

THE SCIENCE OF EMPATHY



The Science of Empathy Grades 8-12

Science, Science for Citizens (Grades 11/12)

Purpose of the Lesson:

Understanding how empathy works and why it's important to practice empathy can help students build stronger interpersonal relationships and can shift their perspective about other people's lived experiences. Empathy is a powerful tool for social change, but also for creating deeper connections with people in our lives. This lesson explores empathy through the lens of science. Students are invited to delve into their relationships with others and how they can learn to feel how someone else is feeling. This is an important practice, as understanding mental health and stigma involves a great deal of empathy.

Curriculum Competencies:

Science

- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest (Grade 8/9/10).
- Make predictions about the findings of their inquiry (Grade 8).
- Make observations aimed at identifying their own questions, including increasingly complex ones, about the natural world (Grade 9/10).
- Demonstrate an awareness of assumptions, question information given, and identify bias in their own work and secondary sources (Grade 10).
- Consider social, ethical, and environmental implications of the findings from their own and others' investigations (Grade 8/9/10).
- Contribute to care for self, others, community, and world through personal or collaborative approaches (Grade 8/9/10).
- Transfer and apply learning to new situations (Grade 8/9/10).
- Express and reflect on a variety of experiences and perspectives of place (Grade 8/9/10).
- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence (Grade 9/10).
- Analyze cause-and-effect relationships (Grade 9/10).

Science for Citizens (Grades 11/12)

- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest (Grade 11/12).
- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence (Grade 11/12).
- Analyze cause-and-effect relationships (Grade 11/12).
- Demonstrate an awareness of assumptions, question information given, and identify bias in their own work and in primary and secondary sources (Grade 11/12).
- Consider social, ethical, and environmental implications of the findings from their own and others' investigations (Grade 11/12).
- Assess risks in the context of personal safety and social responsibility (Grade 11/12).
- Contribute to care for self, others, community, and world through individual or collaborative approaches (Grade 11/12).
- Implement multiple strategies to solve problems in real-life, applied, and conceptual situations (Grade 11/12).
- Express and reflect on a variety of experiences, perspectives, and worldviews through place (Grade 11/12).

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First Peoples Principles of Learning

- Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).
- Learning involves recognizing the consequences of one's actions.

Video

[The Science of Empathy – SoulPancake](#)

SoulPancake (2017, Oct 12). The Ultimatum Game | The Science of Empathy [Video]. YouTube. https://www.youtube.com/watch?v=S_q7CqElaSk&list=PLzvRx_johoA85tJ4dNepYNjRXM0svNOXH&index=3

Guiding Questions:

- How would you define empathy?
- What are some instances where practicing empathy is important?
- How can empathy improve our relationships?
- How did the experiment in the video change your perception of empathy?

THE SCIENCE OF EMPATHY



Step-by-Step Lesson Plan

Preparation: Queue up video/set up projector and print out the worksheet attached below.

- 1. Have the students watch the video “The Science of Empathy”** This can be found [HERE](#).
- 2. Pause the video and use the Guiding Questions to spark discussion.**
- 3. Discuss what empathy is with your students.** Get them to reflect on what empathy means and why it is important. Refer back to the video in this discussion and highlight the fact that empathy is different from sympathy. It involves not just simply putting yourself in someone else’s shoes, but really feeling how they are feeling. Humans practice empathy all the time with friends and loved ones, but it can be harder to do this with strangers or people we fundamentally disagree with on certain issues, as highlighted in the video.
- 4. Ask your students to think of instances where they’ve seen empathy in action.** These can be small instances of empathy, such as crying during a movie, or deeper experiences, such as profoundly feeling someone’s suffering in a conversation about their mental health. Explain to your students that it is good to recognize and acknowledge when they’re experiencing an empathic reaction, as being able to tap into our empathy can help us build deeper relationships and connections in our lives.
- 5. Explain the curriculum connections to your students.** Have your students break up into pairs and do the **“Science of Empathy Ultimatum Game”** experiment. Instead of using money, use objects that can be found around the classroom, like markers, pens, pencils, etc. Explain to them that, even though the objects they’re using don’t have the same high stakes as money, the purpose of the activity remains the same. They should treat the objects they are using for this experiment as treasured objects that have a great deal of value. Have them decide which partner will go first. Then get the student going first to decide how many of the objects they are willing to share with their partner and why. Have the other student write down their prediction of how many objects they think their partner will be willing to share with them. Get the first student to reveal the amount of the object they’re willing to share and explain why they chose that amount to their partner. Then get their partner to reveal if they will accept the offer or not and why or why not. Finally, get the second student to share what their prediction was and why they predicted it would be the outcome. Have the students switch roles.

Have your students fill out this worksheet to track their experience doing this experiment (you can also use this for assessment/checks for learning):

THE SCIENCE OF EMPATHY



Science of Empathy Experiment

Names: _____

Class: _____

Hypothesis (What do you think will happen)?:

Equipment used:

Procedure (What you did):

Results (What happened):

Conclusion (What we found out by doing this experiment):

THE SCIENCE OF EMPATHY



Step-by-Step Lesson Plan

6. Have your students share their results. If students feel comfortable, get them to share the outcomes of their experiments with the class. They can share what their predictions were and what the ultimate outcomes were for each person's turn. Have them explain their rationale and the way they were able to tap into the other person's possible reaction to make their decision.

7. Lesson Closure. Discuss with your class how empathy is a powerful tool within our relationships as well as for social change. When we foster empathy for others, we are creating space for other people's needs and feelings based on their experiences. This is something that can create stronger relationships in our lives as well as for the world at large. This can greatly impact the mental health of the people that we interact with by showing them that we see them and respect their needs.