Responsive Mini-Lessons: Relevance—Not Descriptive

About Responsive Mini-Lessons

Responsive Mini-Lessons (RMLs) provide short, targeted lessons that are responsive to each class's facility with oral argumentation, as assessed with the DiALoG Tool. The DiALoG Tool has eight components. Four are intrapersonal—claims, evidence, reasoning, and relevance; four are interpersonal—listening, co-constructing, critiquing, and regulation. RMLs are aimed at providing more practice with one of the eight components of the DiALoG Tool, so your students are more able to work together to enact rich, thoughtful, and engaging oral argumentation. For each component, the following phrases can be assigned, via the DiALoG Tool, to describe your students' abilities: Not Descriptive, Somewhat Descriptive, or Very Descriptive. An assigned phrase of Not Descriptive or Somewhat Descriptive indicates that your students likely need more support with that particular component of oral argumentation; a lesson is then suggested to help your students strengthen their abilities in that area. If the Not Descriptive phrase is assigned, the lesson provides basic, introductory support; if the Somewhat Descriptive phrase is assigned, the lesson assumes some basic facility with that component and provides an opportunity to practice it with more focus.

For the Relevance RMLs, the Not Descriptive lesson provides an introduction to what relevance is as it relates to a particular claim or topic. Claims and possible supporting evidence are provided to students, and students consider which possible ideas are relevant to the offered claim. The Somewhat Descriptive lesson builds on this by having students consider more complex examples of possible evidence and work together, through discussion, to determine if those examples are relevant or irrelevant.

Does a Responsive Mini-Lesson for the Not Descriptive Level Make Sense for Your Class?

The suggestion to provide a Responsive Mini-Lesson for the Not Descriptive level indicates that, based on your use of the DiALoG Tool, the following statement best describes your students' use of relevant evidence during oral argumentation: *Students' contributions are not relevant to the scientific question that is the focus of the argumentation activity*. For more detail about this level and how it compares to other levels, please see the DiALoG Tool User Guide.

There is one Responsive Mini-Lesson provided for the Not Descriptive level.

Goal

- Provide students with several opportunities to identify both relevant and irrelevant evidence or ideas so students can more easily identify these during scientific discussions.

Responsive Mini-Lesson

Materials and Teaching Considerations

For the class

- Projection: Everyday Argument: Summer Is the Best Time of Year
- Projection: Definitions of *Relevant* and *Irrelevant*
- Projection: Claim: Ice cream is the best kind of dessert.
- Copymaster: Relevant or Irrelevant? (3 pages)
- stapler*

*teacher provided

For each pair of students

1 set of Relevant or Irrelevant? student sheets (3 pages)

Time frame: 20–30 minutes

Teaching Considerations

Most lessons will begin with an introduction followed by the lesson itself. The introduction is a brief activity that sets up and supports the lesson that follows. Each introduction is teacher-led, while the lesson that follows is more student-centered.

Getting Ready

1. **Decide how to present the resources for this lesson.** During the introduction and lesson, you will present Everyday Argument: Summer Is the Best Time of the Year, Definitions of *Relevant* and *Irrelevant*, and Claim: Ice cream is the best kind of dessert. The lesson is written as if these resources will be projected.
    - Alternatively, you can choose to make enough copies of all projections so each pair of students receives one copy of each.
2. **Write the following phrases on the board:**
    - Which information is relevant?
    - Which information is irrelevant?
3. **Make copies of the Relevant or Irrelevant? copymaster.** Make enough copies so each pair of students gets one set. There are three pages; staple each set together.

Introduction

1. **Project Everyday Argument: Summer is the Best Time of the Year.** Read the argument aloud. Ask students if the argument is convincing. If they do not think the argument is convincing, ask them what exactly makes it less convincing. Support them in pointing out that the addition of the sentence *Dogs make great pets.* is confusing and doesn't belong with the rest of the argument.
2. **Project Definitions of *Relevant* and *Irrelevant*.** Read the definitions aloud and explain that these terms are useful in argumentation. Remind students that an important goal of argumentation is to be convincing to others who hear or read your argument. When there is unnecessary information in the argument, it makes it less convincing. Say, **"In argumentation, relevant information is information, such as evidence, that is closely connected to the topic or claim. Relevant information helps make arguments more clear to others. Irrelevant information is information that is not closely connected to the topic or claim and, because of this, doesn't help others better understand the argument being made."**

Responsive Mini-Lesson

3. **Make an explicit connection to oral argumentation in the classroom.** Remind students that when they participate in oral argumentation in the science classroom, they are working toward presenting ideas and thinking to their peers in a more thorough and convincing way. This means that when they are discussing ideas and evidence with others, they want to try to make sure that the ideas they add to the conversation are relevant to that conversation.

Lesson

1. **Introduce the purpose of the lesson.** Explain that an important step in making sure that students provide relevant information when engaging in oral argumentation is actually being able to decide when information is relevant or irrelevant. These activities will give students a chance to practice this.
2. **Explain the activity.**
    - First, the class will work on an example together. Then, students will work with a partner on a different example.
    - For each example, students will be presented with a claim and some possible evidence. They will decide which evidence is closely connected—or relevant—to the claim, and which is not. For the possible evidence that is not closely connected to the claim—or irrelevant—students must explain why they believe this to be true.
    - For a final example, students will come up with their own idea of something that is irrelevant to the claim, and they will explain their thinking.
    - Explain that these arguments will be everyday arguments—they will not always use evidence that scientists would use. This is because everyday arguments are easier to quickly read, understand, and form opinions about, which makes this activity easier for everyone to participate in.
3. **Project Claim: Ice Cream is the best dessert.** Read aloud the text or ask students to read it independently to themselves.
    - Point out the two questions you wrote on the board: *Which information is relevant? Which information is irrelevant?*
    - Have students turn to their partners and discuss the two questions.
    - Have several pairs share their thinking with the class.
    - Focus on irrelevant statements and ask pairs to explain their thinking about why they are sure that one or more statements are irrelevant.
    - Focus on any controversial statements, such as *Some foods, such as ice cream, are made with milk*. Ask students how this statement might be considered either relevant or irrelevant. Accept all responses. Remind students that, in the context of this argument, the information should support, or connect to, the claim. If they had more information—such as why milk is important for supporting the claim that ice cream is the best dessert—then it could be relevant. As it is, without additional information, it probably

isn't relevant. Not all statements being projected will be clear; having a discussion with their partners will help student figure this out.

4. **Project Definitions of *Relevant* and *Irrelevant* again.** Let students know that you will project these definitions throughout the next activity so they can review them as needed.
5. **Distribute Relevant or Irrelevant? student sheets.** Distribute one set of student sheets to each pair of students.
    - Review the directions as needed. Remind students that partners should read and discuss all claims before determining which are relevant and which are irrelevant.
    - Remind students that they need to explain why each piece of information is irrelevant when this is determined.
    - Point out that the last claim, Claim C (on page 3), requires that they come up with their own irrelevant examples.
    - Have students begin working. Circulate and offer support as needed.
6. **Discuss student thinking.** After students have completed their work, have them share their thinking about each example. As you lead the discussion, remind students why it is important to use only relevant information (because it makes your argument more convincing).

Why This Mini-Lesson Matters

This mini-lesson focuses on introducing the concept of relevancy as an important aspect of making convincing arguments. It provides students with opportunities to practice identifying both relevant and irrelevant information in several everyday arguments. Relevancy is integral to making convincing arguments (Schwarz, Neuman, Gil, Ilya 2003; Sampson and Clark 2008), and students need opportunities to learn what relevancy is and isn't with regard to argumentation. Students also need opportunities to learn how the addition of relevant information can strengthen an argument and how the inclusion of irrelevant information can weaken an argument.

Resources

Sampson, V. and Clark, D. (2008). Assessment of the ways students generate arguments in science education: Current perspectives and recommendations for future directions. *Science Education* 92(3): 447–472.

Schwarz, B. B., Neuman, Y., Gil, J., and Ilya, M. (2003). Construction of collective and individual knowledge in argumentative activity. *Journal of the Learning Sciences* 12(2): 219–256.

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Everyday Argument:
Summer Is the Best Time of the Year

Summer is the best time of the year. The weather is usually warm, so people can go outside and enjoy themselves. Summer is also when many kids have time off from school, so they have less responsibility. Dogs make great pets. During the summer, the days are longer, so there is more time to take walks or play games outside.

relevant: closely connected to the topic or claim

irrelevant: not closely connected to the topic or claim

Claim: Ice cream is the best kind of dessert.

Ice cream is easy to eat because it is smooth and creamy.	Ice cream can be eaten plain, or it can have many different kinds of delicious toppings.
Some tea is sweet, and some tea is not.	Desserts that are cold are especially delicious after a hot dinner.
Some foods, such as ice cream, are made with milk.	Ice cream comes in hundreds of different flavors, so everyone can find one flavor they like.

Name: _____ Date: _____

Relevant or Irrelevant?

1. With your partner, read the claims and information in each box.
2. For Claims A and B, circle all information that is irrelevant (not closely connected to the claim).
3. Then, choose one example of irrelevant information, circle the number of the example, and explain why it is irrelevant. Record your answers on the lines provided.
4. For Claim C (on page 3), write ONE idea that would not be relevant to the claim.

Claim A: All students should wear school uniforms to school.

1. Firefighters wear uniforms to work.
2. When you wear a uniform to work or school, it saves time because you don't have to think about what to wear every day.
3. Clothes come in many different colors.
4. Uniforms for school help family expenses because it makes sure that students don't feel like they always have to wear new and expensive clothing every day.
5. Uniforms help teachers find their students when they are away from school on field trips.

Circle one: Statement 1 2 3 4 5 is irrelevant information that is not connected to the claim because _____

_____

_____

_____

Name: _____ Date: _____

Relevant or Irrelevant? (continued)

Claim B: I think video games can help students do better in school.

1. Video games require difficult hand-eye coordination, which can help students with some school skills.
2. In many video games, players need to use difficult math and science skills to survive.
3. Some video games are set in real historical settings, which can help players learn about history.
4. Students have free time away from school, and different students do different things with their free time.
5. When you play video games, you have to think quickly and make quick decisions. This can help with times in school when you have to think quickly, such as during tests.

Circle one: Statement 1 2 3 4 5 is irrelevant information that is not connected to the claim because _____

_____

_____

_____

Name: _____ Date: _____

Relevant or Irrelevant? (continued)

Claim C: Honeybees might become extinct some day.

1. In recent years, many species of honeybees have been added to the endangered species list, which is a list that shows all species that are close to extinction.
2. The entire population of all honeybees has been decreasing each year since at least 2012.
3. People are finding fewer and fewer honeybee homes in places where they used to find them.

On the lines below, write ONE idea that would not be relevant to Claim C.

My irrelevant idea is _____

_____

_____

_____