

Name:

Date:

Genetics: Independent Learning Guide

The role models in the video “Genetics” discuss the importance of genetics and share their excitement about the positive role they believe genetics will play in the future.

Watch the video “[Genetics](#)” at least once. Then read each statement below. Think carefully about each question before you answer it.

1. A role model told us that all humans have 99% of the same DNA.

What does this suggest about you and your best friend or you and a stranger living in another country?

Since all people are so similar genetically, what can explain our different ideas, preferences, and beliefs?

2. Listeners learned that genetics and genomics are related fields of study.

How would you explain the difference between genetics and genomics to a younger student?

3. **Although genetics is a science, it isn't always black and white. One role model explains part of her job by saying, "<Imagine> ...you had a disease. And I say, 'If you got a shot, then you'd have a 40% chance of the disease going away.'"**

Would you get this shot? Why or why not? What other information would you want to ask a geneticist to help you make this decision?

The role model continues, "Then what if I told you that I've discovered a gene. And if you have expression of this gene, you have a 90% chance of that disease going away."

What decision would you make now? Would you still get the shot? Why or why not? Are there any other questions that you might ask the geneticist to help you make a decision?

4. **A role model told us that DNA codes for things like eye color and hair color. These are some expressions of your DNA.**

What else do you think your DNA codes for? What parts of yourself do you believe are not coded into your DNA? Why?



- 5. Many of the role models in this video were excited to talk about the future positive outcomes they believe will come from the study of genetics.**

What exciting possibilities did you learn about in the video? How might something like personalized medicine impact you or your family?
