Honors Biology Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
NDHS Per: \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

**Biology of the Bimbleflicks**

**Introduction**: On an excursion to the south Pacific, the great scientist Professor Sibelius Flinglehorn discovered a new species which he called Bimbleflicks. Bimbleflicks are a small, semi-intelligent species that demonstrate many different genetic traits. All Bimbleflicks have a basic oval shaped body and short legs but have a variety of feet, arms, hair type and color, eye brows, eye shape, and skin color.

Using a die, determine the genotype of your Bimbleflick. An odd roll (1, 3, 5) determines that your trait is based off the first allele for the characteristic. An even roll (2, 4, 6) determines that your trait is based off the second allele for the characteristic. As your genotype is determined, write the phenotype next to it and draw the traits on your Bimbleflick.

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| **Characteristic** | **Traits** |
| **Gender** | **Roll Odd = Male (XY)****Roll Even = Female (XX)** |
| **Hair color** | **Green hair is dominant over purple.****G = green, g = purple** |
| Genotype | Phenotype |
| **Hair Type** | **Straight Hair is dominant over curly hair.****S = Straight, s = curly** |
| Genotype | Phenotype |
| **Feet** | **Hairy feet are dominant over hairless feet****H = hairy, h = smooth** |
| Genotype | Phenotype |
| **Eye brow** | **Unibrow is present in males if UU or Uu. Females need UU to have a Unibrow.** **U = unibrow, u = separated brow** |
| Genotype | Phenotype |
| **Eye shape** | **Circular eyes are dominant over oval eyes****C = circular, c = oval** |
| Genotype | Phenotype |
| **Arm Length** | **Arms can be Long, Medium, or Short. If homozygous, the arms will either be long (knuckle draggers) or short (t-rex short). If heterozygous, the arms will be medium length.** **L = Long, S = short** |
| Genotype | Phenotype |
| **Skin Darkness** | **The shade of skin depends on how many “dark” genes vs. light genes are present.** **The shade of skin is controlled by two genes (4 alleles – roll 4 times). The more dark alleles you have the darker you skin** **D = dark, d = light**  |
| Genotype | Phenotype |
| **Skin Color** | **The color of Bimbleflick can be blue, red, blue and red stripes, or yellow. Both blue and red are dominant over yellow. If blue and red are inherited together, the skin has blue and red stripes.** **Roll 1 or 2 = blue allele, Roll 3 or 4 = red allele, 5 or 6 = yellow allele** |
| Genotype | Phenotype |

**Final Genotype**:

Gender Hair Color Type Feet Eye Brow Shape Arms Skin Darkness Color