**GENETICS: TOUR OF THE BASICS**

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| DNA stands for: |  |
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| DNA  DAN |  |
| d |  |
| **DNA alphabet pieces are:** |  |
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| **BASE PAIR RULE:** | \_\_\_\_ always pairs with \_\_\_\_\_ . |
|  | \_\_\_\_ always pairs with \_\_\_\_\_ . |
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| DNA CODE LETTERS STAND FOR: |  |
|  |  |
| GENES ARE: |  |
|  | One strand of our DNA contains many \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The purpose of a |
|  | gene is to: |
|  | GENES tell the cell to make proteins. |
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| DESCRIBE THE RELATIONSHIP |  |
| BETWEEN HEMOGLOBIN AND |  |
| GENES. |  |
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| WHAT CAUSES SICKLE CELL |  |
| ANEMIA? |  |
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| HOW LONG IS DNA FROM A |  |
| SINGLE CELL IF STRETCHED |  |
| OUT? |  |
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| DESCRIBE HOW IS DNA |  |
| PACKAGED. |  |
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| HUMAN CHROMOSOMES | Humans cells have \_\_\_\_\_\_\_\_chromosomes. Human chromosomes are organized into |
|  | \_\_\_\_\_\_\_\_\_\_ pairs because: |
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| SEX CHROMOSOMES | FEMALE: \_\_\_ & \_\_\_ MALE: \_\_\_ & \_\_\_ |
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|  |  |
| OTHER ORGANISMS’ | Mosquito: Carp: |
| CHROMOSOME NUMBERS | Onion: |
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| PROTIENS |  |
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|  | Our bodies are made up of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells. Each cell is responsible for |
|  | a specific \_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
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| What role do proteins play | \_\_\_\_\_\_\_\_\_\_\_\_\_\_networks are responsible for the sensation of pain. |
| In sending a pain signal? |  |
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| What is a structural protein? |  |
| DESCRIBE THE BLUEPRINT FOR |  |
| A PROTIEN |  |
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| What function does RNA provide |  |
| the cell? |  |
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| Describe Transcription |  |
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| Describe Translation |  |
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| What is heredity? |  |
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| How are traits defined? |  |
|  |  |
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| How are genes transferred to |  |
| a child? |  |
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| Describe a Zygote |  |
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| Why do children have unique |  |
| traits? |  |
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| What is a trait? |  |
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| TYPES OF TRAITS | Physical: |
|  |  |
|  | Behaviorial: |
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|  | Predispostion to Medical Conditions: |
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| EXAMPLES OF HOW TRAITS ARE |  |
| DEFINED |  |
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| DEFINE ALLELE: |  |
|  |  |
| HOMOZYGOUS ALLELES: |  |
|  |  |
| DOMINANT ALLELES VERSUS |  |
| RECESSIVE ALLELES |  |
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|  |  |
| HETEROZYGOUS |  |
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| SHOW AN EXAMPLE OF HOW |  |
| THE TRAITS OF A CHILD ARE |  |
| DETERMINED |  |
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|  |  |
| INCOMPLETE DOMINANCE |  |
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| SINGLE GENE VERSUS COMPLEX |  |
| TRAITS |  |
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