

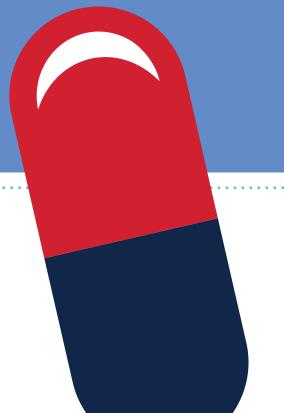
HIGH SCHOOL

# DIGITAL LESSON EDUCATOR GUIDE

Reporting on a Public Health Crisis: Opioids in our Community







# LESSON **OVERVIEW**



In this lesson, students will investigate how the opioid epidemic, as a public health crisis, impacts their community. They will examine the reasons people turn to opioid use and misuse, acting as investigative reporters to investigate the who, what, when, where, why, and how of opioid use and misuse.

The accompanying presentation was created with PowerPoint so that it can be used in a variety of classrooms. If you are using a laptop with an LCD projector, simply progress through the PowerPoint by clicking to advance. All interactive aspects of the presentation are set to occur on click. The corresponding videos link to the slides. Click on the images to play the videos. If you are using an interactive whiteboard, tap on each slide with your finger or stylus to activate the interactive aspects of the presentation. It does not matter where you tap, but you can make it appear as if you are making certain things happen by tapping them. Teacher notes are included for each slide that include information on how to proceed.

#### **Content Areas**

English Language, Life Sciences, and Health Education

#### **Activity Duration**

3-4 class sessions (45 minutes each)

#### **Grade Level**

Grades 9-12

#### **Essential Questions**

- Why do people misuse prescription opioids?
- O What turns opioid use into an epidemic?
- O How does an opioid epidemic impact our community?
- What impact has the opioid epidemic had in our community?

#### **Materials**

- Access to the Internet
- Tablets, journals or blank paper and writing tools
- One short letter's huge impact on the opioid epidemic Student Handout
- Community Roles and Perspectives
   Student Handout
- Multiple Perspectives Student Handout

#### **Objectives**

- Examine public health, what it is, and why it is an important framework for investigating what has grown into a health crisis affecting communities.
- Explore how opioid misuse has grown from an individual health issue to a public health crisis to an epidemic.
- Identify the ways the opioid epidemic impacts families and the community.
- Design a plan or strategy to help mitigate or prevent an opioid epidemic in your own community.

## **BACKGROUND** INFO



Medications are chemicals or compounds used to treat diseases and save lives. Today's medications are produced using a variety of sources. Many medications are developed using substances from nature. When used responsibly, medications can help manage and prevent disease, ease symptoms, and in some cases, diagnose illnesses.

Opioids, a type of prescription medication, are prescribed to treat pain. Prescription opioids and heroin, an illegal type of opioid, are the main causes of overdose deaths. The overuse and misuse of prescription opioids is a serious public health threat.

Endorphins, chemicals that are naturally produced and released in the brain, interact with our brain's opioid receptors. Think of how good you can feel after you eat a good meal, when you engage in fun activities, exercise or do sports, or socialize and laugh with friends and family. Endorphins engage with these natural receptors to block the experience of pain. That is, they don't make the pain go away; they just block your feeling of it.

Because opioids are effective at treating severe pain, doctors have relied on them to help patients manage problems with chronic pain. This may include everything from the short-term pain incurred after a surgery or to ease suffering from long-term, chronic problems like back pain, to lessening pain symptoms from cancer.

There are approximately 144 drug overdose deaths per day in the United States with just over 63 percent of those deaths related to prescription opioids or heroin. The number of prescription opioids sold in the U.S. and the number of prescription opioid deaths have both quadrupled since 1999. Since then, more than 165,000 people have died from prescription opioid overdoses.

# WHAT IS PUBLIC HEALTH?

This has turned the issue into a public health crisis. According to the Centers for Disease Control and Prevention (CDC):

- "Public health is the science of protecting and improving the health of families and communities through promotion of healthy lifestyles, research for disease and injury prevention, and detection and control of infectious diseases."
- O "Overall, public health is concerned with protecting the health of entire populations. These populations can be as small as a local neighborhood, or as big as an entire country or region of the world."

Taking a public health approach involves a community-wide approach to addressing health and environmental problems. It brings together the talents, knowledge, and skills of many fields, from scientists to statisticians, from health departments to law enforcement agencies, and from hospitals and health clinics, to schools and families.

Far from being a medical issue alone, opioid misuse has moved into the domain of public health crisis and has spread throughout the United States.

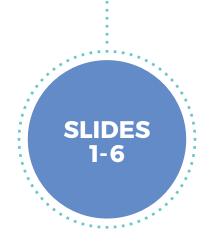
This lesson sequence is designed to help high school students research the roots of opioid use in managing pain, and research why opioids are often misused. They will then investigate the conditions that led to it becoming a public health epidemic.

This guide was created to give educators ideas and strategies for presenting the content in the digital lesson. It provides slide-by-slide details for educators to be prepared to engage with students as they explain, discuss, and effectively facilitate the content in the presentation. The presentation is designed to cover three 45-minute class sessions, but it is flexible, depending on the students' needs and time available.



During the lesson sequence, students will explore the reasons why opioids are prescribed, how they are often misused, and how misuse can lead to abuse. In their role as investigators, students will plan and conduct original research to obtain information about the opioid epidemic in their own communities and design strategies for reducing or preventing an epidemic.

At different points in the lesson, students may be tempted to share personal information regarding misuse by themselves or others. As always, be sure to follow school or district policies about the sharing of personal information about minors.



# ENGAGE & EXPLORE

How Opioids Went from Treatments for Pain to Public Health Crisis



#### SLIDE 1

Display the definitions of a pandemic and epidemic. An epidemic is widespread and affects a disproportionately large number of people in a given area at the same time. A pandemic is a disease that spreads throughout the world.

Click slide to display the following examples from past and present:

- O Ebola
- SARS
- Opioids
- Obesity
- O HIV/AIDS
- O HINI Flu Virus
- Cholera

Invite students to sort the list into the correct category of either an epidemic or pandemic. Click the slide to reveal which of the list are epidemics. Ask students to share out if any of the answers surprised them. Clarify that an epidemic disease is not required to be contagious; the term has been applied to both the obesity and opioid epidemics.

Click the slide to display the information: There are approximately 144 drug overdose deaths per day in the United States with just over 63 percent of those deaths related to prescription opioids or heroin. The number of prescription opioids sold in the U.S. and the number of prescription opioid deaths have both quadrupled since 1999. Since then, more than 165,000 people have died from prescription opioid overdoses. Ask students, How does this information support opioids being classified as an epidemic?



#### SLIDE 2

Guide students to brainstorm recent health crises in the news and share out examples.

 Examples might include: the water crisis in Flint Michigan, cigarette addiction or alcohol abuse, HIV/AIDS, the Zika virus, seasonal flu epidemics, etc.

Invite students to consider the question: What is public health and why does it matter?

Show the video, What is Public Health? <a href="http://ph.ucla.edu/news/multimedia/video/what-health-public-health-treatment-vs-prevention">http://ph.ucla.edu/news/multimedia/video/what-health-public-health-treatment-vs-prevention</a> (2:05)

Start a conversation by asking these questions:

- O Based on the video, what do you think public health is?
- O What kinds of questions or problems does it concern?
- O How do you think the opioid epidemic would be seen as a public health issue?
- O Think about the kinds of people who may be involved in public health in our community. What kinds of roles do they play?



#### SLIDE 3

Invite students to explore how opioid prescriptions evolved into a health crisis and is currently an epidemic.

Display the passage on the slide: A researcher and a physician published a Letter to the Editor in The New England Journal of Medicine in 1980 stating that opioids were useful in pain treatment with no threat of addiction. It became the first time that opioids were recommended as safe and effective for use in treating pain.

#### Ask students:

- Why would the fact that a medical journal originally published this letter be so influential?
- How could doctors and health professionals cite that letter as justification for continuing to prescribe opioid medications for pain?

Clarify that prescribing opioids in hospitals or medical clinics was well known to help moderate pain, as was the effect of the drugs on the brain and body. But before 1980, there was no scientific research establishing whether or not these drugs were addictive to patients. One letter to a medical journal changed all that and triggered the spread of this epidemic to every state, and every demographic—old and young, poor and wealthy, and every race, color or ethnicity.



#### SLIDE 4

Ask students to break into groups of four or five, seated in a circle. Instruct them to start the game of telephone. Ask for a volunteer in each group to discuss the plans for a get-together over the weekend. They may want to covertly write down the message for accuracy, and hide it so no one else sees it. Make sure the leader includes at least one phone number or address, a date and time, and details about what to wear and food to bring.

Then start the game of telephone by whispering the details to the player to their left, and onward until it comes to the last person, who then reports aloud what s/he heard.

- O How close was the last person's report to the original message?
- O Can they track each time the message became distorted?
- What do you think might happen if every person in your group passed the message they heard to a friend outside of your class—and that person, in turn, passed it on again?

Summarize with students how reporting, even in a prestigious medical journal, can be taken out of context to become distorted over time, and the impact this distortion has had on turning a narrowly defined use of pain medications for hospitalized patients into a crisis of epidemic proportions.



#### SLIDE 5

Invite student groups to read this CNN <u>article</u>, "One short letter's huge impact on the opioid epidemic." Article is also available as a handout.

Instruct students to take down key facts from the story on paper, on a blackboard, or on a tablet.

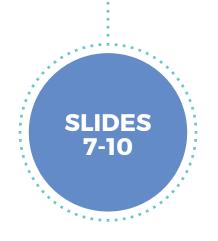
- As students study the bar graph in the article showing the number and types of citations for the 1980 letter, what trends do they observe from year-to-year about citations for this letter, from 1991 to 2017?
- Ask students to think about how the number of times medical professionals cite this letter might contribute to the growth in the prescription of opioid painkillers by doctors?



#### SLIDE 6

Guide students to think critically about the article. Clarify that one of the original authors has subsequently claimed that his letter has been misrepresented in later references and citations. Dr. Jick told CNN in 2016 that it was never meant to apply to the general population. In the original letter, the authors carefully reported that their study took into account the effects of opioid painkillers in close to 40,000 hospitalized patients. Yet, according to a new analysis, 80% of the articles that referenced the letter make no mention of the fact that these were hospitalized patients.

- What is the context for the original authors' opinion, and why is it important?
- What are the consequences for omitting relevant information about hospitalization (in other words, patients under a doctor's supervision and, presumably, for the time the patient is in the hospital) if that is omitted in subsequent references of the study?
- O How do you think that may have skewed treatment recommendations?
- O How did the Ohio Attorney General allege that these pharmaceutical companies misled medical professionals?
- In what ways do you think the misleading information may have contributed to overprescribing opioids?



# EXPLAIN

Is our community impacted by the U.S. opioid epidemic?



#### SLIDE 7

Ask students:

- O Do you think our community is impacted by the opioid epidemic? What evidence supports your response? It is anticipated that students will share that they have seen news reports, discussed the topic in other classes, heard information on the radio, or noticed reports on social media. Students may say their community is not impacted because they have not noticed any reports.
- O How can exploring an issue through multiple perspectives construct a more accurate interpretation of an issue or event? It is anticipated that students will recognize that one viewpoint will be partial, limited, or even distorted. Analyzing and considering different viewpoints adds multiple layers of meaning and can help generate more solutions and better overall understanding.

Guide students to brainstorm five resources that could help them find out.

 Anticipated responses include news articles, infographics, interviews, outreach and awareness flyers, news videos, and guest speakers.



#### SLIDE 8

Divide students into reporting teams to begin defining the scope of the problem. Each team will investigate the problem through a different public health lens. Assign a different community role to each group.

- O Law enforcement (police, sheriff, courts, fire department, etc.)
- Health and medical community (hospitals, clinics, mobile health units, emergency medical technicians, local morgue, social workers and counselors)
- Corrections (jails and prisons)
- Public health institutions (local health department, coroner's office, researchers, epidemiologists, community health workers)
- O Mayor, town council members, or another elected official(s)
- O Education (counselors, school nurse)



#### SLIDE 9

Explain to students that they will use a podcast as a resource to help them kick-start their research with some background information. Students should listen for evidence of how their role in the community plays a part in responding to this epidemic.

Listen with the class to the NPR News interview program, "The Call-In," in an interview with Acting DEA Administrator Chuck Rosenberg, about how a public health epidemic impacts the community, and the public health response:

http://www.npr.org/2017/02/26/517305305/the-call-in-the-opioid-epidemic-and-how-opioids-have-affected-your-lives (8 min. 51 secs).

#### **Key takeaways:**

Interviewing experts to understand how they approach the public health problem of opioid abuse is an effective way to gain an overview of the problem at the local level. By talking to the experts, students will learn the techniques of interviewing, how to find facts to support the evidence, and putting those facts into a format that is easy to comprehend, either visually (graphics, infographics), in an article or report, or in digital formats like video or podcasts.

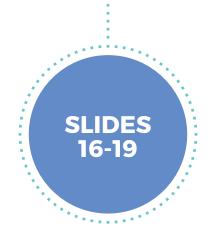
#### **Key points for the discussion:**

- What are some of the ways in the Q&A session that the people who called in are grappling with this crisis?
- Public health questions are addressed by different, often coordinating, agencies and experts, to work on health and safety problems that affect their communities.
- Each agency is concerned with a different piece of the puzzle, based on their training, experience and expertise. For example, the law enforcement community is trained to follow the law and protect citizens from drug trafficking and violence; social workers may help people who have been victims of a crime to address mental health concerns; ER doctors and nurses are trained to save people who may have overdosed, as are EMTs.
- Each agency or organization would keep statistics and capture trends for different purposes. These might be collected from each agency by the local health department to better understand the problem and look for solutions.



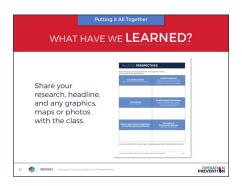
## SLIDE 10

Guide students to take a coordinated public health approach in reporting on the local scope of the problem by examining local news stories, infographics, outreach and awareness flyers, news videos, and interviews through the lens of their assigned community perspective. Provide time for students to conduct their research and record their findings using the Community Roles and Perspectives Student Handout.



# EVALUATE

Putting It All Together: What Have We Learned?



#### SLIDE 11

Distribute the Multiple Perspectives Student Handout. Ask each team to share its research, headline, and any graphics, maps or photos with the class. As students listen, they should summarize how each perspective provides a unique insight into the opioid epidemic.

Invite students to reflect on the following questions:

- What is it about opioids that have led to a public health crisis in the community?
- Are there groups of people at particular risk for misusing prescription opioids and using heroin?
- What stories did they hear about how the opioid epidemic is impacting their community?
- O How would they describe the problem in their community to other students and families about this situation?
- O How can an examination of an issue through multiple perspectives affect the understanding of an epidemic?

Using the class evidence, determine if their community is impacted by the opioid epidemic, or if the opioid epidemic has not impacted their community.

Designate one side of the room as "not affected at all" and the other as "significantly affected." Instruct students to create a human barometer to visualize their conclusion by placing themselves on either side of the room, or somewhere in-between, depending on their evidence based decision.

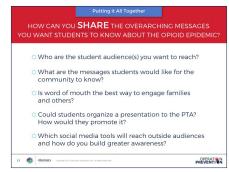
# **DAYS 3 & 4**



# SLIDE 12

Once students have summarized their findings, it's time to share that with the school community. Students have spent time creating materials outlining the scope of the problem and what they have learned. Guide students to identify one, or two key, overarching messages they would like other students to know about the opioid epidemic.

# **DAYS 3 & 4**



#### SLIDE 13

Invite students to think about the audiences they want to reach with their overarching messages, who they are, what they care about, and the best ways to reach them.

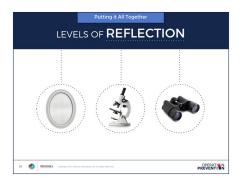
- Who are the student audience(s) you want to reach?
- What are the messages students would like for the community to know?
- O Is word of mouth the best way to engage families and others?
- Could students organize a presentation to the PTA?
   How would they promote it?
- Which social media tools will reach outside audiences and how do you build greater awareness?

Students may choose to create a digital campaign, flyers, video PSA, podcast or blog with posts of their research and interviews to share within the school and community, so that other students can benefit from their research.

**Optional Extension:** Most researchers, health professionals, and other experts on the problem of drug abuse and addiction will agree that prevention is the best treatment. Invite students to brainstorm practices and activities that may contribute to promoting healthy activities that can lead to drug abuse prevention and include this as part of their campaign. As part of this activity, students will want to consider what prevention is, and which prevention programs are most effective.

- What activities, experiences and practices contribute to physical and mental health?
- List some of the key things they can do to prevent substance abuse. These may include: regular exercise, healthy eating, spending time regularly with friends and family, listening to music, engaging in sports, clubs or other after school activities.
- Ask students why they think these activities promote prevention, or help teens develop effective tools to resist peer pressure.
- Discuss social and emotional qualities like resilience, focused awareness, mindfulness, creativity, teamwork, gratitude, and taking responsibility for their actions. Invite them to reflect on how these qualities may contribute to growing a strong prevention muscle.
- Inventory local prevention options. Suggest students create an inventory to find out what local resources are available. Some examples include: help hotlines, clinics, local colleges, and local public health agencies.

# **DAYS 3 & 4**



## SLIDE 14

Distribute the <u>Levels of Reflection Student Handout</u> for students to summarize and reflect on the impact of the U.S. opioid epidemic. Ask students to select one question from each level to respond to as part of their reflection. The mirror invites students to consider the individual impact of researching the opioid epidemic. The microscope guides students to consider how this research helped students learn more about their community. The binoculars ask students to reflect on larger social issues and their own personal development.

# ONE SHORT LETTER'S HUGE IMPACT

# ONE SHORT LETTER'S HUGE IMPACT ON THE OPIOID EPIDEMIC

By Nadia Kounang, CNN Updated 11:16 PM ET, Thu June 1, 2017

Every day, 91 Americans die from an opioid overdose. Drug overdoses overall -- most of them from opioid painkillers and heroin -- are the leading cause of accidental death in the U.S., killing more people than guns or car accidents. In fact, while Americans represent only about 5% of the global population, they consume about 80% of the world's opioid painkillers. But how did we get to this point?

Many public health experts point to a simple five-sentence letter to the editor published in a 1980 edition of the New England Journal of Medicine. The 101-word letter, titled "Addiction Rare in Patients Treated with Narcotics," was signed by Jane Porter and Dr. Hershel Jick of Boston University, who said that of their 11,000-plus patients treated with narcotics, there were only four cases of addiction.

And although this letter provided no further evidence and was not a peer-reviewed study, it has often been cited as proof of the safety of prescribing long-term narcotics for chronic pain.

This week, the journal published yet another letter to the editor, this one an analysis from researchers at the Institute for Clinical Evaluative Sciences of how frequently Porter and Jick's letter has been cited by other researchers and physicians in studies and journals since its publication. The analysis found 608 citations of the initial letter as of May 30, 72% of them pointing to it as proof that addiction was rare among long-term narcotic users.

Dr. David Jick, one of the researchers involved in the analysis, wrote in an email that the "5-sentence letter to the editor in medicine's most prestigious journal was leveraged as proof that opioids could be used safely over the long term, even though it offered no evidence to support that claim. It's clear that many of the authors who cited it hadn't actually read it."

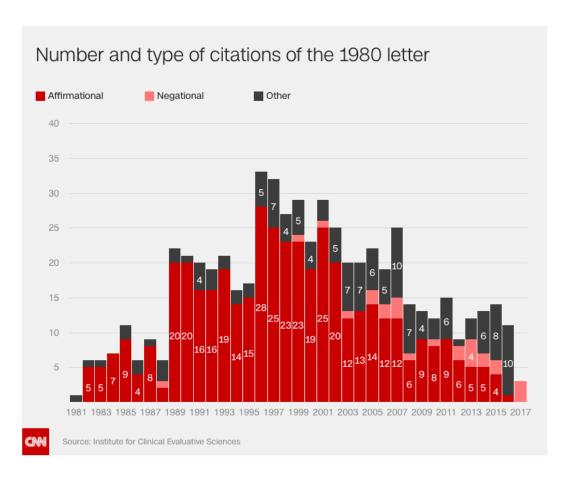
Jick is quick to point out that his letter has been misrepresented. He told CNN last year that it was never meant to speak about the general population, but rather referred only to patients who were closely monitored in a hospital setting. Yet, according to the new analysis, 80% of the articles that referenced the letter make no mention of the fact that these were hospitalized patients.

In addition, most of the citations weren't critical at all of the letter or the notion that these drugs could be dangerous to prescribe long-term. In fact, references to the letter in studies jumped after the 1995 introduction of OxyContin, the long-acting formulation of oxycodone.

And although positive references to the letter have decreased in recent years, they still remained as of 2016.

So far this year, the researchers found no positive references to the letter.

# ONE SHORT LETTER'S HUGE IMPACT CONT.



#### The fight against opioid addiction

To help stem the wave of opioid overdoses across the country, public health experts, legislators and law enforcement have come together in an all-hands-on-deck effort.

Among the most recent efforts, Ohio Attorney General Mike DeWine this week filed suit against five pharmaceutical companies: Purdue Pharma, the maker of OxyContin; as well as Teva Pharmaceuticals; Allergan; Endo Health Solutions and Janssen, a subsidiary of Johnson & Johnson.

In a statement, DeWine said, "These drug manufacturers led prescribers to believe that opioids were not addictive, that addiction was an easy thing to overcome, or that addiction could actually be treated by taking even more opioids."

Ohio joins a growing list of states and municipalities, such as Mississippi and the city of Chicago, alleging that pharmaceuticals recklessly pushed the prescribing of addictive narcotics while knowing the risks.

On Wednesday, the Heroin and Opioid Prevention Effort and Treatment Act went into effect in Maryland, effectively making naloxone, a medication that can reverse opioid overdose, available over the counter. There is similar legislation allowing broad access to naloxone in Alabama, West Virginia and Pennsylvania.

# COMMUNITY ROLES & PERSPECTIVES

Your assigned commu	nity role:	
Describe the opioid epidemic in your own words.		
What are typical responsibilities of your role in a community?		
How does your assigned community perspective provide a unique insight into the opioid epidemic? Include three pieces of evidence.		
How does thinking from this perspective affect your understanding of the opioid epidemic? Include three pieces of evidence.		
How has your assigned community role contributed to solutions?		

# MULTIPLE PERSPECTIVES

Review each perspective and summarize how each perspective provides a unique insight into the opioid epidemic.

<b>Law Enforcement</b> (police, sheriff, courts, fire department, etc.)	Health & Medical (hospitals, clinics, mobile health units, emergency medical technicians, local morgue, social workers and counselors)
Corrections (jails and prisons)	Public Health Institutions (local health department, coroner's office, researchers, epidemiologists, community health workers)
Mayor, Town Council Members, or another elected official(s)	Education & Community Centers (counselors, school nurse)

How can an examination of an issue through multiple perspectives affect understanding of an epidemic?

# LEVELS OF REFLECTION

Select one question to respond to, at each level of reflection, to summarize and reflect on the impact of the U.S. opioid epidemic.

The Mirror Self Reflection	<ul> <li>What have I learned about myself through this experience?</li> <li>Do I have more or less understanding or empathy than I did before this lesson?</li> <li>Are there any realizations, insights or lessons learned?</li> <li>Will this experience change the way I act or think in the future?</li> </ul>
The Microscope  Make the small Experience large	<ul> <li>What would you change about this situation if you were in charge?</li> <li>What have you learned about community organizations, service recipients, or community?</li> <li>Do you feel your actions had any impact?</li> <li>What more needs to be done?</li> </ul>
The Binoculars  Makes the Distance Appear Closer	<ul> <li>From your research, are you able to identify any underlying or overarching issues that influence the problem?</li> <li>What could be done to change the situation?</li> <li>How will this alter your future behaviors, attitudes, or career?</li> </ul>

# NATIONAL HEALTH STANDARDS

**Standard 1:** Students will comprehend concepts related to health promotion and disease prevention to enhance health.

**Standard 3:** Students will demonstrate the ability to access valid information and products and services to enhance health.

**Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

**Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

#### **Social and Emotional Learning (SEL) Core Competencies**

- Self awareness
- Self management
- Social awareness
- Relationship skills
- O Responsible decision-making

# NATIONAL **HEALTH STANDARDS CONT.**

#### **Common Core English Language Arts**

Reading Standards	Writing Standards	Speaking and Listening
RL.9-10.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	W.9-10.2.E Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.	SL.9-10.1.A  Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
RL.9-10.2 Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments	W.9-10.2.F Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	SL.9-10.1.D Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.
RI.9-10.8  Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.	W.9-10.7 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.	SL.9-10.3  Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.
RI.11-12.3  Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.	W.9-10.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.	SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.