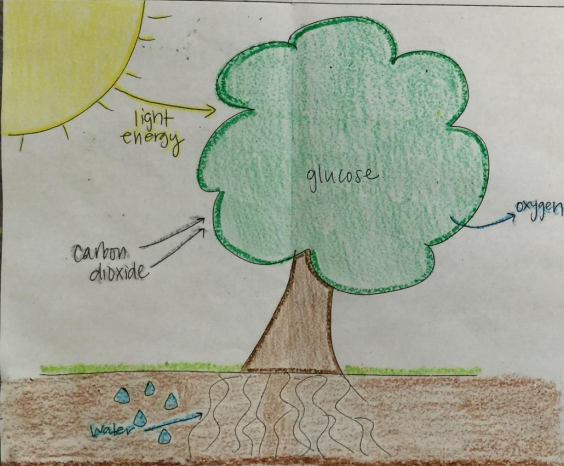
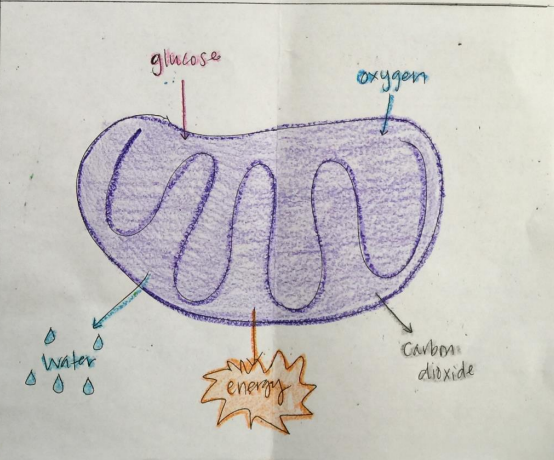


Photosynthesis & Cellular Respiration

step-by-step guide to a foldable

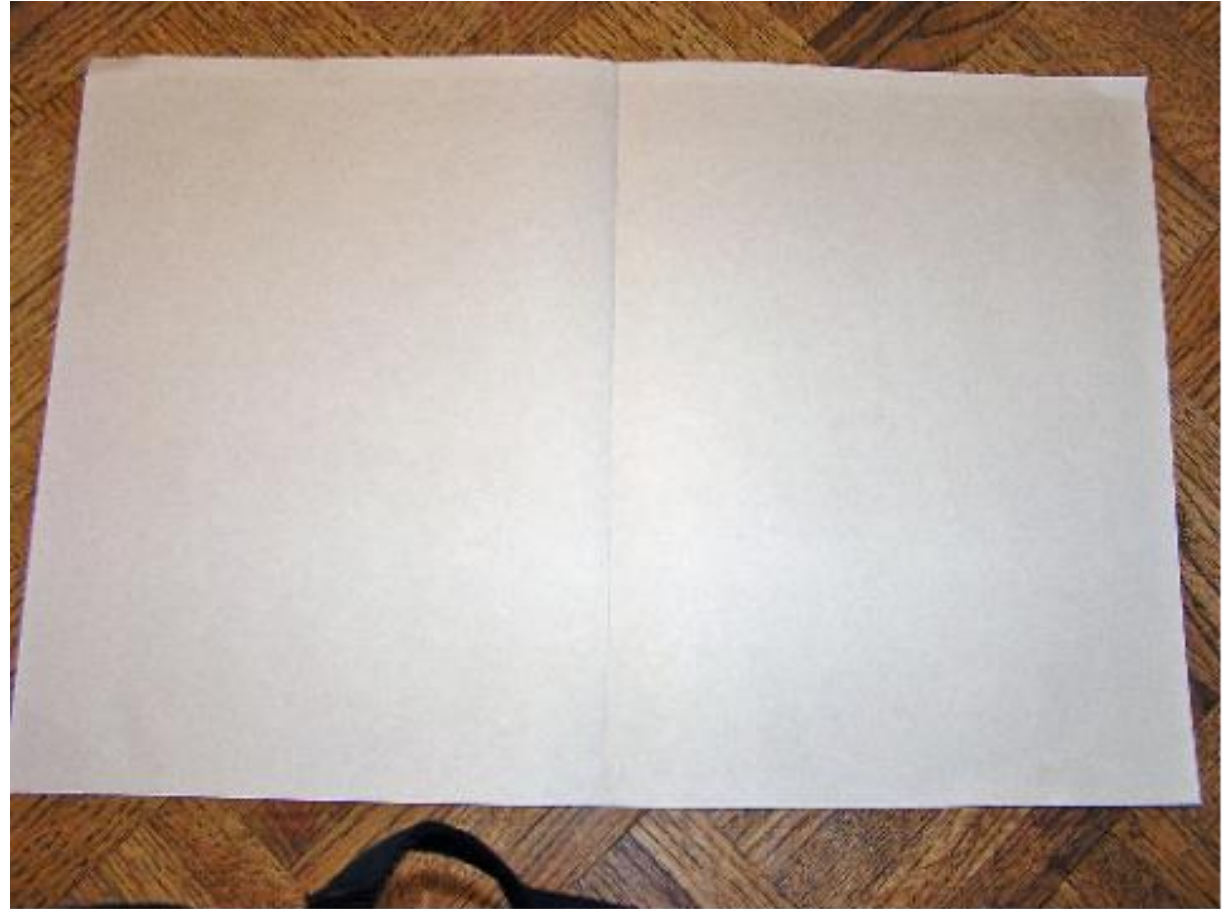
- Follow the given steps to make your very own foldable with key information.

Water + carbon dioxide + light energy \rightarrow sugar + oxygen	sugar + oxygen \rightarrow energy + carbon dioxide + water
$6\text{H}_2\text{O} + 6\text{CO}_2 + \text{light energy} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$	$\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 \rightarrow \text{energy} + 6\text{CO}_2 + 6\text{H}_2\text{O}$
	

The raw materials, products and waste products of the process of <u>PHOTOSYNTHESIS</u>	the raw materials, products and waste products of the process of <u>CELLULAR RESPIRATION</u>
The chemical formula of <u>Photosynthesis</u>	the chemical formula of Cellular Respiration
<u>PHOTOSYNTHESIS</u>	<u>CELLULAR RESPIRATION</u>
the process that uses light energy from the <u>Sun</u> , together with carbon dioxide and <u>water</u> to make glucose & oxygen.	the process in which the cells of living things break down the organic compound glucose with oxygen to produce carbon dioxide, water & <u>ENERGY</u> .

Step #1

- **Fold the construction paper in half – hamburger style.**



ABC
 $2 \times 7 = 14$
3.10
 $\frac{11.50}{10}$
48
3.80
18

Step #2

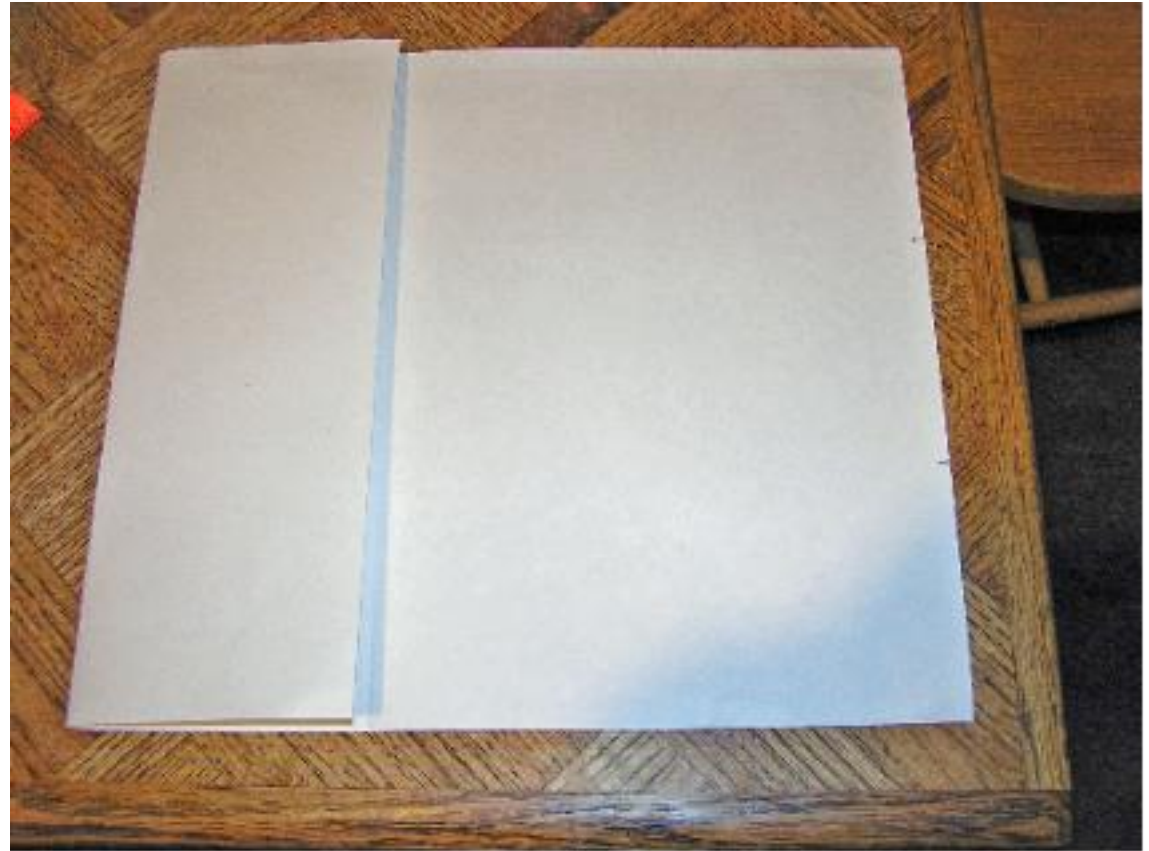
- Open the folded paper up again.
- Divide the paper into 3 equal parts, as shown. Use a ruler. Make tiny marks that you can erase later.



ABC
 $2 \times 7 = 14$
3/10
1.50
48
3.80
18

Step #3

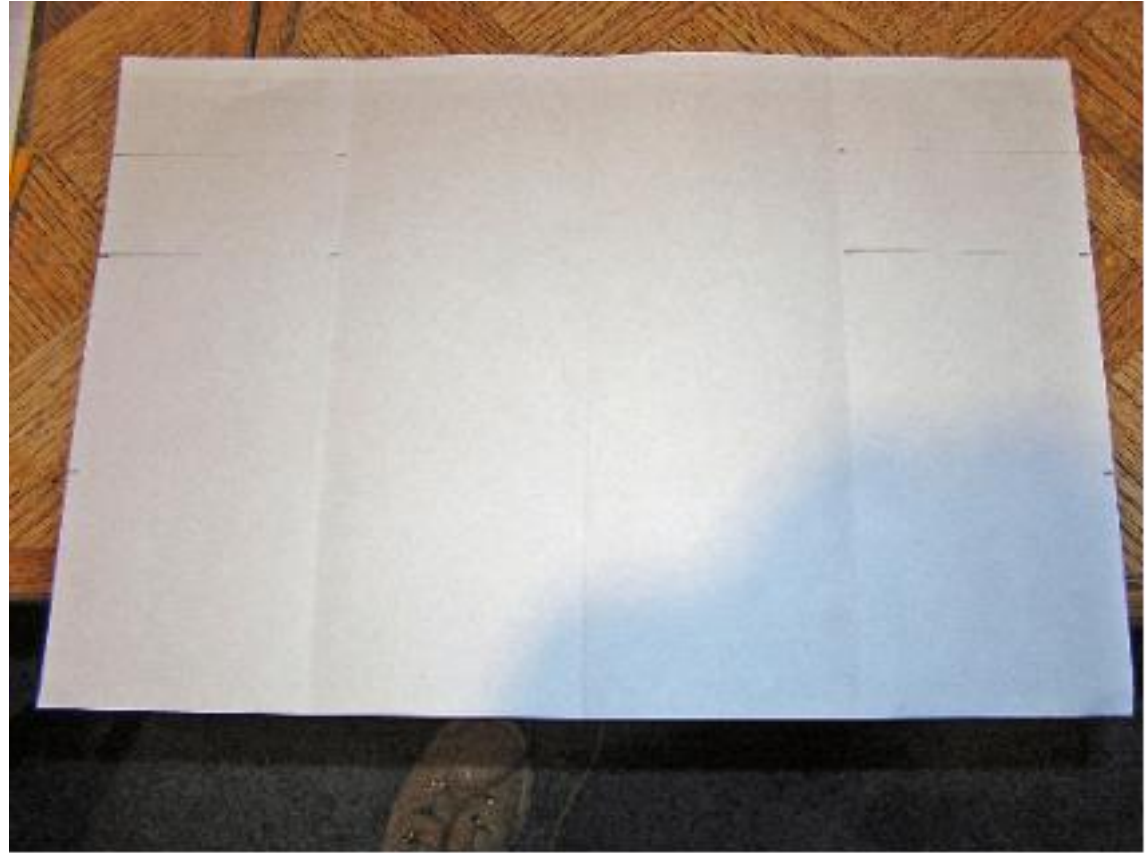
- Open the foldable up again.
- This time fold each half side in half, as shown.



ABC
 $2 \times 7 = 14$
3/10
11.90
48
3.80
18

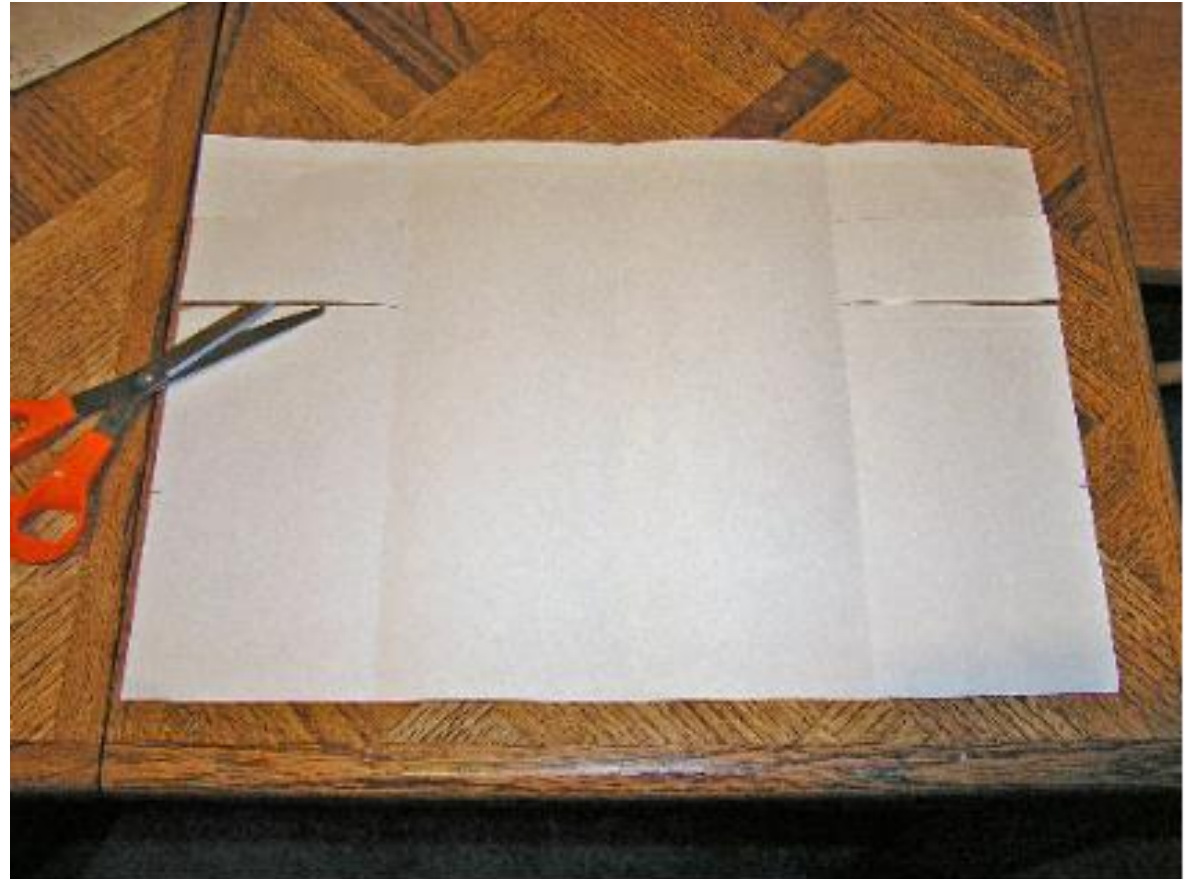
Step #4

- **Open the foldable once again.**
- **Take the upper 1/3 division and divide that in half.**
- **Trace lines across the two divisions in the upper 1/3 of the paper. See example.**



Step #5

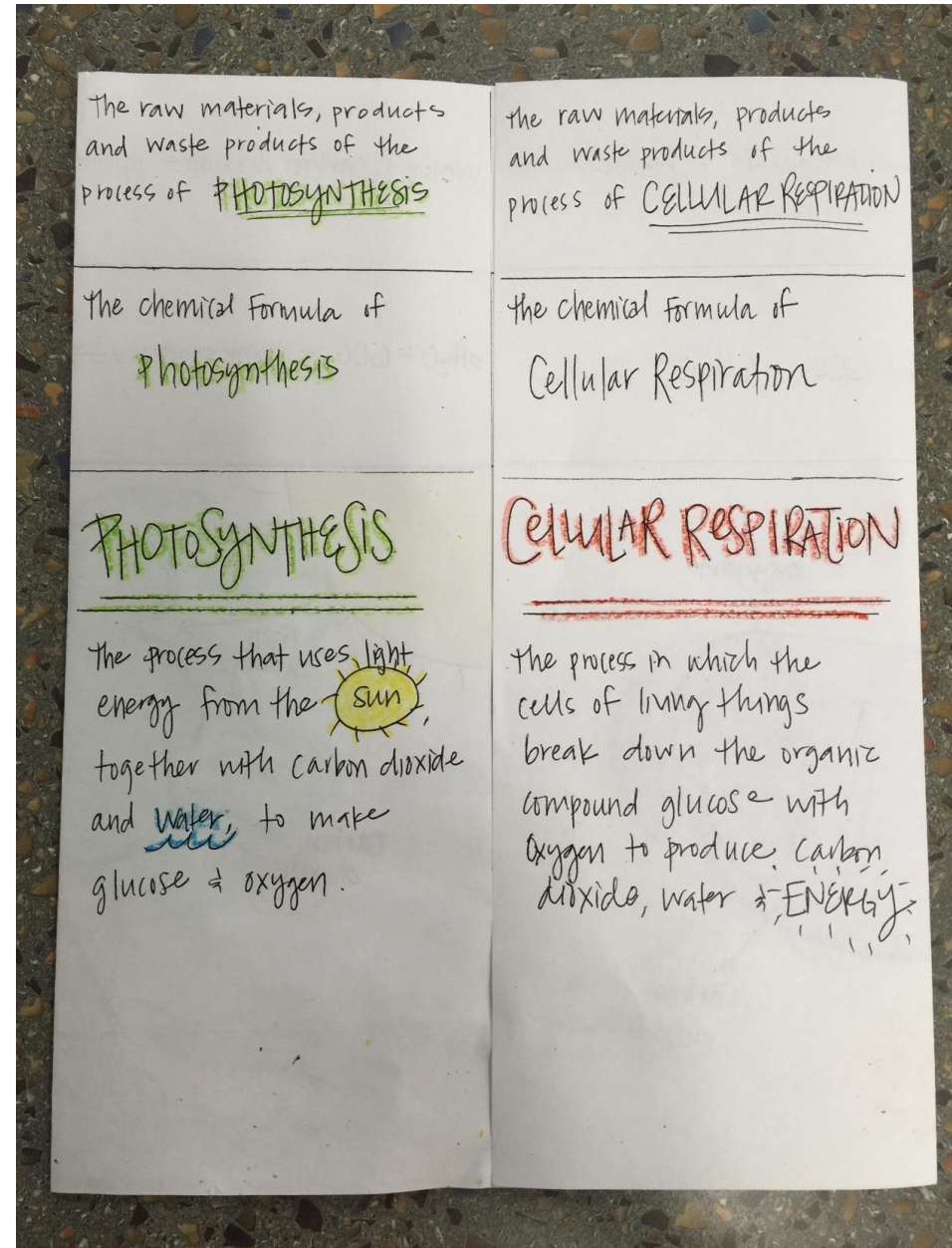
- **Cut across the lines that you made.** (Be careful to cut no farther than what's been shown on the example.)



ABC
 $2 \times 7 = 14$
3.10
 $\frac{11.90}{10} = 1.19$
48 3.80 18

Step #6

- Take the construction paper and fold along the folds as shown.
- Begin writing down the information as given in the example.
- Remember, one side of the foldable is about photosynthesis and the other about cellular respiration.



PHOTOSYNTHESIS

- **Top Row** – "The raw materials, product and waste products of the process of photosynthesis"
- **Middle Row** – "The chemical formula of Photosynthesis"
- **Bottom Row** – "The process that uses light energy from the sun together with carbon dioxide and water to make glucose and oxygen."

The raw materials, products and waste products of the process of PHOTOSYNTHESIS


the raw materials, products and waste products of the process of CELLULAR RESPIRATION

The chemical formula of Photosynthesis

the chemical formula of Cellular Respiration

PHOTOSYNTHESIS

CELLULAR RESPIRATION


The process that uses light energy from the  sun, together with carbon dioxide and water, to make glucose & oxygen.

The process in which the cells of living things break down the organic compound glucose with oxygen to produce carbon dioxide, water & ENERGY.

The raw materials, products and waste products of the process of PHOTOSYNTHESIS

The chemical formula of Photosynthesis

PHOTOSYNTHESIS

The process that uses light energy from the  sun, together with carbon dioxide and water, to make glucose & oxygen.

the raw materials, products and waste products of the process of CELLULAR RESPIRATION

the chemical formula of Cellular Respiration

CELLULAR RESPIRATION

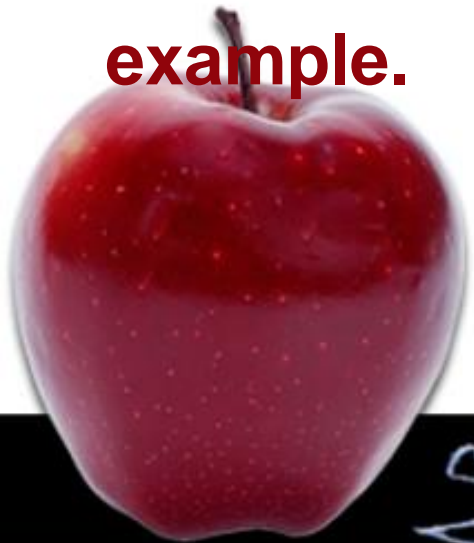
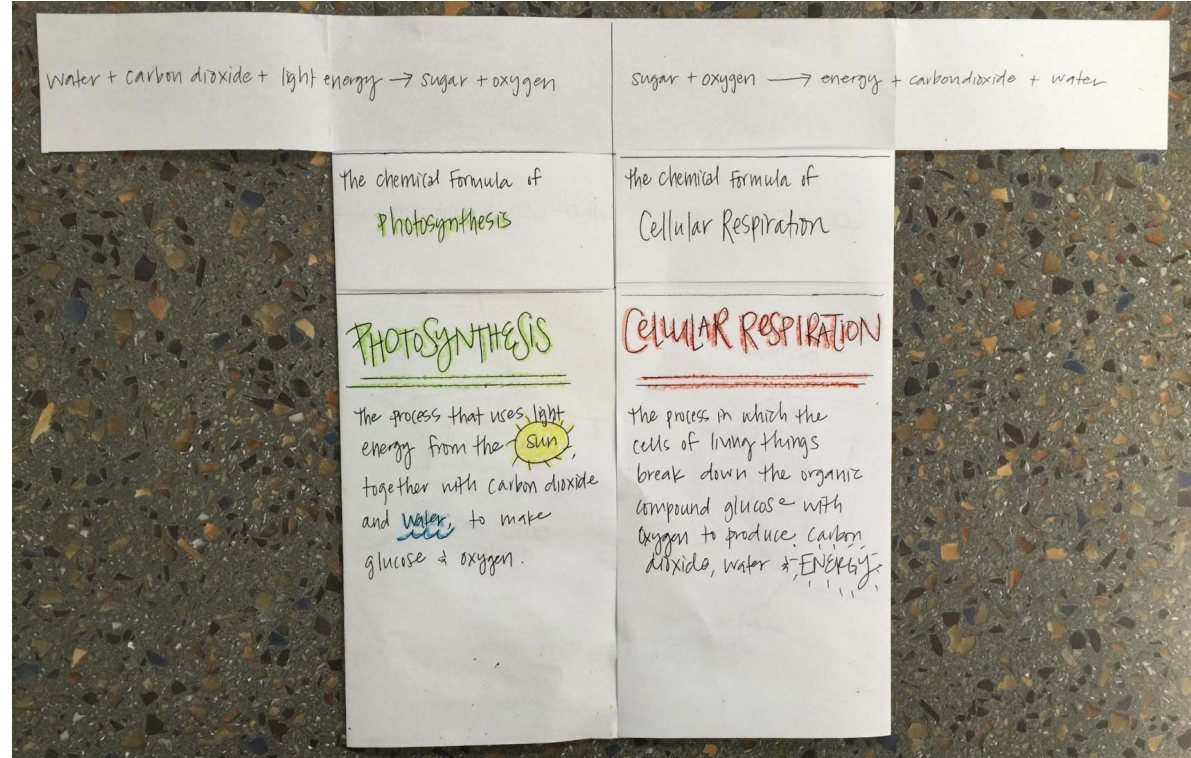
The process in which the cells of living things break down the organic compound glucose with oxygen to produce carbon dioxide, water & ENERGY.

CELLULAR RESPIRATION

- **Top Row** – "The raw materials, product and waste products of the process of cellular respiration"
- **Middle Row** – "The Chemical Formula for Cellular Respiration"
- **Bottom Row** – The process in which the cells of living things break down the organic compound glucose with oxygen to produce carbon dioxide, water & energy.

Step #7

- Time to add the raw materials, products & waste products on the inside of each process.
- Final product will look as shown on the example.



ABC
2+7=9
3/10
11.50
48
3.80
18

For Photosynthesis:

Water + Carbon Dioxide + Solar Energy \rightarrow Sugar + Oxygen

Water + carbon dioxide + light energy \rightarrow sugar + oxygen


sugar + oxygen \rightarrow energy + carbon dioxide + water

The chemical formula of
Photosynthesis

The chemical formula of
Cellular Respiration

PHOTOSYNTHESIS

CELLULAR RESPIRATION

The process that uses light energy from the , together with carbon dioxide and water, to make glucose & oxygen.

The process in which the cells of living things break down the organic compound glucose with oxygen to produce carbon dioxide, water & ENERGY.



ABC
2x7="14"
3/10
11.50
48
3.80
18

For Cellular Respiration:

Sugar + Oxygen \rightarrow Energy + Carbon Dioxide + Water

Water + carbon dioxide + light energy \rightarrow sugar + oxygen


sugar + oxygen \rightarrow energy + carbon dioxide + water

The chemical formula of
Photosynthesis

The chemical formula of
Cellular Respiration

PHOTOSYNTHESIS

CELLULAR RESPIRATION

The process that uses light energy from the  sun, together with carbon dioxide and water to make glucose + oxygen.

The process in which the cells of living things break down the organic compound glucose with oxygen to produce carbon dioxide, water + ENERGY.



ABC
1+1=2
3/10
1.50
48
3.80
18

Step #8

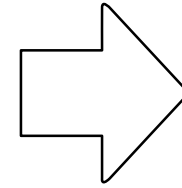
- Time to add the scientific formula.
- The equations will look as shown on the example.

Water + carbon dioxide + light energy → sugar + oxygen	sugar + oxygen → energy + carbon dioxide + water
$6H_2O + 6CO_2 + \text{light energy} \rightarrow C_6H_{12}O_6 + 6O_2$	$C_6H_{12}O_6 + 6O_2 \rightarrow \text{energy} + 6CO_2 + 6H_2O$
<h3>PHOTOSYNTHESIS</h3> <p>The process that uses light energy from the sun, together with carbon dioxide and water to make glucose & oxygen.</p>	<h3>CELLULAR RESPIRATION</h3> <p>The process in which the cells of living things break down the organic compound glucose with oxygen to produce carbon dioxide, water & ENERGY.</p>



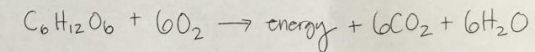
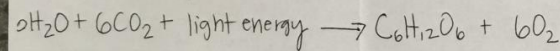
Handwritten mathematical and algebraic expressions at the bottom of the slide, including "ABC", "2x7", "3/10", "1.50", "48", "3.8c", and "18".

For Photosynthesis:




Water + carbon dioxide + light energy \rightarrow sugar + oxygen

sugar + oxygen \rightarrow energy + carbon dioxide + water



PHOTOSYNTHESIS

The process that uses light energy from the , together with carbon dioxide and water, to make glucose & oxygen.

CELLULAR RESPIRATION


The process in which the cells of living things break down the organic compound glucose with oxygen to produce carbon dioxide, water & ENERGY.



ABC

For Cellular Respiration:

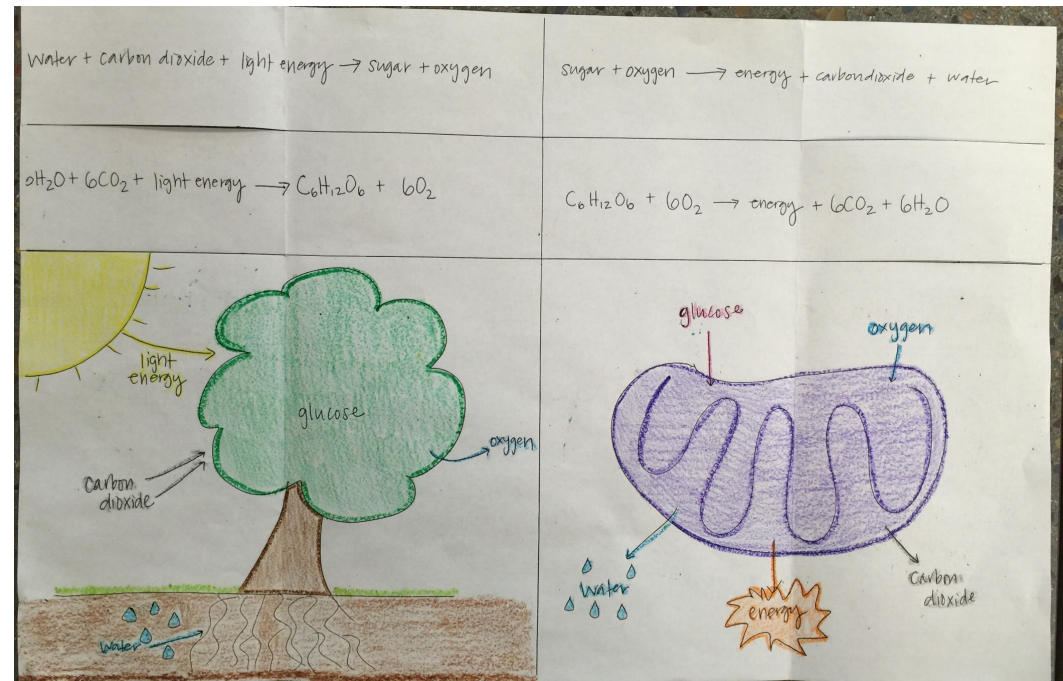


Water + carbon dioxide + light energy \rightarrow sugar + oxygen	sugar + oxygen \rightarrow energy + carbon dioxide + water
$6\text{H}_2\text{O} + 6\text{CO}_2 + \text{light energy} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$	$\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 \rightarrow \text{energy} + 6\text{CO}_2 + 6\text{H}_2\text{O}$
<h3><u>PHOTOSYNTHESIS</u></h3> <p>The process that uses light energy from the , together with carbon dioxide and <u>water</u>, to make glucose & oxygen.</p>	<h3><u>CELLULAR RESPIRATION</u></h3> <p>The process in which the cells of living things break down the organic compound glucose with oxygen to produce carbon dioxide, water & <u>ENERGY</u>.</p>

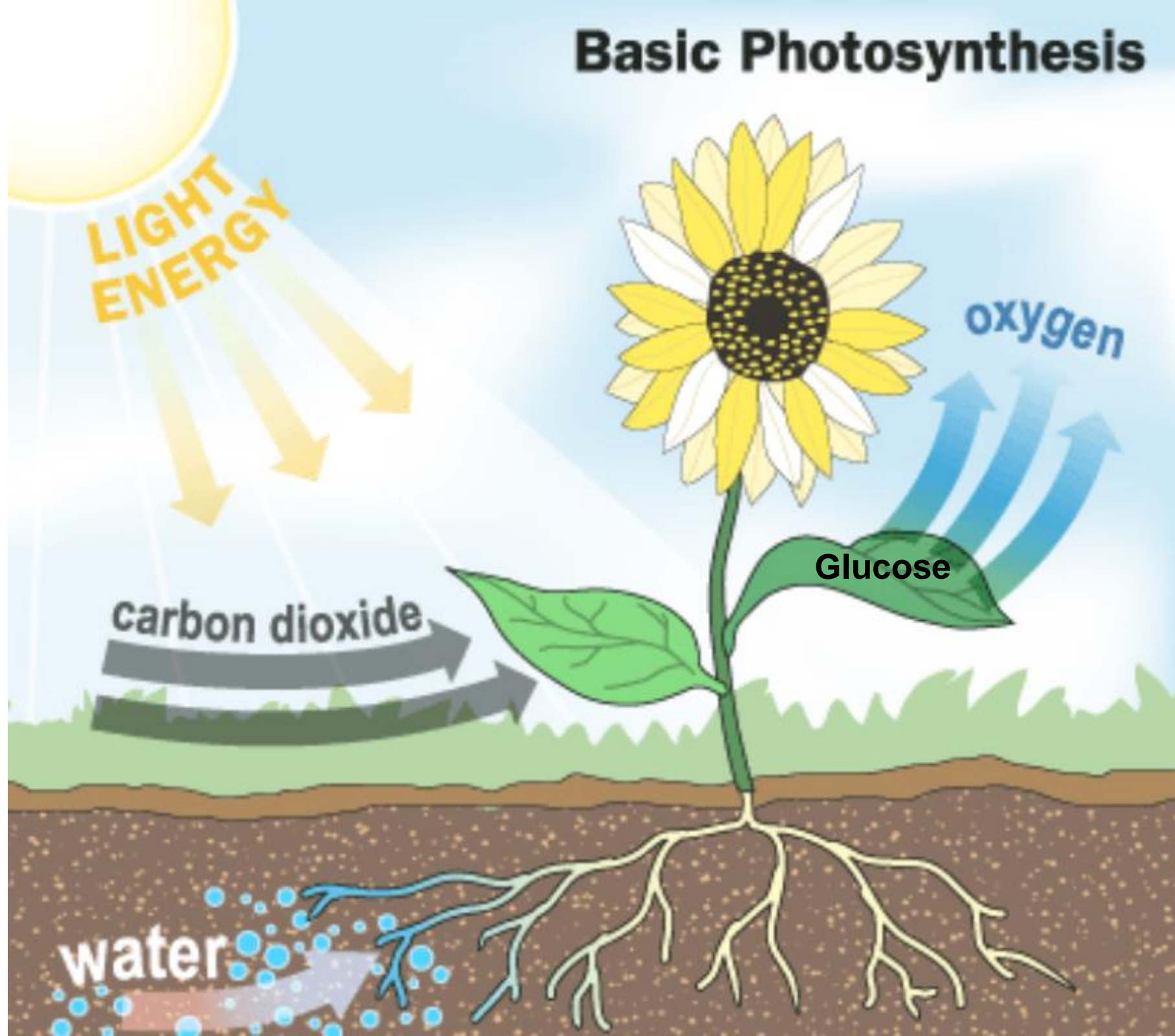


Step #9

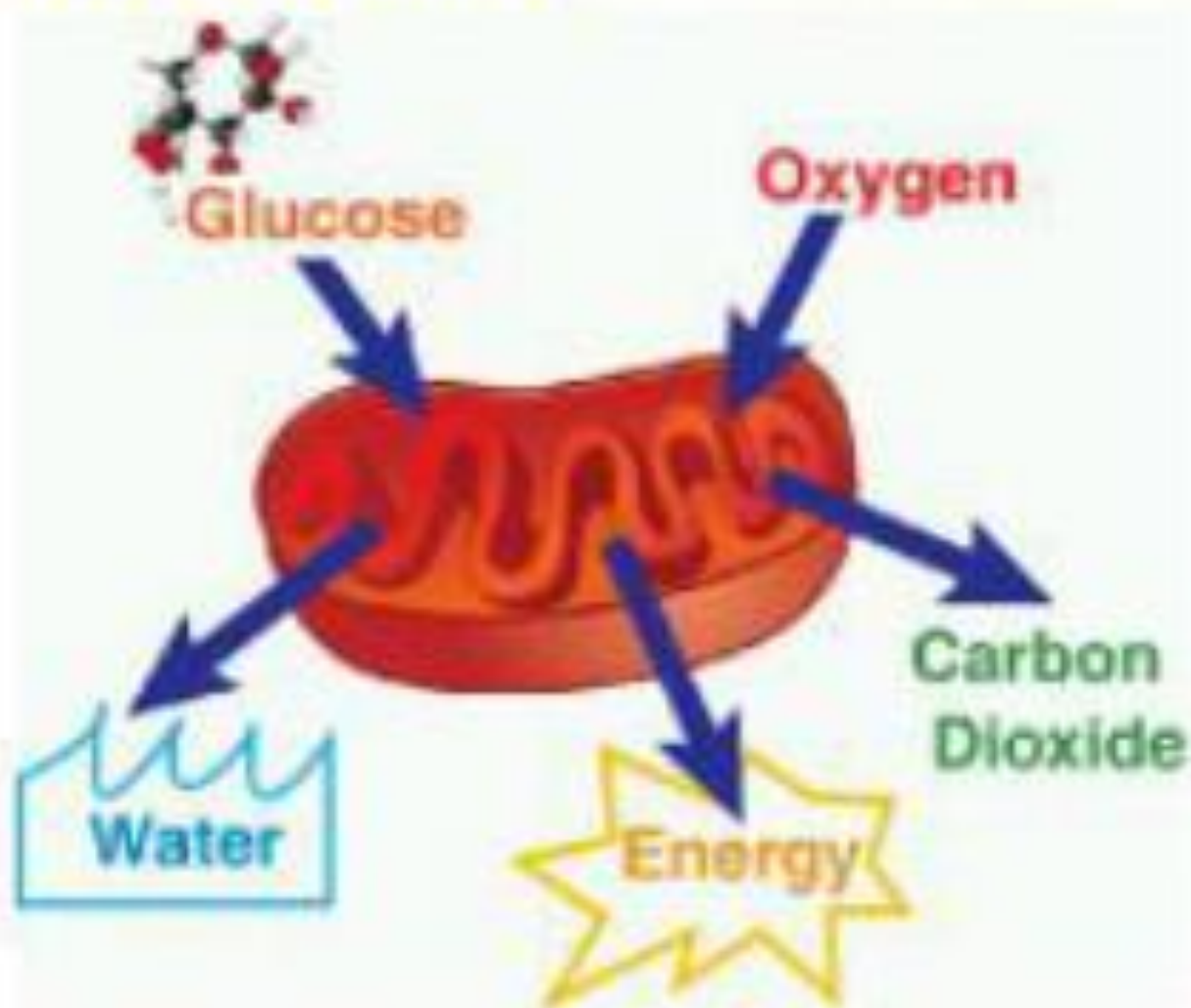
- Time to add drawings on the inside of the foldable as shown.
- The drawings go in the bottom 2/3rds of each side. The process of photosynthesis on one side and the process of cellular respiration on the other. Check carefully that you are on the correct side.
- Be creative in how you depict each process.
- Draw lightly as you are likely to make important changes in the process of perfecting your foldable.



Basic Photosynthesis



Cellular Respiration



Here's a sample of the final product

Water + carbon dioxide + light energy \rightarrow sugar + oxygen

sugar + oxygen \rightarrow energy + carbon dioxide + water

$6\text{H}_2\text{O} + 6\text{CO}_2 + \text{light energy} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$

$\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 \rightarrow \text{energy} + 6\text{CO}_2 + 6\text{H}_2\text{O}$

