

Influenza Strikes!

PLANNING NOTES:

- 1) **Teams:** 4 students
- 2) **Length:** Approx. 5 classes (Day 1: Case Intro; Day 2: Explore the Problem; Day 3: Research, Day 4: Solutions; Day 5: Presentations)
- 3) **Resources Needed:** Computers, Copies of student workbook, Copies of CDC Influenza Pandemic Planning Guide (1 per group; alternatively can be shared as electronic PDF)

OVERVIEW:

The world is on the brink of a global influenza pandemic and the CDC implores communities to take extreme precaution this season, as the new strain appears to have a devastating impact. While the CDC offers basic preventative recommendations, communities across the nation are planning targeted efforts to minimize the risk factors most applicable to their population. Can your task force help protect the health of your community?

GOAL:

Help maintain the health of your community in preventing influenza by making clear, actionable, and evidence-based recommendations to minimize risk.

ROLE:

You are a task force of public health professionals, assigned to review the scientific literature and local data in order to offer recommendations on preventing influenza. Within your team, you have an epidemiologist, a health policy expert, a health behavior and health education specialist, and an environmental health scientist.

OBJECTIVE:

5.11: Use evidence from scientific studies to support a local plan for preventing the spread of influenza

DELIVERABLES:

- 1) Task Force Report:
 - a. Literature Review
 - b. Recommendations
- 2) Local Town Hall Presentation

ASSESSMENT:

Your report and town hall presentation will be graded on a rubric at the end of the case study.

STANDARDS: NGSS & COMMON CORE

WHST.9-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject demonstrating understanding of the subject under investigation. (HSL13)

RST.11-12.8: "Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information."

WHST.6-8.8: "... quote or paraphrase the data and conclusions of others..."

WHST.9-10.8: "...assess the usefulness of each source in answering the research question..."

Case Introduction:

Scenario: It seems like every time you flip on the television these days, there is a new public service announcement about the influenza pandemic, imploring people to get the flu vaccination.

Watch: "Influenza Public Service Announcements" page at CDC.gov
<http://www.cdc.gov/flu/freeresources/media-psa.htm>



Background: Scientists have warned for years that the world was "overdue" for another deadly pandemic, like the 1918 Flu Pandemic, but this fall the CDC, WHO, and other health organizations are warning that the time may have come. No one knows for sure, but your community (like many others) is taking this threat very seriously.

Roles: As a part of a Special Task Force for Influenza Prevention, you are in charge of preventing a major outbreak in your local community. To begin, assign roles. You will work as a team to determine what these roles look like, but for now take brief notes on what you might contribute.

Team Member	Role	Description
	Environmental Health Scientist	
	Epidemiologist	
	Health Behavior & Education Specialist	
	Health Policy Expert	

Students can use computers to look up these fields in public health to get more information on what this role could look like. The responsibilities of each role are not specifically defines throughout the case, but students can be encouraged to be creative & thoughtful about how the work would be undertaken in the real world in order to make it as realistic as possible.

Explore the Problem:

This is a simplified variant of the classic KWL chart. The “Know” column becomes a hybrid of what students already knew (or think they knew) and what they have learned from prior lessons. The “Learned” column is eliminated because students will complete the next step (background research and Lit review) later in the case study.

KNOW-NEED TO KNOW CHART:

Complete the Know-Need to Know chart below based on the following directions:

- **Know:** In this column, write any facts or information you already knew about influenza.
- **Need to Know:** In this column, write a list of QUESTIONS you have.

Know	Need to Know
<div data-bbox="397 993 1224 1108" data-label="Text"> <p>A possible homework assignment could be to research the Flu Pandemic of 1918 and consider the similarities and differences in risk factors that were present in 1918 compared to today.</p> </div>	

RISK FACTORS:

Students should review Lesson 5.5 to help recall the difference between these risk factors.

Using the www.flu.gov website, the CDC Influenza Pandemic Plan packet, and any other resources, take notes on possible risk factors for the flu in the table below.

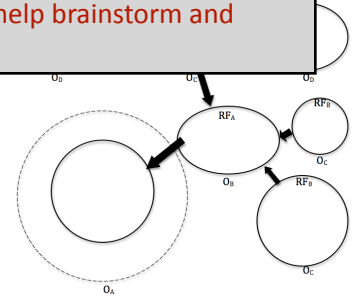
Type of Risk Factor	Risk Factors
Predisposing	
Reinforcing	
Enabling	
Other Modifiable Risk Factors	
Other Unmodifiable Risk Factors	

IDENTIFYING NEEDS:

If students have NOT completed Module 3 (Lesson 3.11), provide a few examples of visual brainstorming tools (also known as concept webs, mind maps, etc.). Emphasize that there is no right or wrong, this is just a way to help brainstorm and think about a problem.

Factor Outcome Web:

Recall: A Factor-Outcome web is a tool used to show the relationship between risk or protective factors and associated outcomes, made by connecting variables with bubbles and arrows, pointed in the direction of hypothesized influence. (Lesson 3.11)



Create a Factor-Outcome web that connects factors and variables related to influenza. You may choose to organize this web in any way that makes the most sense to you; it should be a visual map to track your thinking!

Students might want to do a very brief pencil sketch of a part of their web in the empty space here. Then they could collaborate with team members and create a larger web on poster paper or butcher paper.

Research:

LITERATURE REVIEW:

Each team member on the task force should choose a risk factor to focus on and locate one peer-reviewed, scholarly journal article describing a study related to that risk factor. Summarize the study in the table below.

Info Type:	Information:
<p>Source <i>(title, author, name of site, date, and URL below)</i></p>	<p>Students can use Google Scholar. They should look for articles that have a PDF available for free, whenever possible. Abstracts can be used (as the sole source of information) with approval. Some abstracts offer a very detailed portrait of the research; others are not quite as helpful without the full-text article.</p>
<p>Risk Factor</p>	
<p>Purpose of Study</p>	
<p>Methods</p>	
<p>Results</p>	
<p>Conclusion</p>	

IDENTIFY PRIORITIES:

What were the major findings from your literature review? Share your findings and record the key conclusions in the table below. Then work together to select the **two** most urgent risk factors to prioritize.

Major Research Findings:

Risk Factor	Literature Review Findings

Identify Solutions:

ACTION PLAN:

Prioritized Risk Factors:

Evidence for Risk Factors:

Recommendations:

Ask students:

- Will your prevention recommendation involve primary, secondary, or tertiary prevention (or some combination of the three)? Why?
- What level of the ecological model does your solution focus on? Why?
- Does your solution involve the flu vaccination? Why or why not?

Communicate:

If students need more structure or guidance, an outline can be created with basic requirements for each section. Or groups could be required to submit their own outline for feedback and/or approval before starting their draft!

OFFICIAL REPORT:

Prepare a 2-3 page written report that includes the following:

- **Introduction to Risk Factors**
- **Literature Review**
- **Recommendations**
- **Works Cited**

Students can be required to submit only ONE paper per group (this will also make grading less cumbersome!) They should be encouraged to be very collaborative. (Many hands make light work!) Beware: Often, collaborative papers take LONGER and lead to unequal distribution of work. One strategy, if technology permits, is to require use of Google Docs. If they share with you, as the instructor you can check to see their progress and even revision history showing changes/additions that each team member made.

Each team member should contribute to the report equally. Be sure to cite all your sources appropriately to avoid plagiarism!

TOWN HALL PRESENTATION:

The community will be gathering at a local high school for a briefing from the local health department on the upcoming influenza threat. Prepare a 5 minute team oral presentation that includes the following:

- **Background on Influenza**
- **Explanation of Risk Factors**
- **Summary of research findings**
- **Recommendations**

Each team member should contribute to the presentation equally. Practice as a team to ensure you are professional, clear, concise, and engaging. Be sure to plan your opening and closing as well as transitions between team members.

To make presentations more authentic, community partners could be brought in to view and/or evaluate them, as well as ask questions of each group. (i.e., local health department officials, healthcare providers, Alternatively, presentations could be recorded and uploaded to youtube (keep privacy settings as "unlisted" in order to protect student privacy). These videos could be shared with local health professionals for feedback. If students know this in advance, they may be more invested (and nervous, in a good way!) to do their best and feel that their research and contributions will actually be received from those who may be able to take action!

Rubric:

The rubric can be modified and tailored as needed to individual instructor needs and grading policies/criteria.

Your survey, final report, and final presentation will be evaluated using the criteria below.

Obj. 5.12: Use evidence from scientific studies to support a local plan for preventing the spread of influenza

	Needs Improvement	Emerging Mastery	Partial Mastery	Mastery
LITERATURE REVIEW	Missing or incomplete literature review	Did not access peer-reviewed scholarly journal source or credible source, not aligned to a risk factor for influenza; Did not adequately analyze the study to determine purpose and conclusions	Accessed peer-reviewed scholarly journal source or another credible sources summarizing a study, at least partially aligned to a risk factor for influenza; Analyzed the study to determine purpose and conclusions	Accessed peer-reviewed scholarly journal source, aligned to a risk factor for influenza; Accurately analyzed the study to determine purpose and conclusions
REPORT	Missing or underprepared report; Not concise, clear, & aligned; unprofessional.	Not concise, clear, aligned, or professional; missing some sections; major spelling/grammar issues; unequal contributions	Somewhat Concise, clear, & aligned; mostly professional; comprehensive (includes all sections but some may be weak or short); some spelling/grammar issues; all team members contributed, but some more than others.	Concise, clear, & aligned; professional; comprehensive (includes all sections); few or no spelling/grammar issues; all team members contributed.
PRESENTATION	Missing presentation or underprepared; Not concise, clear, & aligned; unprofessional.	Not concise, clear, & aligned; unprofessional opening, closing, & transitions; one or more team members did not contribute	Concise, clear, & aligned; professional at most points; fairly smooth opening, closing, & transitions; all team members contributed, but some more than others.	Concise, clear, & aligned; professional; smooth opening, closing, & transitions; all team members contributed.

Remind students that they should use the rubric to self-evaluate their work as well. This is a best practice that will help them manage their quality of work and have a clear sense of the expectations and grading criteria.