Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_\_\_ Ast: \_\_\_\_\_

**Dot Lab**

We are going to simulate a predator/prey pressure that affects natural selection. You are a population of predators. Your prey is represented by paper dots, and your environment is the cloth that is on your table.

1. Describe your environment in as much detail as possible.
2. The dots represent your prey. What do you think their different colors are meant to simulate.

Count out 10 dots of each of the 8 different colors, mix them together, then spread them evenly across the cloth environment. When Mr. Hanna says “go”, you’ll have 20 seconds to pick up as many dots as you can and put them into your cups, but you must only pick up one dot at a time. After each round, record the number of dots of each color that survived the round; then double that number to begin the next round.

**1st Generation**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Color of Dots** | **White** | **Pink** | **Red** | **Orange** | **Yellow** | **Green** | **Brown** | **Black** |
| **Beginning Number** | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| **Ending Number** |  |  |  |  |  |  |  |  |

**2nd Generation**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Color of Dots** | **White** | **Pink** | **Red** | **Orange** | **Yellow** | **Green** | **Brown** | **Black** |
| **Beginning Number** |  |  |  |  |  |  |  |  |
| **Ending Number** |  |  |  |  |  |  |  |  |

**3rd Generation**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Color of Dots** | **White** | **Pink** | **Red** | **Orange** | **Yellow** | **Green** | **Brown** | **Black** |
| **Beginning Number** |  |  |  |  |  |  |  |  |
| **Ending Number** |  |  |  |  |  |  |  |  |

**4th Generation**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Color of Dots** | **White** | **Pink** | **Red** | **Orange** | **Yellow** | **Green** | **Brown** | **Black** |
| **Beginning Number** |  |  |  |  |  |  |  |  |
| **Ending Number** |  |  |  |  |  |  |  |  |

**5th Generation**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Color of Dots** | **White** | **Pink** | **Red** | **Orange** | **Yellow** | **Green** | **Brown** | **Black** |
| **Beginning Number** |  |  |  |  |  |  |  |  |

1. Describe your strategies for getting dots. What did you look for? What was challenging? Were some dots easier to “eat” than others?
2. How did the population of dots change after just a few generations?
3. Offer an explanation of why your group’s dot population changed the way it did. Why did some colors increase in number while others decreased?
4. Think of a real-life example of natural selection that closely mirrors this activity. How is it similar?