

Learned Traits vs. Inherited Traits

Summary

One common misconception is that students do not understand the difference between traits that are learned and ones that they have inherited. Students will be participating in a game that helps them to understand these differences. They then will be comparing their data as a class and draw conclusions for what they have found during the activity.

Time Frame

2 class periods of 45 minutes each

Group Size

Large Groups

Background for Teachers

This lesson is designed to be a mid-unit lesson. You will have to have introduced the concept of learned and inherited traits. Also it would be beneficial to students that after this lesson has occurred that teachers bring the topic back to reality. The misconception starts with reality so this lesson is trying to get rid of the misconception first in a non-reality situation. However, they will need to understand it in reality so you will need to bring it back to there and make sure the misconception has disappeared.

[University of Utah's Learn.Genetics](#)

Student Prior Knowledge

Students will have to have a basic knowledge of what does a genetic trait mean, and that they are passed on from parent to offspring.

Intended Learning Outcomes

1. Use Science Process and Thinking Skills
- h. Predict results of investigations based on prior data
- i. Use data to construct a reasonable conclusion.

Instructional Procedures

The teacher will need to cut out the playing cards in advance. They will need to be placed in two piles, one inherited traits and one learned behaviors. Have a way to tell which pile is which, for example print them on different colored paper or label the backs with an A & B.

The teacher will start off by reviewing with the students what traits are. The teacher will then pass out all the supplies. The teacher will then read aloud to the class the background information that is on the students' copies.

Then they will read the rules of the game to the students. Each one of the students will be then picking the four inherited traits that they will have for the whole game. Have the students write down on their papers what these traits are.

They will then get to pick one learned behavior card and write that under situation #1. The teacher will then read to the class situation #1 and the students will then take a look at their traits and decide whether or not that the traits that they have would have allowed them to survive that situation. You will need to repeat these steps for all of the situations.

After all of the situations have been completed the class will then compile the data that they have collected. Have the students create fractions and percent's for how many students survived each of

the situations.

The students will then need to graph the class wide data from their chart. In order to check for understanding, have the students answer the questions in the conclusion section of the lab.

Strategies for Diverse Learners

When the teacher is reading the situations aloud they may be able to use pictures to help those who need language help.

Extensions

You could bring a lot of the concepts in from the science core standard 5 objective 2. You could focus on the survival advantages of the traits that the students pick instead of focusing on what type

Assessment Plan

The teacher will be checking for understanding when going over the reasons for why the students thought that the traits helped their creature survive. Also they will be looking for understand when the students complete the question section of activity.

Bibliography

[University of Utah's Learn.Genetics](#)

Authors

[Candace Collins](#)

[Christian Davies](#)

[Aliese Fry](#)

[Michelle LaCross](#)

[Sharon Miya](#)

[Nancy Porter](#)

[Britnie Powell](#)

[Sarah Ruiz](#)

[Matthew Smith](#)

[Kristin Snow](#)

[Amy Winegar](#)

[Sarah Young](#)