选择性必修2 Unit 1 Reading and Thinking

John Snow Defeats “ King Cholera”

1. 文本分析

本单元的主题是科学和科学家们，主要介绍了中外几位科学家的研究经历和成就，本篇文章介绍的科学家是英国著名的麻醉学流行病学家John Snow研究霍乱病源的事件。在故事的叙述过程，也展示了科学研究的基本步骤，字里行间也体现了一定的科学精神。整个文章主要是总-分-总结构。首段就介绍了在John Snow找到控制霍乱的方法前，霍乱对人们健康的破坏性和人们的手足无措、胆战心惊。接着John Snow在一次伦敦霍乱大爆发中，发现了部分地区受灾严重，并利用地图统计分析的方法，得出不干净的水是霍乱爆发的源头，最终有效控制了疫情。对水源的净化处理也使得全球范围内的霍乱大幅度减少。John Snow也因此被成为现代流行病学之父。

1. 教学目标
2. 通过文本的阅读梳理，可以总结归纳出科学研究的基本步骤。
3. 能够在阅读过程中，擅于提出问题并主动探究答案，从而深化对于文章主体和内涵的理解。
4. 通过阅读思考斯诺成功发现霍乱病源的原因，深入理解科学精神的内涵，学会批判性的思考，形成自己的观点和看法。
5. 教学重点
6. 通过阅读总结归纳科学研究的基本步骤
7. 通过读后思考和人物角色分析，了解科学精神。
8. 活动设计

Step 1: Warming -up

Watch a clip and ask students to write down the names of scientists as many as they can.

List some scientists on PPT and discuss their different fields in science.

Understand the quote on the open page and know more about what science is.

设计意图：让学生更多了知道那些为了新中国建设、为了祖国今天的繁荣富强立下了汗马功劳的科学家们，激活单元的话题，并讨论科学的不同领域分支，初步了解科学的基本概念和定义,同时引出科学方法这个概念，为下文阅读做铺垫。

Step 2: Pre-reading

Pairwork about steps of scientific research

Ask students to raise questions about what he/she wants to know according to the title

设计意图：让学生先预测一波科学步骤，也不核对答案，通过阅读后请同学们自己归纳核对，培养他们自主思考的习惯。根据标题预测内容是阅读理解常见的策略，这里只是稍微换了一下提问方式，增加学生的主动性。

Step 3: While-reading

**Reading for information**

1. John Snow: guide students to read between the lines:

“he... even attended to Queen Victoria when she gave birth.”

Why? Because he was expert/experienced/knowledgeable/professional...

1. Cholera: guide students to understand the word “King” and understand the significance

of John Snow’s work

Compare the situation in the past and now to lead thee next topic: find the source of cholera

设计意图：提高学生文本解读的能力和在语境中理解词汇的能力。

1. Lead the students to analyse the steps of how John Snow found out the source of

Cholera:

was able to announce that...

a case of death away from Broad Street.

John Snow suspected the water was to blame

Many death were near the pump while some households were unaffected.

...began marking on the map

Why was cholera severer in 2 particular streets ?

How does Cholera spread?

1. Ask students to match each step of scientific research with the procedures

设计意图：通过步骤的解读，相信学生对于科学研究的基本步骤应该有所感知，基本上能够排列出正确的顺序。即使有困难，课件标出来的提示词应该也能起到一定的帮助。

**Reading for thinking**

What made John Snow succeed in preventing “King cholera” ?

Ask students to work in groups to discuss what qualities John Snow had and try to find supporting details from the text.

设计意图：通过小组讨论和思想碰撞，学生对于斯诺身上所体现的宝贵品质和科学精神有进一步的了解。从文章里找到支撑句，使得他们的发言有理有据有逻辑可言，同时也是对文本的深层解读。

Step 4: Post-reading

Scientific spirits+scientific methods can possibly lead to scientific success.

Among Scientific spirits, questioning is of great importance and therefore offer students a quote：The scientist is not a person who gives the right answers but the one who asks the right questions.

Scientific methods seems far away from our daily life but actually it is not. What the text wants to offer students is a way of thing and so is science.

As for scientific success, it is closely related to our daily life, from what we eat to where we live. It even decides our future.

And use an example to explore the world deeper and wider and to stay hungry and stay foolish.

设计意图：通过科学名言和华为天才少年的例子，激励学生靠近科学，认识到科学就在身边，同时也意识到作为社会的一员我们有义务也有可能为改变世界作出自己的一份贡献。

Step 5: Homework

Ask students to write a short story about a scientist.

设计意图：让学生真的走进科学家的故事，感受科学家的熏陶，对科学树立正确的态度和观念。