

PART ONE: STRUCTURE OF DNA

<http://learn.genetics.utah.edu/content/begin/tour/>

Take the tour of DNA by clicking on "What is DNA?" and answer the questions below:

1. In what organelle (CELL PART) would I find your DNA (YOUR INSTRUCTIONS)? _____
2. What does DNA stand for? _____
3. The DNA molecule comes in the form of a _____ ladder and scientists call its shape a _____.
4. The MIDDLE of the DNA MOLECULE is made of bases. These bases will only pair up in a particular way:
A always pairs with _____.
C always pairs with _____.
5. What makes up the handrails or SIDES of a DNA molecule (have to look at the picture) SUGAR and _____.
6. G stands for _____.
A stands for _____.
T stands for _____.
C stands for _____.

GO BACK TO THE TOUR PAGE AND CHOOSE "WHAT IS A GENE?"

1. GENES are _____ manuals for our bodies.
2. GENES are made of _____.
3. A gene or protein called _____ is responsible for our RED BLOOD CELLS to carry _____.
4. If our hemoglobin gene is normal, the hemoglobin protein will work fine.
But if the instructions in the gene are changed, or _____, changes in the hemoglobin could result in the disorder _____.
5. TRUE or FALSE: YOUR DNA or GENES are responsible for your EYE COLOR.

GO BACK TO THE TOUR PAGE AND CHOOSE "WHAT IS A CHROMOSOME?"

1. If you pulled the DNA from one of your cells, it would be how long?
2. How does all of that DNA fit inside your cells? _____
3. _____ are storage units for DNA.
4. TRUE or FALSE: Different organisms have a different number of chromosomes inside each cell.
5. How many chromosomes do humans have? _____
6. You received _____ of your chromosomes from your _____ and _____ from your dad.
7. Males have _____ and _____ sex chromosomes. Females have _____ sex chromosomes.
8. How many chromosomes does a mosquito have? _____
How many chromosomes does an onion have? _____
How many chromosomes does a carp have? _____

PART TWO: DNA REPLICATION

<http://www.pbs.org/wgbh/aso/tryit/dna/>

CHOOSE DNA WORKSHOP ACTIVITY

CHOOSE DNA REPLICATION

1. _____, the molecule that holds _____, makes an _____ copy of itself whenever _____.

In this activity, it's up to you to make the copy.

2. LOOK AT THE LOWER RIGHT HAND CORNER...Where are you located?

Draw a picture that is LABELED where you are located:

3. What is the FIRST STEP OF DNA REPLICATION? _____

4. Where does the DNA molecule UNZIP? _____ NOW MATCH THE BASES TO
MAKE A NEW DNA STRAND

5. A (ADENINE) always goes with _____

C(CYTOSINE) always goes with _____