

Bozeman Biology
Biological Molecules video
<http://bit.ly/QEZZg0>

1. Where can we find DNA? _____

2. Four categories of four macro molecules are

i. _____

ii. _____

iii. _____

iv. _____

3. What is a monomer?

—

4. What is unique about lipids?

—

5. What are the main functions of lipids?

—

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6. Lipids are polar? T/F

7. Nucleic acid monomers are -> _____ and are made up of

_____.

8. Functions of nucleic acids are-

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9. Proteins monomers are

10. What differentiates one amino acid from another?

11. Carbohydrate monomers are _____

12. What helps make different types of carbohydrates?

13. What are generic functions of each?

14. What is the significance of directionality of the monomers in a polymer?

15. The process of “putting monomers together” is called

16. Draw an example of this process

17. What is lost during the process?

18 What kind of bond is formed? Is it a strong or weak bond?

19 Can this process be used in the creation of other polymers?

20 How can we break these apart?

21. What is the name of the process?

Nucleic Acids:

22. The two different types of Nucleic acids are

- i. _____
- ii. _____

23. What is a nucleotide? and what are the three parts of a nucleotide?

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- i. _____
- ii. _____
- iii. _____

24. What are the differences between a DNA nucleotide and an RNA nucleotide?

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25. How are these nucleotides arranged in the DNA/ RNA strand?

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26. What are the four nucleotides in DNA?

- i. _____
- ii. _____
- iii. _____
- iv. _____

27 What are the four nucleotides in RNA?

- i. _____
- ii. _____
- iii. _____
- iv. _____

28. Draw a diagram to demonstrate how the directionality of the DNA/RNA molecule is determined.

29. What does the 3' and 5' stand for?

30 What makes DNA anti parallel?

Proteins:

31. Proteins monomer is _____

32. How many amino acids are there and how do we get them?

33. Draw a basic amino acid.

34. What part of the amino acid makes it different? Label it in your diagram above.

35. What gives the structure to proteins?

36. What is the directionality of a protein?

37. What is the significance of the directionality of proteins?

Lipids:

38. Lipids have different types

1. _____
2. _____
3. _____
4. _____

39. What are the common factors between the different lipids?

40. What is significant about hydrocarbons found in lipids?

41. What is unique about phospholipids?

42. What does amphipathic mean?

43. What is the difference between saturated and unsaturated fatty acids?

44. Why do unsat fats bend?

45. Why is margarine solid?

46. Is butter saturated or unsaturated? Solid? or liquid?

Carbohydrates:

47. Carbohydrates monomers?

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48. What are the two categories of carbohydrates?

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49. What are the different types of glucose?

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50. What are the differences between amylose and glycogen?

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