

## Oral Argumentation, Regulation

**Goal:** In this lesson, students will learn to monitor their progress and facilitate equitable participation in a scientific discussion.

**Teaching strategy:** Discourse Circles

**Works Best With:** Small groups

### Preparation:

- Print, cut out, and put evidence cards and claim strips in plastic baggies. Each student gets a baggie.
- Write the opening question on the board.
- Write sentence starters (see below) on chart paper.
- Write discourse circle procedure on chart paper.

### Teaching:

- **Ask your students to answer this question:** *When working in a group, how much do you usually talk? Does it seem to you that everyone talks the same amount? Why or what not.* (This can be done as a turn and talk, stop-and-jot, or whole class discussion)
- Explain the goals for today: Today, we will be practicing two important skills that are needed when discussing in a group: giving everyone a chance to talk and assessing progress. Often, when groups of people come together to discuss something, the quiet people stay quiet and the people more comfortable sharing share a whole lot. When this happens, we don't really have a chance to hear the thoughts of everyone in the discussion. Today I want to give you some practice with how to give everyone a chance to talk without saying something that might hurt someone's feelings. Even though you might want to say, "hey shut up for a minute and let so-and-so talk," there are ways to say something like that more gently.
- Introduce sentence starters. You may also want to model how these can be used in an everyday conversation.

#### Sentence starts for including everyone

- Does anyone else have something to say?
  - Does anyone want to say something different?
  - Let's give \_\_\_ a chance to talk since we haven't heard from her.
- Explain that another problem with group discussions is making progress. Sometimes it can feel like we are just talking in circles, repeating what has been said, or all just sharing our own ideas and ignoring the ideas of others. During these kind of discussions, its common to feel frustrated and throw our hands up and say, "well, I guess we just don't

agree about anything.” But good scientists, and good group workers in general, know how to find little points of agreement and progress in a discussion.

- Introduce sentence starters. You may also want to model how these can be used in an everyday conversation.

Sentence starters for trying to come to an agreement

- Can we all agree that ...
  - It seems like a lot of people think ..., is that correct?
  - Could we say that...
  - Remember, the question we are trying to answer is ...
  - I think we might be getting off topic. How does this relate to our main question?
  - Are we any closer to answering the question?
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- **Introduce the topic.** Greenway Regional Park, located outside a town in a mountainous, forested region, has a problem. Well, some people think its a problem. Wolves live in the park. Although these wolves have not attacked humans, many people are afraid of them. In addition, they have been known to attack cattle that live on nearby ranches. The ranchers, and some local community members, are upset and want the wolves to be removed from the park.
  - **Prepare for the discourse circles.** This should take around 10-15 minutes. Start by distributing the evidence cards and claim strips. Tell students that before they begin their discourse circles, they will sort evidence and come up with arguments.
  - Put students in partnerships. Explain that students will place their claims at the top of their work space. They will then sort the evidence cards according to which claim the piece of evidence supports, placing all of the evidence cards under the appropriate claim. (You may need to demonstrate this if you have not done many evidence sorts with students before.) Remind students that before they sort a piece of evidence, they should have discussed it with their partner. Give them about 10 minutes for this.
  - Ask students to decide whether they think that wolves should be eliminated from Greenway Regional Park. Give them about a minute to do this independently. Have them give you a thumbs up when they have decided.
  - **Introduce discourse circles.** Tell the class that they’ll be using a routine called Discourse Circles to share their ideas whether wolves should be removed from Greenway Regional Park. During this activity, they’ll get a chance to talk and listen in a group of four.
  - **Explain the directions.** Explain the procedure for Discourse Circles, as follows:
    1. One person presents her position and her evidence.
    2. Other students who agree add their evidence
    3. Then a student who disagrees says why and presents his evidence.
    4. The group discusses the statements and evidence to see if they can come to agreement.

- **Model the discourse circle procedure, if needed.** You can model with any topic (you might describe your favorite movie, book, what you did this weekend, etc). Choose three students to come to the front of the room and be your group members. Go through the steps, being sure to use sentence starters.
- **Pose the discussion question.** Ask, “**Should wolves be eliminated from Greenway Regional Park?**” Be sure to post the instructions somewhere visible, so that students can refer to them if they don't know what to do. If you anticipate your students needing more structure, you can use a timer and walk them through each step. Give the students around eight minutes for their discussion. While students are discussing, be sure to circulate and take notes on what you see. During the debrief, it will be helpful to point to and describe the successes you noticed.
- Complete the procedure:
  1. One person presents her position and her evidence.
  2. Other students who agree add their evidence
  3. Then a student who disagrees says why and presents his evidence.
  4. The group discusses the statements and evidence to see if they can come to agreement.

\*Students might ask: What if we all agree? If this is the case, ask one student to play the “devil’s advocate.” You might mention the origin of this phrase—it came from the Roman Catholic Church’s process of canonizing someone: they had someone act as the Devil’s advocate, explaining why they shouldn't be canonized. Explain the importance of disagreement in testing ideas.

- **Debrief:** How many groups came to an agreement about something? How many groups had every group member participate? How many groups still got stuck, even with the sentence starters? Share the positive things you noticed while circulating, emphasizing successes.

**Why this matters:** In our observations of discussion, some groups struggled to progress towards an answer together. As a result, students repeated the same arguments as others or just went around in a circle sharing. Strong discussions featured students who were able to check their progress, notice when others were in agreement, and organize the competing claims in the discussion. In addition, certain discussions were characterized by extremely unequal participation: a core group of a few students did all the discussing. In more successful groups, students worked to include and make space for everyone to participate. These skills ensure that a diverse range of voices are heard.

**Continued teaching and support:** Co-construction and critique are elements of argumentation that occur organically in everyday discussions. During science discussion (or everyday ones) it helps to point to and name these argumentation strategies for your students. In addition, it is

worth cautioning that a lack of co-construction or critique may also be indicative of a lack of student comprehension of the argument. If this is the case, students will benefit from explicit instruction surrounding reading and understanding scientific texts.