

NAME _____

DATE _____

Science Review: Unit D OUR GENES, OUR SELVES

1. If a genetic trait was represented by the letter "a", how would you represent the recessive condition? aa The dominant condition? AA, Aa
2. True/False: Single cell organisms can reproduce asexually. True
3. The offspring of asexual reproduction produces an identical clone T/F? True Is it an identical clone if a genetic mutation occurred T/F? No, false
4. Put these words in order from largest to smallest: DNA, cells, chromosomes
cells, chromosomes, DNA
5. Give an example of asexual reproduction mitosis, budding
6. Diseases that are inherited are caused by which: viruses, genes, environmental conditions? genetic
7. Offspring of sexual reproduction are identical to the parents T/F? false
8. Why do scientists use fruit flies or flowers to study genetics? They reproduce quickly, provide many offspring (large sample size)
9. T/F: A trait can be determined by the environment? T one gene? T many genes? T
10. In a cell, genetic information is stored in the nucleus
11. Egg and Sperm combine during sexual reproduction - fertilization
12. Name and organism that reproduces sexually. human's, mammals, plants, etc.
13. A punnett square is used to determine the probability of traits in offspring through sexual reproduction or asexual reproduction? sexual reproduction
14. Name the two methods that you have learned that can be used to study human genetics. Breeding (Punnett squares), DNA Fingerprinting
15. The offspring of sexual reproduction get their genetic information from two parents. Offspring of asexual reproduction? one parent
16. What is DNA Fingerprinting used for? identification, genetic disorders
17. What are some trade-offs of choosing to be tested for a genetic disease? genetic discrimination, worrying, limitations, etc.
18. What scientist first studied the patterns of heredity? _____
19. Most humans have 2 copies of each chromosome.
20. Two parents are both carriers for a genetic trait. What is the chance that their offspring will inherit the trait? 3:1, 25%

21. Punnett Square: Use the letter "a", where both parents are heterozygous.

	<u>A</u>	<u>a</u>
<u>A</u>	<u>AA</u>	<u>Aa</u>
<u>a</u>	<u>Aa</u>	<u>aa</u>

22. Which genotypes represent the dominant traits? AA, Aa
 Recessive traits? aa

23. What is the ratio of dominant to recessive? 3:1

24. What is an example of a behavior trait that is likely to INCREASE reproductive (animal) success? dancing, song etc.

25. Plant adaptations that are likely to attract Pollinators: Flower color, scent, shape

26. T or F: Animal mating behaviors are influenced by genetics and environment? True

27. Explain how all human beings are genetically unique?

We are offspring from 2 parents. We get genetic information from both parents in 23 chromosome pairs. Which chromosome we get from each parent is random. We each get a unique set of genes.

28. The height of a plant is likely to be determined by what 2 things? _____

both genetic and environmental factors.

29. How many genes do humans have? Approximately between 10,000-50,000.

30. T or F: Mutations act by changing the function of proteins. True

Genetics Vocabulary

1. Characteristic--a feature that helps to distinguish a person or thing.
2. Traits-- A distinguishing feature, as of a person's character.
3. Offspring-- descendants of a person, animal, or plant.
4. Inherited—Traits that appear to be passed from parents to their children.
5. Genes – Inherited bits of information that are passed directly from the parents' cells to the child's cells.
6. Genetics – A branch of biology that deals with heredity.
7. Heredity -- The genetic transmission of characteristics from parent to offspring.
8. Asexual Reproduction – Producing offspring with only one parent. The offspring is a clone of the parent.
9. Clone -- To produce a copy of.
10. Mutation -- An alteration or change.
11. Fertilization – The union of the sperm and the egg.
12. Sexual Reproduction – Producing offspring with two parents that are not clones.