Province of the
EASTERN CAPE
EDUCATION

DIRECTORATE SENIOR CURRICULUM MANAGEMENT (SEN-FET)

HOME SCHOOLING SELF-STUDY WORKSHEET

<table>
<tr><td>SUBJECT</td><td>LIFE SCIENCES</td><td>GRADE</td><td>11</td><td>DATE</td><td>07 April 2020</td></tr>
<tr><td>TOPIC</td><td>Photosynthesis</td><td>TERM 1 REVISION</td><td></td><td>TERM 2 CONTENT</td><td>✓</td></tr>
<tr><td>TIME ALLOCATION</td><td>45 minutes</td><td colspan="4" rowspan="2"><u>TIPS TO KEEP HEALTHY</u>

1. WASH YOUR HANDS thoroughly with soap and water for at least 20 seconds. Alternatively, use hand sanitizer with an alcohol content of at least 60%.
2. PRACTICE SOCIAL DISTANCING – keep a distance of 1m away from other people.
3. PRACTISE GOOD RESPIRATORY HYGIENE: cough or sneeze into your elbow or tissue and dispose of the tissue immediately after use.
4. TRY NOT TO TOUCH YOUR FACE. The virus can be transferred from your hands to your nose, mouth and eyes. It can then enter your body and make you sick.
5. STAY AT HOME.</td></tr>
<tr><td>INSTRUCTIONS</td><td>Use your textbook or Mindset learn extra notes on Photosynthesis</td></tr>
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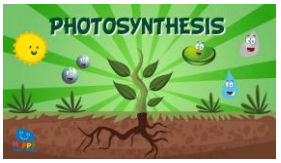
TOPIC: THE PROCESS OF PHOTOSYNTHESIS
WORKSHEET 1: Overview of photosynthesis



1. Explain why organisms (e.g. humans) need energy?

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2. Where does that energy come from?

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3. Differentiate between autotrophic and heterotrophic nutrition.

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4. Draw a plant (with roots). Show on the diagram where the plant gets the various raw materials from. Also, to indicate what is formed and what happens to the products.

5. Write down the raw materials **NEEDED** during photosynthesis.

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6. Products **PRODUCED** during photosynthesis.
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7. Write down the **word** equation of photosynthesis.
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8. Write down photosynthesis as a chemical equation.
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ACTIVITY 1: Answer all questions

1. Where do plants get the water, they that they need for photosynthesis?
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2. How does the water get to the leaves?
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3. Where do the plants get the carbon dioxide that they need for photosynthesis? .
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4. How does the carbon dioxide get into the leaves?
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5. Where do plants get the light energy that they need for photosynthesis?
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6. What is the green pigment chlorophyll used for?
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7. What organelle contains chlorophyll?
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8. What happens to the oxygen that the plants produce as a by-product of photosynthesis?
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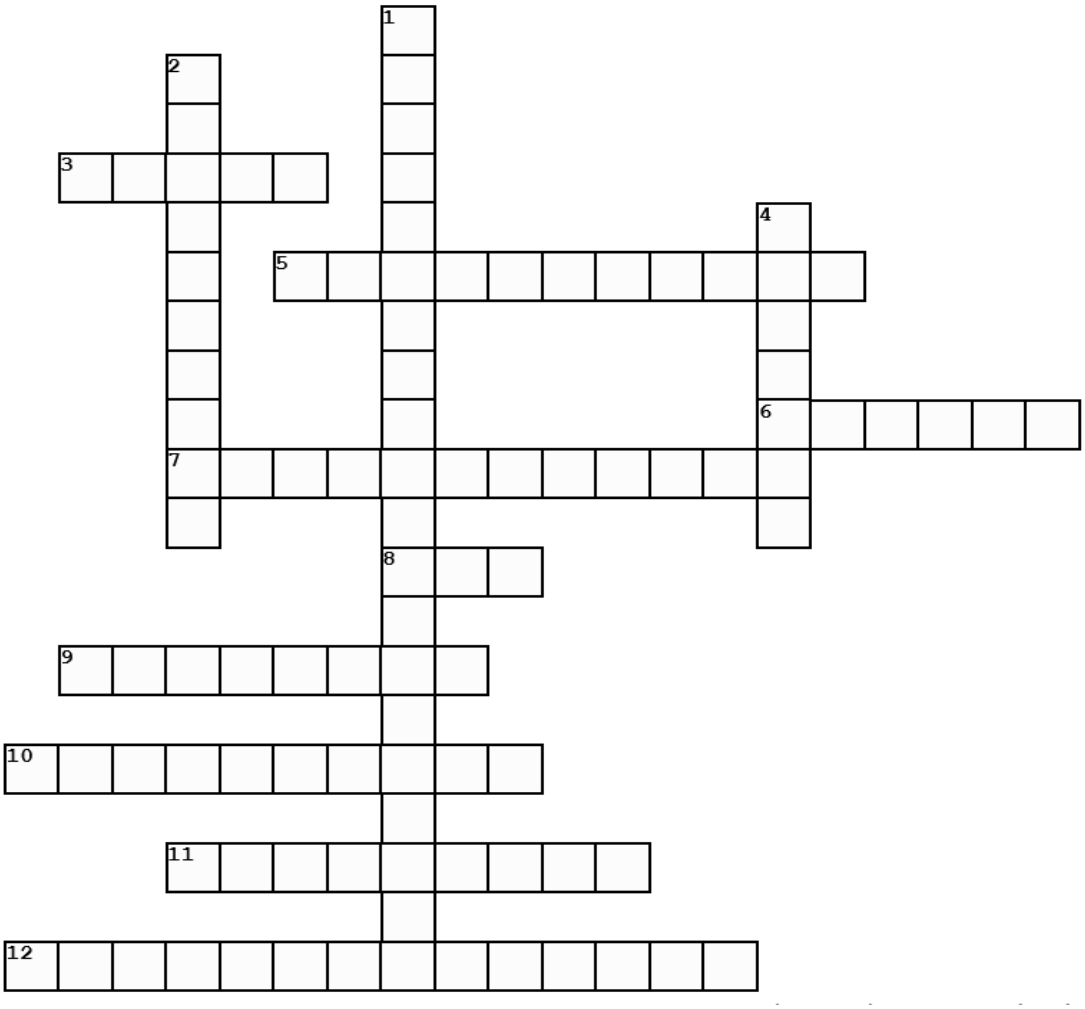
ACTIVITY 2: Complete the Crossword



ACROSS

3 An inorganic compound needed for photosynthesis. (5)

5 A plant pigment that absorbs sunlight. (11)

6 A by-product of photosynthesis. (6)

7 Organisms that cannot synthesize their own food and rely on other organisms — both plants and animals — for nutrition. (12)

8 Number of molecules of oxygen produced along with one molecule of sugar. (3)

9 Chemical reactions that occur when small, simple molecules are synthesized into large, complex molecules (8)

10 The links between the energy that carnivores get from eating to the energy captured by photosynthesis. (4,5)

11 An animal that eats plants. (9)

12 A process that occurs in green plants whereby they trap sunlight energy and use it to make food and release oxygen (14)

DOWN

1 The process during which cells break up glucose molecules to release energy that the cells can use (8,11)

2 Organisms that can produce their own food from the substances available in their surroundings using light (10)

4 An energy-rich molecule that the cells in the plant use in the process of cellular respiration (7)