

**Worksheet 15**

1. What are the 3 types of carbohydrates?


2. What are 3 functions of carbohydrates in animals and humans?


3. What are the 3 functions of carbohydrates in plants?


4. How many calories of energy are in a gram of carbohydrates? \_\_\_\_\_

5. Draw the 3 major monosaccharides

d-glucose	l-glucose	d-galactose	d-fructose

6. What are the function and uses of the following:

d-glucose
d-galactose
d-fructose

7. In the spaces below list the three major disaccharides and the uses or functions of each

Name	Function/Use

8. For each of the disaccharides write the two monosaccharides that make them up

Monosaccharide	+	monosaccharide	disaccharide
	+		
	+		
	+		

9. In the spaces below list the three major polysaccharides and the uses/functions and describe the structure of each

Name	Function/Use
Structure:	
Structure:	
Structure:	

10. Which monosaccharide makes up the 3 polysaccharides? \_\_\_\_\_

11. List the three monosaccharides in order of sweetness with the sweetest first:


12. List the three disaccharides in order of sweetness with the sweetest first:


13. What is the sweetest artificial sweetener?

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14. How many pounds of sugar does the average American consume?

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15. What is a reducing sugar?


16. What is the name of the reaction where all mono, di, and poly saccharides produced?

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17. Which mono and disaccharides are reducing sugars?

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18. What is the name of the bond formed between to monosaccharides to make a disaccharide?

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19. What is the name of the bond formed when a monosaccharide forms a closed ring?

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20. What are the bonds between glucose molecules in starch that our body has an enzyme for and can digest?

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21. What are the bonds between glucose molecules in cellulose that our body has an enzyme for and cannot digest?

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