《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：Reading　　　　　　设计者：上海市西南位育中学 陈远旻

一、教学设计与说明

1. 教学目标

本课为本单元的第 6 课时，核心目标为在语境中，理解 5G 手术技术的主要特征及其较之传统手术技术的优势，帮助学生进一步运用主题相关核心词汇，提升对科技事物的描述能力并正确地表达观点。

2. 设计思路

本课为本单元的第 6 课时，教学内容为 Reading B 语篇。本文以总分总的结构呈现，通过郭医生的事件以及接下来的几个在中国成功的外科手术案例，再次例证了网络技术在远程手术中的益处。本课时旨在帮助学生理解并运用文章中的重点词汇，了解词义并结合对文章内涵的解读，熟悉在不同教学环节中反复出现的词汇。文本与词汇相辅相成，从而加深对文章的理解，运用核心词汇复述文本核心信息。导入部分采用图片谈话的形式，让学生的思维活跃起来同时，引入第一课时所学内容。接着，学生进行自主阅读，并通过阅读理解问题的形式将重点内容在文中划出，并由老师进行互动讲解。然后，学生通过运用与主题相关的一些形容词、动词和动词词组，归纳远程外科手术的特征和作者对此的态度，并借助动词描述手术过程，在新的语境中自如描述远程技术中关于本单元所设计到的新技术的利弊，鼓励学生运用主题相关的词汇进行表达，综合运用所学的关于 5G 网络支持下外科手术的特点描述，科学技术等主题相关词块，做到当堂表述观点，进而在回家作业中尝试归纳、总结利弊，并进一步完善对待科技的态度和观点。

3. 重点难点

运用目标词汇来描述 5G 技术在外科手术中的应用，分析整个单元中出现过的新技术，并综合运用主题相关词汇进行观点态度的阐述。

Lesson Plan

Learning Objectives:

By the end of this period, students will be able to:

1. understand the meanings of the expressions describing the features and procedures of surgery over 5G Internet;

2. state the author's attitude towards tele-surgery with illustrations in the text, categorizing key words and phrases;

3. analyze the pros and cons of the four new pieces of technology with a mind map;

4. practise the target words properly by doing a summary writing.

Procedures:

I.   Warm-up

Interactive activity 1: Revision and prevision

*T: Ask the students to recall the key words according to the pictures.
*Ss: Recall the expressions.
*T: Lead students to think of the differences between tele-surgery and traditional surgery.
*Ss: Learn new expressions and put them down in the worksheet.

Purpose: To arouse students' interest and help them get familiar with some new expression in the text.

II.   Reading

1.   Independent activity 2: Interactive vocabulary study

*T: Ask the students to read the text and underline the answers to the questions. The teacher will give a brief explanation of each target word or phrase. Paraphrasing will be used to facilitate students' understanding.
*Ss: Answer the reading comprehension questions using the target words. Locate evidence to illustrate the author's attitude.

Purpose: To understand and correctly use the target words, esp. adj.; to figure out their meanings, to analyze the author's attitude by using target expressions as evidence; to have a deeper understanding of the text.

Guided questions:

1.   What does the author mean by saying "The future of surgery is looking 'remote'"?

2.   What types of technology did Guo and his team use to direct the surgery hundreds of kilometres away?

3. What is the advantage of 5G network over 4G network?

4. In what type of surgery is 5G network particularly important?

5. Can you tell about the features of surgery over 5G mobile Internet?

6. Can you illustrate "remote" and "mobile" with examples or expressions in the text?

7. What is the author's attitude towards such new technology? Please explain it with evidence.

2. **Independent activity 3: Describing tele-survey with target words**

> *T: Ask the students to describe tele-surgery.
> *Ss: Read the text again and focus on verbs.
>
> **Purpose: To understand the target verbs.**

Guided questions:

1. What can an expert absent from the operating room do?

2. What benefits can doctors gain with 5G mobile Internet connection?

3. How does artificial intelligence help surgeons? How does a live video conference help surgeons?

4. What can advanced Internet technology do to help?

5. What is the advantage of 5G network over 4G Internet?

6. What can a surgical robot do?

7. What's your impression of tele-surgery?

III. Analyze the pros and cons of advanced technology

Interactive activity 4: Cooperative vocabulary use

> *T: Ask the students to choose one category from the chart and talk about its pros and cons in pairs.
>
> *Ss: Cooperate to make a list of pros and cons of a certain piece of technology with the key expressions learned in the module.
>
> *T: Ask students to draw a mind map to organize the targeted adjectives and verbs to prepare for a summary writing.
>
> *Ss: Share the mind map and explain it in simple sentences.

Guided questions:

1. Which advanced piece of technology are you interested in?

2. Do you know its advantages and disadvantages?

3. Would you please discuss the pros and cons with your partner and draw a mind map with key words?

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.

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)