION?

Word Generation - Unit 3.10

## Focus Words

export | symbolic | domestic | integrate | efficient



## WEEKLY PASSAGE

After watching the movie, *Finding Nemo*, ten-year-old Alia made a big decision. She decided she would not eat meat any more. She did not want animals to be killed for food. Her story is not unique. Lately many children are choosing to be vegetarians.

Vegetarians do not eat any beef, pork, chicken, or fish. Some vegetarians choose their meat-free diet for health reasons. Some choose this diet because of their concern for animals, and others because of their concern for the environment.

There are many health benefits from adopting a vegetarian diet. Vegetarians can benefit from lower cholesterol levels, lower blood pressure, and lower rates of diabetes and colon cancer. By replacing meat with beans and nuts, vegetarians eat a diet lower in saturated fat and higher in fiber than meat-eaters.

Nonetheless, a vegetarian diet is not a very **efficient** way for people to get enough protein, iron, and vitamin B12. Meat contains all of these nutrients. So, it is important that vegetarians plan their meals so they do get enough protein and other vitamins and don't end up undernourished.

Some people note that eating meat is not only nutritious, but that it is part of the traditional

American diet. Thus, they think that eating meat is part of the American way of life. A huge roasted turkey is **symbolic** of the first American Thanksgiving. Hamburgers and hot dogs are traditional foods for Fourth of July barbecues. For some Americans, eliminating meat would be like giving up their culture and traditions.

Could the American tradition of eating meat be hurting the earth? Thirty percent of usable land on earth is devoted to producing meat. Feeding cattle and transporting meat creates almost one-fifth of the earth's greenhouse gases. This amount is more than the amount of greenhouse gases produced by cars, trucks, trains, and airplanes combined.

Most of the beef produced domestically is eaten by Americans. However, **exports** are also increasing as more countries are **integrating** meat into their daily diets. As a result, the beef and cattle industry is thriving. Reducing meat consumption could damage an important **domestic** industry.

With all of the environmental and health benefits of vegetarianism, should people continue to eat meat? Are tradition and industry more important than the environment and good health?

# Considering the possible benefits and risks, is becoming a vegetarian a smart decision?

## FOCUS WORDS OF THE WEEK

**export** : (verb) to carry or send for sale in another country

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**symbolic** : (adjective) standing for something else that can't be pictured or shown

FORMS:

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EXAMPLES OF USE:

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**domestic** : (adjective) made in or done in one's own country

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**integrate** : (verb) to form or unite into a whole

FORMS:

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EXAMPLES OF USE:

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**efficient** : (adjective) able to do well

FORMS:

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EXAMPLES OF USE:

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NOTES:

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# Considering the possible benefits and risks, is becoming a vegetarian a smart decision?



## PROBLEM OF THE WEEK

**Option 1:** Many Americans believe that a healthy diet **integrates** meat. After all, meat is an **efficient** way to get calories and protein. Meat can also be a powerful **symbol**. For many Americans, a thick steak represents success, and hot dogs represent summertime baseball.

For many farmers and ranchers, meat production is also a way to earn a living. The U.S. **exports** millions of pounds of meat a year. Many millions of pounds are eaten **domestically**, as well. The table shows the number of pounds of meat eaten by the average American during 5 different years.

Year	Average Meat Consumption
1985	200.4 lbs
1990	200.7 lbs
1995	207.7 lbs
2000	213.9 lbs
2005	220.2 lbs

How much more meat per year did the average American eat in 2005 than in 1985?

- A) .2 pounds
- B) 0.8 pounds
- C) 19.2 pounds
- D) 19.8 pounds

**Option 2:** For vegetarians, meat can be **symbolic** of cruelty to animals. While meat is an **efficient** way to take in calories, most people get enough calories anyway. A vegetarian diet that **integrates** beans, nuts, and vitamin supplements can be just as healthy as a diet with meat. **Domestically**, about 3% of young people ages 8-18 are vegetarian.

If two young Americans ages 8-18 are selected at random, what are the chances that *both of them* are vegetarian?

**Discussion Question:** The U.S. produces millions of pounds of meat each year: some for export, and some to be eaten **domestically**. Most Americans have a diet that **integrates** over half a pound of meat a day. What will happen if more Americans become vegetarian? Which people might lose money and which people might earn more money? In order to feed people **efficiently**, how should the food industry change if meat loses its **symbolic** appeal?

## Considering the possible benefits and risks, is becoming a vegetarian a smart decision?



### THINKING SCIENTIFICALLY

Sasha, a student in Ms. Kahn's class, is vegetarian. "I can **integrate** all the nutrients I need into my diet without eating meat," she says, "so why should any animals be harmed?"

Jamal is not vegetarian, but has decided to eat less meat. Jamal claims, "Raising livestock for food is not an **efficient** use of our resources. Over 50% of the corn and soybeans grown in the world are fed to animals instead of hungry people! The United States does not just **export** products to other countries, we export our ideas too. We should set a good example by trying to eat less meat."

Anthony disagrees with the other students. "The way we eat is a **symbol** of being American!" he says. "Eating meat has always been an important tradition in this country."

Sasha says, "I don't think that's right. I heard that Americans used to eat much less meat than they do today"

Is Sasha correct? Has the amount of meat eaten **domestically** increased over time?

→ Anthony found this topic very interesting and decided to investigate this question.

#### Question:

Has the amount of meat that each person in the United States eats gone up over time?

#### Hypothesis:

The amount of meat eaten per person in the United States has stayed about the same from 1950 to 2000.

#### Procedure:

1. From the data, find the total number of animals used for food in the United States in 1950, 1960, 1970, 1980, 1990, and 2000.
2. Find the total population of the United States for each year listed.
3. For each year listed, calculate the amount of meat eaten per person.

Here are the data that Anthony found:

Year	Total Number of Animals Used for Food in One Year in the U.S.	Total United States Population	Number of Animals Used for Food in One Year, Per Person
1950	21 billion	151 million	about 139
1960	28 billion	179 million	
1970	38 billion	203 million	
1980	43 billion	226 million	
1990	48 billion	248 million	
2000	59 billion	281 million	

Can you complete Anthony's table?

The year 2010 is not listed on the table. What would you predict the data to be? Do you have ideas about how you could find that data?

Do you notice a trend? If so, what is this trend?



# Considering the possible benefits and risks, is becoming a vegetarian a smart decision?

## DEBATING THE ISSUE

### Get ready...

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

**A** Everyone should be vegetarian because eliminating meat from our diets is better for the environment and better for people's health.

**B** No one should be a vegetarian because, without eating meat, it is difficult to get all of the necessary nutrients. In addition, meat is delicious, and eating it is symbolic of U.S. culture and traditions.

**C** People should have the freedom to choose to eat meat, but the meat industry must change. The meat industry must find a way to reduce their output of greenhouse gases.

**D** Whereas no one should regulate anyone else's diet, schools and doctors should encourage people to eat less meat. Eliminating meat consumption is healthy and good for the environment.

**E** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

*In my experience...*

*That's similar to what I think.*

*What makes you think that?*

*When I reread the text, it reminded me...*



Join the national conversation!

# IS AN EXTENDED SCHOOL DAY THE RIGHT CHOICE FOR MIDDLE SCHOOL STUDENTS?

Word Generation - Unit 3.1 |

## Focus Words

extend | radical | crucial | attain | initiative



## WEEKLY PASSAGE

Marisa Green knew sixth grade was not going to be easy. On the first day of class, Principal Hedges told the students of a **radical** change to their schedule. The school day was going to be **extended** until 5:00. Students would even have to attend classes on some Saturdays.

Principal Hedges explained that other countries such as Germany, Singapore and Japan have up to 280 days in a school year. Most American students attend school only 180 days a year. Test scores suggest that 180 days may not be enough. In 2006, fifteen-year-olds from the U.S. scored lower on an international math test than students in 23 other developed countries. Principal Hedges said U.S. schools need to improve if Americans want to compete in the global economy.

The late Senator Edward Kennedy also supported extending the school day. He proposed an **initiative** that is being tested in Massachusetts. Schools that are part of this initiative have added two extra hours to every school day. In some schools, students spend the extra time on Mondays through Thursdays focusing on academics. They use the extra hours on Fridays for enrichment activities,

such as art or music. People who support an extended school day believe it is **crucial** for students who need extra time to **attain** grade-level reading and math skills.

Some people think extending the school day is insufficient to improve student achievement. They argue that just adding hours will not make a difference to student attainment in reading, math, and science. They point out that teachers will need more time to prepare lessons for the extended day. Teachers may need more materials for the lessons as well. Also, extended days do not guarantee that the teachers who are hired to teach are teaching subjects they know best. For example, some schools don't have enough math teachers. In those schools, English teachers may have to teach material they have not been trained to teach. Many people argue that we need to focus on improving school quality, rather than just extending the day.

What is your opinion? Should schools extend the school day to improve student academic attainment?

# Is an extended school day the right choice for middle school students?

## FOCUS WORDS OF THE WEEK

**extend** : (verb) to stretch out; make longer

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**radical** : (adjective) extreme

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**crucial** : (adjective) very important

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**attain** : (verb) to achieve or reach a goal

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**initiative** : (noun) a first step; beginning action

FORMS:

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EXAMPLES OF USE:

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NOTES:

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# Is an extended school day the right choice for middle school students?



## PROBLEM OF THE WEEK

**Option 1:** Senator Edward (“Ted”) Kennedy thought it was **crucial** for Massachusetts schools to improve. He thought it would take **radical** change to **attain** that goal. He started an **initiative** to **extend** the school day.

Most American students now go to school for 180 six-hour days. How many total hours is this?

- A) 1080
- B) 680
- C) 6080
- D) 186

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**Option 2:** Senator Kennedy’s **initiative** to **extend** the school day proposed increasing each student’s school time by 30% - a **radical** increase. Sadly, Senator Kennedy died in 2009. He was unable to **attain** his goal while he was in office.

If each 6-hour school day was extended, each day would be how many hours?

If the 180-day school year was extended, each year would be how many days?

**Discussion Question:** Which kind of **extended** school time would be a more **radical** change, more hours each day, or more days each year? Which kind of **initiative** would win more support from parents? Which one would do a better job of helping students **attain** excellence? Some students think it’s **crucial** to have a long summer vacation. Do you agree?

# Is an extended school day the right choice for middle school students?



## THINKING SCIENTIFICALLY

The principal at Rock Island High School in Illinois noticed that middle school students coming to his high school were not prepared to succeed in ninth grade. Many of his freshmen were not able to **attain** passing grades in **crucial** areas such as math and language arts. He considered **extending** the school day for all ninth graders, but that idea seemed too **radical**. Instead, he created an **initiative** for his incoming students called "Rock Solid."

For the Rock Solid program, Principal Tim Wernentin decided to offer students moving up from middle school an option to get started at Rock Island High before all the tenth, eleventh, and twelfth graders arrive. Ninth graders get the whole school to themselves during the last few weeks of summer. So instead of **extending** the school day, he **extended** a special welcome! During the Rock Solid session, ninth graders get tours of the school, meet with the teachers they will have, and receive free tutoring sessions for any academic area they need.

➔ Mr. Seemy's class thought that this was a brilliant idea. In fact, they thought the middle school should offer a Rock Solid program for elementary students moving up to middle school.

In order to plan a program like Rock Solid effectively, you must identify the problems and think about solutions in a detailed way.

Step One: Think silently for a minute about what was difficult for you when you moved up to middle school from elementary school.

Write it down here: \_\_\_\_\_

Step Two: Get into groups of four. Share what you wrote. Ask other students in your group if you need to clarify anything for them.

Step Three: As a group, select one problem that you think might be solved by a program like Rock Solid.

Write it down here: \_\_\_\_\_

Discuss these questions as a group, and then write down your responses individually.

 What will be your approach for addressing the problem? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

 Do you think that elementary students entering middle school would like your idea?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

 How would you be able to tell if your approach was effective?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# Is an extended school day the right choice for middle school students?

## DEBATING THE ISSUE

### Get ready...

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

**A** Schools are fine as they are now. We do not need a radical change.

**B** Schools need to be improved, but extending the school day is not the answer. First, schools should find a way to make improvements with the amount of time they already have.

**C** Schools in the United States should have an extended day and classes on Saturdays, if that is what is necessary for students to attain the skills necessary to compete in our global economy.

**D** Schools should have an extended day so students can either attain grade-level skills or start working on higher level skills. Most students just hang out after school. Extending the school day would help kids make better use of their time.

**E** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

*In my experience...*

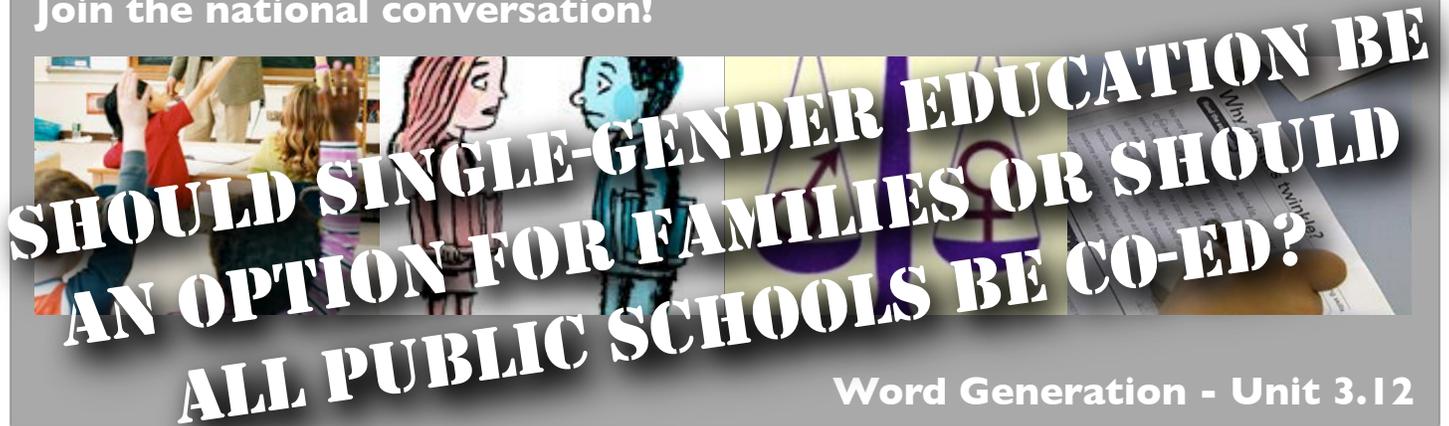
*That's similar to what I think.*

*What makes you think that?*

*When I reread the text, it reminded me...*



Join the national conversation!



Word Generation - Unit 3.12

## Focus Words

gender | comprise | adapt | conduct | paradigm



### WEEKLY PASSAGE

Jenny lives with her mother, grandmother, and little sister. She is a junior at an all-girls high school where she is an excellent student. Jenny has applied to the University of Massachusetts. She is concerned about living in a co-ed dorm. She has not spent a lot of time interacting with boys her own age. Has Jenny's high-school experience prepared her for the real world?

For years, many private schools have separated boys and girls. A new law has made single-**gender** education available to students who cannot afford to get into private schools.

Supporters of this law say that children can learn better in single-gender settings. Teachers of single-gender classes report that girls participate more and boys are able to pay attention better when they are separated. Teachers are able to plan activities specifically to address boys' and girls' needs. For example, lessons for boys include more movement and competition. Lessons for girls include more group work and start with a story that makes the lesson relevant to real life. Some scientists think these differences could help more boys enjoy

languages and art and more girls enjoy math and science.

However, schools also help students learn about how to behave socially. Men and women **comprise** the work force. If children grow up without the experience of working together, they may have trouble **adapting** to mixed-gender situations. To prepare students to succeed as adults, they must learn how to **conduct** themselves around the opposite sex.

Some single-gender schools are having great academic success. The Bright Choice Charter School of Albany, New York has been open since 2005. They offer a boys' school and a girls' school. In 2005, these schools ranked first and second on New York state tests. Some argue that other factors besides single-gender education affected the children's success, but teachers and parents at Bright Choice believe in the single-gender **paradigm**. Are the academic advantages of single-gender education more important than the social learning opportunities provided in regular schools?

# Should single-gender education be an option for families or should all public schools be co-ed?

## FOCUS WORDS OF THE WEEK

**gender** : (noun) either of two groups into which many living things are divided (male or female)

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**comprise** : (verb) to make up; to form

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**adapt** : (verb) to change to fit a new situation

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**conduct** : (verb) to behave in a particular manner

FORMS:

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EXAMPLES OF USE:

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NOTES:

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**paradigm** : (noun) a model or example

FORMS:

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EXAMPLES OF USE:

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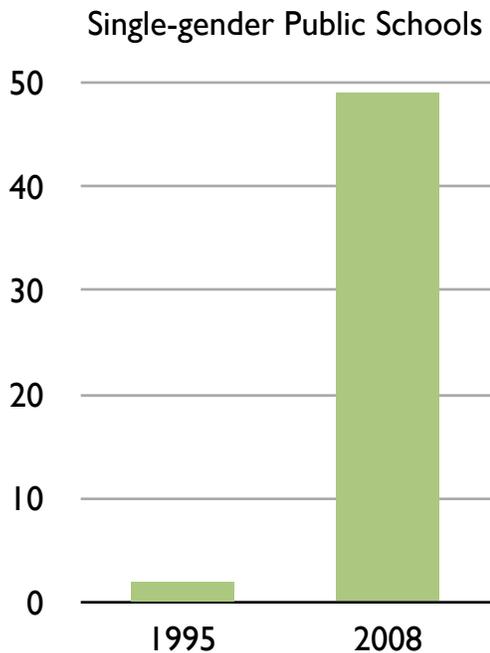
NOTES:

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# Should single-gender education be an option for families or should all public schools be co-ed?

## PROBLEM OF THE WEEK



**Option 1:** American schools must **adapt** to a competitive world. Schools are looking for ways to boost achievement and improve student **conduct**. Schools or classes **comprised** of just one **gender** might help reach these goals. More public schools are considering the single-gender **paradigm**. In 1995, there were just 2 single-gender public schools. In 2008, there were 49.

Which of the following best describes what happened to the number of single-gender public schools?

- A) the number doubled
- B) the number decreased by one-third
- C) the number increased dramatically
- D) the number increased by 300%

**Option 2:** Dr. Leonard Sax has championed the single-gender **paradigm**. He claims that classes **comprised** of only girls or only boys allows teachers to **adapt** each class to boys' or girls' different needs. One study was conducted that found that males prefer a temperature of  $71^{\circ}$  and females prefer a temperature of  $77^{\circ}$  when wearing bathing suits. In regular clothing, Dr. Sax thinks males will prefer a temperature of  $69^{\circ}$ , and females will prefer a temperature of  $76^{\circ}$ .

Assume Dr. Sax is right. Let  $f$  = the preferred temperature for females. Let  $m$  = the preferred temperature for males. Write an algebraic expression that shows the relationship between the two variables.

**Discussion Question:** Will **conducting** studies on **gender** differences help us do a better job of educating students? Should schools **adapt** to students, or should students **adapt** to school? Which **paradigm** seems right to you? Why?

# Should single-gender education be an option for families or should all public schools be co-ed?



## THINKING SCIENTIFICALLY

Ms. Kahn gave her students many assignments to complete as groups. She wondered whether group work was an effective teaching **paradigm**. Every year, she asked her students to work in groups to design a bridge with toothpicks. This year, her class decided to **conduct** an experiment to see if groups build better bridges than individuals. They divided the class into two conditions. Half of the class would work in two groups **comprised** of five students each. The other half of the class would work individually. They would rate each bridge on how long it took to build and how much weight it could hold. If students work better in groups than alone, they will **adapt** their class plans to include more group activities.

→ Ms. Kahn’s student Tanya wondered if working in groups helped with problem solving. She worked with Ms. Kahn to develop a way to test a hypothesis as her class did a project where they made toothpick bridges.

**Question:**  
Is group work an effective way to solve challenging problems?

**Hypothesis:**  
The students who work in groups will build stronger bridges.

**Materials:**

- ▶ Toothpicks
- ▶ Glue
- ▶ Timers

**Procedure:**

1. Begin with a class of 15 students. Divide the students into two groups of 5 students each and 5 students working alone. Students in groups decide on their roles.
2. Monitor the amount of time the students spend building the bridges.
3. When the bridges are complete, measure how much weight the bridge can hold before it breaks.

**Data:**

		Hours to complete the bridge	Mass held by bridge
<b>Working as Groups</b>	A	17	30g
	B	18	25g
<b>Working as Individuals</b>	1	12	25g
	2	6	5g
	3	10	15g
	4	14	15g
	5	11	10g

Do the data give you information about the effectiveness of group work?

*This isn't necessarily true, but let's speculate that one gender learns better in single-gender classrooms and the other does not. IF this were the case, do you think it would be fair to let people choose?*

Could you change this experiment to compare gender groups instead of groups and individuals? How?



# Should single-gender education be an option for families or should all public schools be co-ed?

## DEBATING THE ISSUE

### Get ready...

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

**A** Single-gender education has many academic advantages. Therefore, single-gender education should be mandatory.

**B** Social learning is just as important as academic learning. Co-ed schools should be mandatory.

**C** Students should attend single-gender elementary schools and co-ed high schools to prepare them for college and real life.

**D** People should at least have the option to go to single-gender schools, but such schools might not provide a good environment for everyone.

**E** \_\_\_\_\_  
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### Get set...

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

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# GO!

Be a strong participant by using phrases like these.

*In my experience...*

*That's similar to what I think.*

*What makes you think that?*

*When I re-read the text, it reminded me...*

