Speaking of Critical Thinking

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NAN'UN-DO

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Preface

Welcome to **Speaking of Critical Thinking**, a textbook that provides you with an understanding of, and practice with, critical thinking. Critical thinking is not taught very much in Japan, but it is a very important life skill. While this textbook provides several short reading passages about the various steps and aspects of critical thinking, its main focus is on student experience with logic, creative thinking, and communication. It includes many case studies and communication activities based on the belief that one "Ah hah!" experience is worth several "Uh-huh" moments. The text is designed for a student-centered class for active communication and is especially suited for pair work and small-group work.

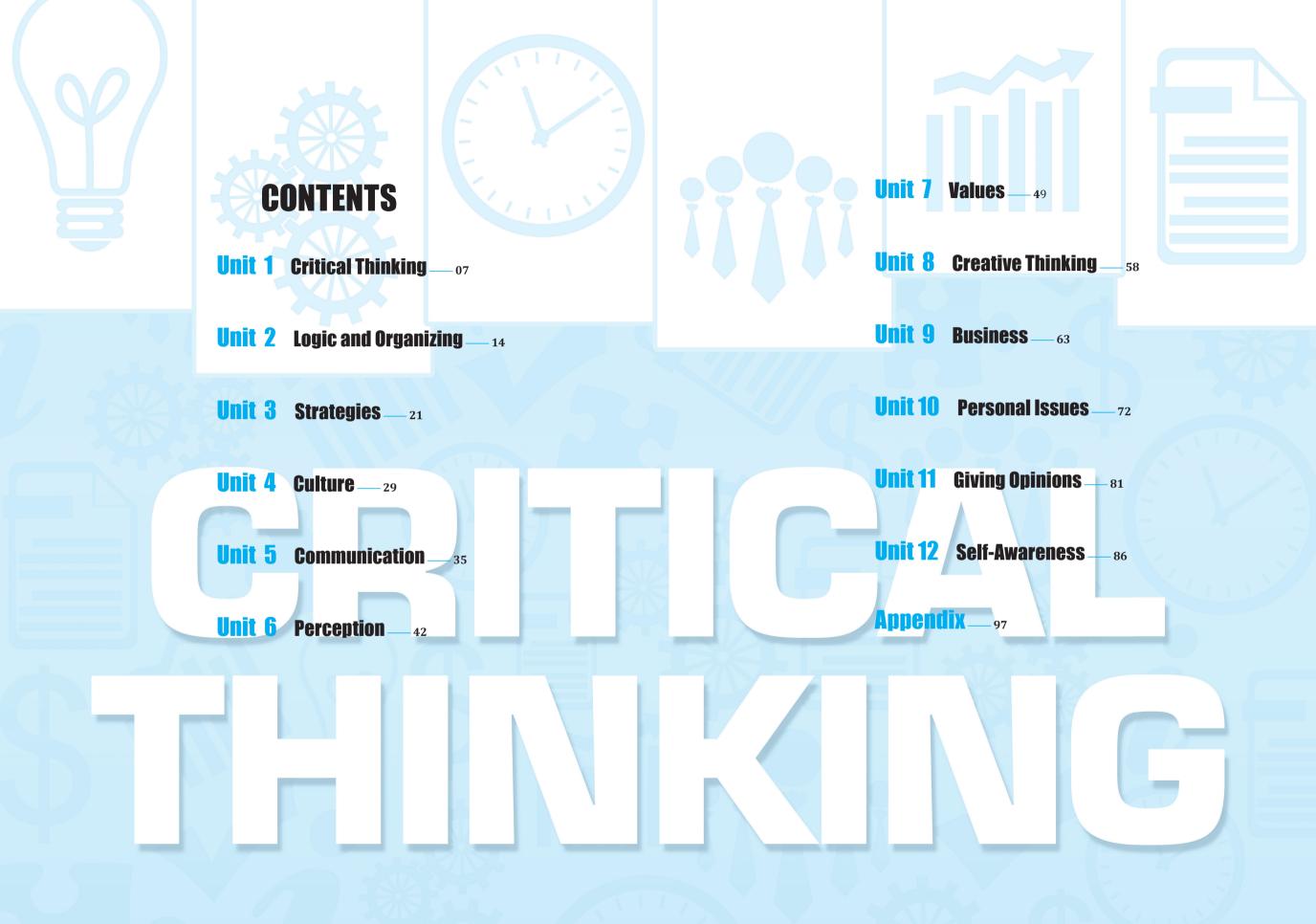
To benefit most from this book, please remember: Don't be afraid of making mistakes. Making mistakes and learning from them is how you can improve your critical thinking as well as your English communication skills.

I enjoyed writing this book and I hope that you will have an exciting time learning and speaking about critical thinking.

Speaking of Critical Thinking

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(idea)

1 Reading: Critical Thinking

リーディング:クリティカル・シンキンク

The world is changing faster and faster, creating new sources of information and new challenges for everyone. For this reason, critical thinking is more important than ever before. We all need a systematic way* to examine new information, to come up with* various options to solve problems, and finally to use a logical approach to choose the best solutions.

Critical thinkers do not just accept information passively. They question the information and the sources and make independent decisions*. They try to see the whole picture* by considering different arguments and points of view. Moreover, they avoid jumping to conclusions* when making important or complex* decisions. Instead*, they try to understand a problem clearly, analyze it, and identify* various solutions before picking the best one.

This book provides a variety of case studies and activities to help you improve your critical thinking and problem-solving skills^{*}. In addition, you will have practice in communicating your opinions about, and solutions to, different issues. Remember that critical thinking is not a natural talent. It is a skill to be developed. We can all improve our critical thinking and communication skills with practice!

* systematic way 系統的な方法 come up with 考え出す independent decision 自主的な判断 whole picture 全体像 jump to conclusions 慌てて結論を出す complex 複雑な instead 代わりに identify 確認する problem-solving skills 問題解決スキル

The basic steps for critical thinking are:

- 1. Gathering important information about a problem.
- 2. Deciding what information is important and what is true (or not!).
- 3. Considering your strengths, weaknesses, values, and biases.*
- 4. Imagining the outcomes for various problem-solving choices.
- 5. Using logic to make the best plans and choices.
- 6. Imagining creative and sometimes unique solutions.
- 7. Explaining things clearly and presenting opinions well.
- 8. Learning from the results of your decisions, from both the successes and the failures.

*bias 偏見、先入観

True or False 内容把握

Write "T" if the sentence is true and "F" if the sentence is false. 以下の文章が内容と合っていれば "T"、合っていなければ "F" を空欄に書きましょう。

- 1. Determining what information is true or not is an important life skill.
- 2. It is important to consider various options before choosing one solution.
- _____ 3. It is important to make decisions about complex problems quickly.
- 4. If you are not good at critical thinking now, you probably never will be.
- 5. Being self-aware* is an important part of critical thinking.
- 6. Imagination is a useful skill for critical thinking.
- _____ 7. Coming up with good solutions is not enough. You also need to communicate them clearly.
- 8. Failure is never good or useful.

*self-aware 自覚している

2 Case Study: The Academic Advisor

ケーススタディ:アカデミックアドバイザー

A Japanese student named Risa came to her academic advisor at her university and said that she was very depressed.

"What's the problem?" the advisor asked?

"I don't like my classes. I'm tired and unmotivated.*"

"Many students feel that way. Don't worry. You're going to graduate in just one more year, and then you can start your new life as an elementary-school teacher."

"But I don't want to be a teacher. I never wanted to be a teacher."

"Really? Then why did you choose to study Education?"

"Because my parents pushed me to become a teacher," the student answered. "They know I like children, and they told me it was a sure way to get a job."

The young woman had thought about changing her major* after her first year of study, but she was afraid it would have taken her another year to graduate. The delay* might have reduced her chances to get a job. Also, she believed her parents would have been unhappy about the extra expense and would have considered their daughter irresponsible.*

The advisor had to be careful what she said to the student, for her department did not want to lose any students. Also, the university pushed graduates in the Education Department to become public-school teachers because it was good for the university's reputation.*

"Don't worry so much. You need to endure.* I'm sure you can do it," the advisor told the student.

After her talk with the advisor, the student was even more depressed and thought about dropping out* of school.

*unmotivated やる気のない major 専攻 delay 遅れ irresponsible 無責任な reputation 評判 endure 我慢する drop out 退学する

Questions to consider:

- 1. Why did this problem happen?
- 2. Is this a common or uncommon problem in Japan? Why?
- 3. What mistakes did the student make? What about her advisor and parents?
- 4. What do you think the student should do now?



3 Pair Work: Out of Place

ペアワーク:仲間外れ

Each of the word groups below has one word that does not belong. Find the word and circle it. Then write down why you think that word is out of place. The first one has been done for you. 1から10の単語群の中にひとつだけグループに属さないものがあります。その単語を〇で囲み、属さない理由を書きましょう。

1. computer, printer, copy machine, pen <u>The other three items are office equipment.</u>
2. golf, swimming, soccer, tennis
3. beans, peaches, strawberries, bananas
4. arm, eyes, nose, ears
5. India, Japan, The United States, Africa
6. teacher, engineer, student, doctor
7. dog, lion, elephant, giraffe
8. run, walk, jump, jog
9. cello, piano, violin, guitar
10. leave, come, depart, go

4 Reading: Advertising

リーディング:広告

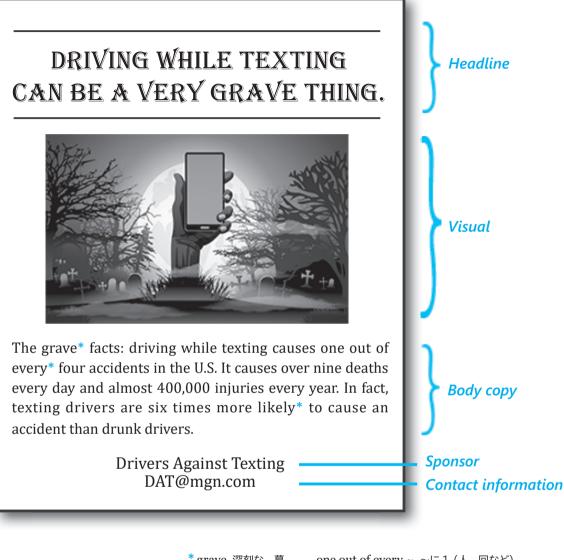
Advertising is a useful tool for understanding the steps of critical thinking. We can learn from how advertisers* communicate a message to people, often in a very creative and effective way. The people working in advertising companies go through* various steps of critical thinking in order to make their advertisement effective. They also have to work as a group, meaning communication and teamwork are important. Advertisers have a very clear goal: to get the target market* to buy their products or to get them to take an action.*



We can look at ads and consider them from different perspectives,* asking such questions as, "What is the product or message?" "Who is the advertisement trying to communicate to (in other words, who is the target market)?" "What is the connection between the headline and the visual?" and "What makes the advertisement effective or ineffective?*" Often, the headline and copy catch our interest*, sometimes with hidden or double meanings.* The language of advertisements is carefully chosen. It is often informal,* like the language used between friends, because this way of communicating makes us feel closer to the product or advertiser.

> * advertiser 広告主 go through 経る target market 目標とする市場 take an action 行動を起こす perspective 見方 ineffective 効果のない catch one's interest (人の) 興味をつかむ double meanings 二通りに取れる意味 informal 堅苦しくない、くだけた

Key Words



* grave 深刻な、墓 one out of every ~ ~に1(人、回など) ~ times more likely ~ ~倍も~する可能性が高い

Questions to consider:

- 1. Why do you think headlines and visuals are usually large in advertisements?
- 2. What makes an effective advertisement?
- 3. What is the sponsor of this ad most concerned about?

5 Activity: Analyzing an Advertisement アクティビティ:広告を分析する

Look at the advertisement on page 11 and answer the following questions. 11ページの広告を見て、以下の質問に答えましょう。

- The word "grave" in the headline has two different meanings. What are they? Meaning #1: Meaning #2:
- 2. What is the connection between the headline and the visual? What message do they send to the reader?
- 3. How does the body copy support the headline and the visual?
- 4. Is this an effective advertisement? Why or why not?

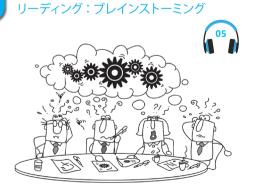
6 Group Discussion: Decision Making グループディスカッション:意思決定

Questions:

- 1. How do you make important decisions in your life? Do you have a usual approach or system to make decisions?
- 2. Are you more logical or do you also use your intuition* when making decisions?
- 3. What types of decisions are you usually good at? What types of decisions are you not so good at? Why do you think you have these differences?
- 4. Are you creative? How do you show your creativity?
- 5. Are you good at communicating your ideas? Are you uncomfortable with speaking in front of groups?

7 Reading: Brainstorming

Brainstorming is a technique to help people come up with original ideas or solutions to tricky problems. It encourages* people to be open to any and all ideas, including ideas that may seem unusual at first. Brainstorming is often a group activity in which participants* are asked to avoid criticizing or even analyzing ideas at the initial* stage, for such judgments* can get in the way of* original thinking and limit



*intuition 直観力

creativity. Instead, brainstorming provides an open, supportive environment that encourages participation by all members. Evaluation* and selection of ideas are done at a later stage.

Brainstorming is not just an effective way to come up with original ideas and solutions. It can also spark fresh ideas and approaches at a later stage when ideas are more thoroughly* analyzed.

* encourage 奨励する participant 参加者 initial 初期の judgement 判断 get in the way of ~ ~の妨げになる evaluation 評価 thoroughly 十分に

8 Activity: Setting Goals アクティビティ:ゴール設定

In the following activity, you are to brainstorm a list of goals you would like to achieve. The goals can be big or small, simple or difficult, realistic or idealistic, specific or vague. Do not judge your ideas, but instead let them pop up naturally into your mind. Write down at least eight in the spaces below.

以下のアクティビティでは、自分が達成したいゴールのリストを考えます。ゴールは大きくても小さくても、簡単で も難しくても、現実的でも非現実的でも、具体的でもあいまいでもかまいません。ゴールとして適切であるかない かを考える必要はありません。自然に思いついたものを最低8個以上書き出してみましょう。

Examples: I want to lose weight. / I want to travel overseas. / I want to get better grades.

1.	
3.	
4.	
8.	
9.	

ペアワーク:なぞなぞ

9 Pair Work: Riddles

- 1. Two mothers and two daughters sit together at a table in a restaurant. However, there are only three people at the table. How can this be?
- 2. A doctor was driving his car on a stormy night when he saw a car hit a tree on the road in front of him. He ran to the car and saw a young man in the driver's seat.

"Oh, no!" the doctor said. "It's my son!" He drove his injured son to the hospital and

helped him into the emergency room. "My son was in a car accident!" he told a nurse.

The nurse put the man in a wheelchair and pushed him into another room. Another doctor came into the room and said "Oh, no! My son!" How is this possible?

3. What can you hold in your right hand but never in your left hand?





Unit 2 Logic and Organizing



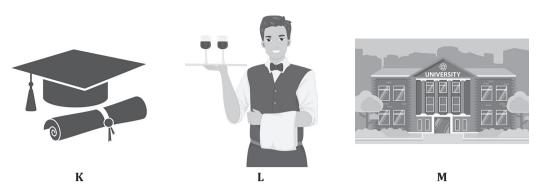
1 Activity: Life Challenge

アクティビティ:人生の課題

Look at the pictures (A to M) below, which tell the story about the challenges of a student named Greg. Use the pictures to put the sentences in the correct order, numbering them from 1 to 13. The first one has been done for you.

A から M の絵は、Greg という学生が経験した人生の課題を表したものです。絵を参考にしながら、ストーリーの 筋が通るよう空欄に文の順番 (1~13) を入れましょう。





- Greg graduated from high school. He was happy because he had saved thousands of dollars.
- He understood their situation and thought about what to do, writing the ideas down on a list.
- The counselor explained that costs at two-year community colleges were much cheaper than private universities, so he suggested that Greg attend the local community college first.
- His father's medical costs were high, so his parents would not be able to help Greg with future university costs.
- After two years at the community college, he transferred to the university of his dreams. The tuition* was expensive, but he had saved enough money.
- He discovered the costs of attending the university were very high, so he knew he would have to save up a lot of money.
- 1 Greg had always planned to go to university since he was a kid.
- ____ Third, Greg looked for part-time job openings.* He wanted to start saving money.
- _____ First, he checked online to see what the tuition and living costs would be for the private university he hoped to attend.
- He found a job as a dishwasher* in a local* restaurant and worked on weekends and during summers.
- He continued to work at the restaurant while he studied at the community college, but as a waiter.
- However, when he was in high school, his father had a bad car accident, which changed his plans.
- Second, he made an appointment with a high-school counselor and asked his mother to join him.
 - *tuition 学費 job opening (仕事の) 空き dishwasher 洗い場担当 local 地元の

Questions:

- 1. What steps of critical thinking did Greg use?
- 2. Why was Greg successful?
- 3. Did these experiences somehow handicap Greg or did they make him stronger?

2 Activity: Organizing Words アクティビティ:順序を決める

Below are eight lists with four words each. Arrange the words in a way that is logical to you. Then write the type of system (i.e. alphabetical order, chronological order, etc.) you use for organizing words. Use different organization approaches when possible.

以下の8つのリストには、それぞれ4つの単語が書かれています。どのような理由で(例:アルファベット順、時 系列など)順序を決めたのかを書いてみましょう。もしできれば異なる方法を使って順序を決めてみましょう。

Examples: adult teenager baby child

adult, teenager, baby, child Order : baby, child, teenager, adult. Ordered by : Age (chronological order) birdhouse, house, tent, castle Order : Ordered by : Size or Order : birdhouse, castle, house, tent Ordered by : Size or Ordered by : Alphabetical order 1. sunset, afternoon, sunrise, night	
Order : Ordered by :	
2. Japan, China, Canada, New Zealand Order : Ordered by :	
3. William Prout, Judith Gomez, Gregory Stone, Stella Lin Order : Ordered by :	
4. leaf, seed, branch, tree Order : Ordered by :	
5. hour, day, minute, second Order : Ordered by :	
6. neck, chest, stomach, head Order : Ordered by :	
7. strawberries, grapes, watermelon, bananas Order : Ordered by :	
8. university, high school, elementary school, middle school Order : Ordered by :	

3 Activity: Finding a Connection アクテビティ:共通点を見つける

The following pairs of words may look like they are unrelated at first glance, but try to write two ways that they have something in common.

以下のワードペアの共通点を2つ探して書いてみましょう。

1. puppy/baby	
A:	
B:	
2. computer/smartphone	
A:	
B:	
3. newspaper/television	
A:	
B:	
4. strawberry/tomato	
B:	
5. water/wind	
В:	
6. bubble/balloons	
-	
B:	
7. 5/9	
B:	
8. lion/gorrila	
, e	
B:	
9. earth/moon	
В:	
10. fireman/doctor	
,	
B:	

4 Case Study: Logic

ケーススタディ:論理性



A British man. Charles, read the editorial in the Englishlanguage version of a large Japanese newspaper. The English in the article was a little strange and too formal, but it was the style of writing that was a real mystery to Charles. The purpose of the article was unclear at first, and the writer wrote about several different issues, some seemingly unrelated to each other. However, the conclusion finally made the opinion of the writer and purpose of the article clear.

"Why did the writer wait until the end to make his point clear?" Charles wondered. "What a frustrating article!"

Questions:

1. Why do you think the article was written in this style?

2. Why was Charles so frustrated?

5 Activity: Find the Statement

アクティビティ:主張を見つける

Find the statement in each of the following lists of sentences and write "S" in the blank. Then find three support sentences and write "SS" in the blanks. Finally, find the sentence in each list that has no relationship to the others and write "X" in the blank.

以下のリストの中で、主張文には "S" を、裏付け文には "SS" を、他と全く関係のない文には "X" を空欄に書き入 れましょう。

- A. Our stress becomes reduced.
 - Research shows that exercise is good for us.
 - Our physical health improves.
 - Vegetables are good for our health.
 - _____ We have more strength and energy.
- Rich people are usually happier than poor people. В.
 - Taking trips and sharing experiences with others make us happy.
 - The way that we spend money affects our happiness.
 - Research shows that giving to others increases our life satisfaction.
 - Buying expensive things does not make us happier in the long run.
- C. ____ They feel less lonely by having a cat, dog, or other pet.
 - Caring for a pet is fun and gives more meaning to their lives.
 - Research shows that elderly people with pets are often healthier and live longer.
 - Dogs have better personalities than cats.
 - Having a pet can improve the lives of elderly people who live alone.

6 Activity: Support Sentences アクティビティ:裏付け文

Choose one of the statements below (check the box) and then write four supporting sentences for that statement.

以下の主張文の中から1つ選び、その意見に対する裏付け文を4つ作りましょう。

Japan needs to allow more foreign workers into Japan.

The government should tax plastic garbage.

Tabaco should be banned in all public places.

Parents should not give smartphones to children under 10 years old.

Parents should not send their children to cram schools.

- 1. _____ 2.
- 3. _____
- 4.

7 Activity: Setting a Goal アクティビティ:ゴール設定

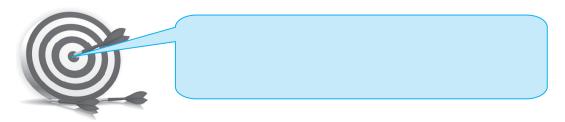
Look back at the list of goals you brainstormed in Activity 8 of Unit 1 on page 13. Choose one of these goals: a larger goal that is important to you would be the best. You may come up with a new goal if you would prefer. Make sure your goal is specific and clear. This makes your goal easier to achieve. It also helps you create a plan to reach your goal, which we will do in a later activity.

Unit 1の Activity 8 (p.13) でゴール設定についてブレインストーミングしたことを思い出し、そのゴールの中から 1つを選んでください。できれば自分にとって最も重要な大きめのゴールを選びましょう。改めて新しいゴールを作っ ても構いません。自分のゴールが具体的で明確であることを確認しましょう。明確であるほどゴールを達成しやす くなるからです。また後で行う、ゴール達成のための計画を作るアクティビティがやりやすくなります。

Vague Goal	Clear goal
I want to lose weight.	I want to lose six kilos.
I want to save money.	I want to save ¥100,000 by the end of this year.
I want to become good at English.	I want to pass Eiken Grade Pre-1 by next year.

Write the goal in the box below, and write why this goal is important to you. Be prepared to share your goal and its importance to you.

下の枠内にゴールとなぜこのゴールが自分にとって大事なのかを書き入れ、それらをシェアできるようにしてください。

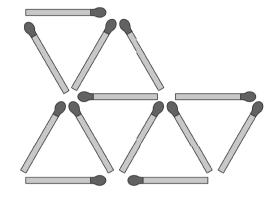


8 Pair Work : Logic Games

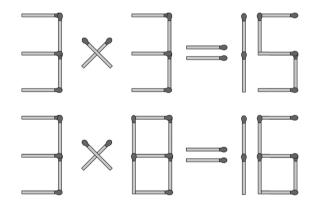
ペアワーク:論理性ゲーム

Try to solve the three problems below. 以下の3つの問題を解いてください。

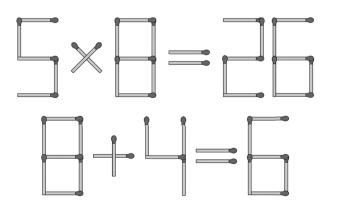
A. Take away three matchsticks to make three triangles.



B. Move one matchstick in each equation to make them correct.



C. Take away three matchsticks in each equation to make them correct.



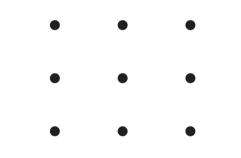


1 Activity: Connecting the Dots

アクティビティ:点と点を結びつける

"Connecting the dots" is an English expression that means to try to make sense of information that is incomplete. We often do this during our daily lives. Can you tell what the picture to the right is by mentally "connecting the dots"?

"Connecting the dots"とは、不完全な情報を繋げて意味を見出す、という意味です。これは私たちが日常行っていることです。点と点を繋がずに右の絵が何か想像できますか?



 $25 \bullet \qquad \bigcirc \qquad \bigcirc \qquad \bigcirc \qquad \bullet 9$ $23 \bullet \qquad \qquad \bullet 11$ $21 \bullet \qquad \bullet 13$ $19 \bullet \qquad 17 \qquad \bullet 15$

Unft8

Strategies

To the left is a famous puzzle that requires you to connect the dots. There are nine dots. Connect them with four straight lines. However, you cannot lift your pen or pencil when drawing the four lines.

左の絵は点と点を結びつけないとわからないパズルで す。ペンを紙から離さずに、9つの点を4本の線で結ん でください。

When we face a new problem, we sometimes must "think outside the box," which is to look at things in a fresh way and come up with a good solution. We have to use our imagination and be flexible. Thinking outside the box helps us think creatively and become better critical thinkers.

