

Name: _____

Date: _____

Period: _____

Unit 5 Concept Map

Week # _____

Basic Genetics Terminology

1. _____ :
physical appearance vs. 2. _____ :
genetic makeup

Ex: brown hair

3. Ex: _____

4. _____ allele vs. 5. _____ allele

Ex: B

Ex: b

6. _____ vs. 7. _____

Ex: BB, or bb

Ex: Bb

Incomplete dominance vs. 8. _____

9. Ex: _____

Ex: spotted

Blood Types

10. Fill in the table below.

Type	Genotype	Antigen	Receive	Donate
A			A, O	
		B		B, AB
	AB			
O		none		A, B, AB, O

Punnett Squares and Pedigrees

11. Tongue rolling is dominant (T) over no tongue rolling. Show the Punnett square for two heterozygous parents.

12. Probability for each:
TT: _____%
Tt: _____%
tt: _____%
Tongue rolling: _____%

13. A red flower (RR) is crossed with a white flower (rr). Show the Punnett square for two heterozygous flowers.

14. Probability for each:
Red: _____%
Pink: _____%
White: _____%
Heterozygous: _____%

15. A man who has O blood and a woman who is heterozygous for B blood have kids. Show the Punnett square.

16. Probability for each:
O blood: _____%
B blood: _____%
A blood: _____%
Heterozygous: _____%

17. Hunter syndrome is sex-linked recessive (h). Show the Punnett square for a carrier woman and affected man.

18. Probability for each:
Affected: _____%
Normal: _____%
Carrier: _____%

19. Fill in the key for the pedigree:

unaffected male carrier male affected male
 unaffected female carrier female affected female

20. In a sex-linked pedigree, it is impossible to have a _____.

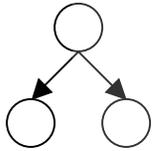
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Mitosis vs. Meiosis

Picture:



21. _____

Daughter cells are:

22. _____ and exactly the same

23. Haploid and _____

Number of chromosomes:

Is the same as the original cell

24. Is _____ as many as the original cell

Purpose:

To make new cells

25. To make _____ cells

Transcription vs. Translation

Occurs in:

26. _____

27. _____

Purpose:

28. DNA to _____

mRNA to amino acid

Done by:

RNA polymerase

29. _____

Example:

30. Transcribe:
DNA: C A C T A A
mRNA: _____

31. Translate:
mRNA: _____
aa: _____

DNA

32. Structure is a _____ made of two strands of nucleotides

33. Nucleotides are complementary: A and _____; G and _____

34. Complete the table based on complementary base pairing

Percentages of Nucleotides				
Source of DNA	A	T	G	C
Yeast	21			
Herring	31			
Human	26			

35. The order of nucleotides within a strand of DNA is held together by _____ bonds, which are strong.

36. The two strands of DNA are held together by _____ bonds, which are weak.

37. DNA replication is semi-conservative, meaning each new molecule of DNA is made of one _____ and one _____

38. _____ is the enzyme for DNA replication

39. Three kinds of mutations can occur: _____, _____, or _____

40. Sickle cell is caused by a _____ mutation