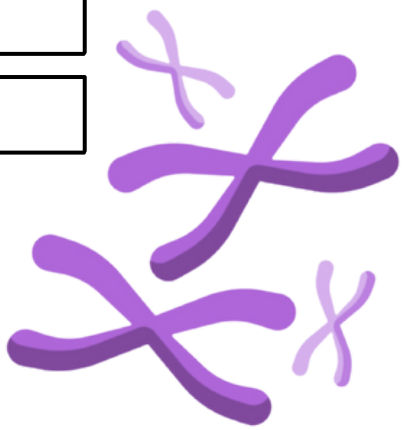
Name:

Grade: Section:



WHAT MAKES ME, ME?

Get to know yourself better by encircling the traits you have.

MY TRAITS	
Straight hair	Curly hair
Cleft chin	No cleft chin
Dimples	No dimples
Freckles	No freckles
Detached earlobes	Free earlobes
Widow's peak hairline	Straight hairline
Hitchhiker's thumb	Straight thumb
Tongue roller	Non tongue roller

FUN FACT!

Our DNA determines our appearance. Every individual has their own pair of genes which determine certain physical features or traits. These genes make us unique in our own ways!

EXTRACT YOUR OWN DNA

Materials:

- Narrow glass container
- 10ml ice cold isopropyl alcohol (80% or higher)
- 10ml dishwashing liquid
- 1/4 teaspoon salt
- 1-3 drops pineapple juice
- 90ml water
- Small glasses or cups for mixing
- Water for initial mouthwash
- Skewer or fine sieve

Instructions:

1. Fill a glass with small amount of water.
2. Gargle with a mouthful of water for at least two minutes.
3. Spit the water into a small cup.
4. In a separate cup, pour 90ml water and 10ml dishwashing liquid. Stir gently.
5. Fill the water cup with your spit with 2 teaspoons of the combined soap solution.
6. Add salt to the mixture and stir.
7. Transfer the liquid cell solution to the narrow jar until the jar is one-third full.
8. Pour a few drops of pineapple juice into the narrow container and carefully spin it to mix the contents.
9. Take a small bit of the cold isopropyl alcohol and pour it into a cup.
10. Pour 2 teaspoons of isopropyl alcohol into the jar slowly, allowing it to run down the body of the jar and form a layer above the liquid cell mixture.
11. Leave the jar stand for at least 5 minutes.
12. The small amount of white web-like substance within the clear layer of the narrow jar are strands of your DNA clumped together.

BRAIN EXERCISE

1. What is the importance of the pineapple juice in the experiment?

2. What role did the dishwashing liquid play in the extraction of DNA?

3. Why is it important for the isopropyl alcohol to be cold for the experiment?

4. Where are DNAs located in a cell? Can it be seen in every cell?

GET CREATIVE!

Create an acrostic poem by using the word GENETICS. Use each letter in the word as the beginning of the line that tells something about the topic.

G
E
N
E
T
I
C
S

MONSTER FACTORY

Given the information below, create a monster with the following genotypes:

1. **Bb / EE / cc / Hh / ff**
2. **bb / ee / Cc / hh / FF**

Blue body color [B] is dominant to orange body color [b]
Three eyes [E] are dominant to one eye [e]
Claws on toes [C] are dominant to no claws [c]
Horns [H] are dominant to no horns [h]
Four fingers [F] are dominant to two fingers [f]