Born This Way?

Nature vs. Nurture

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Grade Level	11th – 12th Grade	**Time Frame**	70 Minutes
Subject	Social Studies		
Course	Sociology		

Essential Question

How do the environment and genetics both play a role in human development?

Summary

In this lesson, students discuss and analyze the ways in which genetics and the environment play a role in human development. Students participate in a Four Corners activity, a Card Sort, and an article analysis, and then extend their learning by viewing a video about an experiment that separated triplets as infants and discussing the ethical implications of the experiment. As an assessment, students write a response to the lesson's Essential Question: How do the environment and genetics both play a role in human development?

Snapshot

Engage

Students participate in a Four Corners discussion about the influence of genes and the environment on human behavior.

Explore

Students sort characteristics of humans into three categories.

Explain

Students analyze a reading about the science behind the nature vs. nurture debate.

Extend

Students view a video about triplets separated at birth due to an experiment and discuss the ethical implications.

Evaluate

Students write a response to the lesson's essential question to demonstrate their understanding.

Standards

Oklahoma Academic Standards (Social Studies: Sociology (9th through 12th grade))

S.2.4: Analyze the influences of genetic inheritance and culture on human behavior including the debate over nature versus nurture.

Attachments

- Card Sort—Born This Way - Spanish.docx
- Card Sort—Born This Way - Spanish.pdf
- Card Sort—Born This Way.docx
- Card Sort—Born This Way.pdf
- Four Corners Signs—Born This Way.pdf
- Lesson Slides—Born This Way.pptx
- Nature Versus Nurture Reading—Born This Way - Spanish.docx
- Nature Versus Nurture Reading—Born This Way - Spanish.pdf
- Nature Versus Nurture Reading—Born This Way.docx
- Nature Versus Nurture Reading—Born This Way.pdf
- S-I-T—Born This Way - Spanish.docx
- S-I-T—Born This Way - Spanish.pdf
- S-I-T—Born This Way.docx
- S-I-T—Born This Way.pdf
- Triangle Square Circle—Born This Way - Spanish.docx
- Triangle Square Circle—Born This Way - Spanish.pdf
- Triangle Square Circle—Born This Way.docx
- Triangle Square Circle—Born This Way.pdf

Materials

- Lesson Slides (attached)
- Four Corners signs (attached)
- Card Sort cards (attached, one set per pair of students)
- Nature vs. Nurture Reading handout (attached, one per student)
- Triangle-Square-Circle handout (attached, one per student)
- S-I-T handout (attached, one per student)

10 minutes

Engage

Teacher's Note: Lesson Prep

Print and hang the attached **Four Corners Signs** around the classroom prior to the lesson.

Print and cut out one set of **Card Sort** cards for each pair of students.

Alternative Digital Card Sort

If you would prefer a digital card sort, use the following Desmos Classroom activity.

Select the following link: "Nature, Nurture, or Both?" Create an account or sign in under the "Activity Sessions" heading. After you log in, the green "Assign" dropdown button will be active. Click the arrow next to the word "Assign," then select "Single Session Code." After making some setting selections, select "Create Invitation Code" and give the session code to students.

Students do not have to sign in unless they intend to pause and resume the activity at a later time.

Use the attached **Lesson Slides** to guide the lesson. Introduce students to the Four Corners activity. Display **slide 3** and read the statement to students: *A person's personality is influenced more by their DNA/genetics than by their environment.* If students need a specific example, ask them to consider whether a person's temper is influenced more by their genes or more by the environment they are raised in.

Provide a moment for students to think about the question, and then ask them to move around the classroom to the "corner" containing the sign that best aligns with their agreement with the statement.

Give students a few minutes to discuss with each other their level of agreement or disagreement with the statement. Ask for a volunteer from each sign group to share their group's thoughts about the statement.

Display **slides 4 and 5** and review the essential question and lesson objective with students. Challenge students to continue to consider their beliefs and understanding about which has more of an effect on human behavior, genetics or environment, as they participate in the lesson.

15 minutes

Explore

Ask students to find a partner. Display **slide 6** and either pass out the **Card Sort** cards or share the session code with the students, directing them go to student.desmos.com to enter the session code to complete the digital card sort. Ask pairs to read through the characteristics listed on each card and then sort it into one of three categories: nature, nurture, or both.

Provide time for pairs to complete the card sort and then compare their responses with another pair and discuss the similarities and differences.

Go through the cards as a class and ask for volunteers to share their reasons for sorting them as they did. Discuss which cards were challenging to categorize and why.

Possible Student Responses

There might be a variety of sorting results depending on students' reasoning. Generally, the results should be as follows:

- Nature: natural hair color, blood type, eye color, ear shape
- Nurture: accent, interests and hobbies, religious beliefs, food preferences, morals and values, work ethic, culture
- Both: freckles, height, weight, hair length, muscle mass, sense of humor, intelligence, athletic ability, personal character

20 minutes

Explain

Display **slide 7** and pass out copies of the **Nature vs. Nurture Reading** and the **Triangle-Square-Circle** handout. Introduce students to the Triangle-Square-Circle strategy. As they read the article, students should note one important idea next to each point of the triangle, an idea they agree with inside the square, and a question they still have inside the circle. Allow time for students to read the article quietly, or read it together as a class. Students should complete the Triangle-Square-Circle responses individually and then discuss their responses with a partner.

When students are done working, ask for volunteers to share their responses and have a class discussion about the influence of both genetics and culture on human behavior. Display **slide 8** and use the guiding questions for the discussion.

Optional Tech Integration

Create a Padlet using the shelf format and add the categories of Triangle, Square, and Circle. Have students enter their responses into the Padlet, and then review them as a class.

15 minutes

Extend

Pass out copies of the **S-I-T** handout. Display **slide 9** and explain the S-I-T strategy. Introduce the video, which shows triplets who were separated at birth, raised apart, and found each other as adults. As they view the video, students should look for one idea that is surprising, one idea that is interesting, and one idea that is troubling.

Display **slide 10** and play the video. At the conclusion of the video, provide a few minutes for students to complete their responses.

Embedded video

https://youtube.com/watch?v=J30G5RaoWNk

Ask students to discuss their responses with a partner, and then ask for volunteers to share their thoughts. Ask the class to consider the ethical concerns of an experiment like this and have a discussion about the experiment. Ask the class to consider whether the results of the experiment should be available to the triplets or published for the world to read about. Tell students that this type of experiment is no longer considered ethical and would probably not be approved today.

Discuss the issue of nature vs. nurture as it pertains to the triplets who were raised apart. Ask the class to think about the influence of both genetics and the environment on how people develop. Which one do they think has a greater impact? Or, are they equal in importance? Give students an opportunity to discuss with a partner, and then ask for volunteers to share their thoughts.

10 minutes

Evaluate

Display **slide 11** and ask students to revisit and respond to the essential question by writing their response on the bottom of the S-I-T handout.

Collect the Triangle-Circle-Square handout, the S-I-T handout, and the essential question responses to assess student understanding of the lesson.

Resources

- Today. (July 12, 2018). The unbelievable way 3 men found out they were triplets separated as babies | Megyn Kelly TODAY [Video]. YouTube. https://www.youtube.com/watch?v=J30G5RaoWNk
- K20 Center. (n.d.). Four corners. Instructional Strategies. https://learn.k20center.ou.edu/strategy/138
- Halstied, L. (n.d.) Nature, nurture, or both? Desmos Classroom Activities. https://teacher.desmos.com/activitybuilder/custom/61609f29ce71215299f666b3
- K20 Center. (n.d.) Triangle-Square-Circle. Strategies. https://learn.k20center.ou.edu/strategy/65
- K20 Center. (n.d.) S-I-T (Surprising, Interesting, Troubling). Strategies. https://learn.k20center.ou.edu/strategy/926
- K20 Center. (n.d.). Desmos Classroom. Tech Tools. https://learn.k20center.ou.edu/tech-tool/1081
- K20 Center. (n.d.). Padlet. Tech Tools. https://learn.k20center.ou.edu/tech-tool/1077