Reading Guide Packet: Ch 12: Introduction to Genetics

Biology A

	Name	Period			
Ch 12.	Ch 12.1: The Work of Gregor Mendel				
1.	What is genetics?				
2.	What is a trait?				
3.	When Mendel cross-pollinated pea plant parents with different traits, he c kind of offspring?	reated what			
4.	How are individual organism's characteristics determined?				
5.	Compare and contrast <i>genes</i> with <i>alleles</i> .				
6.	What does the <i>principle of dominance</i> state?				
7.	What are gametes? What happens to alleles during the formation of game	tes?			

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Ch 12.2: Aoplying Mendel's Principles

8.	What is probability? Why can it be used to predict the outcomes of genetic crosses?
9.	What is the difference between a <i>homozygous</i> and a <i>heterozygous</i> organism?
10.	. Do probabilities predict actual outcomes? Why or why not?
11.	. Compare and contrast <i>phenotype</i> with <i>genotype</i> .
12.	. Why are Punnett squares useful?
13.	. What does the <i>principle of independent assortment</i> state?

	14. Summarize Mendel's principles of heredity.
Ch	12.3: Other Inheritance Patterns
	15. What is incomplete dominance? Give one example.
	16. What is <i>codominance</i> ? Give one example.
	17. What is an example of a gene with multiple alleles?
	18. What does it mean to say that a trait is <i>polygenic</i> ?
	10. What ages it mean to say that a trait is polygeme.
	10. What might be the course of a trait that follows a man Mandalian matter of the criterion
	19. What might be the cause of a trait that follows a non-Mendelian pattern of inheritance?

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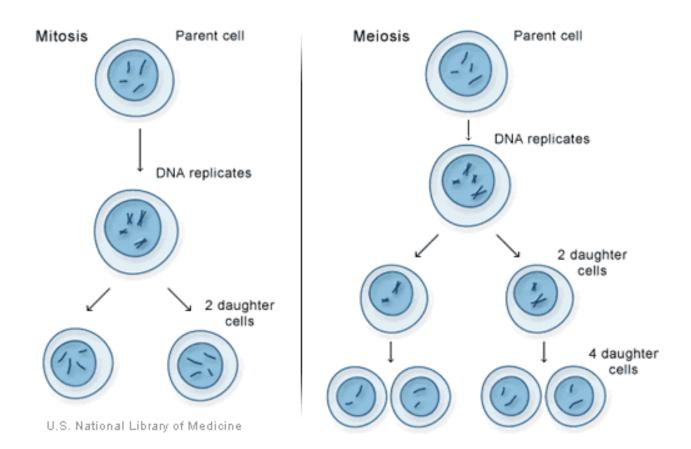
Reading Guide Packet: Ch 12: Introduction to Genetics Biology A 20. Give an example of gene expression that is influenced by environmental conditions. Ch 12.4: Meiosis 21. What are homologous chromosomes? 22. Compare and contrast diploid and haploid cells.

23. What process produces haploid gametes from diploid body cells?

24. What is *crossing-over*? What is the result of this process?

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25. Compare the final results of *mitosis* and *meiosis*.



26. Why are some different genes often inherited together from one generation to the next?