SEPUP Genetics, Activity 58

Nick Dance and Salima Oudghiri

**Hook:**

Have you ever wondered where you got your genes from? Why do you share some of the same genes and also have different genes as your brothers and sisters?

**The Big Idea**

How are simple inherited traits passed from parents to their offspring and then to the next generation?

**Necessary Prior Knowledge/Experience**

Definition of a gene.

**Suggested Adaptations /Improvements to the Procedures**

Omit Student Sheet 58.1 and 58.2 and have students develop their own models and rules for how genes are passed from one generation to the next.

Pass out only Part A of the story and have students read the story independently.

As a group, students will develop a hypothesis for what they think the tails of Skye and Poppy’s offspring will look like?

Pass out Part B of the story and have students read the story.

From the story, students discover that all of the offspring have blue tails.

Ask students: Based on the results, does their hypothesis explain why all of the offspring had blue tails? If it did not, then ask students to develop a new hypothesis to explain why all the offspring have blue tails.

Pass out Part C of the story and have students read the story.

Students discover that some of the offspring have orange tails even though both parents had blue tails.

Ask students: Does their new hypothesis explain the data collected from the third generation? If not, then students need to change their hypothesis to explain why none of the creatures in the 2nd generation have blue tails but in the 3rd generation, orange tail creatures reappear?

**Suggestion for Lesson Extensions/Addenda**

Create a pedigree to show how the gene is passed from one generation to the next. Students can choose an organism of their choice—dogs, plants, etc. Students must choose one trait and describe which trait is dominant and which trait is recessive.

**Reflections**