

まえがき

Inquiring Minds は、カナダのオンタリオテレビ局で作成された、日常生活のなかで人々が遭遇するいろいろなことから、面白く、やさしく、科学的に分析した映像番組です。

本書は Inquiring Minds の番組のなかから、14のトピックを抜粋して、それを素材にし、大学の英語の授業でビデオ教材として利用できるように作成したものです。

日頃の生活のなかで、あらためて「どうしてそうなるの?」と問われてみると、とっさに答えられないことは多いと思います。たとえば、「ゴルフボールの表面はなぜでこぼこになっているの?」「海の水はなぜ塩辛い?」「どうして時計は右周りなの?」などの疑問に答えられますか。

このビデオ教材は、こうした素朴な疑問に Mike, Chris, Persis という3人の Native Speakers が、わかりやすい、ユーモアに富んだ英語で答えてくれます。

本書のそれぞれの Unit の構成は次のようになっています。

① Warm Up

A. Topic Questions

B. Pronunciation

C. Vocabulary

② Summary

③ Watch the Video (VIDEO Script)

④ Comprehension Questions

⑤ Dictation-Cloze

⑥ English Composition

① Warm Up は、ビデオの ③ Watch the Video (VIDEO Script) の理解を助けるための練習問題です。

A. Topic Questions ではそれぞれの Unit の話題になじむための英語の質問です。全部で3問あります。

B. Pronunciation では、③ Watch the Video に出てくる少し難しいと思われる語の発音練習をします。意味は ③ Watch the Video の本文の中に脚注として与えられていますので、参考にしてください。③ Watch the Video を聞く前に、あらかじめ単語の発音と意味を学習しておく、聞き取りと内容の理解に役立ちます。

C. Vocabulary では B. Pronunciation の語句を使って、8つの文の空欄を補充する問題です。ビデオの内容をよりよく理解するための確認問題です。

② **Summary** は、③ Watch the Video (VIDEO Script) の理解を助けるために、VIDEO Script の大意を平易な英語で書いたものです。Native Speaker がしゃべる英語の内容を、あらかじめ知っておくと、内容理解に役立ちます。

③ **Watch the Video** (VIDEO Script) はビデオ映像の中で使われている英語をそのまま書き写したものです。理想を言えば、印刷された文字を見ずに音声を聞いただけで理解することですが、それは難しいので、発話された部分をすべて文字に印刷しています。英語が聞き取れないとき、また、意味を確認するときに利用してください。読みの練習としても利用できます。

④ **Comprehension Questions** は ③ Watch the Video (VIDEO Script) の内容理解を問うものです。全部で6問あります。a, b, c の3つの選択肢の中から、最もふさわしいものを選んで答えます。

⑤ **Dictation-Cloze** は、③ Watch the Video (VIDEO Script) の最後に近い部分をとりあげて、音声を聞きながら、発話されている言葉を正確に書き取る問題です。実際に文字を書き取ることによって、内容理解の確認ができます。また、正しい英語の綴りもマスターできます。

⑥ **English Composition** では、与えられたヒントの箇所を手がかりに、英文を作成することになります。括弧の中に、英作する上で参考になる箇所を示していますので、そのあたりを読み返して英作にチャレンジしてみてください。

本書の作成にあたっては、成美堂の佐野英一郎社長、木村臨氏にご尽力いただきました。感謝申し上げます。

平成15年6月

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Why is Gold so Valuable?



1 Warm Up

A. Topic Questions

Answer the following questions in English.

1. What are some things that are made of gold?
2. What things made of gold would you like to have?
3. Why do you think gold is considered valuable?

B. Pronunciation



Practice the pronunciation of the following words. All of them appear in the video. The meaning of each word is shown in the footnotes in Watch the Video (VIDEO Script).

scarce	refine	goldsmith*	ornament*	property*
heirloom*	tarnish*	corrode*	virtually*	reflector
infrared	quest*	alchemy	launching pad	vein

C. Vocabulary

Fill in the blanks with the appropriate words from the words marked with an asterisk in B. Pronunciation.

1. One _____ of copper is that it can carry electricity.
2. This old clock is an _____ handed down to us from our ancestors.
3. Stainless steel does not _____. That is, it doesn't lose its brightness.
4. The _____ for gold brought many miners to California.
5. This rock has _____ no gold in it.
6. That golden _____ was once worn by the Queen.
7. Iron will _____ and lose its strength if it isn't protected.
8. The fancy vase was made by a famous _____ .

2 Summary

The following is a brief summary of Watch the Video (VIDEO Script). Try to understand the main points.

There are six reasons why gold is valuable. First, gold is attractive. It is shiny and reminded ancient people of the sun. Second, gold is hard to find. It is surprisingly scarce compared with other metals. Third, gold is easy to mine and refine. No heavy machinery is needed to do so. Fourth, gold is easy to make into different shapes. That is why people make it into fancy jewelry. Fifth, gold is long-lasting. It doesn't change into other metals or lose its beauty. Sixth, it reflects the sun's heat.

**Watch the Video** (VIDEO Script)

1-02

Why is Gold So Valuable?

Mike: In sickness and in health, till death do you part. And now the ring, please.

Chris: This may not be the first thing you'd think of at a wedding, but why are wedding rings always made out of gold? Why not silver or **copper** or **brass**? What's so special about gold? Why is gold the most precious metal?

This desire for gold is not a recent thing. As far back as 3,000 BC, gold had already become the metal of choice. The **pharaohs** of ancient Egypt **lined** their temples **with** the stuff. But why gold?

It certainly is an attractive metal—nice and shiny. And that gold color reminded early man of the sun—that symbol of heat, life and power. But there must be more to it than that.

For something to have value, it has to be **scarce**. And unlike, well, sand, gold has always been scarce. There's just not a lot of it around. In fact, if you put together all the gold taken from the earth during all of recorded history, it would only make a cube fifteen meters square. More steel is poured in one hour than gold has been poured since the beginning of time. So, gold is shiny and scarce, but so are a lot of other metals.

Gold had another advantage. You didn't need heavy machinery and **blast furnaces** to collect and **refine** it. If you knew where to look, you could find it lying at the bottom of a riverbed. Compared to other metals, gold is extremely soft. And that's important, because it meant the early **goldsmiths** could easily shape gold into **ornaments**. I mean, what good would a shiny piece of metal be if you couldn't make it into something?

Seventy-five percent of the world's gold production is used to make jewelry—earrings, watches, chains, and of course, rings. But you rarely use

►Notes

copper 「銅」 **brass** 「真ちゅう」 **pharaoh** 「古代エジプトの王」 **line ~ with... = cover ~ with...** **scarce** 「めずらしい」 **blast furnace** 「溶鉱炉」 **refine** 「～を精錬する」 **goldsmith** 「金細工職人」 **ornament** 「装飾品」

pure gold to make jewelry, because it's too soft. You wouldn't want a ring that you could bend out of shape. So we mix the gold with other metals like silver, copper, nickel or **zinc** to make it harder.

30 The purity of these gold mixtures is measured in **karats**. Pure gold is known as twenty-four-karat gold. An eighteen-karat gold ring means it's eighteen parts gold and six parts other metals. Fourteen-karat gold is fourteen parts gold and ten parts other metals, and so on. So, the higher the karat, the more gold it contains, and the more it costs.

35 But there's still one more **property** that really makes gold **stand out** from the other metals. We all know what happens to steel when it's exposed to air or water. It **rusts**. Now, for something to be valuable, it has to also have **longevity**. Imagine a family **heirloom** that rusts and falls apart. I don't think so.

40 Now, not all metals rust like this, but most do react in some way to air or water. Copper turns green. Silver turns black. Gold is the only pure metal that doesn't rust or **tarnish**. Water and air have no effect on it. Even gold recovered from shipwrecks that's been underwater for hundreds of years looks the same as it did on the day it went under. So, of all its
45 properties, perhaps the biggest reason for gold being the most precious metal is its chemical stability. It doesn't rust, tarnish or **corrode**. It never loses its beauty, and it's **virtually** indestructible. And it's this chemical stability that makes gold desirable for much more than just jewelry and coins.



►Notes

zinc 「亜鉛」 **karat (carat)** [kárət] 「カラット (純金含有度の単位)」 **property** 「特性」
stand out 「目立つ」 **rust** (of steel) 「錆びる」 **longevity** [landʒévəti] 「(並外れた) 寿命」
heirloom [éərli:m] 「先祖伝来の家財」 **tarnish** 「光沢を失う」 **corrode** 「(金属が) 腐食する」 **virtually** = almost

Because it doesn't corrode, gold is used in high-tech **circuit boards** 50 where you can't **chance** a bad connection. Like in space. It's a bit difficult to do repairs on a satellite orbiting 36,000 kilometers above the earth.

Gold is also an excellent **reflector** of **infrared** radiation, or heat. A very thin coating of gold is used to protect a satellite's onboard electronics from the sun's radiation. Even the spacesuits and **visors** worn by astro- 55 nauts contain a thin layer of gold to protect them from the sun. Back down on the earth, some buildings have a thin layer of gold in their windows to reflect the heat. It looks impressive and it also cuts down on the monthly air-conditioning bill, too.

1-03

Our **quest** for gold has also led to _____ 60
_____. During the Middle Ages, the science of **alchemy** was born. Its purpose was to find a way to turn _____
_____, like **lead**, into gold. Now, these alchemists never did actually synthesize real gold, but the work they did on other materials became the **launching pad** _____ of chemistry. [BOOM!] 65

And where there's gold, population explosions soon follow. After gold was discovered in Australia in 1851, the population of that country almost tripled during the next ten years. The city of Johannesburg in South Africa was founded _____ a gold rush in 1886. And the gold rush in California in 1849 brought thousands of people out to **the** 70
Wild West—enough people that California became an official state one year later.

Groom: With this ring, I **thee wed**.

Chris: One last thing, sorry. We can thank those ancient Egyptian pharaohs for this custom of wearing a gold band on the third finger of your 75
left hand. You see, they believed that a **vein** ran from your third finger _____ your heart.

Hey, what is this anyhow, about ten-karat?

Persis: Ten-karat?!

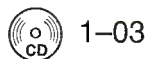
►Notes
circuit board 「配電盤」 **chance** = to risk **reflector** 「反射鏡」 **infrared** 「赤外線の」
visor 「日よけ」 **quest** [kwést] 「追求」 **alchemy** 「錬金術」 **lead** [léd] 「鉛」 **launching**
pad 「基本」 **the Wild West** 「(開拓時代の無法な) 米国西部地方」 **I thee wed.** = I marry
you. **vein** 「静脈」

4 Comprehension Questions

Choose the best answer.

1. Why aren't rings made of pure gold?
 - a. Because gold is too expensive.
 - b. Because gold carries electricity.
 - c. Because gold is very soft and loses its shape.
2. How many karats is pure gold?
 - a. Fourteen.
 - b. Twenty four.
 - c. Thirty four.
3. What is the reason gold lasts a long time?
 - a. It is shiny like the sun.
 - b. It is harder than other metals.
 - c. It is chemically stable.
4. Why is gold put on satellites?
 - a. Because it protects them from the sun's intense heat.
 - b. Because it protects them from objects flying around in space.
 - c. Because it keeps them in orbit longer.
5. What happened when gold was discovered in Australia?
 - a. People fought over the newly discovered gold.
 - b. The population increased rapidly.
 - c. Australia became an independent country one year later.
6. For what reason do people wear rings on the third finger of their left hand?
 - a. Ancient people thought a vein ran from the finger to the heart.
 - b. Rings could be most comfortably worn on that finger.
 - c. A famous king wore a ring on that finger.

5 Dictation-Cloze



*Fill in the missing words in **3** Watch the Video above.*

6 English Composition

Change the following Japanese sentences into English using the hints in the parentheses.

1. 金の利点の一つは、運がよければ、川床の下でも見つけることができるということである。(p. 3 ll. 19-21)

2. 金のあらゆる特性のなかで、化学的な安定性が最も貴重なものであると思われる。(p. 4 ll. 44-46)

3. 金は太陽の紫外線から人々を守るためにも使われる。(p. 5 ll. 53-56)
