

## 《高中英语（上外版）》必修第一册 Unit 4 Life and Technology

课时：第 6 课时 Doctors in China Do Surgery over 5G Internet

课型：阅读课 设计者：上海市西南位育中学 陈远旻

### 课时学习目标：


- 通过上下文语境或借助图片，理解语篇中描述 5G 外科手术的特征的词语；
- 在主题语境下，建构话题词汇语义网，描述远程外科手术相较传统手术的益处，加深对阅读 B 语篇内容的理解；
- 通过分析文中案例，推断报道者对 5G 网络下外科手术的态度，并树立自己的态度；

### Learning Procedures:


#### I. Warm up

1. Recall the common words of people in hospitals


**doctor**




**patient**



**surgeon**



**expert specialist**

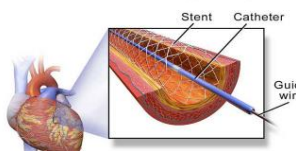


What do they do?

2. Preview the topic-related nouns by thinking of the differences between tele-surgery and traditional surgery.



Stent in Coronary Artery



Different from  
traditional  
surgery, ...

Noun

1. artificial intelligence
2. device
3. image
4. operating room
5. a great leap in healthcare



#### II. Reading activities

1. Grasp the main ideas by reading the text and underlining the answers to the questions.



## Read & underline ...

1. What does the author mean by "The future of surgery is looking 'remote'"? direct the heart surgery hundreds of kilometres away
2. What types of technology did Guo and his team use to direct the surgery hundreds of kilometres away?  
a 5G mobile Internet connection
3. What is the advantage of 5G network over 4G network?  
It can provide a more stable connection by greatly reducing signal delay.
4. In what type of surgery is 5G network particularly important?  
Telesurgery when a doctor operates remotely with a robot



2. Scan the text and figure out the features of tele-surgery.
3. Locate evidence to illustrate the author's attitude.

### Doctors in China do surgery over 5G Internet

#### features

1. a 5G mobile Internet connection
2. remotely control a surgical robot
3. help with operations without being present
4. put together a 3D model with medical images by AI
5. a live video conference link

#### attitude

- make long-distance surgery attractive
- save doctors time to save more lives
- is much faster than 4G
- make a huge difference during telesurgery

**supportive**



What is mobile? Why is the surgery looking "remote"?

Can you find evidence in the text?

- Guo and his expert team were in a hospital in Guangzhou, while the woman was almost 400 kilometres away in a hospital in Gaozhou.
- Doctors far apart have had the chance to work together.
- But it makes a huge difference during tele-surgery when a doctor operates remotely with a robot.
- At the time, the surgeon was located in Hainan while the patient was in Beijing.
- However, he was there "remotely," directing the robot to be his hands.

4. Describe tele-surgery with key expressions, esp. verbs.

#### Describe telesurgery with the help of the key expressions

- |           |  |
|-----------|--|
| Para. 1:  | <u>direct</u> the heart surgery  |
| Para 2:   | help with operations <u>without being present</u> in operating rooms   |
| Para 3-5: | <u>worked out</u> a surgical plan; <u>instruct</u> operating teams; <u>observe</u> the operation from a camera |
| Para 6-7: | <u>save</u> doctors time   |
| Para 8:   | reduce <u>signal delay</u> ; provide a more <u>stable connection</u>   |
| Para 9:   | <u>make a huge difference</u> to .sth.<br>Eg. <u>insert</u> a medical device into the brain                    |



### III. Analyze the pros and cons of advanced technology.

## Cooperative vocabulary use

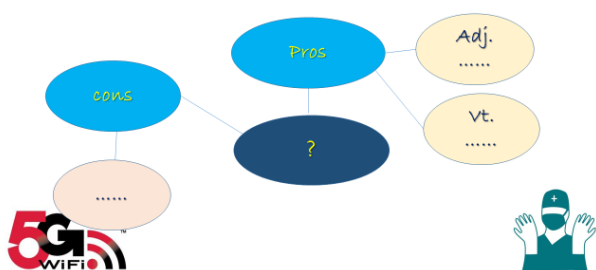
1. Pair work: Choose one from the chart and analyze its pros and cons in pairs.

Life and Technology	Pros	Cons
Robot dogs		
Self-driving cars		
VR technology		Not mentioned.
5G Internet		Not mentioned.

- A. Identify the impacts of new technology on daily life
- B. Share your attitude towards modern technology
- C. Conduct a survey on the use of smart apps
- D. Weigh the pros and cons of new technology
- E. Use comparison and contrast in writing

2. Draw a mind map to organize the targeted adjectives and verbs.

Draw a mind map and develop it into a summary.



3. Share the mind map and explain why in simple sentences.

## IV. Homework

1. Do supplementary reading and comment on one of the tools by properly using the expressions learned in class.

### Telepresence Tools

Like next-generation telephones, the use of telepresence tools to let people remotely participate has been utilized in a broad range of areas. For example, telepresence robots have been used to let kids with chronic conditions attend school or even graduation ceremonies when they cannot physically be present. Combine that with 5G technology and the sort of new robotic and virtual reality-based surgical tools, and it seems that there are some very exciting implications for the future of medicine. Although it's still preferable to have a doctor physically present for a procedure, this will allow specialists to be called on to assist even when they cannot travel to a particular hospital, potentially due to the urgency of an operation.



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2. Analyze the pros and cons of the new technologies and inventions introduced in this unit and complete the table.
3. Work with a partner. List two things that you wish had never been invented and explain why.

### Reference:

- 1: As far as I am concerned, telepresence robots can make life much easier. With such robots, I can

participate in teleconferences or attend school at home. It is especially useful in special situations, such as the outbreak of coronavirus-19. Teachers can help with my school work or instruct me when doing experiments over 5G Internet. Besides, I can prepare for the final exams without having to leave my house, which saves time and reduces the risk of being exposed to virus. Moreover, such advanced robots make up for the loneliness I may feel because it makes a difference to my life by accompanying me all the time. There is no need to worry about students' lack of self-discipline, for teachers will be observing students' learning methods on the other end of the Internet. As long as the Wi-Fi is stable, I believe future school or work will look like that.(150 w)

SCRELE