



# *TED-Ed Video Series*

## Student's Book

### Part 1



#1

# *The World's Most Mysterious Book*

**TED-Ed Video Series**

**Viewing and Listening  
Comprehension Exercises**

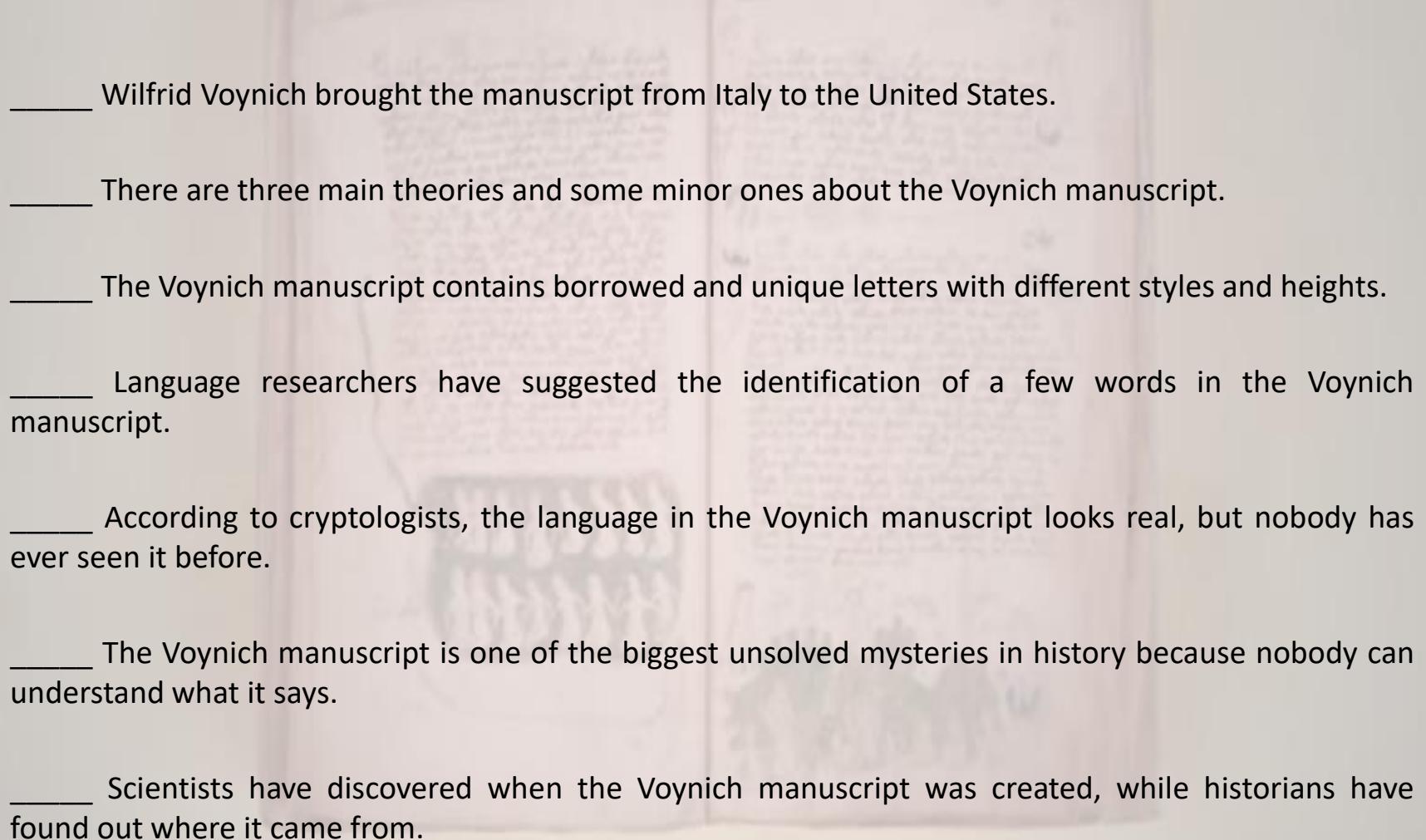
[Click here to watch the video](#)

# I. Match the underlined words below with their meanings in the brown box.

1. Its vellum pages feature looping handwriting.
2. What do these bizarre words represent?
3. He purchased the manuscript from a priest at a college.
4. Cryptologists say the writing has all the characteristics of a real language.
5. Some are borrowed from other scripts.
6. The manuscript is highly decorated with embellishments.
7. Perhaps medieval scholars were attempting to create an alphabet for a language that was spoken but not yet written.
8. The first breakthrough was the carbon dating.
9. Historians have traced the provenance of the manuscript.
10. If we can crack its code, what might we find?

- A. very strange
- B. experts in the study of codes
- C. to find a solution to a problem
- D. sets of letters used in writing languages
- E. the place where something first came from
- F. people who study a subject in great detail
- G. things added to make another thing more beautiful or interesting
- H. an old document or book that was written by hand before printing was invented
- I. an important discovery or event that helps to answer a problem or improve a situation
- J. material made from the skin of a sheep, goat, or cow, that was used for making book covers and writing in the past

## II. Arrange the ideas below in the order in which they are discussed in the video.

- 
- \_\_\_\_\_ Wilfrid Voynich brought the manuscript from Italy to the United States.
  - \_\_\_\_\_ There are three main theories and some minor ones about the Voynich manuscript.
  - \_\_\_\_\_ The Voynich manuscript contains borrowed and unique letters with different styles and heights.
  - \_\_\_\_\_ Language researchers have suggested the identification of a few words in the Voynich manuscript.
  - \_\_\_\_\_ According to cryptologists, the language in the Voynich manuscript looks real, but nobody has ever seen it before.
  - \_\_\_\_\_ The Voynich manuscript is one of the biggest unsolved mysteries in history because nobody can understand what it says.
  - \_\_\_\_\_ Scientists have discovered when the Voynich manuscript was created, while historians have found out where it came from.

### III. Choose the correct answer.

1. According to the video, the Voynich manuscript \_\_\_\_\_.

- A. has 340 pages
- B. was brought to the U.S. in 1420
- C. is 24 centimeters long and 16 centimeters wide

2. Wilfrid Voynich was a \_\_\_\_\_.

- A. mystic
- B. bookseller
- C. physician

3. The \_\_\_\_\_ in the manuscript have been called gallows characters.

- A. taller letters
- B. vibrant drawings
- C. scroll-like embellishments

4. According to historians, the Voynich manuscript was perhaps passed from Emperor Rudolf II to \_\_\_\_\_.

- A. John Dee
- B. Roger Bacon
- C. Jacobus Sinapius

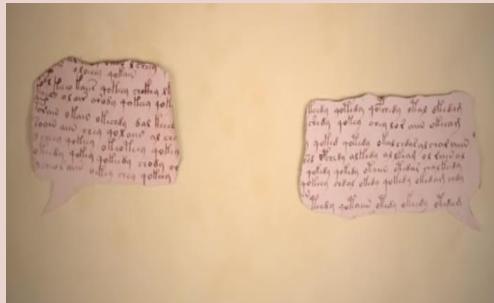
5. Researchers have proposed that one of the words in the Voynich manuscript could be *Centaurun*, a name for a \_\_\_\_\_.

- A. plant
- B. shape
- C. constellation

**IV. Write T if the sentence is correct. Write F if the sentence is incorrect. If the sentence is incorrect, change the underlined words to make it correct.**

1. The only copy of the Voynich Manuscript is in a library at Yale University.
2. There are drawings of floating castles and bathing women in the Voynich manuscript.
3. It seems that just one hand wrote the Voynich Manuscript.
4. According to modern historians, the Voynich manuscript came from Rome and Easter Island.
5. Language researchers are making quick progress in identifying words in the Voynich manuscript.

# V-A. Complete the following table. Use the words and phrases in the box.

Main Theories about the Voynich Manuscript		
Theory 1	Theory 2	Theory 3
		
It is written in _____, so its text has a secret _____. _____.	It is written in _____, so it is _____.	It is written in _____, but in _____ that no one knows.

- cypher
- a hoax
- a script
- meaning
- gibberish
- a real language

# V-B. Complete the following table. Use the words and phrases in the box.

Minor Theories about the Voynich Manuscript				
 It might be _____ that contains the _____ of a culture.	 It was written by _____ who tried to understand the universal laws of _____.	 It was written by _____ who practiced _____ and _____.	 It was written by _____ in Italy.	 It was written by _____.

- grammar
- alchemy
- divination
- knowledge
- witches
- Martians
- a mystic
- a philosopher
- an encyclopedia

## VI. Answer the questions below in complete sentences.

1. Look at the chart on the right. How many stars do you give the video? Why?
  
2. Based on the facts and ideas in the video, what do you think the Voynich manuscript is? Explain your answer.
  
3. Imagine that you will write a book, and it will be famous in history.
  - a. What will your book be about, and why?
  
  - b. In what code or language will you write your book? Explain your answer.
  
4. The Voynich manuscript is mysterious because nobody can understand what it says. Talk about another mysterious object or a mysterious person you know. Why do you say it/he/she is mysterious?

★★★★★	Excellent
★★★★☆	Very good
★★★☆☆	Good
★★☆☆☆	OK
★☆☆☆☆	Poor



#2

# *Meet the Tardigrade, the Toughest Animal on Earth*

TED-Ed Video Series  
Viewing and Listening  
Comprehension Exercises

[Click here to watch the video](#)

# I. Match the underlined words below with their meanings in the blue box.

1. But there's a creature so **resilient** that it can go without water for decades.
2. It does look more like a **chubby** gummy bear.
3. The tardigrade gets around this **restriction**.
4. They start to **synthesize** special molecules.
5. Tardigrades can also **tolerate** other extreme stresses.
6. This has led to some **erroneous speculation**.
7. Tardigrades are so **hardy**.
8. We can develop crops that can **cope** with Earth's changing climate.
9. Could life survive on planets much less **hospitable** than our own?

- A. wrong or false
- B. fat in a pleasant and attractive way
- C. to deal successfully with a difficult situation
- D. having good conditions for living or growing
- E. strong enough to survive difficult conditions or situations
- F. able to return quickly to a good condition after problems
- G. something that limits what you can do or what can happen
- H. to produce a substance through chemical or biological processes
- I. to accept or experience something unpleasant without being harmed
- J. the act of forming opinions about something even if you do not know all the facts

## II. Arrange the ideas below in the order in which they are discussed in the video.

- \_\_\_\_\_ Tardigrades live almost everywhere on Earth.
- \_\_\_\_\_ Anhydrobiosis allows tardigrades to tolerate dryness.
- \_\_\_\_\_ Tardigrades can help us find out if life is possible on other planets.
- \_\_\_\_\_ Scientific evidence shows that tardigrades are from Earth, where they have evolved over time.
- \_\_\_\_\_ Tardigrades go through a tun state to keep their cells in good condition even in dry environments.
- \_\_\_\_\_ Scientists are studying tardigrades to gain helpful knowledge related to vaccines, crops, and astronauts.
- \_\_\_\_\_ The tardigrade may look like a small bear, but it is actually one of Earth's toughest creatures because it can survive various extreme conditions.
- \_\_\_\_\_ Tardigrades can also survive other extreme stresses, including being frozen and heated up past the boiling of water, as well as large amounts of radiation.

### III. Choose the correct answer.

1. Anhydrobiosis comes from the Greek for "\_\_\_\_\_".

- A. metabolism
- B. life without water
- C. extraordinary organism

2. In the tun state, tardigrades do NOT \_\_\_\_\_.

- A. curl up into a ball
- B. pull their head and legs inside their body
- C. release water from their cells into their surroundings

3. According to the video, there are more than \_\_\_\_\_ species of tardigrades.

- A. 110
- B. 1,100
- C. 11,100

4. Based on the video, tardigrades \_\_\_\_\_.

- A. live on all continents
- B. evolve into extraterrestrial beings
- C. use the tun state to tolerate freezing and boiling temperatures

5. If we can understand how tardigrades protect their sensitive biological molecules, we can possibly learn how to \_\_\_\_\_.

- A. keep vaccines stable
- B. safeguard astronauts
- C. stop dryness and other stresses

**IV. Write T if the sentence is correct. Write F if the sentence is incorrect. If the sentence is incorrect, change the underlined words to make it correct.**

1. Humans can only survive for around 100 days without water.
  
2. Among the organisms on Earth, only tardigrades can survive dryness through anhydrobiosis.
  
3. In the tun state, the sensitive molecules in the tardigrade's cells are able to move from one place to another.
  
4. There are probably many other species of tardigrades that have not been discovered yet.
  
5. Tardigrades also live in the most ordinary places.

# V-A. Fill in the boxes with the correct letters to complete the table about the tardigrade.



## The Tardigrade

<b>Another Name</b>	It is also known as the <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> .
<b>What It Looks Like</b>	<ul style="list-style-type: none"><li>It is about <input type="text"/> <input type="text"/> <input type="text"/> millimeter long.</li><li>It has <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> legs.</li></ul>
<b>Where It Lives</b>	<ul style="list-style-type: none"><li>It lives in many different <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> , such as deserts, ice sheets, the sea, fresh water, rainforests, and the highest mountain peaks.</li><li>It can also be found in places like <input type="text"/> <input type="text"/> <input type="text"/> and <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> in yards, parks, and forests.</li></ul>

## V-B. Complete the following table about extreme conditions that the tardigrade can survive. Use the words in the blue box.

			
The tardigrade forms a _____ that stops sensitive cell _____ from unfolding, breaking apart, or fusing together when there is no water.	The tardigrade can live in both the hottest and coldest _____ on Earth.	The tardigrade can also tolerate high _____ levels.	The tardigrade can even survive the _____ of outer space.

matrix

vacuum

radiation

components

environments

## VI. Answer the questions below in complete sentences.

1. Look at the chart on the right. How many stars do you give the video? Why?
  
2. What is/are the most interesting fact(s) about the tardigrade that you learned from the video?
  
3. Would you like to have any of the tardigrade's characteristics or abilities?
  - a. If yes, which of its characteristics or abilities would you like to have, and why?
  - b. If no, why would you not like to have any of the tardigrade's characteristics or abilities?
  
4. The tardigrade is one of the toughest animals on Earth. What is another tough animal you know about? Why is it tough?
  
5. The tardigrade can tolerate different kinds of extreme stresses. How about you? What stresses do you need to cope with? How do you cope with these stresses?

	Excellent
	Very good
	Good
	OK
	Poor



#3

# ***Why Do Cats Act So Weird?***

**TED-Ed Video Series**  
**Viewing and Listening**  
**Comprehension Exercises**

[Click here to watch the video](#)

# I. Match the underlined words below with their meanings in the gray box.

1. These somewhat strange behaviors are both amusing and baffling.
2. Throughout time, cats were simultaneously predators of smaller animals and prey for larger carnivores.
3. Survival of their species depended on instinctual behaviors.
4. The feline actions of Grizmo might seem confusing.
5. She is compelled by the same curiosity that helped ensure the continuation of her species.
6. The cats that were the best at avoiding predators thrived.
7. One of their most predominant behaviors is still one of the most mysterious.
8. They developed through time as both solitary predators and stealthy prey.
9. Are we terribly stupid predators they're able to outsmart every day?

- A. connected with cats
- B. to some degree; fairly
- C. often spending time alone
- D. most important; easiest to notice
- E. at the same time as something else
- F. grew, developed, or became successful
- G. happening naturally; not planned or learned
- H. very confusing or difficult to understand
- I. quiet and careful so that you will be not seen or heard
- J. to defeat or gain an advantage over someone by acting in a clever way
- K. having to do something because you are forced to do it, or you feel that you need to do it

## II. Arrange the ideas below in the order in which they are discussed in the video.

- \_\_\_\_\_ Our homes are our cats' jungles.
- \_\_\_\_\_ Cats may purr for different reasons.
- \_\_\_\_\_ Grizmo prefers to run after and pounce on little toys.
- \_\_\_\_\_ Grizmo looks at the living room from the top of the bookcase.
- \_\_\_\_\_ Grizmo squeezes into small spaces and hides in unusual spots very well.
- \_\_\_\_\_ Grizmo's confusing behaviors at home would make her a super cat in the wild.
- \_\_\_\_\_ There are more than 2 million YouTube videos of cats behaving quite strangely.
- \_\_\_\_\_ Grizmo rips your couch, chair, ottoman, pillows, curtain, and all other things you put in her environment.

### **III. Choose the correct answer.**

- 1. Cats are very \_\_\_\_\_, based on the 26 billion views of YouTube videos of cats behaving strangely.**

A. loving      B. frightening      C. entertaining

**2. Cats can climb to high places because of their \_\_\_\_\_.**

A. natural behavior as prey  
B. very good ability to balance  
C. common muscular structure

**3. Cats are opportunistic predators in the wild because they \_\_\_\_\_.**

A. chase their prey      B. prefer small prey      C. hunt whenever there is prey

**4. The video did NOT say that sharpening their claws helped wild cats \_\_\_\_\_.**

A. relieve stress  
B. regenerate their tissues  
C. stretch their back and leg muscles

**5. The frequency of cat purrs is between \_\_\_\_\_ hertz.**

A. 35 and 115      B. 25 and 150      C. 115 and 250

**IV. Write T if the sentence is correct. Write F if the sentence is incorrect. If the sentence is incorrect, change the underlined words to make it correct.**

1. Cats in the wild needed to eat just a few times each day because most of their prey were small.
2. Cats needed sharp claws not only for climbing and hunting, but also for defending themselves.
3. Cats' behaviors as predators include keeping their litter box clean and odor-free.
4. Cats may purr when they are happy, stressed, or hungry.
5. Cats today still show the behaviors that allowed them to survive in the wild for hundreds of years.

# V. Complete the following table about cat behaviors. Use the sentences in the gray box.

Prey and Predator Behaviors of Cats in the Wild	Behaviors of Cats at Home
	
Wild cats stalked, pounced, killed, and ate small prey every time they could.	<ul style="list-style-type: none"><li>House cats prefer to chase and catch little toys.</li><li>_____</li></ul>
Wild cats evolved to not get caught.	_____
Wild cats tried to find prey in tiny spaces.	_____
Wild cats might have been healing their muscles and bones.	_____
Wild cats climbed to high places to check their territory and find prey.	_____
Wild cats sharpened their claws on nearby surfaces to keep them in good condition.	_____

- House cats purr.
- House cats rip objects in their environment.
- House cats tend to reach into containers and openings.
- House cats eat small meals during the day and at night.
- House cats look at the living room from the top of the bookcase.
- House cats squeeze into small spaces and hide in unusual spots very well.

## VI. Answer the questions below in complete sentences.

1. Look at the chart on the right. How many stars do you give the video? Why?
  
2. What is/are the most interesting thing(s) you learned from the video?
  
3. Do you have a pet cat now, or have you had a pet cat before?
  - a. If yes, which of the behaviors discussed in the video do/did you see in your cat?
  
  - b. If no:
    - Would you like to have a pet cat? Why or why not?
    - In your opinion, which of the behaviors discussed in the video would be the most amusing to see in a cat? What about the most annoying behaviors?
  
4. In your opinion, what do cats think of people? Are people ...
  - a. big cats that compete with them for resources?
  - b. predators they're able to outsmart every day?
  - c. prey?

Explain your answer.

★★★★★	Excellent
★★★★	Very good
★★★☆	Good
★★☆☆	OK
★☆☆☆	Poor