

INVESTIGATION 2 I-CHECK

LIVING SYSTEMS

Name _____

Date _____

1. Mark **X** next to each of the components that must be present for plants to make their own food.

_____	Carbon dioxide	_____	Water
_____	Oxygen	_____	Light
_____	Nitrogen	_____	Sugar

2. Mark **X** next to each *product* of photosynthesis.

_____	Carbon dioxide	_____	Water
_____	Oxygen	_____	Light
_____	Nitrogen	_____	Sugar

3. Plants produce food in their _____.

(Mark the one best answer.)

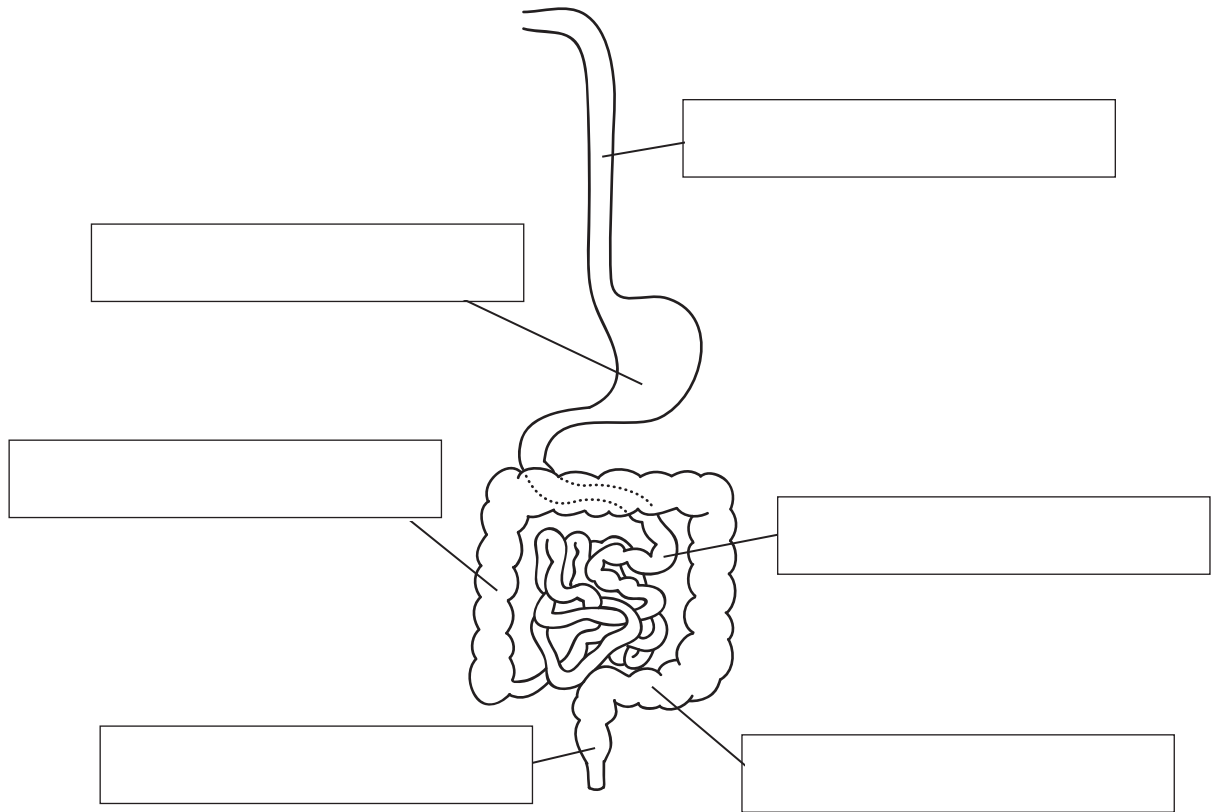
- A** roots
- B** stems
- C** leaves
- D** flowers

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4. Write the names of the parts of the digestive system shown below.

Word bank: colon, esophagus, large intestine, rectum, small intestine, stomach



5. Food is anything that people eat that provides _____.

(Mark the one best answer.)

- A** energy
- B** carbon dioxide
- C** oxygen
- D** water

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6. Two students set up an investigation to see what plants need to produce their own food. They planted a bean in several sets of identical cups of soil. Then they placed them in identical chambers. Chamber A was the control, all factors were present. The other chambers excluded one of the factors.

	Water	Light	Oxygen	Carbon dioxide	Nitrogen
Chamber A	yes	yes	yes	yes	yes
Chamber B	yes	yes	yes	yes	no
Chamber C	yes	yes	yes	no	yes
Chamber D	yes	yes	no	yes	yes
Chamber E	yes	no	yes	yes	yes
Chamber F	no	yes	yes	yes	yes

The students weighed the beans and soil before starting the investigation. After 3 weeks, the students weighed the beans, seedlings (if they were growing), and soil again. Their data are shown here.

	Bean starting mass (g)	Bean ending mass (g)	Soil starting mass (g)	Soil ending mass (g)
Chamber A	500	551	10,000	10,000
Chamber B	500	552	10,000	10,000
Chamber C	500	500	10,000	10,000
Chamber D	500	549	10,000	10,000
Chamber E	500	500	10,000	10,000
Chamber F	500	500	10,000	10,000

- a. Mark **X** next to each environmental factor that these data show is needed for plants to make food and increase their mass.

Water Carbon dioxide
 Light Nitrogen
 Oxygen

- b. Mark **X** next to the factor that is the best supporting evidence for your conclusion.

Bean starting mass
 Bean ending mass
 Soil starting mass
 Soil ending mass

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OPEN-RESPONSE QUESTION

7. a. What information does a food pyramid describe that a food web might not?

b. What level consumer are you? State a claim and provide evidence.

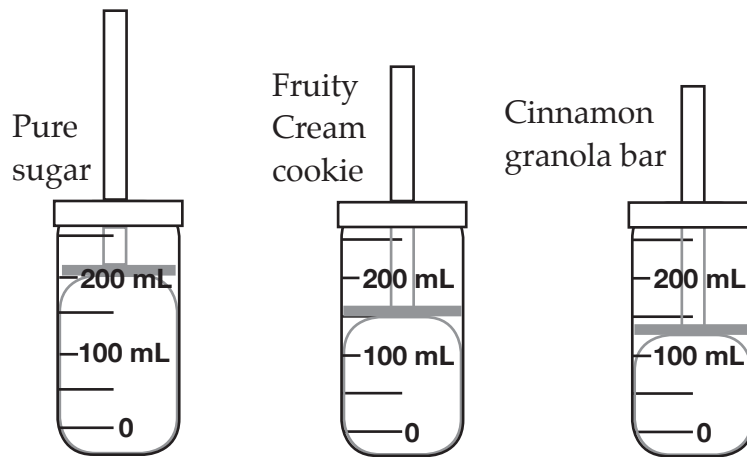
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OPEN-RESPONSE QUESTION

8. A girl's brother told her she should not eat so many cookies because they are made of pure sugar. He suggested she eat a granola bar instead.

The girl decided to investigate the amount of sugar in Fruity Cream cookies and Cinnamon granola bars. She performed the sugar test on 4 grams of pure sugar, 4 grams of Fruity Cream cookies, and 4 grams of Cinnamon granola bars. The results are pictured below.



- a. What volume of gas is produced by 4 grams of sugar? _____
 Are Fruity Cream cookies pure sugar? _____
 What is your evidence?

- b. Do Cinnamon granola bars contain sugar? _____
 How does their sugar content compare to Fruity Cream cookies?
