

DNA Basics

<https://learn.genetics.utah.edu/content/basics/>

Click on What are DNA and Genes and watch the video?

- 1.) What is DNA?
- 2.) Draw a picture of a DNA molecule
 - a.) Label the sugar-phosphate backbone
 - b.) Label the 4 types of nucleotides
- 3.) What is the shape of DNA?
- 4.) What bases pair together?
- 5.) What is a gene?
- 6.) What is a complete set of genes called?
- 7.) What makes people unique?
- 8.) What happens if there is a change in a gene?

Click on What are Proteins and watch the video?

- 10.) Provide 2 examples of proteins.
- 11.) What is a protein?
- 12.) How many different amino acids are there?

Click on Mutations and watch the video?

- 13.) What is a mutation?
- 14.) What is the most common mistake?
- 15.) What other two mistakes could occur?
- 16.) When can DNA changes be passed on?
- 17.) How many variations exist between parent to offspring?
- 18.) Do mutations **USUALLY** result in good/bad/neither (circle one) changes?

Click on [What is Inheritance](#) and watch the video?

- 16.) What is sexual reproduction?
- 17.) How many copies of each gene do we have?
- 18.) How is it decided which genes are passed on to offspring?
- 19.) Do brothers and sisters contain the exact same chromosomes? Explain.

- 20.) How much of their genetics do grandchildren share with their grandparents?

Click on [What are Traits](#) and watch the video?

- 21.) What are traits?
- 22.) Give two examples of human traits.

- 23.) What are the two deciders of what traits you have?

Click on [What are Dominant and Recessive?](#)

- 24.) What is an allele?
- 25.) How many alleles do we have for each trait? Why?

- 26.) Why are alleles referred to as dominant and recessive?
- 27.) How many genes control most traits?