

**Part A.** Classify each as a carbohydrate, protein, lipid or nucleic acid.

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|----------|------------------------|-----------|----------------|
| 1. _____ | starch                 | 10. _____ | polysaccharide |
| 2. _____ | cholesterol            | 11. _____ | phospholipid   |
| 3. _____ | steroid                | 12. _____ | glycerol       |
| 4. _____ | glycogen               | 13. _____ | monosaccharide |
| 5. _____ | nucleotide             | 14. _____ | cellulose      |
| 6. _____ | RNA                    | 15. _____ | amino acid     |
| 7. _____ | polypeptide chain      | 16. _____ | enzyme         |
| 8. _____ | glucose                | 17. _____ | saturated fat  |
| 9. _____ | unsaturated fatty acid | 18. _____ | DNA            |

**Part B.** Identify the specific molecule (use the above terms) from each description. Some terms may be used more than once.

- \_\_\_\_\_ provides long-term energy storage for animals
- \_\_\_\_\_ instructions for building proteins
- \_\_\_\_\_ provides immediate energy
- \_\_\_\_\_ sex hormones
- \_\_\_\_\_ provides short-term energy storage for plants
- \_\_\_\_\_ polymer of many amino acids connected together
- \_\_\_\_\_ forms the cell membrane of all cells
- \_\_\_\_\_ speeds up chemical reactions by lowering activation energy
- \_\_\_\_\_ one sugar
- \_\_\_\_\_ cells convert this into ATP
- \_\_\_\_\_ monomer of proteins
- \_\_\_\_\_ provides long-term energy storage for plants
- \_\_\_\_\_ genetic material
- \_\_\_\_\_ steroid that makes up part of the cell membranes
- \_\_\_\_\_ 3-carbon “backbone” of a fat
- \_\_\_\_\_ provides short-term energy storage for animals
- \_\_\_\_\_ many sugars
- \_\_\_\_\_ monomer of nucleic acids
- \_\_\_\_\_ forms the cell wall of plant cells

**Part C.** Which specific molecule (saturated fat, unsaturated fat, protein, glucose, starch, cellulose) is each food mostly made of?

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|-----------|--------------|-----------|-------------|
| 36. _____ | almond       | 44. _____ | celery      |
| 37. _____ | spinach      | 45. _____ | soy beans   |
| 38. _____ | beef jerky   | 46. _____ | cranberries |
| 39. _____ | bacon        | 47. _____ | egg white   |
| 40. _____ | noodles      | 48. _____ | table sugar |
| 41. _____ | orange juice | 49. _____ | popcorn     |
| 42. _____ | cheese       | 50. _____ | lobster     |
| 43. _____ | wheat        | 51. _____ | sesame oil  |

**Part D.** State whether each is found in animals, plants or both.

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|-----------|----------------|-----------|----------------|
| 52. _____ | saturated fat  | 61. _____ | glucose        |
| 53. _____ | protein        | 62. _____ | RNA            |
| 54. _____ | steroid        | 63. _____ | polysaccharide |
| 55. _____ | amino acid     | 64. _____ | glycogen       |
| 56. _____ | DNA            | 65. _____ | starch         |
| 57. _____ | cellulose      | 66. _____ | phospholipid   |
| 58. _____ | monosaccharide | 67. _____ | enzyme         |

**Part E.** Which food molecule (monosaccharide, polysaccharide, lipid, protein) would you eat if...

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|--|-------|
| 68. ...you needed a quick boost of energy?     | _____ |
| 69. ...you wanted to grow strong nails?        | _____ |
| 70. ...you haven't eaten in days?              | _____ |
| 71. ...you wanted to grow healthy hair?        | _____ |
| 72. ...you had a race tomorrow afternoon?      | _____ |
| 73. ...you were getting ready for hibernation? | _____ |
| 74. ...you wanted to get bigger muscles?       | _____ |
| 75. ...your next meal will be in a week?       | _____ |