

## CARBOHYDRATES AND LIPIDS PRACTICE

Fill in the following table of organic and inorganic compounds. Highlight carbohydrates and circle lipids.

Substance	Formula	Organic (O) or Inorganic (I)
Octane	C <sub>8</sub> H <sub>18</sub>	
Steel	Fe	
Baking Soda	NaHCO <sub>3</sub>	
Sand	SiO <sub>2</sub>	
Water	H <sub>2</sub> O	
Canola oil	C <sub>18</sub> H <sub>30</sub> O <sub>2</sub>	
Drano	KOH	
Steroid	C <sub>27</sub> H <sub>46</sub>	
Isopropyl alcohol	C <sub>3</sub> H <sub>7</sub> OH	
Fructose (fruit)	C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	
Olive Oil	C <sub>18</sub> H <sub>34</sub> O <sub>2</sub>	
Wax	C <sub>25</sub> H <sub>52</sub>	
Glucose	C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	
Sodium	Na	
Ammonia	NH <sub>3</sub>	

Classify each as a carbohydrate or lipid.

- |                                 |                          |
|---------------------------------|--------------------------|
| 1. _____ starch                 | 7. _____ polysaccharide  |
| 2. _____ cholesterol            | 8. _____ phospholipid    |
| 3. _____ steroid                | 9. _____ glycerol        |
| 4. _____ glycogen               | 10. _____ monosaccharide |
| 5. _____ glucose                | 11. _____ cellulose      |
| 6. _____ unsaturated fatty acid | 12. _____ saturated fat  |

Identify the specific molecule from each description. Not just carbohydrate or lipid (ex: cellulose).

13. \_\_\_\_\_ long-term energy storage for animals
14. \_\_\_\_\_ provides immediate energy
15. \_\_\_\_\_ forms the cell membrane of all cells
16. \_\_\_\_\_ one sugar
17. \_\_\_\_\_ steroid that makes up part of the cell membranes
18. \_\_\_\_\_ provides short-term energy storage for animals
19. \_\_\_\_\_ many sugars
20. \_\_\_\_\_ in the cell wall of plant cells

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

- |  |       |
|--|-------|
| 21. ...you needed a quick boost of energy?     | _____ |
| 22. ...you wanted to grow strong nails?        | _____ |
| 23. ...you haven't eaten in days?              | _____ |
| 24. ...you wanted to grow healthy hair?        | _____ |
| 25. ...you had a race tomorrow afternoon?      | _____ |
| 26. ...you were getting ready for hibernation? | _____ |
| 27. ...you wanted to get bigger muscles?       | _____ |
| 28. ...your next meal will be in a week?       | _____ |

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

- |                        |                       |
|------------------------|-----------------------|
| 29. _____ almond       | 37. _____ celery      |
| 30. _____ spinach      | 38. _____ soy beans   |
| 31. _____ beef jerky   | 39. _____ cranberries |
| 32. _____ bacon        | 40. _____ egg white   |
| 33. _____ noodles      | 41. _____ table sugar |
| 34. _____ orange juice | 42. _____ popcorn     |
| 35. _____ cheese       | 43. _____ lobster     |
| 36. _____ wheat        | 44. _____ sesame oil  |