



A worker adds a new coat of paint to the Golden Gate Bridge in San Francisco, U.S.A.

4

Risk Takers

Q When are risks worth taking?

The worker in this photo has a risky job. He clearly faces real danger as he carries out his work high up on the Golden Gate Bridge in San Francisco, U.S.A. However, not all risks are so obvious. In fact, it is easy to overlook many of the risks we take every day, from just crossing the street to eating too much junk food. Risk is everywhere, so it's important that we're able to assess it logically. In this unit, we look at the science of risk-taking and explore ways we can make better decisions when weighing risks.

THINK and DISCUSS

- 1 Look at the photo and read the caption. What is the person doing, and what are some of the risks involved?
- 2 Look at the essential question and the unit introduction. What are some of the everyday risks that *you* take?

Building Vocabulary

LEARNING OBJECTIVES

- Use ten words related to risk
- Use idioms containing the word *odds*





LEARN KEY WORDS

A Listen to and read the information below. Discuss with a partner.

1. What were your initial responses? Which options did you choose and why?
2. Did you change your mind when you thought about the situations more objectively? Why?
3. Are the risks involved in situations 1 and 2 any different?





WHAT WOULD YOU DO?

Imagine you're a participant in a game show. You've already won a thousand dollars when you're offered a bonus prize. You're presented with two options:

OPTION 1	OR	OPTION 2									
<p>You're guaranteed a \$500 bonus.</p> <p>TAKE THE \$500 BONUS</p>  <p>\$1500</p>		<p>Toss a coin. If it lands on heads, you get a \$1000 bonus instead of a \$500 bonus. But if it lands on tails, you don't win anything at all.</p> <table border="0"> <tr> <td>HEADS</td> <td>FLIP COIN</td> <td>TAILS</td> </tr> <tr> <td>+ \$1000</td> <td></td> <td>NO BONUS</td> </tr> <tr> <td>\$2000</td> <td></td> <td>\$1000</td> </tr> </table>	HEADS	FLIP COIN	TAILS	+ \$1000		NO BONUS	\$2000		\$1000
HEADS	FLIP COIN	TAILS									
+ \$1000		NO BONUS									
\$2000		\$1000									

What would you do?

It's now later in the game, and you've managed to accrue \$2000! Unfortunately, you've incurred a penalty. You have two options:

OPTION 1	OR	OPTION 2									
<p>You're guaranteed a \$500 loss.</p> <p>TAKE THE \$500 LOSS</p>  <p>\$1500</p>		<p>Toss a coin. If it lands on heads, you lose nothing. But if it lands on tails, you incur a \$1000 loss instead of a \$500 loss.</p> <table border="0"> <tr> <td>HEADS</td> <td>FLIP COIN</td> <td>TAILS</td> </tr> <tr> <td>LOSE NOTHING</td> <td></td> <td>- \$1000</td> </tr> <tr> <td>\$2000</td> <td></td> <td>\$1000</td> </tr> </table>	HEADS	FLIP COIN	TAILS	LOSE NOTHING		- \$1000	\$2000		\$1000
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What would you do?

In situations like these, our **intuition** often kicks in and we make decisions based on gut feelings. But such decisions aren't always **rational**. We're not thinking objectively about the risks involved and the **probability** of each **outcome**—we're making snap decisions based on emotions and past experiences.

So, think about the game show scenarios again, but this time, without any emotion or **bias**. What would you do this time?

B Match each word in **bold** from Exercise A with its meaning.

1. _____ definitely going to happen
2. _____ the likelihood of an outcome
3. _____ based on logic
4. _____ the result of something
5. _____ an often unfair preference for or prejudice against something
6. _____ a strong, inner feeling that tells you what to do or what is true

C Read the words in **bold** and their definitions. Then complete the passage using the correct words.

aversion: a dislike or fear of something **mental:** relating to the mind
odds: the likelihood of something happening **phenomenon:** an event that is noteworthy

Assessing risk can be a tricky ¹_____ exercise. In the game show scenario earlier, the two coin tosses *feel* different, but when you think about it, what was at stake was exactly the same. You stand to either gain or lose \$500 by tossing the coin. The ²_____ are the same, too: you have a 50-50 chance of guessing correctly each time. Yet, for many people, a(n) ³_____ to losing affects their judgment. The guaranteed \$500 loss seems so much more significant than the guaranteed \$500 bonus that more people are willing to toss a coin to avoid the loss. There's a name that describes this ⁴_____: it's called loss aversion.

D There are many idioms that use the word **odds**. Read the sentences on the left. Then match them with the idioms on the right.

- | | |
|---|---|
| 1. _____ I'm sure you'll make it. | a. You succeeded against the odds. |
| 2. _____ There's too much to do in too little time. | b. What are the odds? |
| 3. _____ I don't know how you did it. | c. The odds are in your favor. |
| 4. _____ Oh, wow. It's you again. | d. The odds are stacked against you. |

COMMUNICATE

E Note an example next to each prompt below. Discuss with a partner.

1. a situation with an unexpected outcome _____
2. a decision you made that wasn't rational _____
3. a time you succeeded against the odds _____
4. something in life that is guaranteed to happen _____

F Work in a group. Think of a time you didn't listen to your intuition when perhaps you should have. Describe what happened and what you would do differently if faced with the decision again.

Viewing and Note-taking

LEARNING OBJECTIVES

- Watch a video about irrational decisions
- Write notes about technical terms
- Understand technical terms

BEFORE VIEWING

A Listen to a talk that contains several technical terms that the speaker explains. Write down their meanings.

1. cognition _____
2. cognitive bias _____
3. subconscious _____
4. confirmation bias _____

Listening Skill

Understanding Technical Terms

When you hear an unfamiliar technical term, don't panic. Speakers generally explain the technical terms they use. And even if they don't, you can always use context to help you understand—the same way you would for any new word.

WHILE VIEWING

B **LISTEN FOR MAIN IDEAS** Watch the TED-Ed video. Which statement below best summarizes the video?

- a. Loss aversion can cause us to apply heuristics in ways that aren't always rational.
- b. Heuristics can be useful, but they can also cause us to make complex decisions poorly.
- c. Heuristics can help us to make decisions based on logic instead of intuition.

C **LISTEN FOR TECHNICAL TERMS** Watch the TED-Ed video again. Listen for the technical terms below and make notes on their meanings. Then check with a partner and discuss the following:

- What abbreviations could you use for them?
- What examples were used?

Note-taking Skill

Noting Technical Terms

When noting down technical terms, there are a few strategies that can help. For instance, pay attention to visuals to help with their spelling, and note down definitions and brief examples that help explain them. Use simple abbreviations for the technical terms in later notes, to save time. At home, research the term more fully and use what you learn to review and improve your notes.

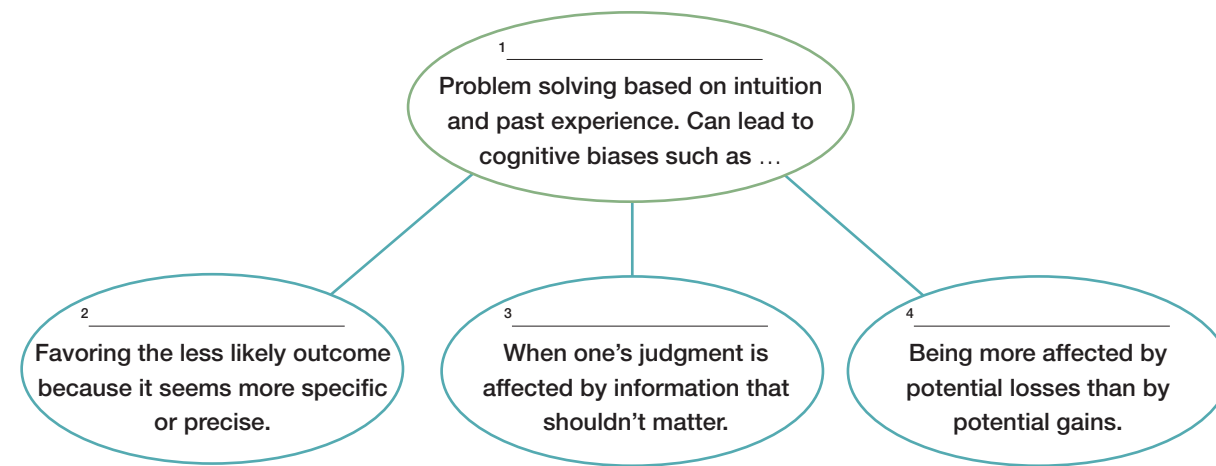
Loss aversion: _____

Heuristics: _____

Conjunction fallacy: _____

Anchoring effect: _____

D Use your notes from Exercise C to complete the mind map below. Write the missing technical terms.



E **LISTEN FOR DETAILS** Watch the TED-Ed video again. Choose the correct option to complete the sentences.

1. In the game show scenario, most people prefer to accept the guaranteed **bonus / loss**.
2. In the experiment with the red and green dice, more people chose the **shorter / longer** sequence.
3. The **conjunction fallacy / anchoring effect** is often used to raise prices.
4. Heuristics help us to **make decisions quickly / analyze situations logically**.
5. When faced with complex problems, we should **shut off / be aware of** our brains' heuristics.

AFTER VIEWING

F **APPLY** Work with a partner. Look at the two quotations below. Which cognitive biases are they examples of? Can you think of other real-world examples of these biases?

"I don't like the idea of investing my money for higher gains. I'm aware there are low-risk investment options out there, but I'd rather just keep my money in the bank where I know it's definitely safe."

"I need an extra week for a job done, but if I ask for a week, my boss will only give me two or three days. So I'll say I need two weeks. That way, I'm more likely to get the one week I need."



Noticing Language

LEARNING OBJECTIVES

- Notice language for helping listeners follow ideas
- Help a listener follow along as you explain a concept

Communication Skill

Helping Listeners Follow Ideas

As a speaker, you should always try to make it as easy as possible for listeners to understand you. You can do this by defining key terms and concepts, giving useful examples, or asking and answering questions listeners might have.



When it comes to nutrition, people are often guilty of the causal fallacy.

LISTEN FOR LANGUAGE *Help listeners follow ideas*

A Listen to three excerpts from the TED-Ed video in Lesson B. Match each excerpt (1–3) to what the excerpt does (a–c).

Excerpt 1: _____ **Excerpt 2:** _____ **Excerpt 3:** _____

- gives a useful example
- defines a key concept
- asks and answers a question listeners might have

B Look at the expressions in the box. What is the function of each expression? Add them to the chart below.

refer(s) to ...	For example, ...	But how ... ?
For instance, ...	We call this ...	So, is there ... ?
This is what's called ...	This is an example of ...	

Defining or naming terms or concepts	
Giving examples to support ideas	
Asking questions listeners might have	

C Listen to a talk and complete the sentences with the expressions you hear. Then work with a partner. Can you use other expressions from Exercise B to complete the sentences?

- The word *fallacy* is used to _____ reasoning that's flawed. And there are many logical fallacies we need to be aware of.
- _____, people often incorrectly assume that some actions have inevitable and irreversible negative consequences. _____ the slippery slope fallacy.
- Also, many people assume that if one thing happens after another thing, then the first thing must have caused the second thing to happen. _____ the causal fallacy.
- _____ anything we can do to avoid logical fallacies? As it turns out, there are quite a few things you can do. _____, try disagreeing with yourself.

COMMUNICATE

D Work with a partner. Read the sentences below. Complete them using your own ideas.

- Everybody takes risks every day. For instance, _____.
- It's best then not to rely on intuition when weighing risks. So, _____?
- _____ refers to _____.
- _____. This is an example of an educated risk.

E Work individually. Choose one of the topics below to explain to a partner. Make notes on definitions you need to give, examples you could use, and questions your partner might have that you could ask and answer.

extreme sports **risky jobs** **dangerous places** **dangerous pets**

F Work with a partner who chose a different topic in Exercise E. Take turns to give a short talk about each of your topics. Use your notes and the language from Exercise B to help you.

"Extreme sports" refers to sports with a high amount of risk ...

Communicating Ideas

LEARNING OBJECTIVES

- Use appropriate language for helping listeners follow your ideas
- Collaborate to identify and explain risks that are often misunderstood

ASSIGNMENT

Task: You are going to collaborate in a group to identify and explain some risks that are often misunderstood as more or less dangerous than they really are.

LISTEN FOR INFORMATION

A **LISTEN FOR MAIN IDEAS** Listen to a talk. What is the main idea of the talk? Circle the answer.

- Fear clouds our judgment, so we should assess risk using data.
- The risk of flying is much less than the risk of driving.
- The world is much less dangerous than we think it is.

B **LISTEN FOR DETAILS** Listen again and complete the notes below.

Flying seems risky because plane crashes are horrible.

But stats paint a different picture:

- Flying is the _____.
- Much safer than _____.

We attach more risk to scarier things:

C Do you know anyone who's afraid of flying? Why are they afraid? Do they know how safe flying is statistically? Discuss in a group.

COLLABORATE

D Work in a group. Read the examples in the chart. Then do your own research and complete the chart by listing things that you think seem much more or much less risky than they actually are.

Event	Perceived risk	Actual risk	Supporting data
Plane crashes	High	Low	1 crash for every 7.7 million commercial flights in 2021.
Car crashes	Low	Medium	Kills approx. 1.3 million people every year, or about 3,300 people a day.

E Work with a partner from a different group. Discuss your charts and answer the questions below.

- Is there anything that surprises you, or that you disagree with?
- Do you think the data is enough to change how people feel about the things in your charts? Why, or why not?

Checkpoint

Reflect on what you have learned. Check your progress.

I can ... understand and use words related to risk.

aversion **bias** **guaranteed** **intuition** **mental**
odds **outcome** **phenomenon** **probability** **rational**

- use idioms containing the word *odds*.
- watch and understand a video about irrational decisions.
- write notes about technical terms.
- understand technical terms while listening.
- notice language for helping listeners follow ideas.
- help a listener follow along as I explain a concept.
- collaborate and communicate effectively to identify and explain misunderstood risks.



LEARNING OBJECTIVES

- Use ten words related to risky behavior
- Understand different forms of the word *mature*

LEARN KEY WORDS

A  Listen to and read the passage below. Circle **T** for true or **F** for false.

- | | | |
|--|----------|----------|
| 1. Risk-taking in teenagers is a form of self discovery. | T | F |
| 2. Most teenagers take on more risk they can handle. | T | F |
| 3. Most teenagers engage in multiple-risk behavior. | T | F |

Risk-Taking and the Teenage Brain

Teenagers are often thought of as **daring**, or even **reckless**. They are known to be big risk-takers: open to new experiences, and unafraid of the **consequences** of their actions. But why exactly are teens wired this way?

For young people, risk-taking is an essential part of growing up. It is a way for teens to learn about themselves. As they **mature** and gain independence, they often seek new and exciting ways to test the boundaries of what they're capable of. They put themselves in unfamiliar situations, try challenging or even dangerous stunts, and—as they succeed or fail—discover new things about themselves that help them better forge their identities.

Risk-taking can obviously be dangerous if it goes too far, but fortunately, most teenagers know where to draw the line. However, there are some who are **prone to** engaging in what's called multiple-risk behavior: they take on more risk than they can handle, and often suffer long-term consequences as a result. These **vulnerable** teens are a minority, but it is nonetheless important that we recognize them and do more to help safeguard their futures.

B Work with a partner. Discuss the questions below.

1. Look at the photo. It shows a young skateboarder performing a stunt at the Ouse Valley Viaduct in the U.K. How risky is the activity he's doing, and why do you think he's doing it?
2. Do you think you take on more risk than other people your age? How often do you think about the potential long-term effects of the risks you take?

C Match the correct form of each word in **bold** in Exercise A with its meaning.

1. _____ the (often negative) effect of an action
2. _____ to grow older and/or wiser
3. _____ likely to do something
4. _____ easily harmed by something
5. _____ brave and willing to try new, sometimes dangerous, things
6. _____ likely to do dangerous things without thinking about what could go wrong

A skateboarder underneath the Ouse Valley Viaduct, the U.K.

Viewing and Note-taking

LEARNING OBJECTIVES

- Watch and understand a talk about teenagers and risk-taking
- Notice the pronunciation of digraphs and consonant clusters

D Read the excerpts from Kashfia Rahman’s TED Talk in Lesson F. Circle the meaning of the words in **bold**.

- “... the teen brain is still in the process of maturation, and this makes them **exceptionally** poor at decision-making, ...”
 - notably more than others
 - occasionally more than others
- “Habituation explains how our brains **adapt** to some behaviors, like lying, with repeated exposures.”
 - change to suit new conditions
 - protect us from harmful behavior
- “I took risks realizing that **unforeseen** opportunities often come from risk-taking.”
 - unfortunate
 - unexpected
- “Can positive risk-taking **escalate** with repeated exposures?”
 - become less over time
 - become more over time

E The word **mature** has different forms that can be used to talk about many different things. Read the sentences. Circle **V** (verb), **N** (noun), or **A** (adjective).

- | | | | |
|--|----------|----------|----------|
| 1. This cheese is very mature , so it’s not to everyone’s taste. | V | N | A |
| 2. Most animals don’t take as long as humans to fully mature . | V | N | A |
| 3. She’s young, but she’s shown a lot of maturity . | V | N | A |
| 4. Despite his age, he’s still rather immature . | V | N | A |
| 5. Their immaturity isn’t surprising. They’ve never had to work for anything. | V | N | A |
| 6. Their excitement was premature . The event had to be canceled. | V | N | A |

COMMUNICATE

F Note an example next to each prompt below. Discuss with a partner.

- a daring thing that you did _____
- a problem that escalated quickly _____
- a reckless mistake made by you or someone else _____
- someone who’s exceptionally good at something _____
- an unforeseen consequence of something you did _____

G The passage in Exercise A talks about risk-taking as a form of self discovery. Discuss with a partner.

- What are some risks you’ve taken that have helped you learn more about yourself?
- Can we learn from both the positive and negative consequences of risk?

TED TALKS

In 2017, while she was still in high school, **Kashfia Rahman** won a prestigious award at an international science fair for her research on teenage risk-taking. In her TED Talk, *How Risk-Taking Changes a Teenager’s Brain*, Rahman talks about her research, as well as how her own risk-taking made her a stronger, more resilient person.

BEFORE VIEWING

A Read the information about Kashfia Rahman and think about the passage you read in Lesson E about teenage risk-taking. What are some questions you think Rahman’s research tried to answer? Discuss with a partner.



WHILE VIEWING

B ▶ **LISTEN FOR MAIN IDEAS** Watch Segment 1 of Kashfia Rahman’s TED Talk. Complete the notes below.

WHAT SHE NOTICED:
 The more risks teens took, _____

WHY WAS THIS?
 One explanation was that _____

But this didn’t explain why:
 – teens are more vulnerable than _____

– not all teens _____

KASHFIA’S THEORY:
 Habituation: As teens take more risks, _____

C ▶ **LISTEN FOR DETAILS** Watch Segment 2 of Rahman’s talk. Answer the questions.

- How did Rahman measure people’s risk-taking behaviors?

- What was the purpose of the EEG headset?

- How did habituation affect people’s emotions?

- What does Rahman say is needed to limit teenage risk-taking?

WORDS IN THE TALK

neuroscientist (n) someone who studies the brain
desensitization (n) becoming less responsive to or affected by something
perfect storm (phr) a set of circumstances where many bad things happen at the same time

D ▶ **LISTEN FOR DETAILS** Watch Segment 3 of Rahman’s TED Talk. Discuss the questions below with a partner.

- Why is it ironic that Rahman’s research project taught her to take risks?
- In what ways did positive risk-taking benefit Rahman?
- What did Rahman identify as a possible idea for her next research project? How does it relate to her original idea?

AFTER VIEWING

E **SUMMARIZE** Rahman’s TED Talk can be divided into six parts. Read the headings and write notes for each part. Then compare notes with a partner.

1 Rahman notices something	2 She begins her research	3 The results are eye-opening
4 She suggests two changes	5 She reflects on her growth	6 She raises a question

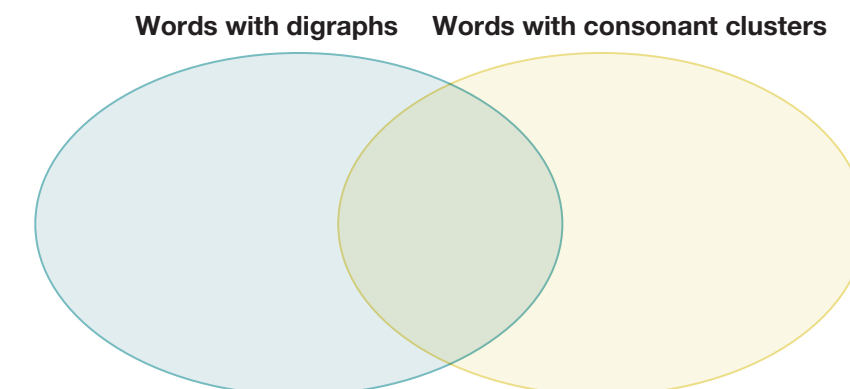
PRONUNCIATION *Digraphs and consonant clusters*

F ▶ Listen to and read the excerpt from the TED Talk. Then look at the bold consonant pairs. Find and underline the digraph.
 “This **st**ill image of me **ex**perimenting in my school **li**brary may seem ordinary, but to me, it **r**epresents a sort of **in**spiration.”

G Work with a partner. Look at the words in the box and find the pairs or groups of consonants. Are they digraphs or clusters? Do some words have both? Use your ideas to complete the Venn diagram.

children	club	driving	geography
phase	risk	searching	thrill

Pronunciation Skill
Digraphs and Consonant Clusters
 English words often have two or more consonants next to each other. When the consonants are spoken as one new sound (e.g., **breath**), it’s called a digraph. But when each sound is pronounced but blended together quickly (e.g., **string**), it’s called a consonant blend or cluster.



Thinking Critically

LEARNING OBJECTIVES

- Interpret an infographic about risk assessment
- Synthesize and evaluate ideas about risk, consequence, and reward

ANALYZE INFORMATION

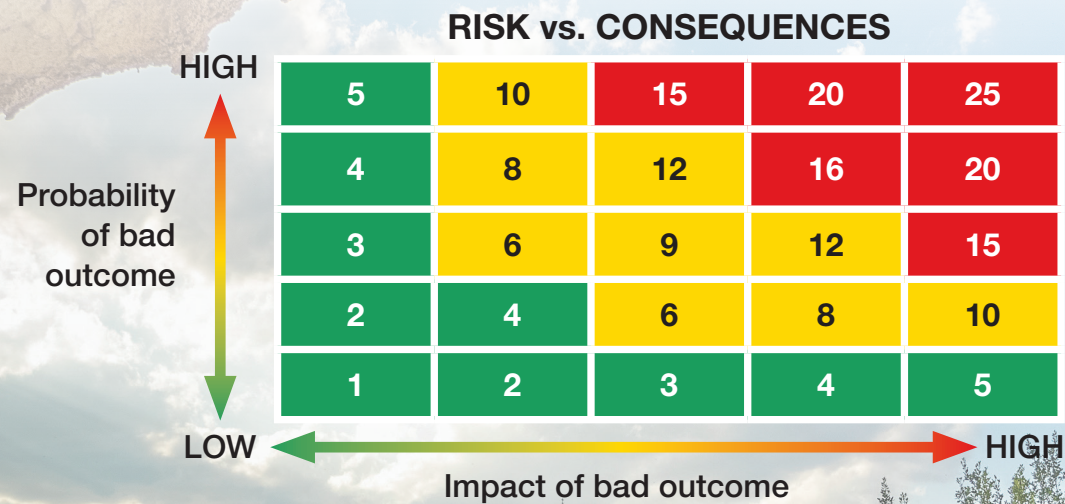
A Look at the three risks below. Which would you be most likely to take? Discuss with a partner.

- Quit your job and start your own business.
- Quit your job to travel around the world.
- Work or study in a country you know little about.

B Look at the infographic and answer the questions. Discuss your answers with a partner.

- What do you think the chart is for?
- How does the chart work? Write down instructions for using it.
- In what situations would the chart be useful?

Is it worth it?



A hiker looks out at the city of Matera, in Italy.

C Work with a partner. Look at the three risks in Exercise A. Think of two things that could go wrong for each risk. Then use the infographic in Exercise B to work out a risk value for each outcome.

	Possible bad outcomes	Impact	Probability	Risk value
Risk 1				
Risk 2				
Risk 3				

D Listen to a talk about risk and reward. Circle **T** for true or **F** for false.

- Both the infographic and the talk touch on the consequences of risk-taking. **T** **F**
- Both the infographic and the talk touch on the rewards of risk-taking. **T** **F**
- People are more likely to take big risks if the rewards are high. **T** **F**
- The rewards we get from risk-taking need to be tangible. **T** **F**

E Look at the risks in Exercise A. Think of two possible rewards for each situation.

Risk 1 _____

Risk 2 _____

Risk 3 _____

F Work with a partner. Look at your answers in Exercises C and E. Does thinking critically about the consequences and rewards associated with the three risks in Exercise A change how you feel about them? Why, or why not?

COMMUNICATE *Synthesize and evaluate ideas*

G Think about Kashfia Rahman's TED Talk in Lesson F. Discuss the questions below with a partner.

- Rahman wants to help teens make better decisions about risk. Could the ideas in this lesson help? Why, or why not?
- Rahman talks about positive risk-taking. How would you define a positive risk, and how could the ideas in this lesson help teens be more open to positive risks?

H In her TED Talk, Rahman talks about policies to limit teenage exposure to negative risks. What might these policies be? How would they work? Discuss with a partner, using ideas from this lesson, and the rest of the unit.

I wonder if first we need to come up with a list of typical risks?

That's a good idea. Because we need to think about how to limit each one ...

Putting It Together

LEARNING OBJECTIVES

- Research, plan, and present on how risk-taking can be both harmful and beneficial
- Use anecdotes to make presentations more relatable

ASSIGNMENT

Group presentation: Your group is going to give a presentation on how risk-taking can be both beneficial and harmful.

PREPARE

- A** Review the unit. Discuss with a partner.
1. In what ways are people sometimes illogical when thinking about risks?
 2. What do we need to consider in order to assess risk more rationally?
- B** Work with your group. Think about your lives. What are some risks you took and didn't take? Did you regret taking or not taking these risks? Note down one or two examples for each box below.

RIGHT DECISION

1 Risk I took
2 Risk I didn't take

WRONG DECISION

3 Risk I took
4 Risk I didn't take

- C** Plan your presentation. Choose one example from each box in Exercise B and complete the chart below.

	Risk 1	Risk 2	Risk 3	Risk 4
Description				
Potential consequences vs. rewards				
Right decision? Why, or why not?				
Would I do the same thing today?				

- D** Look back at the vocabulary, pronunciation, and communication skills you've learned in this unit. What can you use in your presentation? Note any useful language below.

- E** Below are some ways to structure your anecdotes and make them engaging. Think about how you can add details like this to the anecdotes in your presentation.

- Set the scene: describe interesting parts of the where, when and why of your story.
- Explain the problem: describe what you thought and felt.
- Describe the outcome: focus on what was shocking, surprising or interesting.
- Reflect: share what you learned. Can others learn from your experience?

Presentation Skill Using Personal Anecdotes

In Kashfia Rahman's TED Talk, she uses personal stories, or anecdotes, to make her talk more interesting and relatable. When using an anecdote, be descriptive. Emphasize how things seemed to you, and how you felt at the time.

- F** Practice your presentation. Make use of the presentation skill that you've learned.

PRESENT

- G** Give your presentation to another group. Watch their presentation and evaluate them using the Presentation Scoring Rubrics at the back of the book.
- H** Discuss your evaluation with the other group. Give feedback on two things they did well and two areas for improvement.

Checkpoint

Reflect on what you have learned. Check your progress.

- I can ...** understand and use words related to risky behavior.
- | | | | | |
|---------------|--------------------|-----------------|-------------------|----------------------|
| adapt | consequence | daring | escalate | exceptionally |
| mature | prone to | reckless | unforeseen | vulnerable |
- understand different forms of the word *mature*.
- watch and understand a talk about teenagers and risk-taking.
- notice the pronunciation of digraphs and consonant clusters.
- interpret an infographic about risk assessment.
- synthesize and evaluate ideas about risk, consequence, and reward.
- use personal anecdotes to make presentations more relatable.
- give a presentation on how risk-taking can be both harmful and beneficial.