7th Grade Integrated Science Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

7.5 Quiz

1. **What are the components of DNA?**
   1. Ribose sugar, phosphate, oxygen nucleotides
   2. Ribose sugar, phosphate, nitrogenous nucleotides
   3. Deoxyribose sugar, phosporous, oxygen nucleotides
   4. Deoxyribose sugar, phosphate, nitrogenous nucleotides
2. **A scientist in class has ½ a strand of DNA. The order of the nucleotides on that strand is shown below.**

A – T – T – G – C – G – T – A – T – C

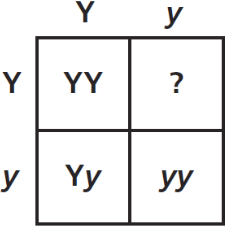
**Write the complementary strand for the DNA that the scientist has:**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Which of the following pictures shows a strand of DNA?**

|  |  |
| --- | --- |
|  |  |
| **A** | **C** |
|  |  |
| **B** | **D** |

1. **A scientist observes that a horse has a brown tail. He observes that the offspring of that horse also have a brown tail. Which term below explains these two observations?** 
   1. Punnett square
   2. Energy flow
   3. Heredity
   4. Adaptation
2. **Which of the following words is used to describe an organisms physical appearance?**
   1. Punnett
   2. Genotype
   3. Biome
   4. Phenotype
3. **A 6th grader named Marshall has blonde hair. His hair is blonde because his genotype is homozygous recessive.** **Which of the following choices correctly displays his genotype?**
   1. BB
   2. bb
   3. Bb
   4. Blonde
4. **Humans have a gene that controls the whether or not their earlobes are attached to their head. An individual has an allele that is represented by “e”. Which of these describes this allele correctly?**
   1. Dominant
   2. Homozygous
   3. Recessive
   4. Heterozygous
5. **In one of Gregor Mendel’s experiments, he crossed a tall plant and a short plant. All of the offspring came out tall. Which trait is recessive?**
   1. Tall height
   2. Medium height
   3. Short height
   4. Tall and medium height
6. **In cheetahs, spots are a dominant trait. A particular cheetah has one dominant allele and one recessive allele for spots. Which of the following describes the genetic makeup of this cheetah?**
   1. Homozygous Dominant
   2. Homozygous
   3. Heterozygous Dominant
   4. Heterozygous
7. **The following Punnett square, in which (Y) are yellow flowers and (y) are purple flowers, is incomplete. Which of these should replace the question mark?**



* 1. Y
  2. YY
  3. Yy
  4. yy

1. **A species of flower has a gene that determines its color. The dominant allele gives red flowers while the recessive allele gives white flowers. If two heterozygous flowers are crossed, what are the possible phenotypes of the offspring?**
   1. All will be red
   2. None will be red
   3. Some will be red and some will be white
   4. It is impossible to determine the phenotype of the offspring with the provided information.