

A Recipe for Traits

Background

A set of instructions called DNA makes a “recipe” for traits in all organisms. Information in a DNA strand is grouped into small segments. Each segment is made of even smaller units (like recipes are made of words, and words are made of letters). Differences in the DNA “alphabet” are what make differences in traits (just like a different sequence of letters makes different words, and a different recipe).

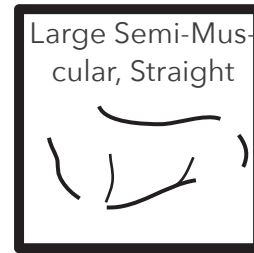
Instructions

1. Make sure you have an envelope containing “Dog DNA”.
2. Determine the first trait of your dog (body shape) by randomly picking a piece of dog DNA out of the envelope.
3. Look at the symbols on the DNA strip you have chosen. Match the pattern to one you see on the Dog Traits Key for body shape.
4. Circle the picture for body shape that matches the DNA piece that you picked.
5. Set the piece of DNA aside and repeat steps 1-4 for the next trait on the key.
6. After circling the matching picture, tape the second piece of DNA to the first to make one long strand. This will become the DNA recipe for your entire dog.
7. Repeat these steps for each of the traits listed on the Dog Traits Key.
8. When you have finished, draw your dog with all of its traits (the traits you have circled on the Dog Traits Key) on a separate piece of paper.
9. As instructed by your teacher, hang up the picture of your dog along with its DNA recipe (the DNA pieces you chose attached in a long strand).

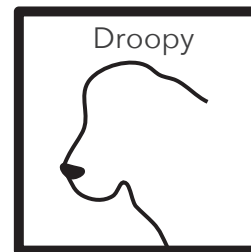
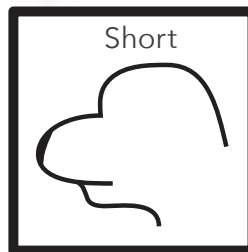
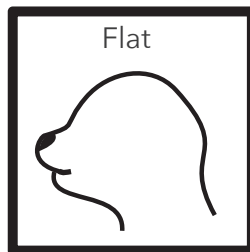
Is your dog different from or the same as others in the class?

Dog Traits Key

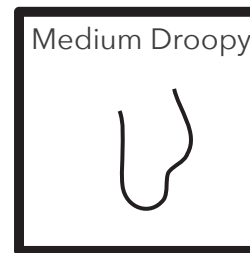
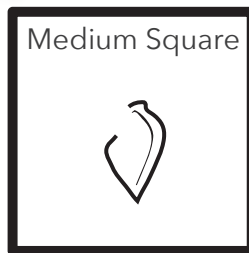
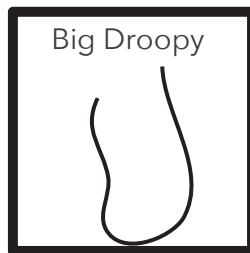
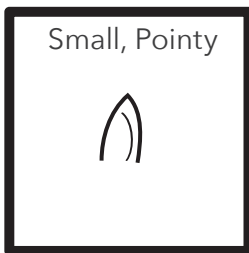
Body Shape



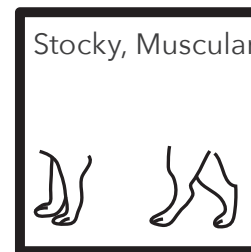
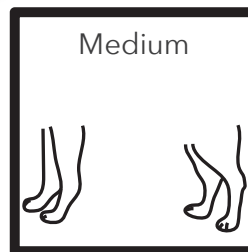
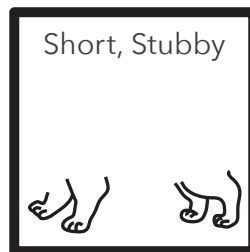
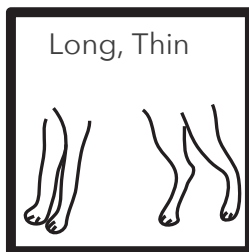
Head Shape



Ears

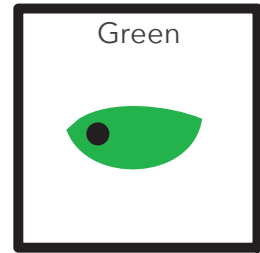
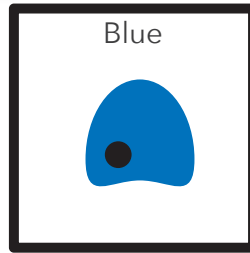
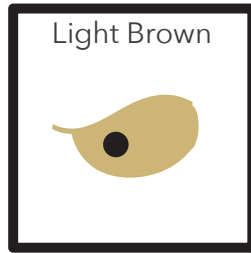


Legs

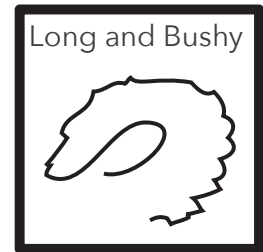
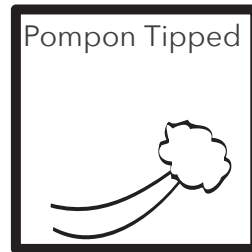
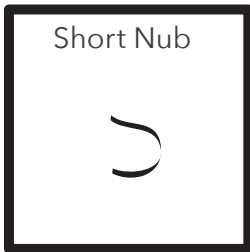


Dog Traits Key

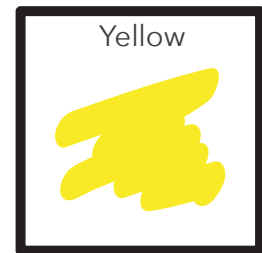
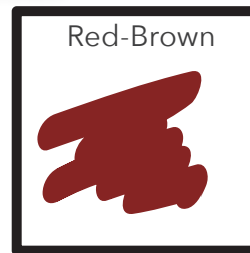
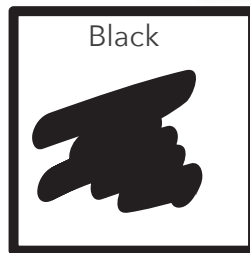
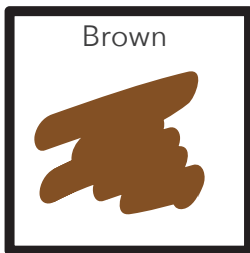
Eyes



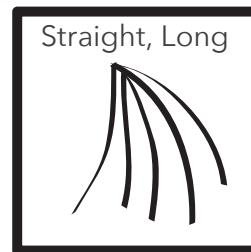
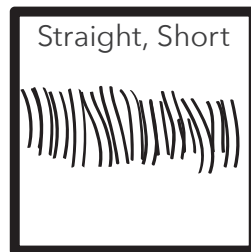
Tail



Coat Color



Hair



Una Receta de Rasgos

Un sistema de instrucciones llamado ADN provee una “receta de rasgos” para todos los organismos. La información se agrupa en segmentos pequeños en el filamento del ADN. Cada segmento incluso está hecho de unidades más pequeñas (como las recetas que están hechas de palabras y las palabras de letras). Las diferencias en el “alfabeto” del ADN son lo que hace diferente a los rasgos (justo como la diferente secuencia de las letras hace que las palabras sean diferentes y por ende, una diferente receta).

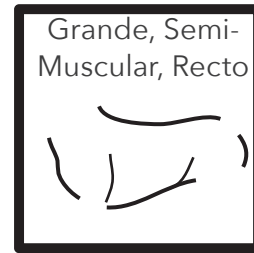
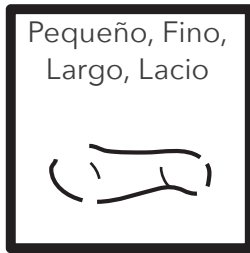
Instrucciones

1. Asegúrese de tener un sobre que contenga el “ADN del Perro”.
2. Determine el primer rasgo de su perro (forma del cuerpo) escogiendo al azar un pedazo del ADN del perro fuera del sobre.
3. Mire los símbolos en el filamento del ADN que escogió. Iguale el patrón con uno que vea en la clave de rasgos del perro para la forma del cuerpo.
4. Haga un círculo en la forma del cuerpo de la figura que igualó al pedazo de ADN que escogió.
5. Ponga el pedazo del ADN a un lado y repita los pasos del 1 al 4 para los rasgos que siguen.
6. Después de circular las figuras emparejadas, usando cinta engomada pegue el segundo pedazo de ADN al primero para hacer una tira larga. Esta se convertirá en la receta del ADN para su perro entero.
7. Repita los pasos para cada rasgo enumerado en la lista de la clave de rasgos del perro.
8. Cuando acabe, dibuje su perro en una nueva hoja de papel con todos los rasgos (los rasgos que ha circulado en la clave de rasgos del perro).
9. Siga las instrucciones del profesor. Cuelgue la figura de su perro junto con su receta del ADN (los pedazos de ADN que escogió unirlos en un largo filamento).

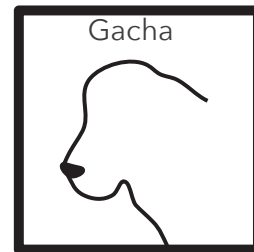
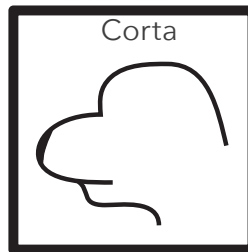
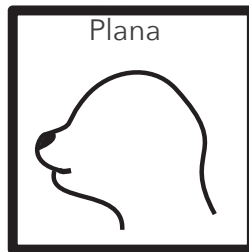
¿Es su perro igual o diferente a los demás en su clase?

Clave de Rasgos en un Perro

La Forma del Cuerpo



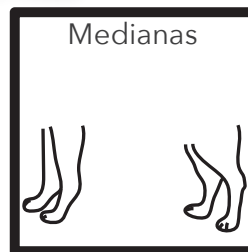
La Forma de la Cabeza



Las Orejas

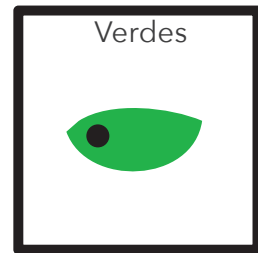
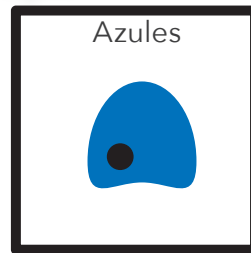


Las Piernas

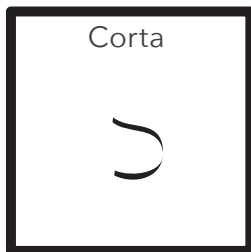


Clave de Rasgos en un Perro

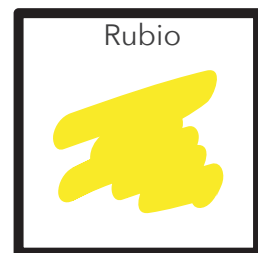
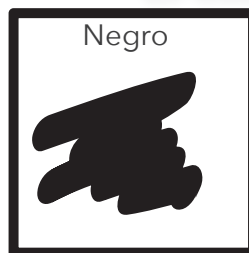
Los Ojos



La Cola



El Color del Pelaje



El Pelo

