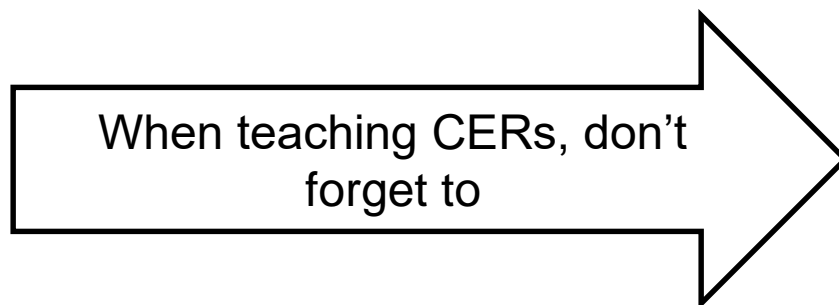


Biology Unit 5 Organizers

Teacher Copy

Cue Do Review Quick Reference Guide



Teacher Notes

Other Content
Enhancement Routines
that can be used during
this Unit:

- Photosynthesis Frame
- Cellular Respiration Frame

Cue

1. Name the Routine
2. Explain how the routine will help students learn
3. Explain to students how they should participate

Do

4. Implement the linking steps
5. Ask students probing questions in order to co-construct the device
6. Provide positive and corrective feedback if necessary

Review

7. Ask questions about the critical content on device
8. Ask questions about the learning process and how the device works
9. Model how to use the device as a study tool, guide for doing other work

The Unit Organizer

④ BIGGER PICTURE

NAME _____
DATE _____

Plants are an essential piece of life on Earth

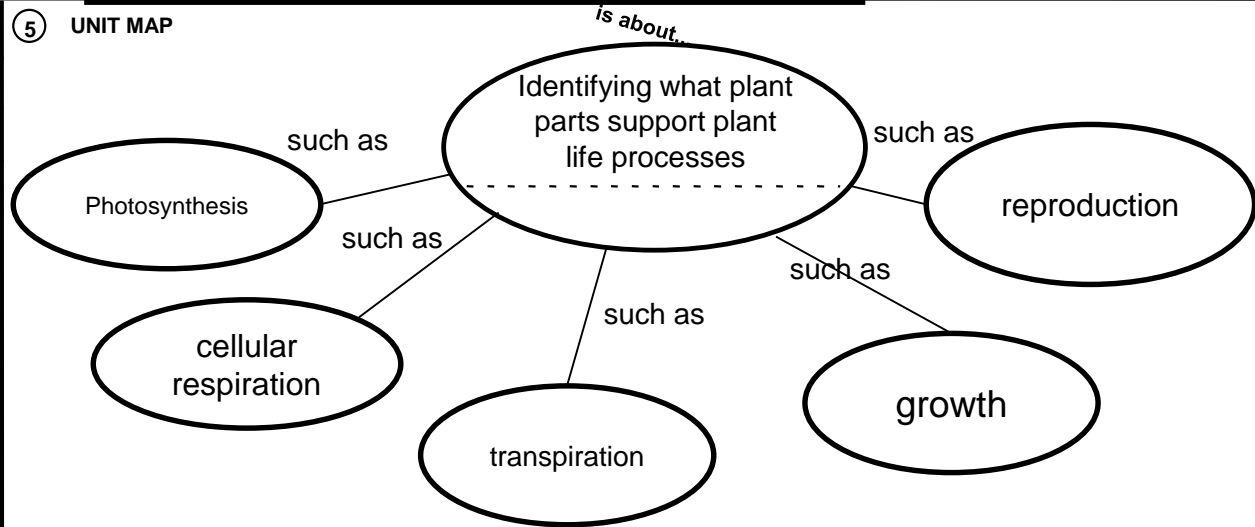
② LAST UNIT/Experience
Evolution

① CURRENT UNIT
Plants

③ NEXT UNIT/Experience
Ecology

⑧ UNIT SCHEDULE

⑤ UNIT MAP



UNIT SELF-TEST
QUESTIONS

1. How are plant structures supporting photosynthesis?
2. How are plant structures supporting cellular respiration?
3. How are photosynthesis and cellular respiration related?
4. How are plant structures supporting transpiration?
5. How are plant structures supporting growth?
6. How are plant structures supporting reproduction?
7. Why are plants so important to the survival of other living things?

structure

Processes

Function
Justify

Cause/effect

⑥

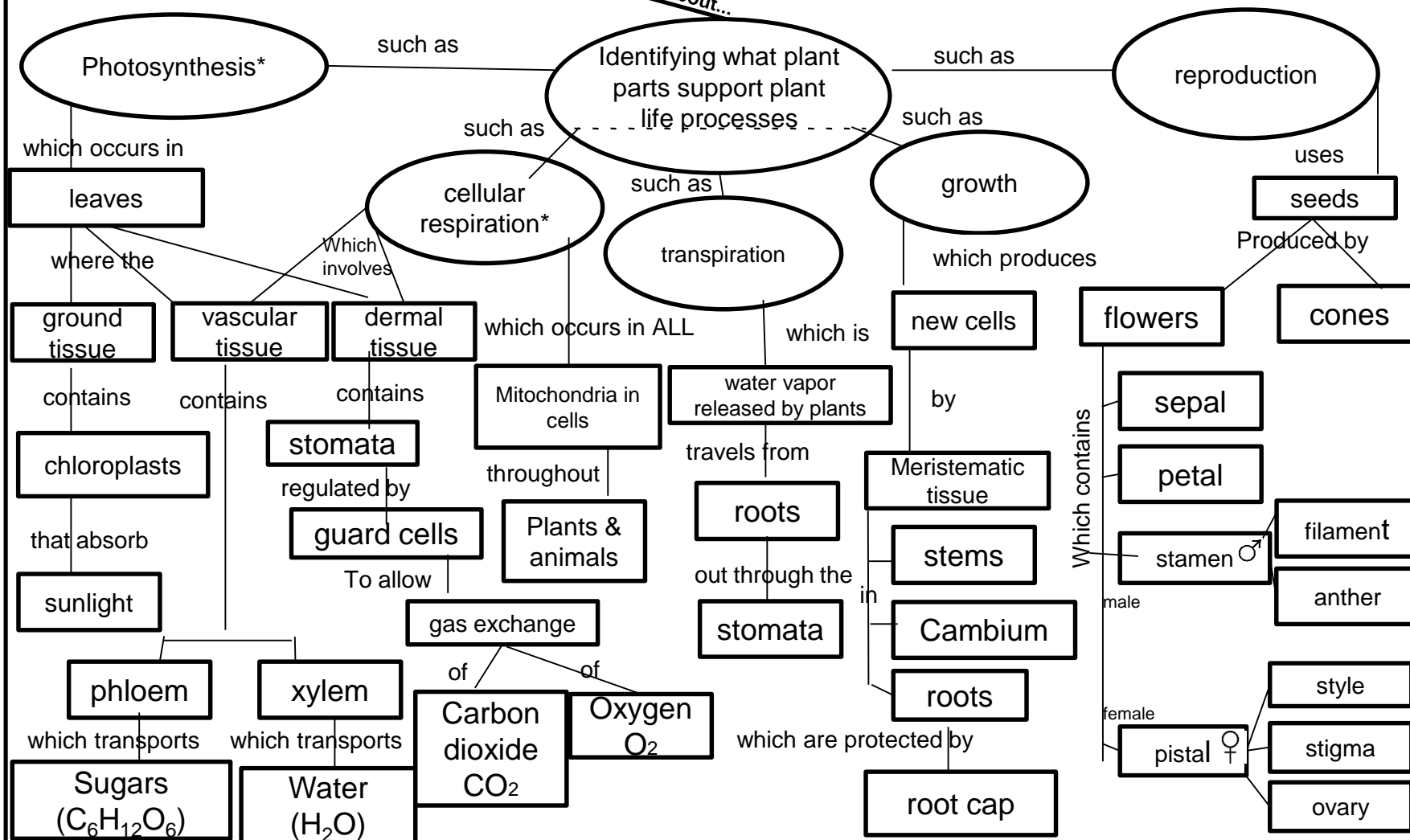
RELATIONSHIPS
UNIT

The Unit Organizer

Plants

NAME _____
DATE _____

9 Expanded Unit Map



NEW
UNIT
SELF-TEST
QUESTIONS

* See Frames

The FRAME Routine

Key Topic

Photosynthesis

is about...

Plants using the sun's energy to make food for animals

Main idea

Reactants (what goes in)

Main idea

Products (what comes out)

Main idea

How plants do this

Essential details

Sunlight (only gets reaction going)

Essential details

Sugar (glucose, $C_6H_{12}O_6$)

Essential details

trap sun's energy in chlorophyll

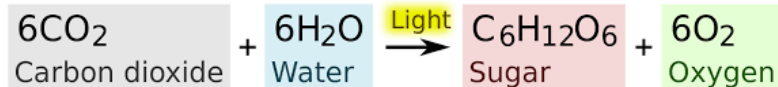
Water (H_2O)

Oxygen gas (O_2)

chlorophyll is found in chloroplasts in plant cells

Carbon Dioxide (CO_2)

Equation:



So What? (What's important to understand about this?)

Humans (and all animals) need oxygen to breathe and sugar to eat and burn for energy to stay alive. Plants produce these so humans (and animals) need plants.

The FRAME Routine

Key Topic

Cellular Respiration

is about...

A process in cells that convert sugar into adenosine triphosphate (ATP) for energy and then release waste products

☐ Main idea

Reactants (what goes in)

☐ Main idea

Products (what comes out)

☐ Main idea

How Cells Do This

Essential details

Sugar (glucose, $C_6H_{12}O_6$)

Essential details

Water (H_2O)

Essential details

Sugar is broken down in cytoplasm

Oxygen gas (O_2)

Carbon Dioxide (CO_2)

ATP

In presence of oxygen the mitochondria will convert the glucose into ATP, releasing carbon dioxide and water

Equation:

Glucose + Oxygen \rightarrow Carbon Dioxide + Water + ATP

$C_6H_{12}O_6 + O_2 \rightarrow CO_2 + H_2O + ATP$

So What? (What's important to understand about this?)

The ATP molecules that are produced provides energy required to perform the functions necessary to life

Biology Unit 5 Organizers

Student Copy

The Unit Organizer

④ BIGGER PICTURE

NAME _____

DATE _____

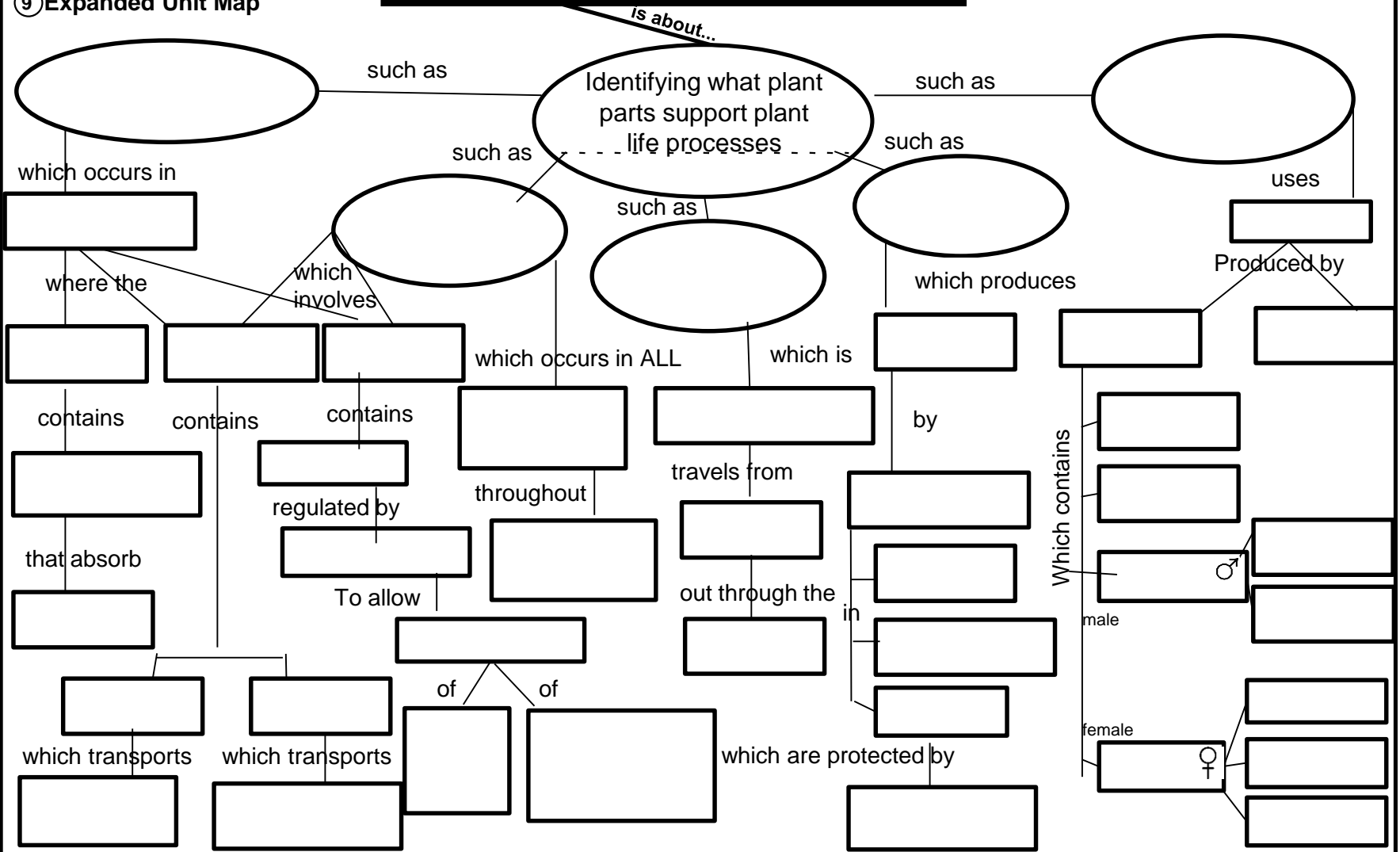
<p>←</p>		<p>→</p>																																													
<p>② LAST UNIT/Experience</p>	<p>① CURRENT UNIT Plants</p>	<p>③ NEXT UNIT/Experience</p>																																													
<p>⑧ UNIT SCHEDULE</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 80px;"></td></tr> </table>																																													<p>⑤ UNIT MAP</p> <div style="text-align: center; padding: 20px;"> <p><i>is about...</i></p> </div>		
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The Unit Organizer

Plants

NAME _____
DATE _____

9 Expanded Unit Map



The FRAME Routine

Key Topic

Photosynthesis

is about...

☐ Main idea

Reactants (what goes in)

☐ Main idea

Products (what comes out)

☐ Main idea

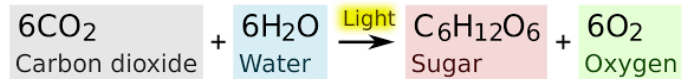
How Plants do This

Essential details

Essential details

Essential details

Equation



So What? (What's important to understand about this?)

The FRAME Routine

Key Topic

Cellular Respiration

is about...

☐ Main idea

Reactants (what goes in)

Essential details

☐ Main idea

Products (what comes out)

Essential details

☐ Main idea

How Cells Do This

Essential details

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Equation:

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