

Equality

Mandatory Vaccinations: Yea or Nay?

TEACHER INSTRUCTIONS

SUBJECT: Science

GRADE LEVEL: 9-12

TIME: Two 30-40 minute lessons (Part 1 & 2)

Overview

In this lesson, students analyze primary sources to inform their ability to discuss and make decisions on issues related to vaccination.

Lesson Materials: Library of Congress resources, slide deck, and discussion questions.

PART I

Teacher Actions:

1. **Ask** students “*Can you think of any laws that are based on science?*” (**Spark Inquiry**)
2. **Engage** students in a discussion about the controversy that laws based on science can cause. Ask about issues they may know relative to vaccinations and their own experiences with vaccinations.

PART II

3. **Explain** to students they will explore the impact of science and the law by role-playing members of Congress who will vote on a bill



regarding vaccinations of school children.

Distribute handouts from the Lesson Materials. (**Deepen Inquiry**)

4. **Distribute** Handouts A and B to student pairs. Guide students through the instructions on Handout A.
5. **Divide** students into small groups for the congressional role play. Give them time to work through the questions and prompts on Handout A, using content from Handout B.
6. **Debrief** the experience with students using the questions that are listed in the slide deck of the Lesson Materials.
7. **Formative Assessment:** At the conclusion of Part I, consider ending lesson with an inquiry exit slip that asks students identify (1) two things they learned and (2) one way they can share what they learned with someone outside of the class.
8. **Final Assessment: Project.** Ask students to do independent research on how vaccinations are being talked about in today’s media and to write a short persuasive essay on the compelling question and share it with their classmates to close the lesson. (**Connection and Action**)

ASSESSMENTS

Lesson Materials Library of Congress Resources

The materials below include **Library of Congress resources** to engage students in the inquiry process of using primary source materials. Additional supplemental materials are also included.

Before teaching this lesson, students will need to know what a vaccination is and how vaccinations work. The Center for Disease Control provides a lot of information here: <https://www.cdc.gov/vaccines/vac-gen/default.htm>

- [Handout A: Instructions](#) – 1 per student
- [Handout B: Source Pack](#) – 1 per student or pair of students (or students can access sources online)
- [Slides of debriefing questions](#)

Sources

Source A: H. R. 2232: *A BILL To amend the Public Health Service Act to condition receipt by States (and political subdivisions and public entities of States) of preventive health services grants on the establishment of a State requirement for students in public elementary and secondary schools to be vaccinated in accordance with the recommendations of the Advisory Committee on Immunization Practices, and for other purposes.* <https://www.congress.gov/bill/114th-congress/house-bill/2232/text>

Source B: H.Res.117 - *Recognizing the importance of vaccinations and immunizations in the United States.*
<https://www.congress.gov/bill/114th-congress/house-resolution/117/text>
<https://www.cdc.gov/vaccinesafety/concerns/autism.html>

Source C: Summary of Article by Andrew Wakefield, et al:
[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(97\)11096-0/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(97)11096-0/abstract)

This lesson is part of a larger initiative, Citizen U, which aims to integrate civic learning across the curriculum for students in grades 2-12. For more lessons like it, in Language Arts, Math, Science, and Social Studies, or to learn more about related creative, community, and professional development opportunities, please visit our [Citizen U website](#)...

Science – High School

LESSON TITLE: Mandatory Vaccinations: Yea or Nay?

ESSENTIAL QUESTION: Should the government be able to require parents to vaccinate their children?

LESSON DURATION: Taken together, Parts I, II, and III should take two class sessions plus additional time after class for independent research.

LESSON OVERVIEW

In this three-part lesson students will be able to discuss the proper role of government in making public health decisions. In Part I, students discuss their prior knowledge of vaccinations and the purpose of vaccinations. In Part II, students assume the roles of members of Congress to determine if they will vote on a bill to require parents to vaccinate their children. Students will use primary sources to explore the issue, then will work in small groups to discuss both sides of the argument. Finally, students will state and support their vote for or against the bill. In Part III, students conduct independent research in order write their answer to the Essential Question.

LESSON OBJECTIVES

Students will be able to:

- Analyze sources to gain understanding about an issue.
- Understand different points of view on the issue.
- Participate in an academic discussion.
- State and support an informed opinion.

LESSON MATERIALS & PREPARATION

Before teaching this lesson, students will need to know what a vaccination is and how vaccinations work. The Center for Disease Control provides a lot of information here: <https://www.cdc.gov/vaccines/vac-gen/default.htm>

- [Handout A: Instructions](#) – 1 per student
- [Handout B: Source Pack](#) – 1 per student or pair of students (Or students can access sources online.)
- [Slides of debriefing questions](#)

Sources

Source A: H. R. 2232: A BILL To amend the Public Health Service Act to condition receipt by States (and political subdivisions and public entities of States) of preventive health services grants on the establishment of a State requirement for students in public elementary and secondary schools to be vaccinated in accordance with the recommendations of the Advisory Committee on Immunization Practices, and for other purposes. <https://www.congress.gov/bill/114th-congress/house-bill/2232/text>

Source B: H.Res.117 - Recognizing the importance of vaccinations and immunizations in the United States. <https://www.congress.gov/bill/114th-congress/house-resolution/117/text>

Source C: Summary of Article by Andrew Wakefield, et al:
[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(97\)11096-0/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(97)11096-0/abstract)

LESSON IMPLEMENTATION

Part I: Spark Inquiry

A. Science & Law

1. Conduct a brief class discussion asking:

- Can you think of any laws that are based on science?
(Federal Food and Drug Administration requirements for labeling; disposing of certain products including electronics, oil, batteries; cannot take someone else's medicine; underage drinking; use of tobacco products; use of certain insecticides; laws about clean water/air, etc.)

2. Explain that there are almost always disagreements when new laws are made.

- For example, science tells us that eating foods high in fat and sodium are not good for you. What if a new law was going to be made that would not allow Americans to eat more than one juicy bacon cheeseburger per month?

Would you agree with that law? Why or why not? *(Accept all answers and probe for understandings about personal preferences and how such a law would be enforced.)*

3. Explain that sometimes laws, including those that are based on science, cause controversy. (If necessary, define “controversy” as strong feelings and beliefs on a topic causing disagreement.)

Assess students’ prior knowledge about vaccinations before proceeding. Ask:

- Do any students recall getting vaccinations? “Booster shots”? *(Explain if necessary.)*
- What is the purpose of a vaccination? *(Vaccinations provide immunity to diseases, such as measles or the flu. Smallpox is a disease that caused full-body blisters, blindness, and death. Smallpox was eradicated from the globe in the 20th century thanks to vaccinations against the disease.)*

B. Closure

1. Have each student complete an inquiry exit slip.

- Students should use the following prompts:
 - *Two things I learned:*
 - *How I can share what I learned with someone outside of class:*

Part II: Deepen Inquiry

A. Welcome to Congress!

1. Explain to the students that they are going to take the roles of members of Congress and decide whether or not they will vote for a bill having to do with vaccinations of school children.

2. Distribute Handout A: Instructions and Handout B: Source Pack to each student. (To save paper, you could have students work in pairs to analyze the sources.)
3. Tell the students that they will work independently to complete the first two steps, then will join a group to complete Step 3. (Students should work in groups of 3-4.)
4. Let students know how much time they have to complete Steps 1-2. Students could be grouped for the discussion in Step 3 as they finish Step 2.

B. Debriefing

Ask the students:

- What was the bill about that you were deciding?
- What was the controversy?
- What were the most compelling arguments for opposing the bill? For supporting the bill?
- What was the most interesting source you used? Why?
- What other sources might have been helpful to you?
- What did you learn about science and the law from this lesson?

NOTE: These questions are listed on the two slides provided as the slide pack for this lesson.

Part III: Connection and Action

1. Collect Handout A and look for:

- Accurate summary of Source A: H. R. 2232.
- Accurate/appropriate answers to prompts for Sources B and C.
- Clear articulation of most compelling arguments in favor and opposed to the bill.
- Effectiveness in stating an opinion and supporting it with evidence from sources/text.

2. **Assessment.** Have students do independent research on how vaccinations are being discussed in today's media.

- Using their research and what they learned from the lesson activities and primary sources, students should write a short persuasive essay (300 words) answering the Essential Question:

Should the government be able to require parents to vaccinate their children?

- Students should answer the question as *yes* or *no* but may include any points they are undecided about.

3. Students may use the following questions to help guide their research:

- What does the community of scientists say about the importance and safety of vaccines?
- Is there a consensus on the safety of vaccines among scientists? (*Consensus* means virtual universal agreement. It does not require every single scientist to have the same opinion as all the others. It does require that almost all scientists have the same opinion.)

- What are the dangers of children not getting vaccinated?
- Who is saying vaccines are safe for most children? Who is saying vaccines are *not* safe and should be avoided?

4. Have a sample set of students read their essays. See if there is a variety of opinions among the students. If there are both yes's and no's the Essential Question, have both sides be heard. Poll the class to see what the class's majority opinion is.

STANDARDS ALIGNMENT

Next Generation Science Standards

HS Natural Selection and Evolution

HS-L S4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

Common Core State Standards Addressed

[CCSS.ELA-Literacy.SL.11-12.1](#)

[CCSS.ELA-Literacy.SL.11-12.3](#)

[CCSS.ELA-Literacy.SL.11-12.4](#)

[CCSS.ELA-Literacy.SL.11-12.6](#)

[CCSS.ELA-Literacy.RI.11-12.1](#)

[CCSS.ELA-Literacy.RI.11-12.2](#)

[CCSS.ELA-Literacy.RI.11-12.3](#)

[CCSS.ELA-Literacy.RI.11-12.4](#)

[CCSS.ELA-Literacy.RI.11-12.5](#)

[CCSS.ELA-Literacy.RI.11-12.6](#)

[CCSS.ELA-Literacy.RI.11-12.10](#)

[CCSS.ELA-Literacy.W.11-12.9](#)

[CCSS.ELA-Literacy.W.11-12.10](#)

C3 Framework

D1.1.9-12

D1.5.9-12

D2.Civ.9.9-12

D2.Civ.13.9-12

D4.1.9-12

This lesson is part of a larger initiative, Citizen U, which aims to integrate civic learning across the curriculum for students in grades 2-12. For more lessons like it, in Language Arts, Math, Science, and Social Studies, or to learn more about related creative, community, and professional development opportunities, please visit our [Citizen U website](#)...