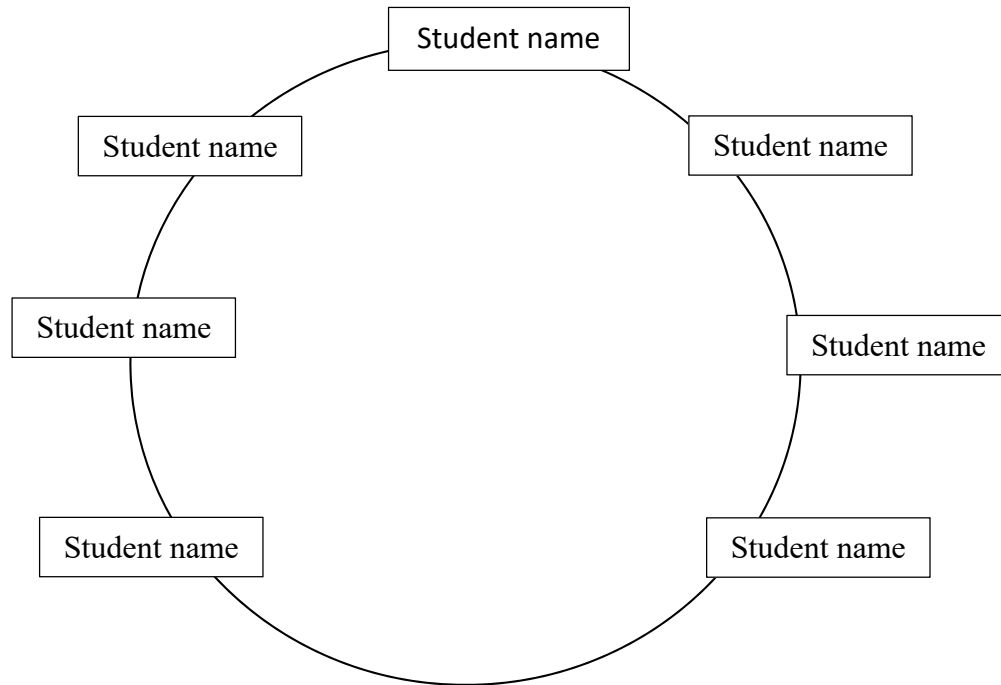


## Discussion Tracking Template



The class sits in a circle. Teachers record student names around circle. As class discusses, teacher can make quick notes about frequency of participation and content of student-shares. Some students may benefit from pre-warning to participation you can achieve this by beginning at a strategic place in your circle. Teachers may want to establish and practice norms for discussion: one speaker at a time, whole body listening, how to phrase questions, etc.

## Stakeholder Fact Sheets for SSI Activity in Week 1

### U.S. Fish and Wildlife Service

**Mission:** The U.S. Fish and Wildlife Service works with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats (U.S. Fish and Wildlife Service, 2010a).

#### Facts:

1. The USFWS control the endangered species program (U.S. Fish and Wildlife Service, 2010b).
2. Wanted to bring the gray wolves to Yosemite National Park (Chadwick, 2010).
3. The USFWS helped states set hunting limits (Yardley, 2009a).
4. Were taken to court by the Earthjustice group and lost (Earthjustice, 2010a).
5. There were about 1600 wolves in Montana, Idaho, and Wyoming in 2010 (Chaney, 2010).



#### Beliefs:

1. The wolf population has recovered (Yardley, 2009a).
2. Only 300 wolves are needed to keep the population stable (Simon, 2008).
3. State governments should be able to control their own wolf populations (Barringer, 2010).

Adapted from

Post, J., & Sadler, T. D. (2010). Wolves in the wild. *The Science Teacher*, 77(9),

## Cattle Ranchers

**Mission:** To raise best beef naturally.

**Facts:**

1. Agriculture is important in Wyoming (Wyoming Business Council, 2010).
2. Cattle is an important part of agriculture in Wyoming (U.S. Department of Agriculture, 2010).
3. Cattle ranches have existed since the 1870s (Wick, 2010).
4. A farmer can protect his/her livestock from gray wolves if the wolves are hurting the livestock (U.S. Fish and Wildlife Service, 2010a).
5. In 1995 wolves hurt 195 sheep and 30 cattle (U.S. Fish and Wildlife Service, 2010b).



**Beliefs:**

1. Ranchers worry that the gray wolves will eat their livestock.
2. Ranchers want the wolves to not be protected.
3. Currently, wolves are protected in Wyoming.

Adapted from

Post, J., & Sadler, T. D. (2010). Wolves in the wild. *The Science Teacher*, 77(9),

## Earthjustice

**Mission:** Earthjustice is a non-profit law firm dedicated to protecting the natural resources and wildlife of earth (Earthjustice, 2010b).

**Facts:**

1. Earthjustice sued the U.S. Fish and Wildlife Service April 2008 and won.
2. Earthjustice is working to protect the Bald Eagle.
3. Earthjustice is working to preserve the Everglades (Earthjustice, 2010b).



in

**Beliefs:**

1. Earthjustice lawyers want the wolves to be protected.
2. Earthjustice believes 2,000 wolves are needed to keep the population stable (Earthjustice, 2010d).
3. Earthjustice believes that hunting wolves will lead to endangering the population (Harbine, 2009).

Adapted from

Post, J., & Sadler, T. D. (2010). Wolves in the wild. *The Science Teacher*, 77(9),

## Wyoming Tourism Bureau

**Mission:** To promote Wyoming's 2<sup>nd</sup> leading industry of tourism. To raise awareness of Wyoming's tourism resources including national parks.

### Facts:

1. Tourism is Wyoming's 2<sup>nd</sup> leading industry with over 2 billion dollars in revenue (Wyoming Business Council, 2010).
2. Yellowstone National Park brings over 3 million people to Wyoming (Nash, 2009).
3. Yellowstone National Park welcomes tens of thousands of wolf watchers each year bringing in \$35 million (Chadwick, 2010).



### Beliefs:

1. Wyoming's Tourism Bureau wants wolves to be protected to attract visitors and raise money for the state (Chadwick, 2010).
2. May support wolf hunting to attract more tourists (Yardley, 2009b).

Adapted from

Post, J., & Sadler, T. D. (2010). Wolves in the wild. *The Science Teacher*, 77(9),

## Sportsmen for Fish and Wildlife

**Mission:** Sportsmen for Fish and Wildlife is a non-profit organization of sportsmen who are interested in protecting wildlife habitat. They educate people about the role hunters play in conservation and hunting and fishing as a tradition (Sportsmen for Fish and Wildlife, 2010).

### Facts:



1. The group has 15,000 members (Sportsmen for Fish and Wildlife, 2010).
2. They protect the sports of fishing and hunting (Sportsmen for Fish and Wildlife, 2010).
3. Trying to remove gray wolves from the Endangered Species list (Benson, 2010).

### Beliefs:

1. Wolves are responsible for hurting populations of elk, moose, sheep, and deer (Benson, 2010).
2. State governments should control own wolf populations (Benson, 2010).
3. Wolf hunting could lead to increases in populations of other wildlife (Benson, 2010).

Adapted from

Post, J., & Sadler, T. D. (2010). Wolves in the wild. *The Science Teacher*, 77(9),

## Teaching Perspective

|                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resources                                                                                                                                                                                                                                                               |
| Red Eyed Tree Frog Activity from Read.Write.Think (link below)                                                                                                                                                                                                          |
| <i>Fish is Fish</i> by Leo Lionni                                                                                                                                                                                                                                       |
| <i>Seven Blind Mice</i> by Ed Young                                                                                                                                                                                                                                     |
| <a href="http://www.readwritethink.org/classroom-resources/lesson-plans/multiple-perspectives-building-critical-30629.html?tab=3#tabs">http://www.readwritethink.org/classroom-resources/lesson-plans/multiple-perspectives-building-critical-30629.html?tab=3#tabs</a> |

\*Teachers can modify for their instructional context and goals.

## Differentiation Strategies to Support Learners

The below strategies can be beneficial for all learners. Teachers can modify for their instructional context and goals.

### Students in Need of More Scaffolding

- Heterogenous grouping
- Pre-teach important concepts such as perspective taking
- Preview text structures
- Model active listening skills
- Use sentence frames for comments and questions in discussions
- Read-aloud words as selected by the student(s)
- Read-aloud entire texts
- Use texts as students' independent reading levels when the goal is comprehension
- Use embedded text to speech technologies or extensions such as NaturalReaders.com
- Model metacognition when reading informational text
- Work with students in small groups
- Provide extended time as needed
- Help students prioritize resources for research
- Use visual supports when possible
  - o Images/figures
- Use sentence stems for written responses
  - o The author(s) wrote
  - o This makes me think
  - o This is important because
  - o This article is pro/con
  - o Evidence to support this is
  - o According to the source,
- Permit students to use speech to text as needed
- Scribe for students as needed when the focus is not on written output

### Advanced Learners

- Provide additional supplemental resources to deepen students' thinking about a topic
- Use heterogeneous grouping
- Give students guiding feedback as they research independently
- Ask students to report as experts in closing circle or a class meeting

### English Language Learners

- Provide language-rich environment
- Use cognates when appropriate
- Provide additional teacher wait-time
- Make explicit connections between lived experiences and content being studied
- Encourage students to ask questions about a topic before reading
- Use total physical responses when possible
- Use gestures when speaking
- Speak slowly and clearly
- Use visual supports when possible
  - o Images/figures

### Strategies to Build STEM Experiences for Students

We acknowledge not all students may have extensive STEM experiences. Teachers can make any experience “big” for their student(s). We offer some suggestions for building STEM experiences that teachers can modify for their instructional context and goals.

- Record students’ ideas about science in a concept map use this as an anchor throughout instruction to build on students’ prior experiences
- Use photographs of nature with importance to local contexts as launching points for discussion
- Share multimedia resources with students
  - o Consider using virtual field trips (online tours of local farms, watersheds, natural history museums)
- Share a read aloud of informational or narrative text
- Share a citizen science project with students
- Take a nature walk around the building with students, ask what they notice.
  - o This can be a launching point for robust discussion and an opportunity to build on students’ curiosity

Student Notetaking Template

| Source Title | Notes | Page/<br>paragraph<br>number |
|--------------|-------|------------------------------|
|              |       |                              |

Teachers can modify for their instructional context and goals.

## Rubric and Student Work Samples

Rubric

|                  | Score                                       |                                 |                                            |                                                 |
|------------------|---------------------------------------------|---------------------------------|--------------------------------------------|-------------------------------------------------|
|                  | <b>0</b>                                    | <b>1</b>                        | <b>2</b>                                   | <b>3</b>                                        |
| <b>Structure</b> | No paragraph structure                      | 1 paragraph                     | 2-3 paragraphs                             | 4+ paragraphs                                   |
|                  | No introduction or conclusion               | An introduction or conclusion   | A partial introduction and conclusion      | A complete introduction and conclusion          |
|                  | No central thesis or stance in the argument | Stance waivers throughout essay | Stance is generally clear throughout essay | Stance is clear and consistent throughout essay |
|                  | No topic                                    | Topic is unclear                | Topic is somewhat clear                    | Topic is clear                                  |
| <b>Evidence</b>  | No evidence                                 | Evidence from 1 source          | Evidence from two sources                  | Evidence from three or more sources             |

Teachers can modify rubric as they see fit. Students with disabilities should be held accountable as best fits his/her individualized education programs and with accommodations (word banks, sentence stems, picture supports, scribing, speech to text, etc).

## Work Samples

to Whom This May Concern

I believe that bald eagles should be protected, partly because bald eagles don't do any harm and are an important species on the national seal. Bald eagles were chosen for the national seal because it is believed that the patriots fighting the American Revolution heard them shrieking for freedom. Do you know what bald eagles stand for? They represent beauty, strength, courage, and freedom. Those are also important to nature and people.

DDT, a pesticide that seeped into the water that poisoned the fish that the bald eagles ate. The bald eagles use their talons and beaks to swoop down into the water to catch their prey. Eating the poisoned fish had made it harder for bald eagles to have chicks. The bald eagle population was also threatened by loss of habitat and deliberate killing. The birdwatchers reported sightings on social media, and conservationists took bald eagle chicks, and once old enough to take care of themselves, they released the chicks back into the wild. Before they release the chicks, they band them to track their migration movements to see if the chicks have their own babies. You may say that bald eagles take too much time and wastes too much money, but bald eagles are an important species that almost went extinct, when the conservationists took the chicks and watched over them by tracking their migration movements. You may not agree with me, but I believe that bald eagles, our national emblem, should be protected.

Sincerely,

A concerned citizen

July 16, 2019

To Whom This May Concern

I believe that people should learn about hurricanes because they can happen in places where they live, they can cause flooding, and the winds can be very strong and fast. Some people may think that hurricanes aren't dangerous. If people don't live where hurricanes are, they might not know facts about them. These people should know that hurricanes can bring flooding. The wind is so strong it can blow things away. Hurricane winds can reach 23 kilometers per hour. Flooding could be dangerous because it could bring water into houses. House flooding is dangerous because it could destroy belongings and people could drown. Flooding is dangerous since it is unpredictable. Hurricanes are bringing more rain because the earth is getting warmer. High winds are dangerous because they can blow belongings away. The winds can affect houses because it could knock them down. Hurricanes are judged on the Saffir- Simson hurricane scale to determine how dangerous they will be. The scale is based on 5 categories of wind speed. People in hurricane areas need to know if they need to leave town. I want to teach people how to be safe in the event of a hurricane.

Sincerely,  
A concerned citizen

To Whom This May Concern

I believe that global warming is melting the ice caps and making the sea level rise. Cities on the coast will be flooded **AND THE HUMAN RACE MIGHT become EXTINCT!!!!!!!!!!** The reason is it might destroy animals' habitat and if they die out then food chains break and it might make other animals go extinct then humans might not have food and die out. Global warming is when greenhouse gases get into the atmosphere and it gets warmer and warmer over time and melts the ice caps. We can fix global warming by reducing the amount of greenhouse gases like methane, carbon dioxide and nitrous oxide we let into the atmosphere we can help stop greenhouse gases getting into the atmosphere by making more electric cars and not burn coal and oil. You might say that global warming is not real but its warmed up 3 centigrades in 1 decade. That's why you should do something about global warming

from a concerned citizen.

