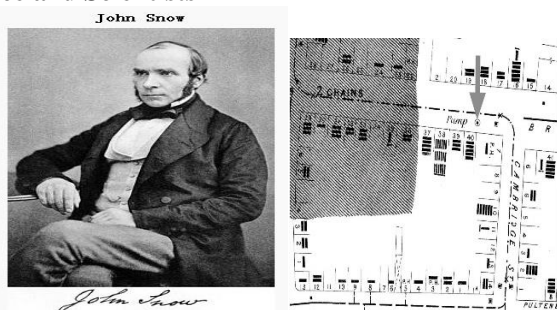


新人教版 选择性必修 2
Unit 1 Science and Scientists
Reading and Thinking: John Snow Defeats “King Cholera”
导学案

一、单元学习主题

单元主题是“人与社会-科学与科学精神”，人教版高中英语选择性必修 2（2019 版）Unit 1 Science and Scientists



二、单元整体解读：

本单元主题语境是“人与社会”，主题是“科学与科学家”（Science and Scientists），本单元围绕“科学和科学家”这一话题展开。讲述了几位中外科学家的生平、经历、研究过程和重要贡献，旨在激发青少年对科学研究的兴趣和好奇心，引导他们思考科学研究的方法，积极开展科学研究，探究科学家的必备品质和科学精神的基本要素。

三、语篇文本分析：

本文是一篇按照时间顺序记述事件发展过程的叙事性文本，时间线索是明线，而科学研究的步骤是文章叙述的暗线。文章的第一段介绍了研究的背景。第二段为科学研究的第一个阶段，即问题的提出（Find a problem）：关于霍乱的病源，当时有两种观点，斯诺需要通过研究找到真正的病源。接下来第三段讲述了斯诺所采用的研究过程：收集数据、分析结果、找到进一步佐证，最终得出结论（Collect data – Analyse the results- Find supporting evidence- Draw a conclusion）。第四段揭示了霍乱传播的真相。最后一段陈述了斯诺在控制霍乱传播方面的贡献。

四、课型解析

本节课属于“Reading and thinking”部分，reading 是前提，critical thinking and creative thinking 是关键。本篇课文是本单元的主课文，本文讲述了当时欧洲霍乱肆虐，已负盛名的约翰斯诺医生挺身而出，决心消灭霍乱。1854 年霍乱再次席卷伦敦时，斯诺决心弄清为什么有两个街区的霍乱疫情特别严重（Ask a question），便开始了他的调查研究。斯诺提出了一个科学、直观而有效的方法---绘制霍乱病例地图。在另外一个病例的佐证下，斯诺得出结论，是水泵中的水携带了霍乱病菌。由于斯诺的不懈努力，人们开始饮用洁净的水，霍乱的威胁在世界范围内明显减弱。他的研究成果和研究方法对今天预防霍乱还具有现实意义，而“霍乱地图”成为流行病学的经典案例，斯诺也因此获得“流行病学之父”的美誉。

I. 【教学目标】 Learning Objectives:

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

1. Find out the stages of scientific research in this passage.
2. Learn about John Snow's research process and analyze John Snow's characters;
3. Express your idea on the given topic through creative thinking;
4. Enable the Students to get to know some knowledge about Cholera.
5. Enable the Students to understand the passage well.
6. To learn from the great scientists and develop the noble spirits.

II. 【教材分析】:

The theme of this unit is about science and scientists, while the theme of the reading text is about “Understand the questioning mind”. The text mainly talks about “John Snow Defeats “King Cholera”.

III. 【学情分析】:

Students in Grade two have learned English for years, and they have mastered some basic language points and language skills, and they can get some detailed information in the text. But most of them lack reading strategies like skimming, scanning and prediction. This text is related to science and scientists.

Some students may be familiar with, but they may not know the spirits of science and scientists. This text activates students' awareness and knowledge of scientists all over the world.

IV. 【教学过程】 Teaching procedures:

Step 1. Pre-Reading: Leading-in

Name some famous scientists you know and tell something about them.

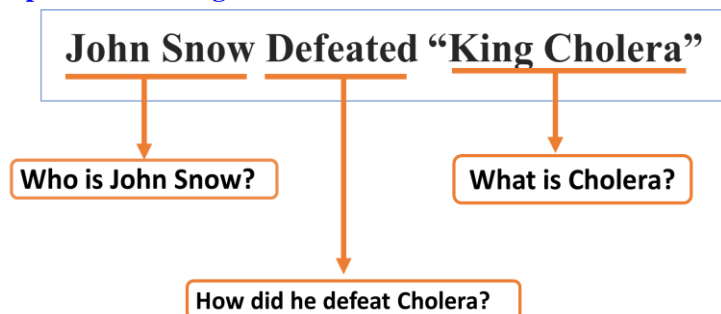
Do you know the scientists in fighting against COVID-19?

【设计意图】让学生说出中外著名的科学家和他们的科研，引出“science”的话题。

【核心素养提升点】

学习能力：感知话题语言，提升口头表达能力。

Step 1. Pre-Reading: Prediction



The text is mainly about _____ and _____ he defeated king cholera.

John Snow:

a famous doctor and even attended to Queen Victoria when she gave birth.

Cholera:

It begins in the stomach and a severe case can lead to death without immediate treatment.

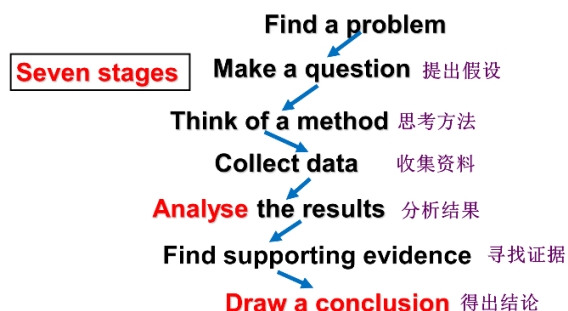
The victims(患者) died very quickly from a loss of liquid (缺水)after severe vomiting(呕吐) and diarrhea(腹泻).

【设计意图】学生通过看(view)课文图片及阅读标题来预测课文内容，激活话题图式，导入话题，为多维课堂目标做好铺垫。

【核心素养提升点】

学习能力：提升预测的能力。

Step 2. Pre-Reading: Discourse analysis



Can you put the correct stages into the reading?

【设计意图】通过让学生画思维导图，把握各段落间的关系，厘清文章结构。用文中的信息来完成思维导图，对课文内容和结构进行总结和强化，加深对语篇的理解。

【核心素养提升点】

语言能力：能阅读和理解科学研究的步骤

Step 3. Pre-Reading: Structure of the passage

seven stages in scientific research

Para1	Find a problem	Phenomenon
Para2	Make a question	two theories
	Think of a method	make an investigation
Para3	Collect data	how?
	Analyse the results	find?
Para4	Find supporting evidence	other cases
	Draw a conclusion	
Para5	Solutions and significance	

【设计意图】紧扣课文主题，引导学生浏览标题，明确科学研究的7个基本步骤

【核心素养提升点】

学习能力：培养学生构建核心内容图的能力

Step 4. While-Reading: Read for main idea

scan the text quickly and complete the form.

Paragraph:	Main Idea
1	What? Who?
2-3	How?
4	The truth
5	Results and significance

I. 阅读课文，匹配段落大意

段落

主旨大意

- | | |
|----------------|--|
| 1. Paragraph 1 | A. Snow began his study by marking on a map. |
| 2. Paragraph 2 | B. John Snow wanted to destroy cholera. |
| 3. Paragraph 3 | C. John Snow decided to prove the second theory. |
| 4. Paragraph 4 | D. Snow is considered the father of modern epidemiology. |
| 5. Paragraph 5 | E. The water from the pump had been infected by waste. |

[答案] 1—5 BCAED

【设计意图】学生快速阅读寻找每段的主题句，梳理文本的篇章结构，更好地理解全文。

【核心素养提升点】

学习能力：培养学生抓住文章主要脉络的能力。

Step 5. While-reading: Find a problem (para 1)

Skim the text and answer the questions below.

- What's the effect of Cholera?
- What's John's decision?

【设计意图】自主提问环节检验学生对文本的理解以及抓住重点正确提问的能力。教师给出“自主阅读提问单”。

【核心素养提升点】

学习能力：提升根据阅读内容用英语正确提问并回答的思维能力。

Step 5. While-Reading: Make a question & Think of a method (Para 2)

- What are the two theories? Which theory did John Snow think was reasonable?
- What did John Snow ready to do when another outbreak hit London in 1854?

Step 5. While-Reading: Collect data & Analyse the results (Para.3)

- How did John get a valuable clue about the cause of the disease?
- What did he find on the map? What did he do to deal with it?
- Why is there no death at No. 20 and 21 Broad Street as well as at No. 8 and 9 Cambridge Street?
- When Snow _____, cholera was at an end.

【设计意图】让学生通过查找关键信息，引导学生深入分析和挖掘文章，培养学生定位信息的能力，加深对文章的理解。学生阅读各个段落，理解科学家在科研过程中运用的方法。

【核心素养提升点】

学习能力：培养概括和思辨的能力。

Step 5. While-Reading: Find supporting evidence & Draw a conclusion (Para. 4)

- How did John Snow further confirm that cholera was spread by germs?
- What's the conclusion of John's research?

3. How were people infected with the virus of cholera?

【设计意图】引导学生查找第4段中关于霍乱病源的关键信息。

文化意识：能够认识到科学研究的精神。

Step 5. While-Reading: Solutions and significance (Para 5)

1. What's the solution of the problem?

2. What is the significance of Snow's tireless effort?

Read Para 5 carefully and fill in the blanks.

The result:

Through Snow's tireless _____, water companies began to sell _____, and the threat of cholera around the world saw a substantial _____. cholera is still a problem. Each year, _____ of people around the world get cholera and many _____ it.

Snow's contribution:

Fortunately, we now know how to _____ cholera, _____ the work of John Snow. _____, in his use of maps and statistics, Snow _____ the way scientists study diseases.

Snow's achievement:

Snow is considered _____.

3. What qualities do you think John Snow has?

warm-hearted; courageous;

determined (strong -willed);

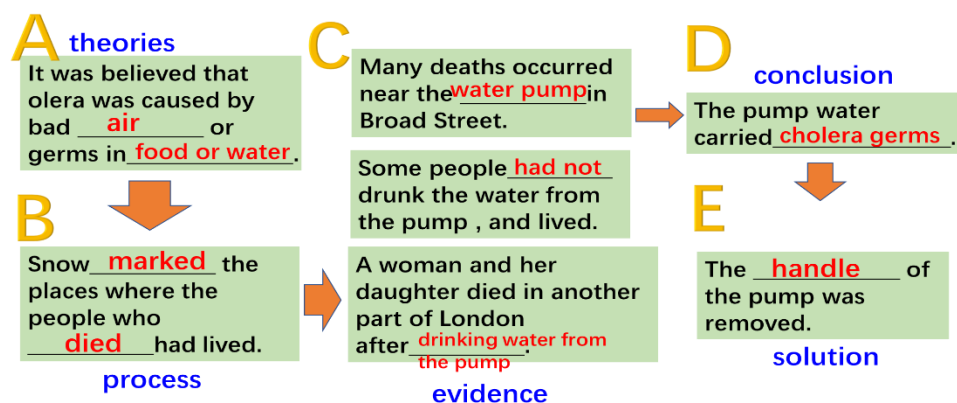
talented; intelligent; patient;

careful (having good observation)

hard-working...;

Step 6. While-Reading:

Read the passage again and complete the chart below.



【设计意图】引导学生关注科学研究的7个基本步骤，鼓励他们主动提出问题并寻找答案。

【核心素养提升点】

学习能力：提高逻辑思维能力，学会使用寻读策略

文化意识：学会科学研究的基本步骤。

Step 7. While-Reading: Read for details

	Stages	Key words or sentences
analyse the result	1.	two contradictory theories
ask a question	2.	in two particular street the cholera was so severe find out why
draw a conclusion	3.	marking on the map
collect data	4.	houses number 16,37,38 and 40; 20 and 21; 8 and 9
find a problem	5.	multiple death near the water pump; some houses had no death.
find supporting evidence	6.	a woman and her daughter had died, the woman liked the water.... had it delivered to her house
think of a method	7.	John Snow announced that the pump water carried cholera germs.

【设计意图】引导学生寻读语篇，查找5个段落中的关键信息，学习科学研究的基本步骤。

【核心素养提升点】

语言能力：提升快速查找细节、梳理内在联系的思维能力。

Step 8. Post Reading: Consolidation

Retell the passage according to below:

John Snow was a well-known _____ in London in the ____ century. He wanted to find the _____ of cholera in order to help people _____ it. In 1854 when a cholera _____ London, he began to gather information. He _____ on a map _____ all the dead people had lived and he found that many people who had _____ (drink) the dirty water from the _____ died. So he decided that the polluted water _____ cholera. He suggested that the _____ of all water supplies should be _____ and new methods of dealing with _____ water be found. Finally, “King Cholera” was _____.

Step 9: Post-reading: Discussion:

Father of hybrid rice: keep people away from hunger

Despite the danger of infection, devotion to the research of COVID-19

How has John Snow 's work affected our daily lives?

Step 10: Post-reading: Critical thinking

In order not to get infected with disease, what should we pay attention to in our daily life?

Drink boiled water

Wash hands often

Keep away from flies

choose fresh sea food

Keep the kitchen clean

Cook raw food thoroughly

deal with rubbish properly.

Heal the food left overnight

Don't forget to wear a mask when you go out.

【设计意图】此环节属于阅读后的语言运用活动，旨在给学生机会，讨论在日常生活中应该注意的问题。

【核心素养提升点】

思维品质：培养学生主动收集、整合，发展批判性思维。

Step 11: Assignment:

1. Write a short passage in 80 words to introduce him/her and the reason why you admire him/her.
2. Think about what qualities a great scientist should have.
3. According to seven steps of scientific research, work in groups to make a presentation about how our country fight against the COVID-19.

【设计意图】将课堂所学语言知识、写作技巧以及课堂合作讨论的成果在新的语境下进行创造性的表达。

【核心素养提升点】

学习能力：提升学生的写作能力。

【学后反思】

1. 是否能够利用科学研究的 7 个步骤帮助理解文章结构和内容？
2. 是否能够对霍乱的病源有清晰的理解？

【板书设计 Blackboard Design】

Blackboard Design

Blackboard Design	Unit 1	
	John Snow Defeats “King Cholera”	
1. Paragraph 1 2. Paragraph 2 3. Paragraph 3 4. Paragraph 4 5. Paragraph 5	A. Snow began his study by marking on a map.	
	B. John Snow wanted to destroy cholera.	
	C. John Snow decided to prove the second theory.	
	D. Snow is considered the father of modern epidemiology.	
	E. The water from the pump had been infected by waste.	
1—5 BCAED		