Variations Lab **Diversity (variation) within a species**

Diversity within a species can be monitored genetically of physically. As humans there are many traits that we can see variations in from individual to individual. Select 2 traits you wish to measure – ex: width of thumb, size of feet.

*Below is the information that needs to be included in your lab write up. Lab write ups must be done in pen (blue or black ink). You need to use graph paper for your graphs and make sure they are properly labelled. Questions from the Analysis must be restated and answers should be in full sentence.*

**Question:** What are you studying?

*Ex; I am studying the correlation between height and foot size. I am trying to figure out if there is a relationship between how tall you are and how big your feet are.*

**Hypothesis:** What do you predict to find out about the two traits with regards to their variation and the characteristics of the humans that possess these traits?

*Ex; Based on what I know about height and foot size, I think that the bigger your feet, the taller you are vertically.*

**Results:** Record you information into a chart for each trait

* Group you data into meaningful categories and, if possible share your results with others in the class.
* Create a graph or histogram of the data, identifying the range of data that you collected for each. Put both traits on the same graph.

|  |  |  |
| --- | --- | --- |
| Person | Foot Size | Height (INCHES) |
| PT | 12.5 | 74 |
| CC | 8.5 | 70 |
| JB | 10.5 | 73 |
| BR | 9 | 65 |
| DF | 10.5 | 72 |
| GK | 7 | 63 |
| AE | 12.5 | 73 |
| BL | 9 | 67 |
| LH | 12 | 70.5 |
| BL | 7 | 63 |
| JC | 8.5 | 67 |
| RR | 8.5 | 65 |

**Analysis/Conclusion**

1. Were there any correlations between the two traits?
2. What can you conclude about variations within a population?
3. Do you think there would there be greater or smaller variations if all of the tested subjects were related? Why or Why not?
4. Explain how natural selection might affect these traits? Give a hypothetical example.