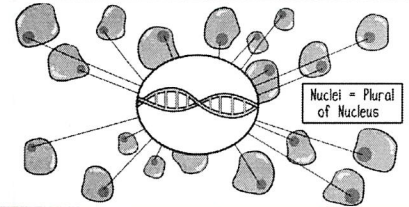


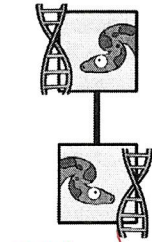
Amoeba Sisters Video Recap - DNA, Chromosomes, Genes, and Traits: An Intro to Heredity

1. Explain what this image represents regarding where your entire DNA code can be found.

DNA is in the nucleus of every cell
1 complete set of instructions per cell
(except sex cells...more on this later!)



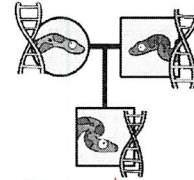
2. One of these images represents sexual reproduction, and the other represents asexual reproduction. Label them and then briefly describe what each means in your own words.



asexual

Explain:

1 parent
identical DNA
identical clone
of parent

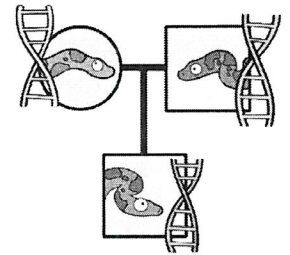


sexual

Explain:

2 parents
combination of
DNA
combination of
traits from parents

3. Spike is not a clone of his father. He inherited DNA from both of his parents. Chromosomes are condensed units of DNA. If Spike has 36 chromosomes, you would expect that Spike would have inherited 18 chromosomes from his mother and 18 chromosomes from his father.



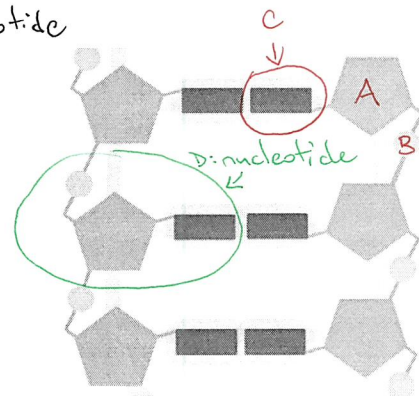
4. How did you determine the chromosome numbers?

Spike gets half his DNA from each parent.

5. Label the diagram on the right using the following words: (A) Sugar, (B) Phosphate, (C) Nitrogenous Base (D) Nucleotide

6. What is a nucleotide?

building block of DNA. Each nucleotide has
sugar, phosphate, nitrogenous base
 How many nucleotides do you see in this diagram? 6



7. What are the four different types of bases in DNA and how do they pair?

adenine, cytosine, guanine, thymine.
A-T ; C-G

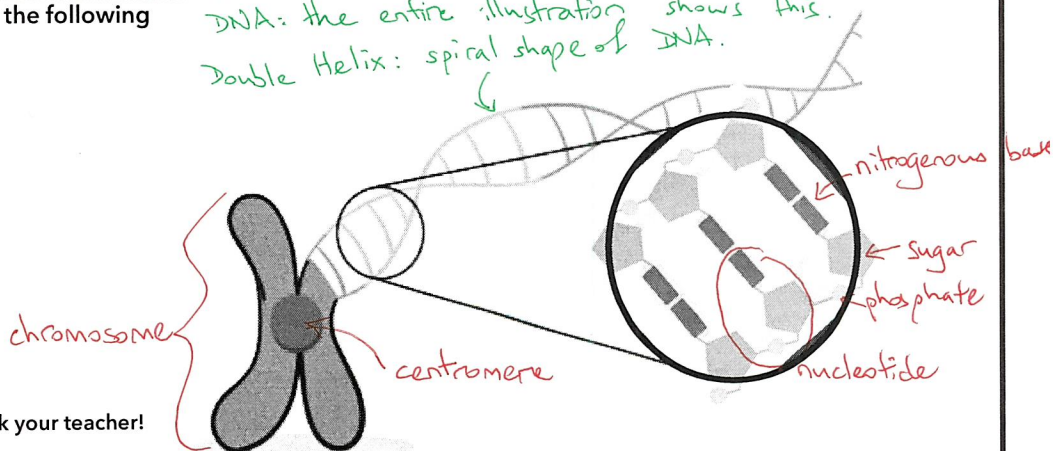
8. In your own words, what is the relationship of DNA bases and traits such as hair colour, eye colour, etc?

The DNA sequence of bases is the code for all your traits.

9. Label the illustration with the following words:

- DNA
- Double Helix*
- Nucleotide
- Phosphate
- Sugar
- Nitrogenous Base
- Chromosome
- Centromere*

DNA: the entire illustration shows this.
Double Helix: spiral shape of DNA.



* Not directly covered in video. Ask your teacher!