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Period\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Amoeba Sisters: “Structure and Function of DNA”** (8:53)

1. What is the most important molecule of life**?*\_\_\_\_\_\_\_\_\_***

2. Even though all of your cells contains your entire DNA code, that DNA is not always

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_all the time in all cells.

3. The ability to turn genes on or off is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4. DNA is a type of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

5. The building block of a nucleic acid is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. There are three parts of a nucleotide: \_\_\_\_\_\_\_\_\_\_\_\_\_, next is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

—sometimes called the sugar phosphate backbone and a \_\_\_\_\_\_\_\_\_\_\_\_\_.

7. The most important part of the nucleotide is the \_\_\_\_\_\_\_\_ because the bases actually code for traits.

8. There are 4 bases in DNA: \_\_\_\_\_\_\_\_\_\_\_\_ and\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. If pairs are mismatched, it’s called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

10. DNA has \_\_\_\_\_\_\_ strands so there are nucleotides running up one side and nucleotides running up the other side. The bases are what is paired in the middle

11. The DNA is also twisted into a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shape.

**Ted Ed “The Twisting Tale of DNA”** (4:27)

1. Every cell of every living thing on earth contains all the information it needs to

create and duplicate and make variations of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. DNA is made of chains of four smaller molecules called

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3. The four differing nucleotide parts, called bases, are made of a few

\_\_\_\_\_\_\_\_\_\_\_, oxygen, hydrogen, nitrogen and phosphorus atoms.

4. You can think of DNA as a great library of information that exists to do one thing

only: to direct the building of different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

5. It’s infrequent, but our own nucleotide sequences can change as the result of spontaneous or environmental damage (which might remove or shift a nucleotide

position). It changes the gene involved, and can then change the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

***After you have viewed this video, write answers to the following:***

6. The secret of life. The double helix. The building block of life. Deoxyribonucleic acid. These are all names for what is most commonly known as DNA. If you had to rename the molecule, what would you call it and why?

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7. The double helix structure, DNA, wasn’t discovered until 1953.

* Do a search on Safari.
* Write down names of at least **two** notable scientists that have made major discoveries in the fields of life science (biology). Find scientists other than Watson, Crick and Wilkins.
* Write down what their discoveries were?
* Cite where you found it. (This is not a formal citation.)

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