

Lesson Five

Challenge Arguments

OVERVIEW

The purpose of Quality Talk (QT) Lesson Five is to introduce challenge arguments. The lesson will begin with a review of previous materials, including the components of an argument, ways of evaluating the strength of evidence and reasons/reasoning, and how to assess the overall strength of an argument. Next, challenge arguments will be introduced as a way for students to challenge an argument made by another person in their group during discussion.

Lesson Five includes an example of how interns could introduce evaluation of evidence and reasons/reasoning to elementary students and provides a practice activity.

OBJECTIVES

At the end of this lesson, students will be able to:

- ◆ explain what a challenge argument is and how it can be used to explore different answers to an authentic question;
- ◆ synthesize possible challenge arguments to arguments they might make during discussion; and,
- ◆ consider how they would introduce challenge arguments in an elementary classroom.

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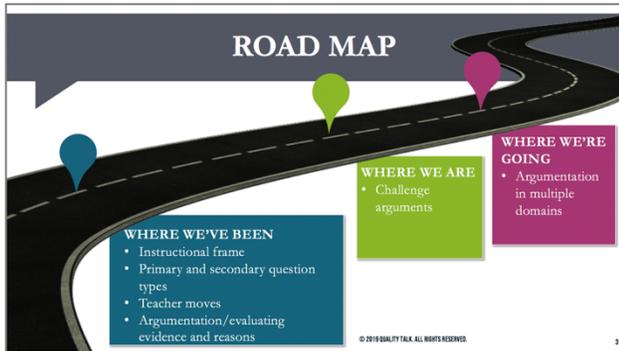
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MATERIALS

- ◆ QT Math PST Lesson 5 Slides
- ◆ QT Math PST Lesson 5 - Workbook

Part 1. Review

1.1 Road Map



Display **Slide 3**, which show what interns have learned so far, what they will be learning during this lesson, and what they will learn in future lessons.

Remind interns that in the first Quality Talk lesson, they learned about the instructional frame and the first three question types. In Lesson Two, they learned about teacher moves and were introduced to argumentation. Lesson Three built upon the three primary question types from Lesson One, and introduced six secondary authentic question types. Finally, Lesson Four overviewed ways of evaluating the strength of evidence, reasons, and reasoning.

In this lesson, interns will continue to build on their knowledge of argumentation by learning about how to formulate challenge arguments in response to arguments made by others in their group.

In the last lesson, interns will learn about how argumentation may look different in different content areas. For example, a strong argument in CLE may not use the same kinds of evidence and reasons or reasoning as a strong argument in mathematics.

1.2 Review: Argumentation

REVIEW: ARGUMENTATION

What Makes an Argument

✓ Strong arguments are made up of a claim, reasons/reasoning, and evidence.

✓ Each piece adds weight to an argument.

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Display **Slide 4**, which contains a review of argumentation.

Review reasons/reasoning and evidence with interns. **Reasons** give support to a person's claim and explain why a person thinks their claim is valid, while **reasoning** helps us explain the links between evidence and the claim. Reasons/reasoning answer the question: "Why do you think that?" **Evidence** provides direct support for one's reasons. It answers the question: "How do you know that?"

Remind interns that an argument is composed of a claim, reasons/reasoning, and evidence. Each piece adds weight to the argument and makes it stronger.

We can think of a good argument with all three components like a sturdy house. When claims and evidence are linked together with reasons or reasoning that explain the claims, they form a sturdier house than if they were missing links. This is just like a house made from faulty or weak materials.

Part 1. Review

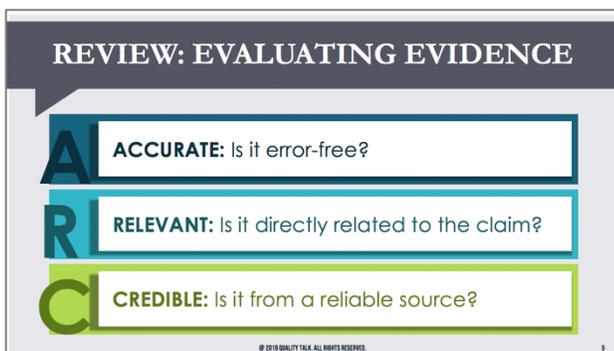
1.3 Review: Evidence



Display **Slide 5**, which shows various sources of evidence.

Review the following sources of evidence with interns: texts, calculations, observations, experts, experience, and research. Also point out that there may be other sources of evidence not listed here.

Remind interns that some sources of evidence may be more relevant or more highly valued in some content areas than in others. For example, calculations – which can be performed by a student or shown in a text – are a common form of evidence used in mathematics as well as science but are less common in areas like language arts or social studies.



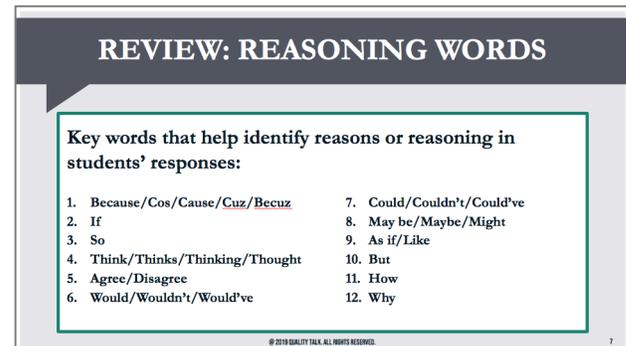
Display **Slide 6**, which shows a representation of the ARC test.

Remind interns that the ARC test is used to determine the strength of evidence. When determining whether a piece of evidence is

appropriate, one can use the ARC test to consider whether the evidence is:

- ◆ **Accurate:** *Is it error-free?*
- ◆ **Relevant:** *Is it directly related to the claim?*
- ◆ **Credible:** *Is it from a reliable source?*

1.4 Review: Reasons and Reasoning



Display **Slide 7**, which contains a list of reasoning words.

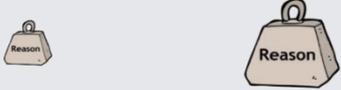
Inform interns that **reasoning words** are commonly used when students are providing the reasons or reasoning to support their claim.

Reasoning words include:

1. Because/Cos/Cause/Cuz/Becuz
2. If
3. So
4. Think/Thinks/Thinking/Thought
5. Agree/Disagree
6. Would/Wouldn't/Would've
7. Could/Couldn't/Could've
8. May be/Maybe/Might
9. As if/Like
10. But
11. How
12. Why

Part 1. Quality Talk in the Classroom

REVIEW: EVALUATING REASONS



✓ A **weak reason** has little or nothing to do with the claim.

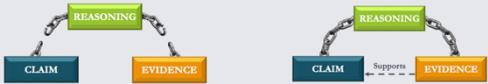
✓ A **strong reason** is closely connected to the claim.

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Display **Slide 8** to review how to evaluate reasons.

Explain that **weak reasons** have little or nothing to do with the claim. They add little or no weight to an argument. On the other hand, **strong reasons** are closely connected to the claim. They add a lot of weight to an argument.

REVIEW: EVALUATING REASONING



✓ **Weak reasoning** lacks appropriate principles or concepts and fails to connect the evidence to the claim.

✓ **Strong reasoning** includes relevant principles or concepts and explains how the evidence supports the claim.

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Display **Slide 9**, which describes guidelines for considering the quality of reasoning.

Remind interns that in general, **weak reasoning** tends to lack the appropriate mathematical or scientific principles or concepts that are needed to show why the evidence supports the claim, and thus fails to connect the evidence to the claim.

Strong reasoning uses relevant mathematical or scientific principles or concepts. These principles or concepts are then used to make logical connections that explain how the evidence supports the claim.

1.5 Review: Weight of an Argument

WEIGHT OF AN ARGUMENT



Recall that arguments have more weight when:

- ✓ They contain more reasons/reasoning and evidence
- ✓ The reasons/reasoning and evidence used are strong

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Display **Slide 10**.

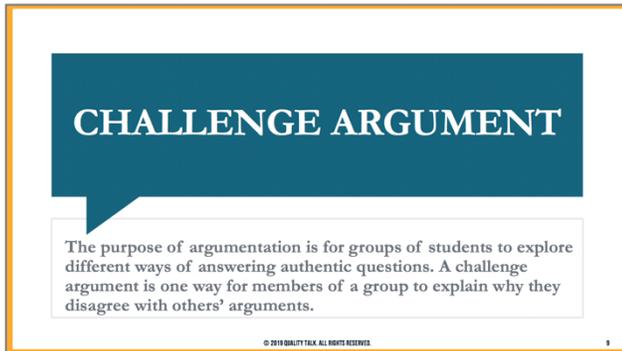
Remind interns that arguments weigh more when:

- ◆ They contain more reasons/reasoning and evidence.
- ◆ The reasons/reasoning and evidence used are strong.

Explain that in addition to using these criteria to judge the weight of a single argument, they can also compare the relative strength of two arguments in order to decide which one they believe is a more valid argument.

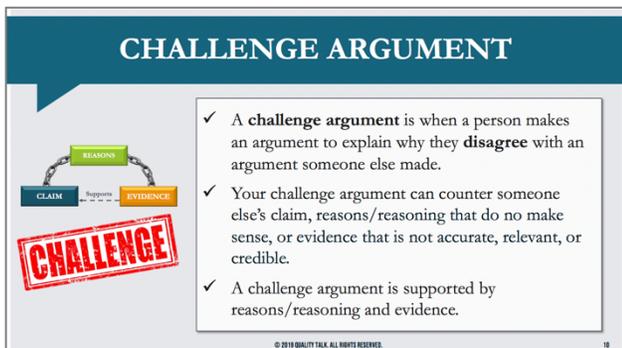
Part 2. Challenge Arguments

2.1 Challenge Arguments



Display **Slide 11** to introduce Part 2 of the lesson.

Remind interns that one purpose of argumentation is for groups of students to explore different ways of answering authentic questions. During a discussion, arguments may be presented that others in the group do not agree with. A challenge argument is one way for members of a group to explain why they disagree with others' arguments.



Display **Slide 12**, which overviews challenge arguments.

Inform interns that:

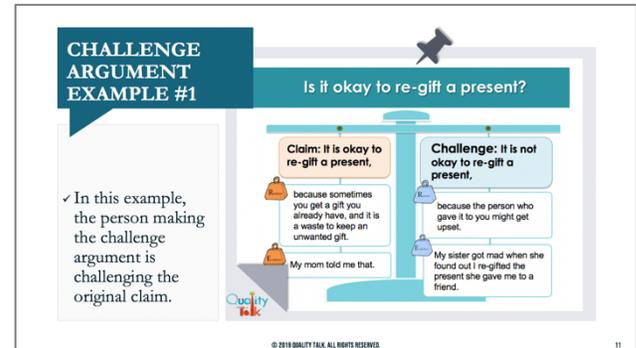
- ◆ A **challenge argument** is when a person makes an argument to explain why they **disagree** with an argument or component of an argument that someone else made.
- ◆ Your challenge argument can counter someone else's claim, reason/reasoning that do not make sense, or evidence that is not accurate, relevant, or credible.

- ◆ A strong challenge argument is supported by reasons/reasoning and evidence.

Explain to interns that when another person in their group makes an argument that they disagree with, it is not enough to just disagree. Instead, they should use a challenge argument, including reasons/reasoning and evidence, to explain *why* they disagree.

Also point out that a challenge argument does not have to be used to counter the claim. For example, a student could agree with someone's claim but believe that their evidence is not accurate, relevant, or credible. In that case, the challenge argument would be used to explain why the evidence is not strong. It could also include a stronger piece of evidence that also supports the claim.

2.2 Challenge Argument Examples



Display the first example of a challenge argument shown on **Slide 13**.

Inform interns that the arguments shown on this slide are in response to the question: "Is it okay to re-gift a present?"

Read the original argument to interns:

Claim: It is okay to re-gift a present,

Reason: because sometimes you get a gift you already have, and it is a waste to keep an unwanted gift.

Part 2. Challenge Arguments

Evidence: My mom told me that.

Then inform interns that another student in the group disagreed with the original argument and countered it with a challenge argument. Read the challenge argument to interns:

Claim: It is not okay to re-gift a present,

Reason: because the person who gave it to you might get upset.

Evidence: My sister got mad when she found out I re-gifted the present she gave me to a friend.

Explain that in this example, the person making the challenge argument is challenging the original claim. In the first argument, the student is claiming that it is okay to re-gift a present. The challenge argument counters this by claiming that it is not okay to re-gift a present. Both claims are supported by a reason and evidence. Both claims are supported by a reason and evidence.

CHALLENGE ARGUMENT EXAMPLE #2

Is it okay to re-gift a present?

✓ Just like regular arguments, challenge arguments can be stronger or weaker, depending on the reasons/reasoning and evidence used.

Claim: It is not OK to re-gift a present.
because the person who gave it to you might get upset.
A movie star said that.

Counter-claim: It is OK to re-gift a present.
because most people today don't care if you re-gift something.
The New York Times published an article by Miss Manners about it.

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Display **Slide 14**, which shows a second example of a challenge argument.

Inform interns that this example addresses the same question as the first example: “Is it okay to re-gift a present?”

Read the first argument:

Claim: It is not okay to re-gift a present,

Reason: because the person who gave it to you might get upset.

Evidence: A movie star said that.

Then read the challenge argument:

Claim: It is okay to re-gift a present,

Reason: because most people today don't care if you re-gift something.

Evidence: The *New York Times* published an article by Miss Manners about it.

Point out that this challenge argument also challenges the original claim.

Explain that in this case, both claims are once again supported by a reason and evidence. However, the first argument contains evidence from a source that is not credible, as a movie star is not an expert on re-gifting. On the other hand, the student who poses the challenge argument provides evidence from a credible source, an article from the *New York Times* by Miss Manners, an etiquette expert.

Inform interns that just like regular arguments, challenge arguments can be stronger or weaker depending on the reasons/reasoning and evidence used. In this example, the challenge argument is stronger than the original argument because its evidence passes the ARC test, while the evidence in the first argument does not.

WEIGHING ARGUMENTS

Which side is stronger?

Weak Argument (Claim) vs. Strong Challenge Argument

✓ To decide whether an argument or a challenge argument is more valid, think about which one has more weight.

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Display **Slide 15**, which shows a representation of a scale weighing the two arguments from the previous example.

Part 2. Challenge Arguments

Explain to interns that they can decide whether an argument or a challenge argument is more valid by thinking about which argument has more weight. Remember that the weight of an argument depends not only on having supporting reasons/reasoning and evidence, but also on the strength of the reasons/reasoning and evidence.

In the example on the previous slide, the first argument has weight from the reason, but because the evidence did not pass the ARC test, it does not add much weight to the argument. On the other hand, the challenge argument not only contained a reason closely connected to the claim, but it also cited evidence that passed the ARC test. As a result, the challenge argument has more weight.

Point out to interns that in the previous example, both *claims* are valid responses to the question. However, the challenge argument is a more valid *argument* because it contains stronger evidence.

CHALLENGE ARGUMENT EXAMPLE #3

✓ In this example, the person making the challenge argument is countering the reasoning in the original argument.

Example: Challenge Argument

How does hand sanitizer affect our health?

Steve
I think hand sanitizer makes us healthier **[Claim]** because it keeps our hands clean **[Reasoning]**. According to a blog I read, washing your hands with soap and water won't clean them as well as hand sanitizer **[Evidence]**.

Lin
I don't agree **[Claim]**. The website for the Centers for Disease Control and Prevention states that hand sanitizer does not wash away dirt, grease, and toxic chemicals like pesticides and heavy metals **[Evidence]**, which means that it is not better at keeping our hands clean than washing with soap and water **[Reasoning]**.

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Display **Slide 16**, which shows a third example of a challenge argument.

Inform interns that this argument and challenge argument are in response to the question: “How does hand sanitizer affect our health?”

Read the first argument:

I think hand sanitizer makes us healthier **[Claim]** because it keeps our hands clean

[Reasoning]. According to a blog I read, washing your hands with soap and water won't clean them as well as hand sanitizer **[Evidence]**.

Then read the challenge argument:

I don't agree **[Claim]**. The website for the Centers for Disease Control and Prevention states that hand sanitizer does not wash away dirt, grease, and toxic chemicals like pesticides and heavy metals **[Evidence]**, which means that it is not better at keeping our hands clean than washing them with soap and water **[Reasoning]**.

Explain to interns that in this example, rather than challenging the claim that the first student made in his argument, the second student uses a challenge argument to counter his reasoning. He claims that hand sanitizer cleans hands better than soap and water, and she provides a challenge argument supporting the idea that soap and water are actually better than hand sanitizer at cleaning hands. Remind interns that they can use a challenge argument to counter any part of another's argument.

Also point out that in this example, the challenge argument is more valid. Although both arguments use reasoning that connects the evidence to the claim, the first argument cites information from a blog while the challenge argument cites evidence from the Centers for Disease Control and Prevention, which is a much more credible source. As such, the challenge argument is stronger than the first argument.

Part 3. Quality Talk in the Classroom

3.1 Challenge Arguments in the Classroom

CHALLENGE ARGUMENTS IN THE CLASSROOM

✓ Practice with children by asking them to consider arguments and challenge arguments to questions.

Example Questions:

- ✓ Should kids have physical education (P.E.) every day?
- ✓ Should kids be excused from school to go on vacation?
- ✓ Should students have a two-month summer vacation or shorter breaks spread out over the course of the year?

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Display **Slide 18**, which provides an overview of how interns could teach their students about challenge arguments.

Explain that students can be asked to write arguments and challenge arguments in order to explore multiple answers to the same question.

Some example questions that elementary students could practice with are:

- ◆ Should kids have physical education (P.E.) every day?
- ◆ Should kids be excused from school to go on vacation?
- ◆ Should students have a two-month summer vacation or shorter breaks spread out over the course of the year?

Point out that these examples could be tailored to the needs and interests of the teacher and the students in the class.

3.2 Practice: Arguments and Challenge Arguments

LET'S PRACTICE

✓ In small groups, write an argument and challenge argument to answer the question:

- ✓ Should students have a two-month summer vacation or shorter breaks spread out over the course of the year?

Practice

1. As a group, decide on the claim you will make and then work together to form a strong argument supporting by reasons/reasoning and evidence.
2. Identify each of the argument components: claim, reasons/reasoning, and evidence.
3. Record your **argument** on the large paper and label or color-code the claim, evidence, and reasoning.
4. Discuss how people might disagree with your first argument and write a **challenge argument**.
5. Record your challenge argument on the large paper and label or color-code the claim, evidence, and reasoning.

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Display the practice on **Slide 19**.

Inform interns that they will be writing arguments and challenge arguments to answer the question: Should students have a two-month summer vacation or shorter breaks spread out over the course of the year?

Divide the interns into small groups. Then give them the following instructions:

1. As a group, decide on the claim you will make and then work together to form a strong argument supported by reasons/reasoning and evidence.
2. Identify each of the argument components: claim, reasons/reasoning, and evidence.
3. Record your **argument** on the large paper and label or color-code the claim, evidence, and reasoning.
4. Discuss how people might disagree with your first argument and write a **challenge argument**.
5. Record your challenge argument on the large paper and label or color-code the claim, evidence, and reasoning.