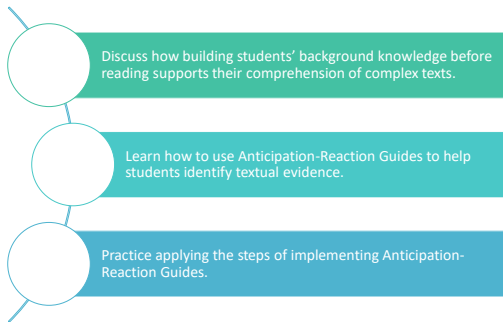


Activating Students' Background Knowledge and Facilitating the Use of Textual Evidence

CALI READS SITE WEBINAR
SEPTEMBER 2020



Objectives

Anticipation-Reaction Guides

What?	Who?	When?
<ul style="list-style-type: none">• Strategy for supporting comprehension	<ul style="list-style-type: none">• Teacher created	<ul style="list-style-type: none">• Background knowledge is important to comprehension

Why is it important to activate or build background knowledge?



(Burgoyne, Whiteley, & Hutchinson, 2013; Elbro & Buch-Iversen, 2013)

What do you think this text is describing?

If the balloons popped, the sound wouldn't be able to carry because everything would be too far away from the correct floor. A closed window would also prevent the sound from carrying because most buildings tend to be well insulated. Since the whole operation depends on a steady flow of electricity, a break in the middle of the wire would also cause problems. Of course, the fellow could shout, but the human voice is not loud enough to carry that far. An additional problem is that a string could break on the instrument. Then there could be no accompaniment to the message. It is clear that the best situation would involve less distance. Then there would be fewer potential problems. With face to face contact, the least number of things could go wrong.

(Bransford & Johnson, 1972)

What would improve your understanding of the passage?



Just Enough Background Knowledge

If the balloons popped, the sound wouldn't be able to carry because everything would be too far away from the correct floor. A closed window would also prevent the sound from carrying because most buildings tend to be well insulated. Since the whole operation depends on a steady flow of electricity, a break in the middle of the wire would also cause problems. Of course, the fellow could shout, but the human voice is not loud enough to carry that far. An additional problem is that a string could break on the instrument. Then there could be no accompaniment to the message. It is clear that the best situation would involve less distance. Then there would be fewer potential problems. With face to face contact, the least number of things could go wrong.

(Bransford & Johnson, 1972)

Anticipation:

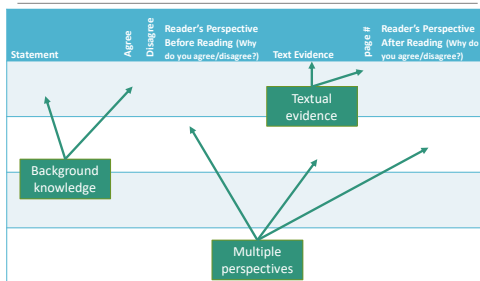
Have students respond to a set of statements before reading a text about those "big ideas"

Reaction:

Have students reconsider the same statements after reading the text

Anticipation-
Reaction
Guides

Features of the Anticipation- Reaction Guide



Writing the Statements

Claim	Support	Reasoning	Warrant	Backing	Rebuttal

Claim	Support	Reasoning	Warrant	Backing	Rebuttal

Why not use fact-based or true-false statements?

A. Pi must abandon being a vegetarian in order to survive.

B. People may do heroic things to survive, but they also may do shameful things in a life-or-death situation.

C. Science and religion are mutually exclusive ways of understanding the world.

D. Truth is absolute—the facts will prove what happened.

E. Pi offers the Japanese officials two versions of what happened after the sinking of the ship and asks them to choose a version of the story to accept as truth.

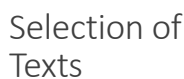
F. The two Mr. Kumars demonstrate how science and religion both demonstrate a belief and help explain the world.

The Life of Pi by Yann Martel

POLL

Which of these statements are examples of the type we want for Anticipation-Reaction Guides?

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- Major literary themes
- Historical novels
- Satires

- Primary source documents
- Controversies

- Bioethics
- Context-dependent phenomena

[illegible]

Statement	Agree Disagree	Reader's Perspective Before Reading (<i>Why do you agree/disagree?</i>)	Text Evidence	Page #	Reader's Perspective After Reading (<i>Why do you agree/disagree?</i>)
It is important to keep everything as clean and free of bacteria as possible.					
Bacterial infections are not as serious as viral infections because we have medicines for treating bacteria.					
Finishing a full course of antibiotics is important to getting and staying healthy.					

Set Purpose for using the Anticipation-Reaction Guide

- Start thinking about some important ideas in the text.
- Recall what you already know or have experienced.
- Establish a reason for reading the text.



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Responding to the Statements

Statement	Agree Disagree	Reader's Perspective Before Reading (Why do you agree/disagree?)	Text Evidence	Reader's Perspective After Reading (Why do you agree/disagree?)
It is important to keep everything as clean and free of bacteria as possible.				
Bacterial infections are not as serious as viral infections because we have medicines for treating bacteria.				
Finishing a full course of antibiotics is important to getting and staying healthy.				

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How could this be done remotely?

Share reasoning with partner

Response cards

Debate sides

Provide sentence stems for rationale.

- I agree/disagree with _____ because I learned that _____.
- I agree/disagree with _____ because when I _____.

Scaffolds Before Reading

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Breakout Rooms:
Recording Textual Evidence

Statement	Agree Disagree	Reader's Perspective Before Reading (Why do you agree/disagree?)	Text Evidence	Page #	Reader's Perspective After Reading (Why do you agree/disagree?)
It is important to keep everything as clean and free of bacteria as possible.	✓			1	
Bacterial infections are not as serious as viral infections because we have medicines for treating bacteria.	✓				
Finishing a full course of antibiotics is important to getting and staying healthy.	✓				

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Scaffolds During Reading

Partner reading

Silent reading

Supply the page numbers or the paragraph where evidence can be found for each statement.

Teach paraphrasing

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Reconsidering the Statements After Reading

Statement	Agree Disagree	Reader's Perspective Before Reading (Why do you agree/disagree?)	Text Evidence	Page #	Reader's Perspective After Reading (Why do you agree/disagree?)
It is important to keep everything as clean and free of bacteria as possible.	X ✓				
Bacterial infections are not as serious as viral infections because we have medicines for treating bacteria.	✓				
Finishing a full course of antibiotics is important to getting and staying healthy.	✓				

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Teach students to evaluate claims and evidence

Share reasoning with partner

Provide sentence stems for rationale.

- I agree/disagree with this statement because ____ and ____ support the idea that ____.
- I agree/disagree because the text stated that _____. This means _____.
- Even though the text stated _____, I know that _____.

Scaffolds After Reading

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Remote Instruction



Summary of the Steps

Teacher	Select appropriate text
	Develop 3-4 opinion statements
	Pre-teach vocabulary and set context
	Set purpose
	Read statements to students
Students	Decide whether to agree or disagree and provide rationale
	Read the text and record relevant information
	Reconsider statements
	Change or confirm opinion and provide rationale

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Anticipation-Reaction Guides within a System of Supports

USE IN THE STAGES OF READING

- Before Reading**
- Read and respond to statements
 - Discuss
- During Reading**
- Collect textual evidence
- After Reading**
- Revisit and respond to statements
 - Discuss

CONNECT WITH OTHER STRATEGIES

- Before Reading**
- Preteach vocabulary
 - Preview of text and/or topic
- During Reading**
- Repair breakdowns in comprehension
- After Reading**
- Summarize
 - Close reading

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Implementation Tips



Provide the students with stems for expressing how they agree or disagree with either the text or their peers.



If students are initially reluctant to offer their perspectives (either before or after reading the text), divide them into two groups to consider the arguments for agreeing or disagreeing. As a group, they can generate the support for the perspective and have a debate with the other group.



Pair the comprehension instruction inherent in Anticipation-Reaction Guides with writing instruction in how to synthesize or summarize the author's ideas and evidence.



For students who struggle to locate appropriate textual evidence, use numbered tape flags to suggest places in the text where the students should focus on considering how the information might be related to the statement on the guide with the same number.

Using an Anticipation-Reaction Guide for lessons where one right answer or perspective is expected


Targeting ideas that are politically or emotionally charged within the community

Allowing students to read with a confirmation bias

Completing the Anticipation-Reaction Guide as a homework assignment without offering the opportunities for discussion

Using the guide with lessons where students are supposed to identify the key ideas or themes

Potential Difficulties



How will you support your sites in implementing Anticipation-reaction Guides?

PLANNING TIME

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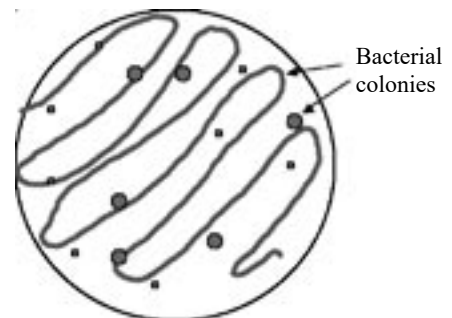
Grade	Benchmark	Standard	Page
06	06 : 05	05	1-5

Both viruses and bacteria can cause serious infections, but they require different treatments. **Viruses** are not cells. They need a host to multiply, so they cause infections by entering and multiplying within the host's healthy cells. Viruses cannot be treated with antibiotics, and taking antibiotics for viral infections could make other infections antibiotic resistant. However, vaccines can prevent viral infections, and other medicines can stop viruses from multiplying.

Bacteria are *microscopic, single-celled organisms that exist all around you and inside you*. Although they can cause sickness and disease, they are very important to life on Earth. We depend on bacteria to help in the digestion of food, for plant growth, and to help us make foods and medicines. Bacteria are an important part of the soil. They are able to capture some nutrients that plants cannot. When living things die, bacteria play a very important role as **decomposers**, *bacteria and fungi feeding on and breaking down plant and animal matter*. Without these decomposers, the bodies of all organisms that have ever lived would still remain. This would be messy. When bacteria break down the dead organisms, they release substances that can be used by other organisms in the ecosystem.

Bacteria can affect our bodies in several ways. Harmful bacteria can make us sick, but fortunately, our bodies will fight back. When streptococcus bacteria give us strep throat we can take medicine to help us get well faster. Some bacteria always live in our bodies. They are found in digestive systems and help digest food. Other bacteria are in our food. When you eat yogurt or cheese, you eat bacteria.

Bacteria are the smallest microorganisms. You can see them when there are thousands of them growing together a colony. To see bacteria as a single organism, requires a microscope with very high magnification. Bacteria live in almost every place on Earth. Scientists can **culture**, *grow microorganisms in a specially prepared nutrient medium*. The drawing shows how colonies of bacteria look when cultured on a plate. The colonies vary in size and color depending on the type of bacteria.



Bacterial Colonies on a Plate

The Washington Post

Democracy Dies in Darkness

New debate on antibiotics: Do you really need to take the full course?

By **Ariana Eunjung Cha**

July 27, 2017 at 11:00 a.m. CDT

The one rule about antibiotics that has been drilled into our heads for generations is that you absolutely must take the full course — or else something very bad might happen.

Is it time to reconsider that advice?

In an opinion piece published in the BMJ on Wednesday, a group of practicing physicians argues that the idea that stopping antibiotics early may be dangerous to the patient and society as a whole is not grounded in strong science and that policymakers, educators and doctors should drop this message.

The question of how people use antibiotics is one of the most critical issues facing modern medicine. Whenever bacteria are exposed to antibiotics, they have the potential to evolve new strains that can withstand the drugs. Failing to take a full course of antibiotics, the logic goes, leaves behind bacteria that have developed some resistance. The rise of resistant “superbugs,” public health officials warn, could lead to a global pandemic if we cannot figure out how to better control our use of the drugs. In June, the World Health Organization took the unprecedented step of creating a controversial “reserve” list of antibiotics that should be restricted and only used in the most dire of circumstances.

Infectious disease experts Martin Llewelyn from the Brighton and Sussex Medical School, Tim Peto from the Oxford Biomedical Research Center and their co-authors argue in the new article that the advice to finish all your antibiotics contradicts the unambiguous fact that it's not underuse but overuse that's creating the resistance problem.

Peto explained in an interview that as far as they could tell, the “full course” idea originated with a speech in 1945 given by Nobel Prize winner Alexander Fleming. Fleming recounted a moving story involving a patient with a streptococcal throat infection who didn't take enough penicillin, and passed it on to his wife, leading to her death from the newly antibiotic-resistant strain.

“The comments were emotional but not based on evidence,” Peto said. “We want the world to do more research so that we have a plan that's more substantiated.”

Several infectious disease experts agreed these are questions worth asking, but that it's premature to drop the decades-old advice.

Lauri Hicks, director of an office that focuses on antibiotics for the U.S. Centers for Disease Control and Prevention, pointed out that there are a number of studies regarding the ideal duration of therapy for specific issues. Regarding ear infections, for example, one study showed that patients taking an antibiotic for five days were more likely to fail treatment than those taking it for the full 10 days. Hicks said there is also evidence that if you don't complete a course of antibiotics, that makes it more likely that bacteria on your body may develop antibiotic resistance and cause a more serious infection down the road.

However, Hicks acknowledged there are certainly “compelling” reasons to think about it differently.

“There are situations where finishing a full course is important. There are also cases where it may not be as important and may end up putting patients at risk if we give them an unnecessary amount of antibiotics,” she said.

Sarah Fortune, a professor of immunology and infectious diseases at the Harvard T.H. Chan School of Public Health, said that for urinary tract infections and typhoid fever, studies have shown one day of drugs is often sufficient — making the normal week-long course overkill in many situations. For tuberculosis, however, stopping antibiotics early has been shown to put patients at risk for making their situation worse.

“This is an important example because it highlights the double-edge sword of treatment shortening,” she said.

If you treat for too short a time, you may end up enriching the environment for antibiotic-resistant organisms, she explained, “and the relative proportion of drug-resistant bugs becomes higher, higher than the host can ever deal with, and then this infection can reemerge as drug resistant.”

Yonatan Grad, in the division of infectious disease at Brigham and Women’s Hospital, said he feels that there are “many opportunities for improvement” in how doctors use antibiotics, and for many types of infections it may well be possible to reduce the duration of treatment without compromising the treatment’s effectiveness. However, he said the suggestion in the new opinion piece that doctors should tell people to stop taking antibiotics when they “feel better” is problematic.

“How are you to judge ‘feeling better’? Symptoms mostly gone? Entirely gone? Some symptoms, but not others?” he said, “This is too vague and subjective a recommendation.”

Ariana Eunjung Cha

Ariana Eunjung Cha is a national reporter. She has previously served as The Post’s bureau chief in Shanghai and San Francisco, and as a correspondent in Baghdad.

Handwashing

at Home, at Play, and Out and About



Germs are everywhere! They can get onto your hands and items you touch throughout the day. Washing hands at key times with soap and water is one of the most important steps you can take to get rid of germs and avoid spreading germs to those around you.

How can washing your hands keep you healthy?

Germs can get into the body through our eyes, nose, and mouth and make us sick. Handwashing with soap removes germs from hands and helps prevent sickness. Studies have shown that handwashing can prevent 1 in 3 diarrhea-related sicknesses and 1 in 5 respiratory infections, such as a cold or the flu.

Handwashing helps prevent infections for these reasons:



People often touch their eyes, nose, and mouth without realizing it, introducing germs into their bodies.



Germs from unwashed hands may get into foods and drinks when people prepare or consume them. Germs can grow in some types of foods or drinks and make people sick.



Germs from unwashed hands can be transferred to other objects, such as door knobs, tables, or toys, and then transferred to another person's hands.



What is the right way to wash your hands?

1. Wet your hands with clean running water (warm or cold) and apply soap.
2. Lather your hands by rubbing them together with the soap.
3. Scrub all surfaces of your hands, including the palms, backs, fingers, between your fingers, and under your nails. Keep scrubbing for at least 20 seconds. Need a timer? Hum the “Happy Birthday” song twice.
4. Rinse your hands under clean, running water.
5. Dry your hands using a clean towel or air dry them.



Centers for Disease
Control and Prevention
National Center for Emerging and
Zoonotic Infectious Diseases

When should you wash your hands?

Handwashing at any time of the day can help get rid of germs, but there are key times when it's most important to wash your hands.

- Before, during, and after preparing food
- Before eating food
- Before and after caring for someone who is sick
- Before and after treating a cut or wound
- After using the bathroom, changing diapers, or cleaning up a child who has used the bathroom
- After blowing your nose, coughing, or sneezing
- After touching an animal, animal food or treats, animal cages, or animal feces (poop)
- After touching garbage
- If your hands are visibly dirty or greasy

What type of soap should you use?



You can use bar soap or liquid soap to wash your hands. Many public places provide liquid soap because it's easier and cleaner to share with others. Studies have not found any added health benefit from using soaps containing antibacterial ingredients when compared with plain soap. Both are equally effective in getting rid of germs. If soap and water are not available, use an alcohol-based hand sanitizer that contains at least 60% alcohol.

How does handwashing help fight antibiotic resistance?

Antibiotic resistance occurs when bacteria resist the effects of an antibiotic – that is, germs are not killed and they continue to grow. Sickneses caused by antibiotic-resistant bacteria can be harder to treat. Simply using antibiotics creates resistance, so avoiding infections in the first place reduces the amount of antibiotics that have to be used and reduces the likelihood that resistance will develop during treatment. Handwashing helps prevent many sicknesses, meaning less use of antibiotics.

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For more information and a video demonstration of how to wash your hands, visit the CDC handwashing website:

www.cdc.gov/handwashing