

Super Gene



Discover how two people can have the same looks and behavior by writing about the child of your favorite super-heroes!

Essential Question

Why do people look like their parents, and why might they act similarly or differently to their parents?

Overview

Students will learn about basic genetics and how genes can affect someone's behavior. They will write their own narrative about a character they create as a class in order to illustrate the effects of inherited traits and learned behaviors.

Discussion Questions

1. What is a DNA strand?
2. Why are genes important?
3. How are learned behaviors different from inherited traits?

Key Words

- Foreshadowing
- Basic Plot
- Fiction Writing for Kids

Materials

- Pencils
- Crayons
- Notebook paper
- Blank paper
- Colorful beads
- Colored string

Vocabulary

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|---------------------|---------------|--------------|
| • DNA | • Protagonist | • Character |
| • Genetics | • Antagonist | • Cliché |
| • Inherited Traits | • Suspense | • Dialogue |
| • Learned Behaviors | • Flashback | • Narrator |
| • Narrative | • Resolution | • Setting |
| • Foreshadowing | • Conflict | • Stereotype |
| • Plot | • Fiction | • Story Arc |

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Step-by-step

1. Ask any students who have dark hair to raise their hands. Then repeat this step for students with glasses and students with brown eyes. Use this as a lead-in to discuss inherited traits.
2. Ask the students if they think they have anything in common with their family: parents, siblings, even aunts and uncles. Then ask if any of them have learned specific things from their family that they do all the time, or that they at least do somewhat regularly. Use this as a lead-in to differentiate learned behaviors from inherited traits.
3. Give the class a visual example of a DNA strand and use it to explain the basics of genetics. Hand out colored beads and colored string to the students and have them each choose a minimum of four colors: two for inherited traits, and two for learned behaviors.
4. Have them make bracelets out of these.
5. When the students are finished, have them look for other students who might have used the same colors as a way to point out that you might be related to someone without knowing it. This could also be a possible lead in to an example about ancestors.

6. Ask the students, "Who wants to make their own superhero?" Then ask the students to pick out a male superhero from this list:

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|-------------|--------------|--------------------|------------|
| 1. Superman | 4. Spiderman | 7. Captain America | 10. Falcon |
| 2. Batman | 5. The Flash | 8. Wolverine | |
| 3. Aquaman | 6. Hulk | 9. Static Shock | |

Now ask them to pick out a female superhero from this list:

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|-----------------|-----------------|---------------|-------------------------|
| 1. Wonder Woman | 4. Supergirl | 7. Ms. Marvel | 10. The Invisible Woman |
| 2. Storm | 5. Rogue | 8. She-Hulk | |
| 3. Catwoman | 6. Black Canary | 9. Vixen | |

7. Once two superheroes have been chosen, tell the class that the superhero they are making is going to be the child of whomever the class agreed on. Ask the class what they think this superhero's name would be (for example, would their kid have a name that combined their parents' names? Would it be something unique?).
8. Help the children figure out what inherited traits their superhero would have using this list as a guide (if some kids prefer some traits over others, that's fine; they are going to draw them later so they're allowed to have variety from each other):

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|---------------|------------------------|-----------------------|-------------|
| 1. Hair color | 4. Left/Right handed | 7. Dimples/No Dimples | 9. Freckles |
| 2. Eye color | 5. Roll tongue/No-roll | 8. Attached earlobe | |
| 3. Skin color | 6. Widow's Peak | | |

9. Now help to guide the students into figuring out what learned behaviors their superhero might have picked up from their parents using this list as a guide (again, it's okay if the class does not agree as a whole):

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|---|-----------------------|---------------------------------------|------------|
| 1. Kindness | etc. | 6. Aggressiveness | 9. Archery |
| 2. Abilities: reading, writing, singing, dancing, acting, | 3. Martial Arts | 7. Building | |
| | 4. Speech Patterns | 8. Fighting (other than martial arts) | |
| | 5. Likes and Dislikes | | |

10. Once this is complete, allow the students to draw their superhero.

11. When this is complete, ask the student if their character is a good guy or a bad guy (the class should say "good guy" but it is okay if they decided to make their superhero a villain). Introduce them to the terms antagonist and protagonist.

12. Ask the students what a good guy, or protagonist is supposed to do (answer should be to stop the antagonist/ fight crime/etc.). Help the students come up with their own antagonist. This does not need to be as detailed or referenced. Just help them come up with a character that might not like the superhero they have created.

13. Tell the students that they are going to write a story about their superhero using the following prompts:

For Below-Level Students:

Your protagonist/hero is patrolling the streets alone and is getting an eerie feeling that they are being watched. As they continue along their way something catches their eye and they go to investigate. Your antagonist/villain comes out and the two of them have a fight.

For On-Level Students:

Your protagonist finds your antagonist committing a crime and steps in to stop them. What happens during their battle? How does it end?

For Above-Level Students:

Your protagonist and antagonist find themselves in battle. What happened to get them there? How does the fight continue and conclude? Have them turn this in at the end of the week.

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Conclusion

Students should have a full understanding of basic genetics and how it affects themselves and others. They should also have a clear understanding of a basic, proper story arc.

Assessments

The stories the students will write.

Georgia Performance Standards

Science

55L2. Students will recognize that offspring can resemble parents in inherited traits and learned behaviors.

a Compare and contrast the characteristics of learned behaviors and of inherited traits.

b Discuss what a gene is and the role genes play in the transfer of traits.

Writing Standards

ELAGSEW3: Write narratives to develop real or imagine experiences or events using effective techniques.

National Core Standards

CCSS.ELA-LITERACY.W.4.2.D Use precise language and domain-specific vocabulary to inform about or explain the topic.

CCSS.ELA-LITERACY.W.4.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

CCSS.ELA-LITERACY.W.4.3.A Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.