Join the National Conversation!

WordGen WEEKLY
SERIES 2 Part B

TEACHER EDITION
<table>
<thead>
<tr>
<th>Unit</th>
<th>Topic</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.13</td>
<td>Should doctors be allowed to assist seriously ill patients with suicide? prevention</td>
<td>73–78</td>
</tr>
<tr>
<td></td>
<td>pursue</td>
<td>alter</td>
</tr>
<tr>
<td>2.14</td>
<td>Should American students be required to learn a second language? economic</td>
<td>79–84</td>
</tr>
<tr>
<td></td>
<td>multicultural</td>
<td>attribute</td>
</tr>
<tr>
<td>2.15</td>
<td>Are green technologies worth the investment? conserve</td>
<td>85–90</td>
</tr>
<tr>
<td></td>
<td>renewable</td>
<td>invest</td>
</tr>
<tr>
<td>2.16</td>
<td>Violence and media: Are ratings systems necessary? rating</td>
<td>91–96</td>
</tr>
<tr>
<td></td>
<td>ban</td>
<td>interact</td>
</tr>
<tr>
<td>2.17</td>
<td>Should intelligent design be taught in school? design</td>
<td>97–102</td>
</tr>
<tr>
<td></td>
<td>creationism</td>
<td>concept</td>
</tr>
<tr>
<td>2.18</td>
<td>Should drug companies be allowed to advertise prescription drugs on TV? disclaimer</td>
<td>103–108</td>
</tr>
<tr>
<td></td>
<td>prescription</td>
<td>potential</td>
</tr>
<tr>
<td>2.19</td>
<td>Should voting be compulsory in local and national elections in the United States? civic</td>
<td>109–114</td>
</tr>
<tr>
<td></td>
<td>apathy</td>
<td>enforce</td>
</tr>
<tr>
<td>2.20</td>
<td>Should there be amnesty for undocumented immigrants? amnesty</td>
<td>115–120</td>
</tr>
<tr>
<td></td>
<td>undocumented</td>
<td>orient</td>
</tr>
<tr>
<td>2.21</td>
<td>Should corporal punishment be outlawed? privacy</td>
<td>121–126</td>
</tr>
<tr>
<td></td>
<td>invasion</td>
<td>consist</td>
</tr>
<tr>
<td>2.22</td>
<td>Should middle and high school students have to meet a grade requirement to participate in sports? eligible</td>
<td>127–132</td>
</tr>
<tr>
<td></td>
<td>affect</td>
<td>maintain</td>
</tr>
<tr>
<td>2.23</td>
<td>Are after-school jobs helpful or harmful for middle and high school students? resumé</td>
<td>133–138</td>
</tr>
<tr>
<td></td>
<td>responsibility</td>
<td>acquire</td>
</tr>
<tr>
<td>2.24</td>
<td>Should middle and high schools use academic tracking? tracking</td>
<td>139–144</td>
</tr>
<tr>
<td></td>
<td>aptitude</td>
<td>policy</td>
</tr>
</tbody>
</table>
When Ryan’s uncle was in the hospital in severe pain the doctor said he had only about a month to live. Ryan’s uncle asked the doctor to give him pills so he could end his life. The doctor, however, refused to provide pills to assist with suicide. She said her approach was to help save lives, not end them.

But people like Ryan’s uncle say they don’t want a long, painful death. They also worry about how much money useless treatment will cost their families. Starting in 1990, the idea of assisted suicide was supported by Dr. Jack Kervorkian. According to the late Dr. Kervorkian, people have the right to pursue happiness. For people who are dying, that includes the right to die when they choose.

Others are critical of that view. They say patients are not capable of making that choice. For one thing, patients who are in pain can’t think clearly. They may just want to end the pain, not their lives. The right treatment could be all that is needed for prevention of the pain. Those who are against assisted suicide also worry that family members might urge a sick relative to die in order to reduce medical bills. Besides, some say, suicide is wrong. Human beings didn’t create life, so they don’t have the right to take it, even their own.

People who support assisted suicide say it is cruel to make suffering people live. They say healthy people have no idea how bad pain can be. They want to alter the laws to make assisted suicide legal. Laws legalizing assisted suicide have passed in a handful of states. In all other states a doctor who assists a suicide is considered to be guilty of murder. Where do you stand? Should doctors be allowed to assist seriously ill patients with suicide?

Questions for Classroom Discussion:

- What is assisted suicide?
- Why are some people critical of helping ill patients with assisted suicide?
- Why are some people in favor of the assisted suicide option?
- Do you think the law should be altered so that it would be easier to help patients end their suffering? Why or why not?
**USE THE FOCUS WORDS**

*prevention* (noun) the act of stopping something from happening

**Sample Sentence:** The right treatment could be all that is needed for *prevention* of the pain.

**Turn and Talk:** What steps contribute to the *prevention* of fires at home?

*critical* (adjective) using careful judgment about the good and bad parts of something; disapproving

**Sample Sentence:** Some people think that those who are terminally ill have the right to choose when they die, but others are *critical* of that view.

**Turn and Talk:** Can someone be both *critical* and supportive of the government? Explain.

*pursue* (verb) to follow; to engage in

**Sample Sentence:** Dr. Kervorkian believed people have the right to *pursue* happiness.

**Turn and Talk:** Is it ok to *pursue* your own happiness even if it means hurting someone else’s feelings along the way?

*alter* (verb) to change

**Sample Sentence:** People who say it is cruel to force suffering people to live want to *alter* the laws that make assisted suicide illegal.

**Turn and Talk:** Are there any rules at home that you would like to *alter*?

*approach* (noun) method

**Sample Sentence:** Some doctors believe the best *approach* to treating the terminally ill is to provide lots of pain relief.

**Turn and Talk:** What is your *approach* to not forgetting your homework at home?

*approach* (verb) to speak to someone for the first time about something

**Sample Sentence:** Abigail cleaned her room and washed the dishes before *approaching* her mother about going on the school trip.

**Turn and Talk:** How would you *approach* someone who you suspected of spreading hurtful rumors about you?
DO THE MATH

In 1997, Oregon passed the Death with Dignity Act (DWDA). This act allowed doctors to prescribe lethal drugs to certain seriously ill patients. Some people are glad that the law was altered, but others are critical of the change. Why do some patients decide to pursue the right to die?

**Option 1:** Each year in Oregon, some seriously ill people make the decision to die by assisted suicide. In 2014, about 70% of people who received DWDA prescriptions actually took the medication. Which decimal is equivalent to 70%?

- A. 0.7
- B. 70
- C. 0.07
- D. 0.007

**Option 2:** In 2014, 105 people who received DWDA prescriptions in Oregon ended up taking the medication. If this was approximately 70% of the total number of people who received DWDA prescriptions in Oregon, then how many people received DWDA prescriptions in this state?

**Discussion Question:** Patients give different reasons for pursuing assisted suicide. Understanding why people want to die is critical to making laws about this issue. Some patients say that assisted suicide is a good approach for patients with illness that cause slow and painful deaths. They say that legislation like the DWDA is a method of prevention for unnecessary suffering. What if many people began using assisted suicide as a way to prevent high medical costs for their families? Would this alter your view of assisted suicide?
THINK SCIENTIFICALLY

“I can understand that if someone is really sick and knows that they won’t get better, then they might prefer to end their life painlessly and peacefully instead of suffering more treatment,” says Jorge. “But it would certainly be better if critically ill patients didn’t find themselves in this position in the first place.”

“I wonder if there are new advancements in medicine being pursued that could lead to the prevention of such terrible illnesses that take people’s lives?” asks Lisa.

Jorge says, “Do we know anything about the specific reasons why people might choose to request physician-assisted suicide?”

“Thanks, Jorge! That’s a great question,” says Ms. Kahn. “Let’s look at this data set from the Oregon Public Health Division. Oregon was the first state in the U.S. to alter its laws to make physician-assisted suicide legal. Does this table help answer your question, Jorge?”

<table>
<thead>
<tr>
<th>Reason for Requesting Assisted Suicide (Total number of respondents = 669)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Losing Autonomy</td>
<td>91.2%</td>
</tr>
<tr>
<td>Less Able to Engage in Enjoyable Activities</td>
<td>88.8%</td>
</tr>
<tr>
<td>Loss of Dignity</td>
<td>82%</td>
</tr>
<tr>
<td>Losing Control of Bodily Functions</td>
<td>51.6%</td>
</tr>
<tr>
<td>Burden on Family/Friends/Caregivers</td>
<td>38.6%</td>
</tr>
<tr>
<td>Inadequate Pain Control</td>
<td>23.5%</td>
</tr>
<tr>
<td>Financial Implications of Treatment</td>
<td>2.7%</td>
</tr>
</tbody>
</table>

Jorge and Lisa noticed that the percentages added up to way more than 100% in the chart. How could that be?

People reported multiple reasons for requesting assisted suicide. If they were to list only one reason, then the percentages would add up to 100 percent.

Lisa assumed pain would be the main reason why people who are really sick request assisted suicide. Was her assumption correct? How do you know?

No, her assumption wasn’t correct. Only 23.5% of patients reported pain as a reason. There were many other reasons patients reported more.

There have been cases in which people have been told they will not recover from a disease when, in fact, they do. Would those cases alter your thoughts about this policy?
Be a strong participant by using phrases like these:

- I believe that...
- I agree with you, but...
- Can you show me evidence in the text that...
- You make a good point, but have you considered...

Jot down a few notes on how to support your position during a discussion or debate.

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

A
- Doctors should be allowed to assist patients who are seriously ill to commit suicide.

OR

B
- Doctors should not be allowed to assist patients who are seriously ill to commit suicide.

OR

OR

OR

OR
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

prevention | critical | pursue | alter | approach
What are the benefits of knowing two languages? Many scientific studies show that growing up bilingual is great for kids’ brain development. Being bilingual may also be good for getting a job. Many businesses want to hire people who speak more than one language because they consider this skill a valuable attribute.

But most Americans do not know a second language, and those who do typically do not know the second language very well. Children who come from homes where English is not the family’s native language often forget the language their parents speak.

How did we become so monolingual? Some say it is because we are a multicultural nation and it would be too confusing if every group were to use its own language. Unlike educated Americans, most educated Europeans, Asians, and Africans speak several languages, often including English. In Europe, students are required to take two distinct foreign languages in school. Most people around the world think that knowing several languages is critical; multilinguals can participate in the political and economic activities taking place globally.

Even the U.S. government and U.S. Armed Forces are constantly looking for speakers of languages relevant to facilitating our economic and foreign policy. For example, they seek Arabic speakers, but very few Americans (unless they come from Arabic-speaking families) study Arabic in school or university. Currently, the State Department pays six-figure salaries to speakers of Farsi, Pashto, and Arabic.

Knowing more than one language seems to be good for learning, employment, and maybe even national security. So how can parents, schools, and society facilitate opportunities for learning languages? Should American students all be required to learn a language in addition to English?

Questions for Classroom Discussion:
• What are some of the benefits of knowing two languages?
• What are the differences between the U.S. and Europe in language study and language use?
• Should Americans be required to learn a second language other than English? Why or why not?
USE THE FOCUS WORDS  * and alternate parts of speech

**economic** *(adjective)* financial, related to money

- *Sample Sentence:* These are hard **economic** times; many people are losing their jobs and their homes because of a bad economy.

- *Turn and Talk:* Should children be involved in the **economic** decisions of their households? Why or why not?

**multicultural** *(adjective)* related to more than one culture

- *Sample Sentence:* The **multicultural** art festival showed the work of artists from around the world.

- *Turn and Talk:* Would you describe your city or neighborhood as **multicultural**? Why or why not?

**attribute** *(noun)* skill, feature

- *Sample Sentence:* Akhil is a very intelligent boy, but his best **attribute** is his honesty.

- *Turn and Talk:* What are some **attributes** that the President of the United States should have?

**attribute** *(verb)* to hold responsible for; to credit

- *Sample Sentence:* Marcus **attributed** his team’s victory to teamwork and practice.

- *Turn and Talk:* To what do you **attribute** your success in school? I **attribute** my success in school to ______________.

**facilitate** *(verb)* to make easy or possible

- *Sample Sentence:* The internet **facilitates** the sharing of photos, since you can easily upload and view pictures in just seconds.

- *Turn and Talk:* How can you help **facilitate** the arrival of a new student to your school?

**distinct** *(adjective)* different

- *Sample Sentence:* Margarita is **distinct** from her friends because she is the only one who plays piano.

- *Turn and Talk:* How are you **distinct** from other students at your school?
DO THE MATH

In the United States, being bilingual is an attribute that can facilitate getting a good job. Today, the U.S. has many political, economic, and military connections with other countries. The U.S. is also full of immigrants from around the world who speak different languages. In a multicultural country like the U.S., speaking more than one language is a distinct advantage.

Option 1: In 2006, during the Iraq War, only 33 of the 1,000 U.S. employees at the U.S. Embassy in Iraq spoke Arabic. Of these 33, only six were fluent. What percentage of embassy employees spoke fluent Arabic?

A. .006%
B. .06%
C. .6%
D. 6%

Option 2: The main languages spoken in Afghanistan are Dari and Pashto. The U.S. military’s Defense Language Institute is now training 200 soldiers each year to speak basic Dari and Pashto. In 2009, there were about 100,000 U.S. troops in Afghanistan. At the rate of 200 per year, how many years would it take to train 100,000 soldiers in basic Dari and Pashto?

500 years

Discussion Question: In our multicultural world, there are many languages that schools could teach. If more American soldiers knew Arabic, they would have an easier time talking to the people of Iraq. Now that China is an economic power, knowing Chinese is an attribute that might facilitate getting a job. Are these good reasons for teaching Arabic and Chinese in school? Or, should our political and economic goals be distinct from the reasons we teach languages? Should we choose to teach languages that will help keep our country strong? How should we decide? Explain your answer.
Mr. Seemy’s students return from their foreign language class full of new words and ideas, but Erik is doubtful about the benefits attributed to studying a second language.

“I know learning a new language helps me to appreciate our multicultural community, but does it do anything else?” says Erik.

“Actually,” says Chelsea, “learning a second language has economic benefits because it can help you find a job.”

“That’s true!” chimes in Mr. Seemy. “But did you know that it also helps facilitate brain development?”

“Wow, really? Does that mean that speaking two languages can actually physically change your brain?” asks Erik.

Erik is interested in this topic and finds an information sheet on “neuroplasticity” of the brain to share with his classmates.

**Neuroplasticity**

Neuroplasticity can be described as “the ability to adapt to ongoing changes and to process information efficiently and adaptively.” Think of it as mental flexibility. Just as you can exercise your muscles to make them strong, you can exercise your brain to make it work quickly, efficiently, and accurately.

People who are bilingual challenge their brains to function in two distinct languages at the same time, which exercises the frontal lobes of their brains. The frontal lobe is where the brain makes quick decisions, plans, solves problems, and processes language.

Scans of bilingual people’s brains show that, on average, their frontal lobes are stronger and more active than those of monolingual people’s.¹

<table>
<thead>
<tr>
<th></th>
<th>Monolingual</th>
<th>Bilingual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory (score out of 10)²</td>
<td>6.2</td>
<td>7.8</td>
</tr>
<tr>
<td>Onset of Alzheimer’s (age in years)³</td>
<td>75.4</td>
<td>78.6</td>
</tr>
<tr>
<td>Response Time (milliseconds)³</td>
<td>1,437</td>
<td>911</td>
</tr>
<tr>
<td>Language Ability (score out of 100)³</td>
<td>85.8</td>
<td>91.9</td>
</tr>
</tbody>
</table>

**Data Sources:**

As of 2008, only 58 percent of all middle schools in the U.S. offered foreign language instruction. While over 90 percent of high schools offered a foreign language, studies have shown that students are able to adopt a new language more easily at a young age. Are foreign languages offered at your school and in your district? Discuss with your classmates how you might be able to use this data to convince the administrators in your district to strengthen your foreign language program.
DEBATE THE ISSUE
Pick one of these positions (or create your own).

A Americans should be required to learn English and only English.

OR

B Students who speak another language at home should be encouraged to continue using it while learning English.

OR

C All students should be required to learn a language other than English.

OR

CREATE YOUR OWN

Jot down a few notes on how to support your position during a discussion or debate.

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

Be a strong participant by using phrases like these:

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

"I believe that..."

"I agree with you, but..."

"You make a good point, but have you considered..."
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

economic | multicultural | attribute | facilitate | distinct

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
As Amanda walked through the park, she noticed a big new trash can called a BigBelly. When she looked it up on the web, it turned out to cost $6,000! The BigBelly has a solar-powered compactor inside, so it maximizes the amount of trash contained while minimizing the number of times it needs to be emptied. The BigBelly is one of many “green technologies” now available. But does it make sense to invest so much money in them? City managers and mayors say that each BigBelly will pay for itself in three years, because they only need to be emptied once a week. Traditional trash cans get emptied once or twice a day, at a cost of about $2,000 a year each, and the trucks that travel around to empty them use gasoline and pollute the air. Nonetheless, buying a lot of BigBelly cans could punch a big hole in any city’s budget!

The BigBelly uses a renewable energy source, the sun. Many other renewable technologies are under development. Some people are putting solar panels on their roofs, and switching from electricity produced with coal or gas to solar-powered electricity. Solar-powered cars and planes are under development. Solar-powered light strips have been installed on some rural highways; once in place, the strips run for free and rarely require maintenance. Investors are developing solar panels that can replace the asphalt on highways; these panels use solar power to generate heat (so that ice and snow melt immediately), light (so that streetlamps are unnecessary), and extra electricity for nearby towns and cities.

Investment in these solar technologies is expensive. The Department of Transportation gave $100,000 to the solar pavement project, but several million more will be needed just to finish the development. Is it worth investing in such expensive technologies? Should we proceed to invest in technologies that may never be practical on a large scale? Shouldn’t we conserve public funds for more immediate needs, like improving schools and fixing potholes? What if we develop green technologies but lack the funds to proceed with using them? How high a price should we pay for green technology?

Questions for Classroom Discussion:

• What is green technology?
• What are some examples of green technology?
• If a technology is termed “green,” is it automatically a good thing?
• Do you think green technology is worth the expense?
• Would you recommend getting a BigBelly trash compactor for your own town or city?
ARE GREEN TECHNOLOGIES WORTH THE INVESTMENT?

USE THE FOCUS WORDS

**conserve** (verb) to protect from loss

- Sample Sentence: Jose and Rachel carefully *conserved* their water as they hiked through the desert.
- Turn and Talk: What are three things you can do to *conserve* water at home?

**renewable** (adjective) able to be replaced

- Sample Sentence: Nations around the world are investing in *renewable* energy.
- Turn and Talk: Describe what is meant when people talk about “*renewable* resources.” What are some examples?

**invest** (verb) to put money or resources toward something, expecting a future benefit

- Sample Sentence: Research institutions *invest* a lot of money into programs for recycling, water purification, and renewable energy.
- Turn and Talk: What can young people do to *invest* in their futures?

**proceed** (verb) to move forward

- Sample Sentence: Since the road was under construction, many signs alerted drivers to “*proceed* with caution.”
- Turn and Talk: Has the school year *proceeded* according to your expectations? Explain.

**maximize** (verb) to increase to the greatest possible amount

- Sample Sentence: Green technology can help conserve the natural environment and *maximize* resources.
- Turn and Talk: How do you *maximize* the amount of sleep you get on school nights?
As Americans worry about conserving resources, more people are thinking about renewable energy. The Obama administration promised to proceed toward maximizing production of cleaner energy, and has invested in wind and other renewable energy sources. However, most of America’s energy still comes from non-renewable sources like oil and gas. The information below comes from the U.S. Energy Administration’s 2011 report.

Renewable Energy Consumption by Major Source

- Coal 20%
- Natural Gas 26%
- Petroleum 36%
- Renewable Energy 9%
- Nuclear Electric Power 8%
- Solar 2%
- Geothermal 2%
- Biomass waste 5%
- Wind 13%
- Biofuels 21%
- Wood 22%
- Hydropower 35%

Option 1: Which of the following is true?

A. Americans get more of their energy from coal than from petroleum (oil).
B. Americans get more of their energy from coal than from all renewable sources combined.
C. Americans get more of their energy from natural gas than from petroleum.
D. Americans get more of their energy from hydropower than from nuclear electric power.

Option 2: Nine percent of the energy Americans consume comes from renewable energy sources. Of this, 13% comes from wind. What percent of America’s total energy consumption comes from wind?

1.17%

Discussion Question: Nations around the world are investing in renewable energy. In 2005, 8% of the energy produced by the European Union (EU) came from renewable sources. To maximize renewable energy production, the EU set a goal of producing 20% of its energy from renewable energy sources by 2020. As of 2015, this change is proceeding on schedule: The EU is on track to meet its goal. Should the U.S. set a similar goal? Why or why not?
THINK SCIENTIFICALLY

Sekou is giving a report on renewable energy.

“Scientists say conserving energy is not enough. We need to switch to renewable sources of energy like wind, water, and sun. To maximize our efforts, people around the world must work together.”

Sekou proceeds. “Two scientists named Mark Jacobson and Mark Delucchi have a plan to meet all the world’s energy needs with renewable energy by 2030. Their plan would require governments to invest a total of 100 trillion dollars.”

“What about using renewable energy here at school?” asks Nadia.

“Good question!” says Sekou. “I wonder if there is a renewable energy source that would both decrease our school’s emissions and conserve money.”

Sekou did some more research on renewable energy to learn about cheap ways to decrease emissions from the school and created the following table to share with the class. She calculated how much each energy source would cost her school.

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Statistics by unit</th>
<th>Statistics for our school (using 20 megawatt hours per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost ($/MWh)</td>
<td>CO₂ Emission (tons / GWh)</td>
</tr>
<tr>
<td>Coal</td>
<td>100.1</td>
<td>1,145</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>67.1</td>
<td>338</td>
</tr>
<tr>
<td>Wind</td>
<td>86.6</td>
<td>20</td>
</tr>
<tr>
<td>Solar</td>
<td>144.3</td>
<td>31</td>
</tr>
</tbody>
</table>

Which energy source is the least expensive?

Natural Gas is the least expensive.

Are any of the energy sources both inexpensive and healthy for the environment?

Wind is the best combination of inexpensive and environmentally healthy. Natural gas is cheaper but emits more carbon dioxide.

Which energy source emits the least carbon dioxide?

Wind emits the least carbon dioxide.

Discuss what other information should be collected before proposing using any of these renewable sources in your district. What might school leaders want to know?

Some possibilities: What are the district’s current energy sources and costs? Are there additional overhead costs to switching to different sources? Can cost and carbon dioxide emissions be reduced through conservation?
ARE GREEN TECHNOLOGIES WORTH THE INVESTMENT?

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

A ☐ We should invest heavily in green technologies.

OR

B ☐ We should proceed cautiously with green technologies.

OR

CREATE YOUR OWN ☐

Jot down a few notes on how to support your position during a discussion or debate.

____________________________________________________________________________________________________________________

____________________________________________________________________________________________________________________

____________________________________________________________________________________________________________________

____________________________________________________________________________________________________________________

____________________________________________________________________________________________________________________

____________________________________________________________________________________________________________________

Be a strong participant by using phrases like these:

“Can you show me evidence in the text that...”

“I believe that...”

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

“I agree with you, but...”
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

conserve | renewable | invest | proceed | maximize


In 1968, the Motion Picture Association of America began rating films for children and adults. Assigning ratings may be better than banning or censoring films, but rating movies can be complex. People disagree about the specific factors that make a film inappropriate for children. In the United States, movies with nudity and sexual activity are often restricted to older viewers, while in Germany or France sexual content is not a big deal. However, Europeans restrict or censor movies in which violence occurs.

Today, video games, books, TV shows, and music also get ratings. Those who like the rating system say it helps people decide if a product is right for them or their children. It helps parents decide quickly if a movie might offend them and whether or not it is okay for their children. Others say ratings are too simplistic, that they ignore the central messages in movies or books.

The specific rating systems used have changed over the years. Today there are five possible ratings for movies. G stands for General Audiences. It means that there is no sex, violence, or profanity, and the movie is fine for all ages. PG stands for Parental Guidance Suggested. It means that some of the movie content might not be okay for kids. PG-13 gives parents a stronger caution. It indicates that something in the movie might not be okay for kids under 13. R, for Restricted, means children must be accompanied by an adult to even get into the theater. Finally, NC-17 means No One 17 and Under Admitted.

Some people don’t like rating systems because they can be used for maximizing profits rather than protecting the public. Movies rated PG and PG-13 tend to make more money than those rated R, so major movie studios strategize to make sure that their films get less restrictive ratings. In addition, parents who do not interact much with their children or worry about their interests may not even know what a certain rating on a video game or book means. Furthermore, a young gamer who is stopped from buying a title because it is “too mature” can often get someone older buy it. Making rating systems work is complex.

What do you think about this? Do you think people should be restricted in what they can buy or see? Are rating systems necessary?

Questions for Classroom Discussion:
- What is the purpose of ratings?
- Why do some people think that rating systems are not fair?
- Does your family pay attention to movie or game ratings?
- What does the United States rating system rate as worse: sex or violence? Why do you think that is? Do you agree?
VIOLENCE AND MEDIA: ARE RATING SYSTEMS NECESSARY?

USE THE FOCUS WORDS  * and alternate parts of speech

**rating** *(noun)* a classification, an ordering

→ **Sample Sentence:** In 1968, the Motion Picture Association of America began assigning **ratings** to films.

**Rating** can also be used as a verb ("rate")! **Rating** movies can be complex!

**ban** *(verb)* to forbid

→ **Sample Sentence:** Ratings are an alternative to **banning** or restricting a film.

→ **Turn and Talk:** If you knew that a movie was **banned**, would that make you want to see it more or less?

**ban** *(noun)* a rule that forbids something

→ **Sample Sentence:** The school placed a **ban** on disposable plastic water bottles.

→ **Turn and Talk:** Should there be a **ban** on smoking in public places?

**interact** *(verb)* to communicate, to have social contact with

→ **Sample Sentence:** Parents who do not **interact** with their children may not even know what a certain rating on a video game or book means.

→ **Turn and Talk:** Do you **interact** differently with your parents when you want them to buy you something? Explain.

**occur** *(verb)* to happen

→ **Sample Sentence:** In the United States, movies in which sexual activity **occurs** are often restricted to older viewers.

→ **Turn and Talk:** In the last movie you saw, would you say that violent scenes **occurred** too frequently?

**complex** *(verb)* complicated; of many parts

→ **Sample Sentence:** Rating movies is **complex** because people disagree about the specific factors that should be included in the rating.

→ **Turn and Talk:** Do you think rating video games is more **complex** than rating movies? Explain.

**complex** *(noun)* a group of related things connected in complicated ways

→ **Sample Sentence:** The mayor unified the transportation **complex**, which included trains, buses, and streetcars.

→ **Turn and Talk:** Why might someone want to live in an apartment **complex** instead of a house?
DO THE MATH

Instead of banning adult content in movies, the Motion Picture Association of America (MPAA) gives ratings to let viewers know what occurs in a movie. The interactions between a movie’s creators and the MPAA can be complex. For example, if a movie’s creators are unhappy with a rating, they can edit and resubmit their movie to the MPAA until they get the rating they want.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Average Earnings Per Film 1995 – 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG-13</td>
<td>$41,237,141</td>
</tr>
<tr>
<td>G</td>
<td>$37,692,288</td>
</tr>
<tr>
<td>PG</td>
<td>$36,591,876</td>
</tr>
<tr>
<td>R</td>
<td>$14,934,641</td>
</tr>
<tr>
<td>Not Rated</td>
<td>$740,664</td>
</tr>
</tbody>
</table>

Option 1: According to the table, which of the following is true?

A. If a movie is rated PG-13, it will definitely earn more money than a movie rated R.
B. On average, movies rated PG-13 earned more money than movies rated PG.  
C. On average, movies rated R earned more money than PG-rated movies.
D. Movies that were not rated did not earn any money.

Option 2: If these average earnings stay true, how much is it worth to a movie’s creators to have a rating changed from R to PG-13?

$26,302,500

Discussion Question: On average, a movie with a PG-13 rating will earn much more than a movie with an R rating. Why? Here is one possible explanation: For some parents, watching movies is a way to interact with their kids. They see a movie together, and then talk about it afterwards. This helps parents and kids build strong relationships. Therefore, R-rated movies may earn less money because parents don’t take their kids to see them. Is this a good explanation, or is the situation more complex?
Mr. Seemy says, “When I watch you touch your ear, something interesting occurs. Some of those same neurons fire again. We call these neurons mirror neurons.”

Mr. Seemy continues, “Mirror neurons help us interact with other people. When we see someone smile, mirror neurons remind us what it feels like to smile. They also help us imitate complex behavior, like dance steps.”

Jamal has been studying media violence, and he has an idea. “Hey, mirror neurons could explain why watching violence in the media makes people violent in real life,” he says. “When a kid watches someone punch, mirror neurons help them understand punching, and also help them imitate it.”

“My mom told me she read an article once that said watching violent TV makes kids more violent,” Jennifer explains. “That’s why my brother and I are not allowed to watch anything with any violence in it! It’s not fair!”

“Let’s see if we can find the article your mom read online,” suggests Mr. Seemy.

Jennifer helps Mr. Seemy to locate the online article her mom described: a 2002 study in Science magazine. Jennifer shares the information she finds with her classmates. The study compares the amount of TV children around age 14 watched with the number of aggressive acts they committed later (around the ages of 16 and 22).

### Aggression Reported After Daily TV Viewing | Total Number of Participants = 707

<table>
<thead>
<tr>
<th>Time Watching TV</th>
<th>Aggressive Acts Reported</th>
<th>No Aggressive Acts Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 hour</td>
<td>5</td>
<td>83</td>
</tr>
<tr>
<td>1 to 3 hours</td>
<td>87</td>
<td>299</td>
</tr>
<tr>
<td>3 or more hours</td>
<td>67</td>
<td>166</td>
</tr>
</tbody>
</table>

One of Jennifer’s classmates concludes that kids watching 1–3 hours of television led to the highest rate of violence because there were 87 aggressive acts committed by that population. Is she correct? Why or why not?

No. A higher PERCENTAGE of people who watched over 3 hours of TV later reported aggressive acts.

Do these data support Jennifer’s mom’s decision to ban her children from watching TV shows with violence?

No. She would need data on violent TV viewing, not just TV viewing.

Discuss what other variables you would like to see included in a study like this in order to ensure that time watching TV was the ONLY factor leading to aggressive behavior. Examples might include incidence of childhood abuse, hours spent playing violent computer games, etc.
DEBATE THE ISSUE

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

A

☐ The rating systems in place are not strict enough.

OR

☐ The rating systems in place are fine.

OR

☐ Rating systems are unnecessary.

OR

CREATE YOUR OWN

Jot down a few notes on how to support your position during a discussion or debate.

Be a strong participant by using phrases like these:

“Can you show me evidence in the text that...”

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

“I believe that...”

“I agree with you, but...”
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

rating | ban | interact | occur | complex

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_____________________________________________________________________________________________
Bethany Collichay’s parents want Bethany to believe exactly what it says in the Bible. The Bible says that God created human beings and all the plants and animals. At Bethany’s school, however, the science teacher says that living things evolve. This idea was first written about in a book by Charles Darwin that came out in 1859. Darwin’s theory of evolution says that humans and other animals developed from common ancestors over millions of years. This theory explains similarities and differences among species. It also explains why some species survived while others became extinct. When scientists study fossils from millions of years ago, they find evidence that supports what Darwin said. Changes in flu viruses and in color patterns on birds and fishes show that evolution is going on right now.

While scientists say that evolution is undeniable, and point out that it is taught in all developed countries, people like Bethany’s parents have the right to their religious beliefs. They don’t want anything to threaten their child’s religious beliefs. When schools teach about evolution, some people fear a child’s belief in creationism could be threatened. So such people are asking schools to teach intelligent design along with evolution. The central concept behind intelligent design is that living things must have been designed by an intelligent being. Supporters ask us to think about the eye. An eye has to be created all at once with all its parts, they say, or it won’t work. Even though the law in America does not allow public schools to teach religion, intelligent design doesn’t name the designer or use the word “God,” so many argue that teaching about it would not break the law.

Scientists, however, are against teaching intelligent design. They say intelligent design is not science. It doesn’t explain how living things came about or why some are like each other. It doesn’t fit with evidence, and it doesn’t predict anything. Therefore, intelligent design is not a scientific perspective, but a religious one.

What do you think? Should schools teach intelligent design along with evolution?

**Questions for Classroom Discussion:**
- What is the difference between evolution and creationism?
- What is the relationship between creationism and intelligent design?
- Why are scientists against teaching intelligent design?
- Do you think that what a student learns in school might threaten his or her religious beliefs?
**USE THE FOCUS WORDS**  * and alternate parts of speech

---

**design** *(noun)* a plan or drawing

- **Sample Sentence:** The basic design of a bicycle has changed very little over the last fifty years.
- **Turn and Talk:** In your opinion, which smartphone has the best **design**? Explain your answer.

---

**design** *(verb)* to plan; to make

- **Sample Sentence:** Scientists worked for years to **design** solar panels that turn light from the sun into usable energy.
- **Turn and Talk:** If you could **design** a pair of shoes for the future, what would they look like?

---

**creationism** *(noun)* the belief that the world was made by an intelligent force

- **Sample Sentence:** When schools teach about evolution, some people fear a child’s belief in **creationism** could be threatened.
- **Turn and Talk:** Which do you remember learning about first: **creationism** or evolution?

---

**concept** *(noun)* an idea

- **Sample Sentence:** The central **concept** behind intelligent design is that living things must have been designed by an intelligent being.
- **Turn and Talk:** What is your **concept** of good manners?

---

**evolve** *(verb)* to change over time

- **Sample Sentence:** At Bethany’s school, however, the science teacher says that living things **evolve**.
- **Turn and Talk:** As you’ve gotten older, how have your ideas about friendship **evolved**?

---

**perspective** *(noun)* a point of view

- **Sample Sentence:** Therefore, intelligent design is not a scientific **perspective**, but a religious one.
- **Turn and Talk:** What is your **perspective** about junk food advertising in schools? Should it be allowed?
DO THE MATH
Scientists believe that humans and chimpanzees both evolved from an ancestor that lived 5 to 7 million years ago. Supporters of intelligent design disagree. In the poll below, people give their perspectives on the debate.

In a June 2007 poll by USA Today/Gallup, people were asked what they thought about evolution, or the concept that humans and apes have a common ancestor. People gave the following answers:

- **No Opinion**: 3%
- **Definitely False**: 28%
- **Probably False**: 16%
- **Probably True**: 35%
- **Definitely True**: 18%

**Option 1**: Which of the following is true?

- A. Half of the people polled thought evolution was probably or definitely true.
- B. More than half of the people polled thought evolution was probably or definitely true.
- C. Less than half of the people polled thought evolution was probably or definitely true.

**Option 2**: According to this poll, what was the probability that any two people chosen at random both thought that evolution was probably or definitely true?

\[ .53 \times .53, \text{ or about } 28\% \]

**Discussion Question**: Fifty-three percent of the people in this poll thought that evolution was probably or definitely true. On the other hand, 44% responded that evolution was probably or definitely false. Many people who do not believe in evolution think that creationism and/or intelligent design are better explanations for where human beings came from. Why do people disagree so strongly about the concept of evolution? From your perspective, does this disagreement make sense? Do you have strong feelings about evolution?
Ms. Kahn’s science class is studying the concept of natural selection. Charles Darwin used this concept to explain how living things evolve over time. Some students, however, don’t believe in Darwin’s explanation.

“I think that learning about evolution in science class conflicts with my religious perspective,” says Victor. “I’ve learned about intelligent design, and my dad says it should be considered a scientific theory just like Darwin’s.”

“What?!” exclaims Kareema. “Intelligent design isn’t scientific at all! My mom says it’s creationism disguised as science. If some intelligent being created and designed all life on Earth, then who or what created that intelligent being? Can you and your dad explain that, Victor?”

“Hold on, Kareema,” says Ms. Kahn. “We can address your disagreement with Victor by investigating how we decide if something is indeed ‘science.’ Let’s consider some criteria for what makes a theory scientific, and then you and Victor can decide for yourselves.”

Kareema and Victor looked online and found the following list of criteria for judging whether or not a theory is scientific.

For a theory to qualify as “scientific” it should have most or all of the following characteristics. It should be...

- consistent (not contradicting itself)
- as simple as possible (not proposing elaborate explanations that go beyond available evidence)
- useful (explaining past observations and making predictions about future observations)
- testable (able to be confirmed or disproved by experiments or observations)
- replicable (supported by repeated observations or experiments producing the same results)
- progressive (improving on previous theories)
- revisable (open to change based on new evidence)

With a partner, discuss whether or not intelligent design is a scientific theory based on the above criteria. Try to use the focus words (design, creationism, concept, evolve, and perspective).

Note: Most scientists do not regard intelligent design as a scientific theory. Among other objections, scientists typically argue that intelligent design fails the following:

- **Simplicity** test (by positing an intelligent agent as the source of life without explaining the source of that intelligent agent)
- **Usefulness, testability, and replicability** tests (because it does not point to predictions that could be empirically tested in controlled, repeated experiments to confirm or disprove the theory)
- **Revisability** test (because the conclusions of intelligent design seem fixed—for example, when shown evidence of “bad design” in nature, defenders of intelligent design often argue that the designer may have motives that we cannot understand for making things that appear poorly designed, effectively denying the possibility of any evidence that would challenge their theory)

DEBATE THE ISSUE

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

A

☐ Schools should only teach evolution, the accepted scientific theory.

OR

☐ School should allow creationism (intelligent design) to be taught alongside evolution.

OR

☐ ____________________________

☐ ____________________________

☐ ____________________________

☐ ____________________________

CREATE YOUR OWN

Jot down a few notes on how to support your position during a discussion or debate.

☐ ____________________________

☐ ____________________________

☐ ____________________________

☐ ____________________________

Be a strong participant by using phrases like these:

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

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

I believe that...

I agree with you, but...

I agree with you, but...
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

design | creationism | concept | evolve | perspective

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
In 1997, the law was changed to allow drug companies to advertise prescription drugs on television without including a lengthy statement of every possible side effect. Each year since, there have been more of these ads. Television ads are still required to provide disclaimers about the main risks of each drug. Typically, such disclaimers are stated very quickly while good-looking actors distract the viewers. In 1991, drug companies spent $55 million on advertising directly to consumers. By 2012, they were spending over $4 billion. The average number of prescriptions per person in the United States has also increased. In 1992, that average was 7.2. By 2011, it was 13.

Prescription drug advertisements have the potential to be helpful. They often provide useful information. They can lead people to talk to their doctors instead of ignoring a health problem. Yet this advertising also causes some problems. Many people who go to the doctor assume they need a certain drug that might not be right for them. Doctors can feel pressured to prescribe the medication that the patients ask for. This might mean that the patient takes an expensive drug when there are less costly alternatives available. Advertisements might also lead people to think that there is a pill that will solve any problem. This could make them rely on drugs instead of preventing health risks with good diets and regular exercise. Also, they might not know about the risks of taking the medication they see on television. There is not enough time in a typical disclaimer to tell consumers about all of the possible side effects of a drug. The United States is one of only two countries in the world that allow drug companies to advertise directly to consumers.

Do prescription drug advertisements help people more than they hurt? Or should drug companies be restricted from advertising on television?
**USE THE FOCUS WORDS**

**Disclaimer (noun)** statement denying responsibility

*Sample Sentence:* Television ads are required to provide **disclaimers** about the major risks of each drug.

*Turn and Talk:* Should products that promise to clear away pimples come with a **disclaimer**?

**Prescription (noun)** an order that allows someone to use a medication or therapy

*Sample Sentence:* The average number of **prescriptions** per person in the United States has increased.

*Turn and Talk:* Why do you think only doctors can write **prescriptions**?

**Potential (noun)** possibility

*Sample Sentence:* Prescription drug advertisements have the **potential** to be helpful.

*Turn and Talk:* What do adults mean when they say a young person has a lot of “**potential**”? Explain.

**Assume (verb)** to decide without much evidence

*Sample Sentence:* Many people who go to the doctor **assume** they need a certain drug that might not be right for them.

*Turn and Talk:* Why might young people take risks and **assume** that they will not get injured?

**Rely (verb)** to depend on

*Sample Sentence:* People who see advertisements for prescription drugs might **rely** on drugs instead of preventing health risks with good diets and regular exercise.

*Turn and Talk:* Do you think teenagers **rely** too much on technology? Explain.
DO THE MATH

Are prescription drug advertisements dangerous? Consumers who rely on commercials for information about drugs may not get the whole story. These people may not understand the disclaimers that talk about side effects. They may ask their doctor to prescribe a drug that has the potential to be dangerous. Drug companies, however, assume that they have a right to market their products directly to consumers.

Option 1: In 2006, Americans spent $216 billion on prescription drugs. This amount is about 10% of the country’s total health care costs. Given this information, what are the country’s total health care costs?

A. $2,160 million
B. $21.6 billion
C. $216 trillion
D. $2.16 trillion

Option 2: One study said that for every $1 a company spends on consumer advertising, it will have an increase of $2.20 in sales. In 2006, drug companies spent $4.8 billion on advertising. If the study is correct, the $4.8 billion spent on advertising should have caused an increase of how many dollars in sales?

A. $7 billion
B. $8.4 billion
C. $10.56 billion
D. $10.8 billion

Discussion Question: In 2006, drug companies spent $4.8 billion on consumer prescription drug ads. In that same year, drug companies spent $7.2 billion marketing drugs to doctors. If companies spend billions of dollars trying to convince doctors to use their products, can we rely on a doctor’s advice? Or does advertising have the potential to affect a doctor’s judgment? Can we assume that doctors’ decisions are not changed by advertising? Why or why not? Should we demand a new kind of disclaimer in the doctor’s office telling us which products have been advertised to our doctors?
Mr. Seemy's students are studying familiar diseases in science class. “Some diseases are caused by bacteria, such as strep throat, tuberculosis, and food poisoning,” says Mr. Seemy. “However, diseases such as the common cold and chickenpox are caused by viruses, which are even smaller than bacteria.”

“I had a cold for two weeks and my doctor wouldn’t write me a prescription for antibiotics,” says Arjun. “She told me the cold was caused by a virus, and antibiotics wouldn’t work on it, and that I just needed to rest and drink a lot of fluids. It was so annoying!”

“Many people assume that antibiotics can kill viruses, but they can’t,” says Mr. Seemy. “Antibiotics are only effective on bacterial infections. Your doctor was right, even if you didn’t like it. You may see advertisements for a certain drug on TV or hear stories about people using a particular drug to get better, but that doesn’t necessarily mean it will be helpful in your situation.”

“I know what Arjun means though,” says Tanisha. “When I’m sick all I want is to get better. But my uncle’s a doctor and he says relying too much on antibiotics has the potential to create even stronger types of bacteria.”

“Well, I know that bacteria and viruses aren’t the same thing,” says Arjun, “but really, how are they different?”

“Let’s look at some information and see if you can sort different germs into the right categories for yourself,” says Mr. Seemy.

The class goes over the following information on bacteria and viruses:

<table>
<thead>
<tr>
<th>Bacteria</th>
<th>Viruses</th>
</tr>
</thead>
<tbody>
<tr>
<td>single-celled organisms</td>
<td>non-cellular</td>
</tr>
<tr>
<td>about 1,000 nanometers in size (visible with light microscope)</td>
<td>20-400 nanometers in size (not visible with light microscope)</td>
</tr>
<tr>
<td>reproduce by dividing (binary fission)</td>
<td>reproduce by hijacking a host cell and turning it into a virus factory</td>
</tr>
<tr>
<td>need to eat and produce waste</td>
<td>neither eat nor produce waste</td>
</tr>
<tr>
<td>classified as living by all scientists</td>
<td>scientists debate whether viruses should be classified as living</td>
</tr>
<tr>
<td>antibiotics can interfere with life processes and kill bacteria</td>
<td>cannot be killed by antibiotics</td>
</tr>
</tbody>
</table>

Now imagine you are a doctor. First, determine if each germ below is a bacteria or a virus. Then decide if you will prescribe antibiotics to fight each germ.

**Salmonella**
- single-celled
- reproduces using binary fission
- can be viewed under a light microscope

**Rhinovirus**
- must use a host cell to reproduce
- cannot be seen using a light microscope
- not made of cells

**Influenza (the flu)**
- does not consume food or produce waste
- about 100 nanometers in size

Which of the three germs above are treatable with antibiotics? How do you know?

Salmonella is a bacterium (as shown by the characteristics listed), and can be treated with antibiotics. Rhinovirus and influenza are both viruses (as shown by the characteristics listed), and antibiotics have no effect on them.

Suppose a patient who had the flu asked you to prescribe an antibiotic he had seen advertised. Explain to your patient whether or not antibiotics could help him, and why.

Antibiotics will not fight the flu; it is a virus. Excessive antibiotic use also promotes drug-resistant bacteria.
DEBATE THE ISSUE
Pick one of these positions (or create your own).

A
- Drug companies should be able to advertise on television.

OR

B
- Drug companies should not be able to advertise on television.

OR

CREATE YOUR OWN
- __________________________
- __________________________
- __________________________
- __________________________
- __________________________
- __________________________

Jot down a few notes on how to support your position during a discussion or debate.

- __________________________
- __________________________
- __________________________
- __________________________
- __________________________
- __________________________
- __________________________

Be a strong participant by using phrases like these:

- Can you show me evidence in the text that...
- I believe that...
- You make a good point, but have you considered...
- I agree with you, but...
- I agree with you, but...
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

disclaimer | prescription | potential | assume | rely

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
Crispin Morales is a poor Bolivian factory worker who works 12-hour days. He works every day but Sunday. The last presidential election fell on a Saturday. Although he was given the day off as the law required, Crispin was unable to get to a polling station to vote. (Later, he was glad to hear that his candidate, Evo Morales, won the 2006 election with over 50 percent of the popular vote.) Because voting is mandatory in Bolivia, those who do not vote are punished for not complying with their civic duty. Crispin was not allowed to draw his salary from his bank for over two months.

Not all countries with compulsory voting enforce this law. If a citizen of Australia or Brazil provides a good reason for not voting (e.g. being in a hospital) it is accepted. Many nations have dropped mandatory voting altogether. For example, Venezuela discontinued mandatory voting in 1993 and saw a 30% decline in attendance at the polls.

Low voter turnout is a common problem in countries without compulsory voting. This problem might be explained by voter apathy. Of 222 million eligible voters, only 125 million cast their votes in the 2012 U.S. presidential election. By contrast, over 750 million votes were cast during season 10 of American Idol. Some people find it discouraging that voting for American Idol seems to generate more enthusiasm than voting in national elections. Of course, American Idol viewers can vote multiple times during multiple episodes. Nonetheless, some citizens evidently feel their vote counts more in television contests than in political contests. Or perhaps they’re just not interested in politics.

Mandatory voting seems attractive but it can be misused. In dictatorships, citizens are often forced to vote, but they don’t have a choice. The same person is elected every time because the government does not allow other candidates to run for the same position. In March 2014 in North Korea, 99% of the country cast votes all for Kim Jong Un.

But how can democracies have representative governments unless all or most of their citizens vote? Some say the reason to force people to vote is to make sure that the elected government represents the majority of the population. But those against compulsory voting say that being required to vote is a violation of personal liberties. Others say that voting should be seen as a civic right and not a civic duty.

What do you think? Should all Americans be required to vote? Or should voting be voluntary?
USE THE FOCUS WORDS  * and alternate parts of speech

civic (adjective) related to citizenship

Sample Sentence: In countries where voting is mandatory, those who do not vote are punished for not doing their civic duty.

Turn and Talk: Is trying your best in school a civic responsibility?

apathy (noun) lack of interest

Sample Sentence: Low voter turnout might be explained by voter apathy; many voters just don’t care who wins.

Turn and Talk: Which is more dangerous: apathy or anger? Explain.

enforce (verb) to make sure that a rule is followed

Sample Sentence: Not all countries with mandatory voting enforce this law.

Turn and Talk: What is one rule that most of your teachers enforce?

decline (noun) a drop, lessening

Sample Sentence: Venezuela discontinued mandatory voting in 1993 and saw a 30% decline in attendance at the polls.

Turn and Talk: Some communities have had a significant decline in crime due to certain policies. What kinds of policies might cause a decline in crime?

*decline (verb) to drop or become less

Sample Sentence: Teen smoking declined from 36% in 1997 to 16% in 2013.

Turn and Talk: What can be done to ensure that teen smoking rates decline even further?

evidently (adverb) apparently

Sample Sentence: Evidently some citizens feel their vote counts more in television contests than in political contests.

Turn and Talk: Your friend says to you, “Evidently, you must have been up late last night!” Explain how he or she might know that about you. What evidence might your friend have used?
DO THE MATH

Many people see voting as a civic responsibility. Some people are worried about declining voter turnout and rising apathy about who gets elected to the United States government. Millions of Americans vote for their favorite American Idol singer, but many Americans never vote for president. Some people say that Americans evidently don’t care very much about politics. One idea to increase voter turnout is to make and enforce compulsory voting laws. However, is voter turnout really declining? What do the numbers tell us?

Option 1: According to the graph, which election year had the greatest decline in voter turnout compared to the election before?

A. 1996  
B. 2000  
C. 2004  
D. 2008

Voter Turnout in Presidential Elections

<table>
<thead>
<tr>
<th>Year</th>
<th>Voter Turnout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>55%</td>
</tr>
<tr>
<td>1996</td>
<td>49%</td>
</tr>
<tr>
<td>2000</td>
<td>51%</td>
</tr>
<tr>
<td>2004</td>
<td>55%</td>
</tr>
<tr>
<td>2008</td>
<td>57%</td>
</tr>
</tbody>
</table>

Option 2: According to the U.S. Census Bureau, the population of the United States in 2000 was 281,421,906 residents. The voter turnout that same year was 51% of eligible voters. Does this mean that, in 2000, 51% of 281,421,906 residents voted? Why or why not?

No, this doesn’t mean that 51% of the total number of residents voted. Some residents (like children and sometimes felons) are not eligible to vote. Since eligible voters are only a subset of U.S. residents, the percentage of eligible voters who voted is less than 51% of the total residents.

Discussion Question: If voter turnout has stopped declining, should we be satisfied? Or is it evident to you that more people should vote? Does voter turnout of 50% or 60% indicate civic apathy? Is good citizenship something that we should enforce?
Ms. Kahn’s science class is practicing working with information and presenting it in different ways. “Scientists need to be able to organize and interpret the data that they collect,” says Ms. Kahn, “as well as explain it to others. Majesta has brought in a data table about voter participation in 2011 that she found on the internet to share with us.”

“I’m not sure if this information backs up the idea that compulsory voting really works,” says Majesta. “I mean, Mexico has compulsory voting and it has one of the lowest voter participation rates in the data table.”

“But in Mexico they don’t really enforce the voting rules,” says Sergio. “My uncle always votes—he says it’s his ‘civic duty’—but none of my cousins ever bother.”

“Well, evidently Australia takes its voting law seriously,” suggests Majesta, “because they’ve got a really high voter turnout rate.”

“There are a lot of variables that could affect the rate of voter turnout,” says Ms. Kahn. “Access and ease of voting, level of education, apathy, and enforcement affect whether people vote or not.”

“Hold on!” says Sammy. “Ms. Kahn, this table is confusing. The percentages are all over the place. Can we find a way to make the information more clear?”

<table>
<thead>
<tr>
<th>Country</th>
<th>% of registered voters who voted</th>
<th>Has compulsory voting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>93%</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>61%</td>
<td>No</td>
</tr>
<tr>
<td>Chile</td>
<td>88%</td>
<td>Yes</td>
</tr>
<tr>
<td>Greece</td>
<td>62%</td>
<td>Yes</td>
</tr>
<tr>
<td>Israel</td>
<td>80%</td>
<td>No</td>
</tr>
<tr>
<td>Italy</td>
<td>75%</td>
<td>Yes</td>
</tr>
<tr>
<td>Mexico</td>
<td>63%</td>
<td>Yes</td>
</tr>
<tr>
<td>Russia</td>
<td>64%</td>
<td>No</td>
</tr>
<tr>
<td>Spain</td>
<td>69%</td>
<td>No</td>
</tr>
<tr>
<td>United States</td>
<td>71%</td>
<td>No</td>
</tr>
</tbody>
</table>

How is the current table organized? What are the benefits and drawbacks of this organization?

The existing table is organized alphabetically by country. This makes it easy to look for a given country on the table, but it doesn’t highlight any patterns in the other columns.

How could the information from Majesta’s data table be presented in a way that might make it more clear or easier to understand?

Organizing the rows in order of participation rates makes it easier to look for a relationship between participation and compulsory voting. Viewed this way, the table suggests that compulsory voting laws alone do not determine voter participation.

Discuss whether or not you think voting should be compulsory. Use the data from the table to help make your argument.
SHOULD VOTING BE COMPULSORY IN LOCAL AND NATIONAL ELECTIONS IN THE UNITED STATES?

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

A  ☐ Voting should be a matter of choice.

OR

B  ☐ U.S. citizens should be required to vote.

OR

CREATE YOUR OWN

☐ __________________________

☐ __________________________

☐ __________________________

☐ __________________________

☐ __________________________

Jot down a few notes on how to support your position during a discussion or debate.

___________________________________________________

___________________________________________________

___________________________________________________

___________________________________________________

___________________________________________________

___________________________________________________

___________________________________________________

___________________________________________________

Be a strong participant by using phrases like these:

“Can you show me evidence in the text that…”

“I believe that…”

“You make a good point, but have you considered…”

“I agree with you, but…”
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

civic | apathy | enforce | decline | evidently

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________

From the time he came to the United States as a child, Marcos studied hard while his parents worked long hours. Now he is a top student in his high school class. But he may not be able to go to college because the government won’t give him the same help it gives to other students. There are jobs that he will not be allowed to take, even though he could do the work. And he won’t be allowed to get his driver’s license. Marcos is an undocumented immigrant, someone who doesn’t have papers that prove he has the right to live in America. The laws and programs that help many people in America exclude Marcos and his family.

Some people say it’s unfair that our laws exclude hardworking people. They think America is a place where everyone should have equal rights. Some want the government to give undocumented immigrants amnesty, so that they can become legal immigrants. The U.S. passed a law like this once before. It let immigrants who had been in America from 1982 to 1986 get legal documents. Some people argue that immigrants who were brought to the U.S. as children should be given amnesty. They shouldn’t be punished for something they had no control over. Many argue that the U.S. should pass a new amnesty law to help people like Marcos and his family.

Other people say that because Marcos’ family broke the law when they entered the country, they should not have the same rights as legal immigrants. These people believe there should not be amnesty for undocumented immigrants. They say we should orient our immigration laws toward protecting those who went through the proper channels, not those who “jumped the line.” As it is, they say, we don’t have enough jobs to go around, or enough money to pay for everyone’s education. Giving amnesty to undocumented immigrants will only compound the problem.

What do you say? Should there be amnesty for undocumented immigrants?

Questions for Classroom Discussion:
- What is amnesty?
- Why do some people think undocumented immigrants should get amnesty?
- Why do some people think amnesty for undocumented immigrants is not a good idea?
- Should immigrants who arrived as children be granted amnesty?
USE THE FOCUS WORDS  * and alternate parts of speech

amnesty (noun) official forgiveness

Sample Sentence: Some people want the government to give undocumented immigrants amnesty, so that they can become legal immigrants.

Turn and Talk: Can you think of a reason that a person would be granted amnesty for murder?

undocumented (adjective) without legal papers

Sample Sentence: Marcos is an undocumented immigrant, someone who doesn’t have papers that prove he has the right to live in America.

Turn and Talk: Some people who were brought to the U.S. when they were young have done well in school, but because they are undocumented, they can’t get financial aid to go to college. What should be done?

orient (verb) to adjust, to align

Sample Sentence: Some say the United States should orient its immigration laws toward protecting those who went through the proper channels, not those who “jumped the line.”

Turn and Talk: Are there enough movies that are oriented to teenagers? Explain.

exclude (verb) to leave out

Sample Sentence: Programs that help many people in America often exclude undocumented immigrants.

Turn and Talk: Do you think it is ever okay to exclude people from a school activity?

compound (verb) to add to

Sample Sentence: Some think that forgiving people who entered the country without permission will only compound problems like unemployment.

Turn and Talk: Does punishing children physically teach them a valuable lesson or simply compound their behavior issues? Explain.

*compound (adjective) having two or more parts

Sample Sentence: Compound microscopes use two lenses to magnify an object.

Turn and Talk: A compound word brings together two or more independent words, like lifeguard, babysit, or loudspeaker. Can you think of other compound words?
DO THE MATH

All immigrants must adapt to a strange new culture. Undocumented immigrants face a compound problem: They must adapt without revealing that they entered the country illegally. This means that undocumented immigrants are excluded from opportunities that help other immigrants orient themselves in the United States. An amnesty could give back these opportunities. But how many undocumented immigrants are there?

Option 1: According to the Department of Homeland Security, the undocumented immigrant population was 11.6 million in 2008. It dropped to 10.8 million in 2009. What happened to the population of undocumented immigrants between 2008 and 2009?

A. It decreased by about 4.3%
B. It decreased by about 5.1%
C. **It decreased by about 6.9%**
D. It increased by about 7.9%

Option 2: In 2008, the number of undocumented Mexican immigrants in the U.S. was 6.65 million. The year before, in 2007, the number of undocumented Mexican immigrants had been 380,000 higher. Describe the decrease from 2007 to 2008 as a percentage.

**The number of undocumented Mexican immigrants decreased by about 5.4%**.

Discussion Question: When asked to explain the decrease in undocumented immigrants in 2009, officials gave a compound answer. They said it was partly due to increased border security, and partly due to the slow U.S. economy. The slow economy caused many people, including immigrants, to lose their jobs. With less potential to get a better job in the United States, there was less incentive to come to the U.S., and the rate of immigration declined.

Some people want to keep lowering the number of undocumented immigrants by excluding them from the workforce. People who support this idea say that instead of considering amnesty, we should punish employers who hire undocumented workers. This will make it even less likely that undocumented immigrants will be able to find jobs by coming to the U.S. Is this a good solution? Why or why not?
Mr. Seemy’s class is debating immigration amnesty. Cesar and his family are undocumented immigrants. Cesar has the highest GPA in the class.

“I can’t afford college,” says Cesar. “College grants and loans are oriented toward American citizens. People like me get excluded. What kind of career can I have? I don’t have papers. Having no college education will compound my problems. I’ll probably get stuck in a low-paying job. With amnesty, I can get a better education and a better job.”

“You’re assuming an amnesty would lead to a better job,” says Takemi. “You can’t predict the future.”

“We can’t predict the future with certainty, but we can look at what has happened in the past,” says Mr. Seemy. “Let’s investigate!”

Cesar and Takemi find the following study and share it with the class.

### Question:
Do immigration amnesties lead to better jobs for undocumented immigrants?

### Hypothesis:
The immigration amnesty of 1986 resulted in better jobs for at least 30% of undocumented immigrants.

### Subjects:
10 immigrants who became legal during the 1986 amnesty.

### Procedure:
1. Interview subjects:
   - Ask about jobs held before the amnesty.
   - Ask about jobs held after the amnesty.
2. Analyze the subjects’ answers to find out how many got better jobs after the amnesty, and how many maintained similar jobs despite the amnesty.

### Data:

<table>
<thead>
<tr>
<th></th>
<th>Got Better Jobs</th>
<th>Got Similar Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>After 1986 Amnesty</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

### Is the hypothesis supported by the data? Why or why not?


### How would you make this a better experiment?
Consider sample size, number of trials, control of variables, whether the procedure is a true measure of the question, replicability, data collection, etc.

### Most people would say the sample size of this study is too small. Why?

The smaller the sample, the less certain it is that a result can be generalized. In a sample of only 10 people, coincidence could play a larger role.

### Real Research
The paper cited below says that the 1986 Immigration Reform and Control Act (IRCA) led to better jobs for previously undocumented immigrants. By 1992, 48% of men and 38% of women subjects had secured better jobs than they had held as undocumented immigrants. All subjects attained legal status under the IRCA.


A “Better” Job?: The study used the Nam-Powers Occupational Status score, which assigns scores to occupations based on workers’ average earnings and average education.

### Classroom Discussion:
Summarize the real research. (By 1992, 48% of men and 38% of women who gained legal status through the 1986 amnesty had better jobs.) Are students surprised by this finding? Why or why not? How does the finding connect to this week’s topic? Which side(s) of the debate could it support?
Jot down a few notes on how to support your position during a discussion or debate.

Be a strong participant by using phrases like these:

- Can you show me evidence in the text that...
- I believe that...
- You make a good point, but have you considered...
- I agree with you, but...

DEBATE THE ISSUE

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

A
- Undocumented immigrants should not receive amnesty.

OR
- Undocumented immigrants should receive amnesty.

OR
- Undocumented immigrants should only receive amnesty if they were brought here as children.

OR
- Create your own.

SELECT THE ISSUE

- Amnesty  |  Undocumented  |  Orient  |  Exclude  |  Compound

UNIT 2.20
Word Generation  |  Series 2B  |  Unit 2.20  |  wordgeneration.org
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

amnesty | undocumented | orient | exclude | compound

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
All over the world children are disciplined by their families. Sometimes this discipline consists of spanking or hitting children when they misbehave. In 1997, the United States Court of Appeals ruled that parents do not have a secure right under the U.S. Constitution to corporally punish their children.

Many people are puzzled by those who oppose spanking. They argue that parents have always used spanking as a way to discipline their children, and that spanking is a universal form of punishment. In a 2010 survey of children in 33 countries, half reported having been subjected to corporal punishment by their parents. In the U.S., research indicates that 65% of 19- to 35-month-olds and 85% of teenagers have been slapped or spanked by their parents. Would spanking be so common if it didn’t work?

But some researchers argue that spanking is ineffective in reducing bad behavior. Spanking does not help children to understand why their behavior was wrong. Furthermore, being spanked by a loved one can be frightening. So even if parents explain why a child is being spanked, the pain and fear caused by being hit may interfere with understanding the explanation.

Because of research like this, many children’s rights organizations argue that spanking and other forms of corporal punishment should be outlawed. The United Nations Committee on the Rights of the Child has declared spanking a “form of violence” and called for banning it. Both the Council of Europe and the Organization of American States have echoed that call. As a result, 33 countries have outlawed corporal punishment. The U.S. is not among them.

Though no one is in favor of violence against children, many think that parents should have the right to decide whether to spank or not. They argue that making spanking illegal would be a violation of parental rights, an invasion of the privacy of the family, and inconsistent with the traditional values of many people living in the U.S.

What do you think? Should spanking be outlawed, or should parents retain the right to use corporal punishment with their own children?
USE THE FOCUS WORDS  * and alternate parts of speech

privacy (noun) freedom from the attention of others

**Sample Sentence:** Some parents believe that having the courts decide what they may do in their own homes interferes with their privacy.

**Turn and Talk:** Many famous people complain that they have no privacy because of the news media. Do you think celebrities have a right to complain about their lack of privacy?

invasion (noun) unwanted interference

**Sample Sentence:** Many American elm trees died as a result of Dutch elm disease carried by an invasion of beetles.

**Turn and Talk:** There is strong disagreement about whether invasion of a foreign country can ever be justified. What do you think?

consist (verb) to be made up of

**Sample Sentence:** Sometimes discipline may consist of spanking or hitting children when they are behaving badly.

**Turn and Talk:** Would you prefer it if school consisted only of online projects? Explain.

secure (adjective) safe, certain

**Sample Sentence:** In 1997, the United States Court of Appeals ruled that parents do not have a secure right under the U.S. Constitution to physically punish their children.

**Turn and Talk:** What are some ways to create a secure password for your email account?

*secure (verb) to get something

**Sample Sentence:** After a difficult test and long application, Jamar secured a spot at a competitive high school.

**Turn and Talk:** How might a person secure tickets to the Olympics?

corporal (adjective) related to the body

**Sample Sentence:** Some parents claim that corporal punishment by teachers violates children’s rights.

**Turn and Talk:** Corporal punishment used to be common in homes and schools. Why do you think this has changed?
SHOULD CORPORAL PUNISHMENT BE OUTLAWED?

DO THE MATH

According to a 2002 poll by ABC News, most Americans think that good family discipline can consist of occasional spankings. But while most Americans feel secure in the right to spank their children in the privacy of their own homes, they also tend to disapprove of corporal punishment in school. Is spanking in school an appropriate response to bad behavior?

<table>
<thead>
<tr>
<th>Spanking Approval Poll</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approve of spanking children at home</td>
<td>65%</td>
<td>31%</td>
</tr>
<tr>
<td>Think spanking should be permitted in school</td>
<td>26%</td>
<td>72%</td>
</tr>
</tbody>
</table>

Option 1: Which of the following statements is true?

A. More people disapprove of spanking at home than approve of spanking in school.
B. Most people disapprove of spanking at home.
C. Most people approve of school spanking.
D. Seven out of ten people approve of spanking in school.

Option 2: What is the maximum percentage of people polled who could both approve of spanking at home and disapprove of spanking in school? Would you expect the actual percentage to be lower or exactly equal to the maximum?

A maximum of 65% of the people polled could both approve of spanking at home and disapprove of spanking in school. We might expect the actual percentage who both approve of spanking at home and disapprove of spanking in school to be lower, more like 41% (72%-31%), because we could reasonably assume that the 31% who disapprove of spanking at home also disapprove of spanking at school.

Discussion Question: Why do people change their opinions about corporal punishment depending on where it happens? If people disapprove of corporal punishment in school, does that mean it shouldn’t happen anywhere? Or should families have the right to their own privacy?
Ms. Kahn’s students are discussing corporal approaches to punishment in schools and at home.

“Spanking and all physical punishment should be against the law for everyone,” exclaims Viet Ly. “If I have kids when I’m older, I won’t ever spank them. And I definitely don’t think teachers should be able to hit kids.”

“I understand Viet Ly’s point,” says Jonah, “but Americans really value their privacy and independence. Parents won’t like being told they can’t raise their own children the way they want to in their own homes. It’s a violation of their rights.”

“Maybe they won’t like it, but the law already consists of rules telling people what to do at home and at school,” argues Rashad. “Hitting kids to make them behave better doesn’t even work, does it Ms. Kahn?”

“Well, Rashad, there is a lot of research suggesting that corporal punishment may do more harm than good,” said Ms. Kahn. “But doing scientific research on something like corporal punishment is difficult. Can you, Jonah, and Viet Ly get together and brainstorm reasons why?”

Here are some of the ideas Ms. Kahn’s students had about the challenges of doing research on corporal punishment.

- **Jonah**: I don’t think people would tell the truth to researchers on this topic. So interviews and surveys might be misleading. Do you agree with Jonah? Why or why not?

- **Rashad**: I think that doing experiments involving hitting children would be wrong and dangerous. So it would be hard to come up with experimental evidence to prove anything. Do you agree with Rashad? Why or why not?

- **Viet Ly**: I think corporal punishment might seem to work in the short term—it might stop children from doing something bad at the moment. But I think it would do harm in the long term. The long-term effects would be hard to measure. Do you agree with Viet Ly? Why or why not?

---

**Note**: While a great deal of research suggests that corporal punishment is associated with depression, anxiety, and aggression in children, it is unethical and probably illegal to do the kind of longitudinal, randomized, controlled studies that would prove causality. Does spanking cause aggression and antisocial behavior, or do aggressive and antisocial children get spanked more? You cannot assign children to treatment groups where they will be hit, and then see years later what the effects are.

For a review of research on corporal punishment and consideration of some of the challenges for this kind of research, see Elizabeth T. Gershoff, “More Harm Than Good: A Summary of Scientific Research on the Intended and Unintended Effects of Corporal Punishment on Children”: [http://scholarship.law.duke.edu/lcp/vol73/iss2/3/](http://scholarship.law.duke.edu/lcp/vol73/iss2/3/)

---

**If you were a researcher trying to gather information about sensitive issues like corporal punishment, how could you secure honest information and guarantee privacy to your participants?**
### Should Corporal Punishment Be Outlawed?

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

**A**
- All *corporal* punishment should be outlawed, including that administered by parents.

**OR**
- Parents and teachers should have the right to spank children for misbehavior.

**OR**
- Only parents should have the right to spank their children for misbehavior.

**OR**
- __________________________________________
- __________________________________________
- __________________________________________
- __________________________________________
- __________________________________________

**Create Your Own**

Jot down a few notes on how to support your position during a discussion or debate:

<table>
<thead>
<tr>
<th>Note 1</th>
<th>Note 2</th>
<th>Note 3</th>
<th>Note 4</th>
<th>Note 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Be a strong participant by using phrases like these:

- *Can you show me evidence in the text that...?*
- *I believe that...*
- *You make a good point, but have you considered...?*
- *I agree with you, but...*
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

privacy | invasion | consist | secure | corporal

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
Svenka worked hard on her soccer skills and made the school team. When she got an F on her report card, the coach told her she was not eligible to play unless her grades improved. The school that Svenka attends, like many others around the country, has a rule: If you don’t pass a class, you don’t get to play. Svenka thinks that this is unfair. She does not think this one bad grade should affect her place on the team.

Some people think that middle and high school students who play sports should maintain certain grade point averages to play sports. Many schools use grades as a prerequisite for participation in after-school activities. They feel that the students should work as hard in the classroom as on the field. If students really want to play they should work extra hard in school to make sure that they can.

Not only does this rule encourage student athletes to keep up with their coursework, it also motivates coaches to teach players how to balance their time. Coaches don’t want their star athletes to fall behind in school and be dropped from the team.

On the other hand, there are people who do not think grade requirements are a good idea. They think that forcing students to get a certain grade will keep too many from participating. In previous years, some students took easier classes just so they could play sports. This was unfair to the athletes who had to work harder to keep up their grades in challenging classes.

What do you think about this? Does the “no pass, no play” rule seem fair to you? Should middle and high school students have to meet a grade requirement to participate in sports?

Questions for Classroom Discussion:
- What is the rule about playing sports in Svenka’s school?
- Why do some people think that middle and high school students who play sports should maintain certain grades?
- Why do some people think that grade requirements for sports are not a good idea?
- Is there a grade requirement to be eligible to play sports in your school?

This week’s issue:
SHOULD MIDDLE AND HIGH SCHOOL STUDENTS HAVE TO MEET A GRADE REQUIREMENT TO PARTICIPATE IN SPORTS?
USE THE FOCUS WORDS  * and alternate parts of speech

**prerequisite** (noun) requirement that must be met before moving on

*Sample Sentence:* Turning in all your homework is usually a **prerequisite** for getting good grades.

*Turn and Talk:* What are some **prerequisites** for getting a driver’s license?

**prerequisite** (adjective) required before something else can happen

*Sample Sentence:* Punctuality (being on time) is a **prerequisite** behavior for getting a raise.

*Turn and Talk:* What are some **prerequisite** achievements for becoming a doctor?

**eligible** (adjective) qualified for

*Sample Sentence:* Students must bring in signed permission slips to be **eligible** to participate in field trips.

*Turn and Talk:* Do you think students who don’t do their homework should be **eligible** to go on field trips?

**maintain** (verb) to keep up; to sustain

*Sample Sentence:* Raphael got a 100% on the quiz, which allowed him to **maintain** his A+ average in class.

*Turn and Talk:* What can you do to **maintain** a good reputation among your peers?

**affect** (verb) to have an effect on

*Sample Sentence:* Eating a healthy breakfast can **affect** how well you do in school.

*Turn and Talk:* Besides diet, what else can **affect** your performance in school?

**affect** (noun) observable emotion

*Sample Sentence:* Ella’s **affect** changed as soon as she saw the grade on her test.

*Turn and Talk:* Describe a poker player’s **affect**.

**previous** (adjective) earlier, most recent

*Sample Sentence:* We won our game last night because we played a lot better than we had in the **previous** game.

*Turn and Talk:* If you could choose any of your **previous** teachers to teach your class next year, who would you choose and why?
In Georgia, students must maintain good grades to be eligible to play sports. For a student to join a sports team, he or she must have met certain prerequisites the previous semester. In 2009, the Georgia school board made a change that affects middle school students. Before, middle school students had to pass five classes the semester before playing a sport. Now, students have to pass at least 70% of their classes the semester before playing a sport. One reason the Georgia school board changed their sports eligibility rule is because different Georgia schools follow different schedules. Some students only take four classes each semester, so even if they passed every class, they wouldn’t meet the eligibility requirement of passing five classes.

Option 1: If students take four classes, how many must they pass to pass at least 70% of their classes?

A. at least 1  
B. at least 2  
C. at least 3  
D. all 4

Option 2: Sierra passed five of her classes, but she did not meet Georgia’s new sports eligibility requirement that students must pass at least 70% of their classes. How many classes must she have taken?

Sierra must have taken a minimum of 8 classes. Here is one way to think about it: Let \( t \) = classes taken and \( p \) = classes passed. Then, solve the inequality \( p \geq .7t \). When \( p = 5 \), we get \( 7.1 \geq t \). Since \( t \) must be a whole number, Sierra must have taken 8 or more classes.

Discussion Question: Under the previous rule, passing a certain number of classes was a prerequisite for playing sports. The new rule asks students to pass a certain percentage of classes. In some schools, students can choose to take extra classes. Under the new rule, if students take more classes, they must maintain more passing grades to stay eligible to play sports. Will the new rule affect how many classes students take? Do you think it will discourage students from being ambitious and taking more classes? Why or why not?
Mr. Seemy finds Vickie sitting sadly in the hallway, holding a basketball. “What’s wrong, Vickie?” Mr. Seemy asks.

“I’m not eligible to play in the game tonight,” Vickie says. “Our coach made good grades a prerequisite. I try to maintain a strong B in each class, but I failed a history test last week and an English test the previous week. I’m so frustrated! I’ll probably just quit the team.”

“Don’t do that!” says Mr. Seemy. “Basketball can help you keep your grades up. Exercise affects your brainpower.”

“Really?” asks Vickie.

“Let’s investigate!” says Mr. Seemy.

Is the hypothesis supported by the data or not?

Support. Note: Review the issue of correlation vs. causation.

What evidence supports your conclusion?

Runners earned a higher average score than sitters.

Real Research: The article cited below describes a study where college students ran, lifted weights, or sat quietly before a memory test. The runners consistently performed best. The article connects this finding to other studies that have suggested that exercise in general and aerobic exercise in particular stimulates helpful brain activity.

SHOULD MIDDLE AND HIGH SCHOOL STUDENTS HAVE TO MEET A GRADE REQUIREMENT TO PARTICIPATE IN SPORTS?

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

A ☐ Students who play sports should not have to maintain passing grades in any of their classes.

OR

B ☐ Students who play sports should have to maintain passing grades in all of their classes.

OR

C ☐ Students who play sports should have to maintain passing grades in a certain percentage of their classes.

OR

CREATE YOUR OWN

Jot down a few notes on how to support your position during a discussion or debate.


Be a strong participant by using phrases like these:

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

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

"I agree with you, but..."

"I believe that..."
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

eligible | affect | maintain | prerequisite | previous

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
Jason’s day is full of teachers, classes, and assignments. He also has an after-school job. Jason works hard to earn money and keep up with his studies. But in the past few weeks he has been working too many hours and not doing his homework or passing his tests.

When Jason first started looking for a job he was very excited. He put together a resumé to help him acquire his position. He thought having a job would teach him about responsibility as well as help him earn some extra cash.

Like Jason, many students think that having a part-time job is a good thing. They get a chance to make new friends with their coworkers. Their bosses and coworkers perceive them as responsible adults. They start to learn the value of money and to save up for the things they want, like clothes, video games, or even a car. Some even help out with their family’s needs. These are all benefits of having an after-school job.

Then there are those who think students should not be working while they are in school. Jason could not sustain his good grades because of work. Some people claim that students who work do not do as well in school because they don’t have as much time to study or do assignments. These students are also tired more often and do not pay as much attention in class.

What do you think about this? Are after-school jobs helpful or harmful to middle and high school students?
USE THE FOCUS WORDS

resumé (noun) a document summarizing experience and qualifications

Sample Sentence: Most high school students learn to write a resumé that includes all of their work and volunteer experiences, as well as academic achievements.

Turn and Talk: What are two things that you hope to be able to include on your resumé when you are a high school senior?

responsibility (noun) duty; the ability to act independently

Sample Sentence: Jason thought having a job would teach him about responsibility as well as help him earn some extra cash.

Turn and Talk: Where have you learned more about responsibility: in school or at home? Explain.

acquire (verb) to gain

Sample Sentence: Jason put together a resumé to help him acquire a job.

Turn and Talk: How do you plan on acquiring the experience and skills necessary for building a strong resumé?

perceive (verb) to sense or be aware of; to view in a certain way

Sample Sentence: When students get a job, their bosses and coworkers perceive them as responsible adults.

Turn and Talk: Do your teachers perceive you as responsible? Why or why not?

sustain (verb) to keep up

Sample Sentence: As it turns out, Jason could not sustain his good grades while working.

Turn and Talk: What was the last book that sustained your interest from beginning to end?
Many students perceive an after-school job as a responsibility that will help them build their resumé, acquire new skills, and earn money. But new responsibilities affect the amount of time students have for other things. Can students sustain their dedication to schoolwork and take on a job after school at the same time?

**Option 1:** According to the Bureau of Labor Statistics, students who have an after-school job spend an average of 42 fewer minutes per day on schoolwork than students who don’t work. If the school year is 180 days, how many more hours per year would the average non-working student spend on schoolwork than the average student with an after-school job?

- A. 7,560 hours
- B. 300 hours
- C. 244 hours
- D. 126 hours

**Option 2:** According to the Bureau of Labor Statistics, students who have an after-school job spend an average of 42 fewer minutes per day on schoolwork than students who don’t work. If we let \( m \) = the number of minutes the average non-working student spends on schoolwork each day, write an algebraic expression that shows the number of minutes the average student with an after-school job spends on schoolwork in a 5-day week.

\[
5(m - 42)
\]

**Discussion Question:** According to the Bureau of Labor Statistics, working students spend 42 fewer minutes on schoolwork, 42 fewer minutes on fun activities, and 36 fewer minutes on sleep each day. Do you perceive any of these statistics as a problem? Whose responsibility is it to make sure that kids sustain focus on their schoolwork and acquire healthy habits like getting enough sleep?
The students in Ms. Kahn’s class are talking about after-school jobs.

“I do some babysitting occasionally during the week, and almost every weekend,” says Kareema, “but I don’t know how I would cope with the responsibility of having a regular job every weekday. By the time I finish soccer practice, it’s almost dinner time, and then I’ve got to get my homework done before maybe watching a little TV and going to bed. Where is there time to work a regular job?”

“I enjoy my job,” says Sergio. “I get my homework done right after school, then after dinner I go work for three hours at my aunt’s video rental store. It feels good to help her out, and it’s fun to talk with the customers about movies, even though I end up not having as much time as I used to for watching movies myself. Anyway, it’s great to acquire some spending money for the weekends.”

“Money is important,” says Viet Ly. “But I worry about how my older brother’s job affects him. He’s 17, and he works an eight-hour shift after school three days a week, plus another eight hours on Saturday. He’s saving most of his wages for college, but ever since he turned 16 and started his job, he’s had a hard time sustaining good grades. He just seems rushed and tired all the time.”

Sergio nods. “Yeah, I think I’d have a hard time keeping up with my school responsibilities if I spent that much time on the job,” he says. “I guess it’s like Goldilocks and the Three Bears: I don’t want too much work or too little work. I like it just right.”

“But how much is just right?” says Viet Ly.

“Good question,” says Ms. Kahn. “Let’s see if we can find any research data on after-school jobs and academic performance.”

After doing an online search, Ms. Kahn’s students find the following graph summarizing the results of some research on the relationship between after-school employment and grade point averages for middle school and high school students.

This graph is generalized (not exact) since it is not marked off in numerical units for grade point average or hours worked. It shows an “inverted U” relationship between average GPA and hours worked, peaking at around 15 hours of work.

Discuss with a partner where you think 15 hours would be located on this graph.

What general idea is the graph trying to communicate?

Having about 15 hours of after-school employment is associated with the best average grades. Having no work, or especially too much work, is associated with having lower grades.

Assuming this graph is a fair representation for the studies it summarizes, what do you think might cause this “inverted U” relationship between hours worked and average GPA for students?

Working might make some students feel more confident and responsible, and might help them learn to organize their time better, while students who work too much may be overwhelmed. Or maybe students who already get good grades also choose to work moderate hours.

DEBATE THE ISSUE

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

A
☐ After-school jobs are harmful to students.

OR

B
☐ After-school jobs are helpful to students.

OR

CREATE YOUR OWN
☐ ______________________

☐ ______________________

☐ ______________________

Jot down a few notes on how to support your position during a discussion or debate.

☐ ______________________

☐ ______________________

☐ ______________________

☐ ______________________

☐ ______________________

Be a strong participant by using phrases like these:

“Can you show me evidence in the text that...”

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

“I believe that...”

“With you, but...”
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

resumé | responsibility | acquire | perceive | sustain

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
Academic tracking means that students are placed into certain classes based on their abilities. Let’s say Jasmine shows an aptitude for mathematics in sixth grade. She would then be put in advanced math courses starting in seventh grade and continuing all the way through high school. But Oscar, who is in her class, starts off slowly in math so he takes a completely different and easier set of math classes. In her senior year, when Jasmine knows more math than Oscar, is this because of aptitude or experience?

The arguments for and against tracking policies have many components. Some people think tracking is a good idea. Students can learn at their own speed. Higher-track students do not have to wait for others to catch up with them. Lower-track students do not have to deal with students who are faster and get impatient with them for slowing the class down. However, studies show that teachers who have lower-level classes also have lower expectations for those students; lower expectations for student success do not support student learning. Furthermore, researcher and professor Jo Boaler discovered that students in mixed-ability math classes outperformed students who were tracked.

People who oppose academic tracking point out that the tracks are decided by testing. Tests can misrepresent students’ skills. People who think tracking is unfair argue that students who do not test well end up in low-level classes where they have fewer chances to learn. Maybe the students who score poorly on the test just need tutoring or a little more time to learn the same material as the high-tracked students. Tracking opponents complain that schools do not involve themselves in helping lower-tracked students learn because they are busy getting higher-tracked students ready for college.

What do you think about this? Is this practice fair? Do kids like Oscar miss out on a better education because they are put into a low track?
**USE THE FOCUS WORDS**

**tracking** *(noun)* grouping by ability

*Sample Sentence: Academic tracking means that students are placed into certain classes based on their abilities.*

*Turn and Talk: Why do you think there is rarely tracking in P.E. class? Should there be?*

**aptitude** *(noun)* ability, ease of learning

*Sample Sentence: Let’s say Jasmine shows an aptitude for mathematics in sixth grade.*

*Turn and Talk: What is something for which you have an aptitude? What is something for which you do not have an aptitude?*

**policy** *(noun)* course of action

*Sample Sentence: The arguments for and against a tracking policy have many components.*

*Turn and Talk: What is an example of an anti-bullying policy at your school?*

**component** *(noun)* part

*Sample Sentence: John’s musical talent was an important component of his application.*

*Turn and Talk: Describe the components of a recent project you had to complete.*

**involve** *(verb)* to engage; to include

*Sample Sentence: Tracking opponents complain that schools do not involve themselves in helping lower-tracked students learn because they are busy getting higher-tracked students ready for college.*

*Turn and Talk: What can be done to involve students who don’t like to participate in class discussions?*
DO THE MATH

Hughes Middle School follows a policy of academic tracking. The school has advanced math classes for students who have an aptitude for math. Choosing students for this program involves giving all students a math test with two components: calculating and critical thinking. Students must earn a total score of 80% to qualify for the advanced class.

Option 1: Julie received 95 out of 120 points on her math aptitude test. Will she qualify for the advanced math class?

A. Yes
B. No

Option 2: On the math aptitude test, the calculating component is worth 70% of the final grade, and the critical thinking component is worth 30%. If Bethany gets half of the calculating problems right and all of the critical thinking problems right, will she qualify for the advanced class? (You can assume that all problems within each of the two sections are worth the same number of points.)

No, Bethany’s score would be 65%.

Discussion Question: Tracking involves measuring each student’s aptitude, and this usually means giving a test. A policy of tracking students using a test score means that some students will miss qualifying for a higher track by just a few points. Is it fair for a student to be put into a lower track based on a few points? Is there a way to make tracking decisions more fair? What components should a fair tracking system have? Or is tracking just wrong?
THINK SCIENTIFICALLY

Mr. Seem has just returned from a teacher conference during which teachers discussed the pros and cons of academic tracking. He’s interested to hear what his students think about the idea.

“I wish our school used academic tracking,” sighs Candice. “Different students are good at different things. Separate tracks would make things easier for everyone!”

“Maybe,” says Rohan, “but tracking policies can involve some unintended negative results. I read online about a famous study done in 1964 by a professor named Robert Rosenthal. He told some elementary school teachers that a special new test had shown that certain students were probably about to make huge academic advances. In reality, Rosenthal had chosen the students at random. But at the end of the school year, those students really had done better than their classmates, because of the high expectations of their teachers. And other studies have shown that teacher expectations are an important component of student achievement.”

“I doubt that,” says Candice. “I can’t see how a teacher’s expectations would affect a student’s aptitude.”

“I can,” says Warren. “Here, let’s do a little informal experiment. I’m going to draw two short comic strips. Both show a student and a teacher on the first day of school. I am going to ask people which cartoon shows a teacher with high expectations and see which one they pick.”

In which comic do you think the teacher expects the student to do poorly?

Students will likely say Comic A’s teacher has low expectations. Alternatively, Comic A’s teacher could be inexperienced whereas Comic B’s teacher has learned to be patient and encouraging. Or, Comic A might show a math game where students are timed, and Comic B shows regular instruction. Like expectations about people, what we’re told to expect in the comics can influence how we judge them.

Why did you make the choice you did about which comic shows which scenario? Do your classmates see these comics the same way?

Comic A’s teacher gives up on the student quickly, while Comic B’s teacher treats their hesitation as a sign of productive thought.

How do you think scenarios like these, repeated many times over the course of a school year, might affect the student?

Note: Either experience might teach the student to share the teacher’s high or low expectations, altering their self-image and behavior. Other students might work extra hard to disprove a teacher’s expectations.
Jot down a few notes on how to support your position during a discussion or debate.

Be a strong participant by using phrases like these:

- Can you show me evidence in the text that...
- You make a good point, but have you considered...
- I believe that...
- I agree with you, but...
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

tracking | aptitude | policy | component | involve

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
Word Generation | Series 2 | Part B

FOCUS WORDS

Unit 2.13
prevention
critical
pursue
alter
approach

Unit 2.14
economic
multicultural
attribute
facilitate
distinct

Unit 2.15
conserve
renewable
invest
proceed
maximize

Unit 2.16
rating
ban
interact
occur
complex

Unit 2.17
design
creationism
concept
evolve
perspective

Unit 2.18
disclaimer
prescription
potential
assume
rely

Unit 2.19
civic
apathy
enforce
decline
evidently

Unit 2.20
amnesty
undocumented
orient
exclude
compound

Unit 2.21
privacy
invasion
consist
secure
corporal

Unit 2.22
eligible
affect
maintain
prerequisite
previous

Unit 2.23
resumé
responsibility
acquire
perceive
sustain

Unit 2.24
tracking
aptitude
policy
component
involve