

## The Young Scientists Series — Book 4: Breakers of Barriers

### List of Resources

1. Fun with Words!
2. Understanding What We Read
3. Learning Sentence Structures
4. Responding to Text
5. Close Reading Skills
6. Answer Key

### Internet Resources

- Tu Youyou receiving the Nobel Prize  
<https://www.youtube.com/watch?v=uj3GNOUfOM4>
- Ada Lovelace  
<https://www.youtube.com/watch?v=FQ7FcNWbc20>
- Guinness World Record World Youngest Doctor  
<https://www.youtube.com/watch?v=lgU4cQRi1mA>

### 1. Fun with Words

This is a word search puzzle which highlights the different vocabulary in this book.

### 2. Reading for Understanding (The Scientist and the Secret in the Ancient Book)

This activity is set based on the latest comprehension format. It serves as a practice for their comprehension open-ended skills.

### 3. Learning Sentence Structures

You may start this activity by discussing what each of the scientists in this book has achieved. Using the structure “Not only...but also...” get them to create 4 sentences to review what each of them has achieved.

### 4. Responding to Text

Refer to the text “The Impossibly Young Doctors”. Students are to share what they would be if they were able to start working now.

### 5. Close Reading Skills

In this exercise, students will practice their close reading skills. You may want to encourage them to look for contextual clues in the text.

Word Search

T M A M W J E U T N J Q L I  
Q T L A V X N V G O E U A Z  
U V G T S S V J Y I V K S E  
Y R F H D A I H V T S H L D  
A N T E H M R Y M P R Z E N  
I P Y M R B O B E I E X V U  
M A P A D I N N C R M Z O O  
H S G T C T M S H C M V N P  
K C R I A I E P A S A S M M  
X A L C Z O N U N E R I D O  
X L B A O N T Q I R G C N C  
T I S L W R A M C P O R C R  
J N G M X D L O A I R L Y X  
W E T G H N P V L Y P S G P

- ambition
- compound
- environmental
- mathematical
- mechanical
- novels
- pascaline
- prescription
- programmer

In this activity read the story “The Scientist and the Secret in the Ancient Book” and answer the following questions.

1. Why did Tu name his daughter, Youyou? [2m]

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2. Based on the story, state whether each statement in the table below is **true** or **false**, then, give a reason why you think so. [2m]

Sentence	True/False	Reason
i) In the 1960s, scientists were honored during the Cultural Revolution.		
ii) Many people knew about Mao Zedong’s plan to find a cure for malaria.		

So Tu Youyou was commissioned to find a cure for an incurable strain (A)  
of deadly disease. (B)

3. Which word has the same meaning as “fatal”? Circle (A) or (B). [1m]

4. Why was Youyou’s discovery important to everyone in the world?

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5. Which sentence in the story tells us that the story Tu read was extraordinary?

# Learning Sentence Structures

In this book, the famous scientists have conquered their difficulties in life to succeed. Let's form sentences to have another look at what they have achieved.

We will use the following sentence structure "Not only...but also..." to form our sentences. An example has been done for you.

**Example:**

Ada Lovelace was good at mathematics. She was the world's first computer programmer.

**Not only** was Ada Lovelace good at mathematics, she was **also** the world's first computer programmer.

Tu Youyou discovered a cure for malaria. She won the Nobel Prize.

1. Not only

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Balamurali Ambati went to medical school at the age of 14. He became a fully qualified doctor at the age of 17.

2. Not only

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Blaise Pascal invented a mechanical calculator. He became a famous scientist.

3. Not only

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Rachel Carson's message inspired the setting up of the US environmental agency. She was listed as one of the founders of the green movement.

4. Not only

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Fill in the blanks with a suitable word.

While many of us have things we are interested in such as cars or video games, not many of us will have the (1) \_\_\_\_\_ to use our interest in our work. Rachel Carson was one who used her love for nature to become of one of the famous science writer in the (2) \_\_\_\_\_. As she was growing up, she found a love for nature and writing. This led her to do very well in school. However, life was tough for Rachel. Growing up in a (3) \_\_\_\_\_ family, Rachel had to work odd jobs to earn enough money to feed her family. However, that did not stop Rachel from pursuing her love. She persevered and became a famous (4) \_\_\_\_\_ of a book called "Silent Spring" when she was older. She inspired the United States to set (5) \_\_\_\_\_ an Environmental Agency. This move made many people understand that our actions can lead to the destruction of our environment.