



## Unit 4 Genetics and the Inheritance of Traits

### Grade 7 Science

#### Unit Length and Description:

5 instructional weeks

Students will examine key ideas focused on using models to describe why asexual reproduction results with identical offspring whereas sexual reproduction results in offspring with genetic variation. Students will also construct explanations describing how genetic variations of traits in populations increase some individual's probability of survival, and synthesize information about technologies that have changed the way humans influence the inheritance of desired traits in organisms.

#### Science Standards:

- 7-MS-LS3-2** Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.
- 7-MS-LS4-4** Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.
- 7-MS-LS4-5** Gather, read, and synthesize information about technologies that have changed the way humans influence the inheritance of desired traits in organisms.

#### Enduring Understandings- Unit Anchor Phenomenon:

Four out of seven children in the Fugate family have blue skin and fingernails.

#### Essential Questions- Reflective Summaries:

- Create a model to describe the differences between the genetic variations that occur during asexual and sexual reproduction.
- Create a model that explains why 4 out of 7 children in the Fugate family have blue skin and fingernails.
- Construct an explanation supported by evidence that describes how genetic variations of traits in a population help some organisms survive and reproduce in their environment.
- Describe how technologies have changed the way humans influence the inheritance of desired traits in organisms.