Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Natural Selection Limbo!

**Purpose**

The purpose of this lab is to evaluate natural selection in action! Nature selects those individual with traits best suited for their environment. An organism’s survival is dependent on their phenotype (physical traits), and we all know that your phenotype is determined by your genotype (genes). So, if an organism does not have a trait necessary for survival in their environment, they will never have that trait because it’s not in their genes! In other words… you’ve either got it, or you don’t![[1]](#endnote-1)

**Procedure**

 **Materials**

1. Limbo bar

**Sequence of steps**

1. Understand the analogy:

Students = Organisms Limbo Pole = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Good Limbo = You survive & reproduce Bad Limbo = Death & no offspring

1. The problem: Students will pass under a limbo bar continually being lowered. What traits are necessary for survival in this environment?
2. Hypothesis: The top five surviving students will have the following traits –
	1.
	2.
	3.
	4.

![C:\Users\Angela\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\DRP2N1IJ\MCj04242300000[1].wmf]()

1. Students should voluntarily pass under a lowering limbo bar. Record the top five students and indicate the traits they displayed in the data table under observations.

**![C:\Users\Angela\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\DRP2N1IJ\MCj04242300000[1].wmf]()**

**Observations**

Data Table: Top 5 students

  *Circle Displayed Traits*

|  |  |
| --- | --- |
| Student Name | Trait |
| 1. | 1 | 2 | 3 | 4 |
| 2. | 1 | 2 | 3 | 4 |
| 3. | 1 | 2 | 3 | 4 |
| 4. | 1 | 2 | 3 | 4 |
| 5. | 1 | 2 | 3 | 4 |

**Conclusion Questions**

1. How does the environment an organism lives in affect its survival?
2. How does natural selection affect single-gene traits?
3. What would happen to the species if none of the organisms were able to limbo under the pole?
1. (2008).Limbo Lab, Natural Selection in Action. *Atwater High School Agriculture Department*. [↑](#endnote-ref-1)