**Is there a relationship between the proportions of the human body?**

Use the string and the meter sticks to determine the lengths and circumferences of the body parts listed in the table below. Put all of the data on the board and then find the class averages.

|  |  |  |
| --- | --- | --- |
| **Body Part** | **Measurement in cm** **(round to 1 decimal)** | **Class average** |
| Neck circumference |  |  |
| Wrist circumference |  |  |
| Total height |  |  |
| Arm span |  |  |
| Length of face (from hairline to chin) |  |  |
| Length of foot |  |  |
| Length of hand |  |  |
| Length of nose |  |  |

Use the class averages to see if there is a relationship between measurements. The final column should express the ratio in term of a 1:number ratio (you may have to round but that’s ok…we’re trying to get approximations).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Body Part** | **Class Average** | **Body Part** | **Class Average** | **Ratio in Lowest Terms (round)** |
| Neck circumference |  | Wrist circumference |  |  |
| Total height |  | Arm span |  |  |
| length of face |  | Length of hand |  |  |
| Length of foot |  | Length of face  |  |  |

Discussion Questions:

1. Are there any ratios that are surprising to you?
2. Do you think there may be a ratio that exists that we didn’t explore in this activity? What is it?
3. Are there any other ratios in nature or other parts of the your world that exist?