

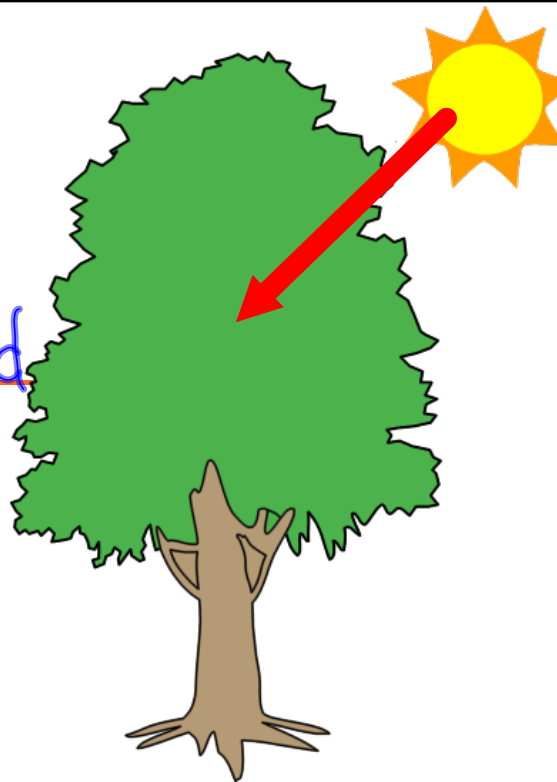
Photosynthesis

3 stages

Oct 25 - 2:51 PM

Stage 1

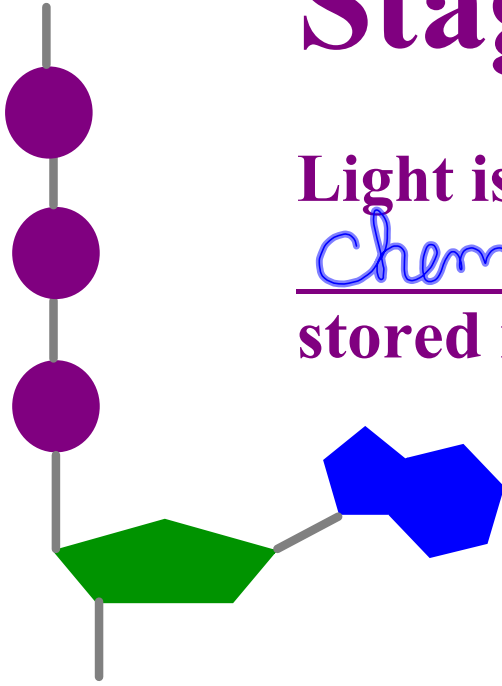
Energy is Captured
from sunlight.



Oct 25 - 2:57 PM

Stage 2

Light is converted to chemical energy and stored in ATP

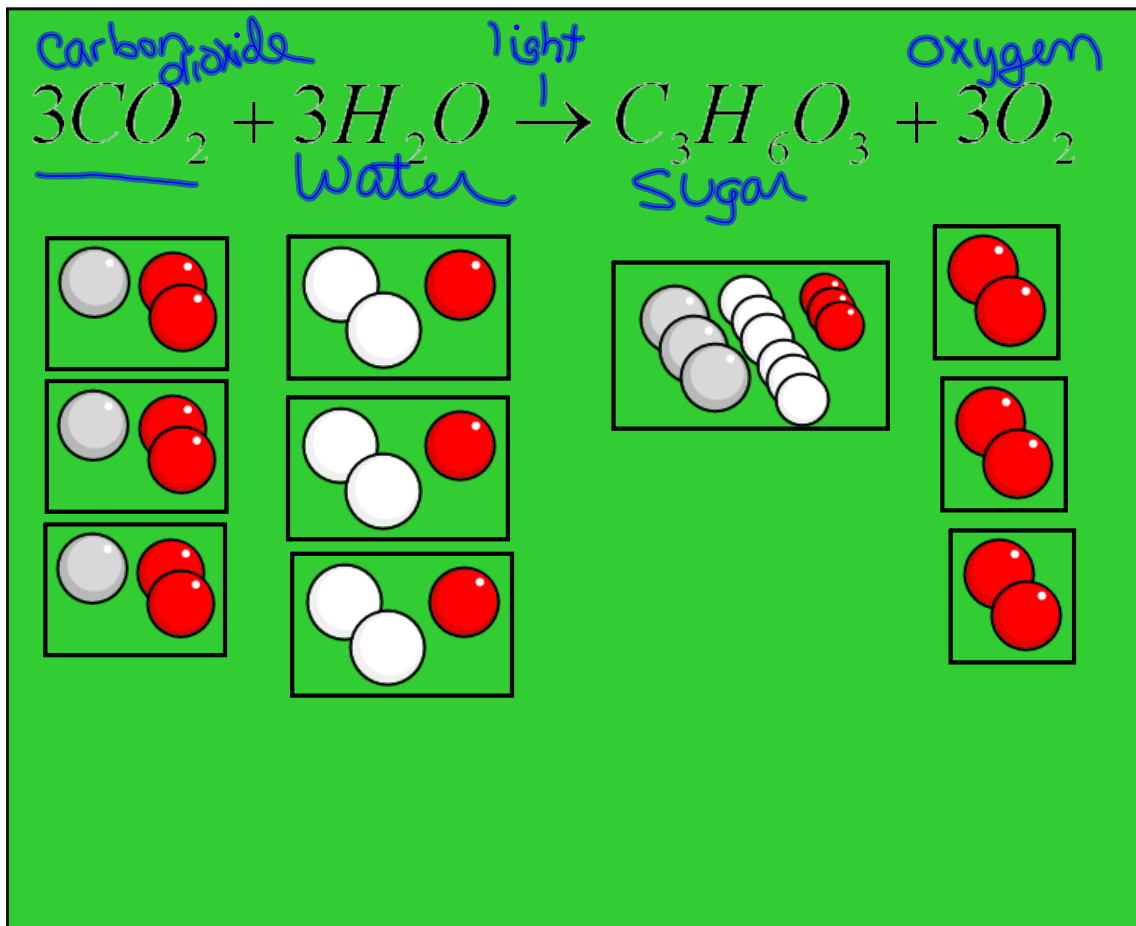


Oct 25 - 2:58 PM

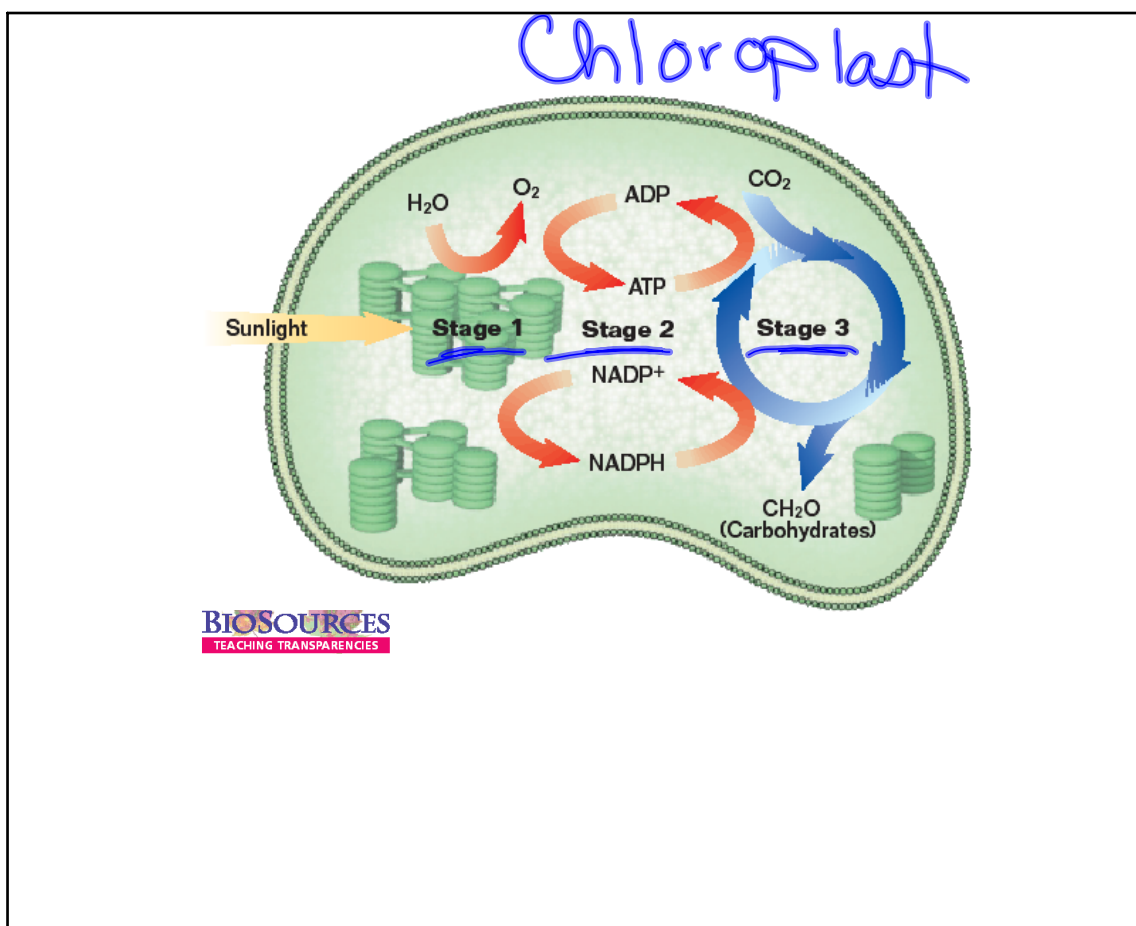
Stage 3

The ATP powers formation of organic compounds using CO₂ sugar

Oct 25 - 3:00 PM



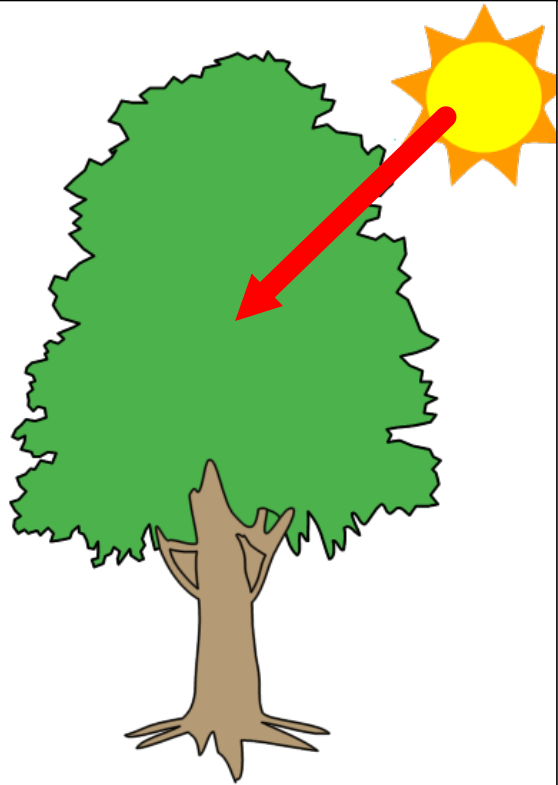
Oct 25 - 3:07 PM



Oct 25 - 3:10 PM

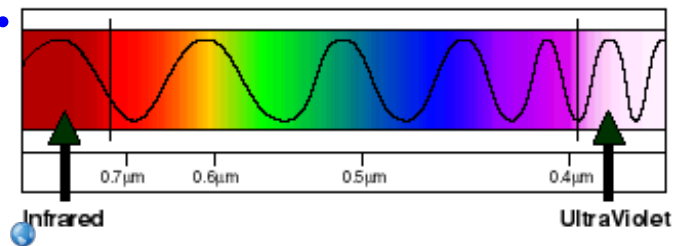
Stage 1

Energy is captured from sunlight.



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There are different wavelengths of light.



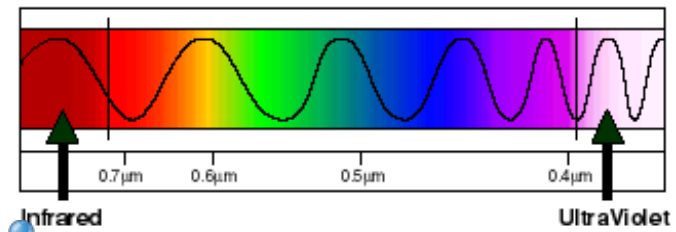
<http://imagers.gsfc.nasa.gov/ems/visible.html>

Oct 25 - 3:11 PM

Pigments

absorb only

certain
wavelengths
and reflect
others.



<http://imagers.gsfc.nasa.gov/ems/visible.html>

Oct 25 - 3:14 PM

Chlorophyll- the primary
pigment in photosynthesis
absorbs mostly blue and
red light and reflect green
and yellow



Oct 25 - 3:13 PM

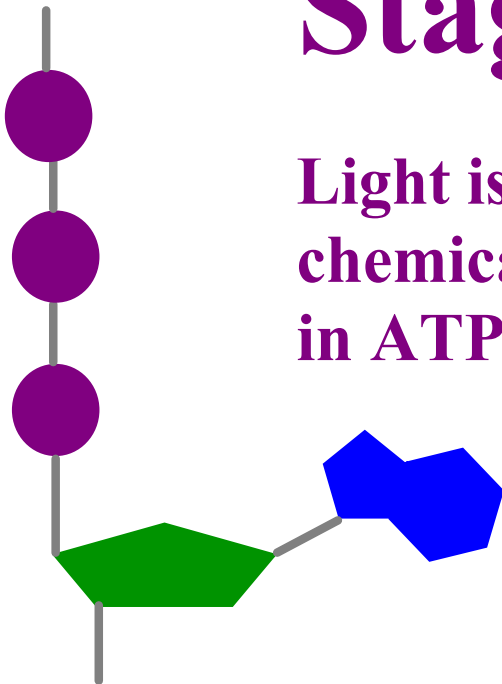
Thylakoids-disk
shaped structures
with clusters of
pigments
embedded in the
membranes

Excited
electrons jump
around in the
thylakod
membrane

Oct 26 - 7:23 PM

Stage 2

Light is converted to
chemical energy and stored
in ATP

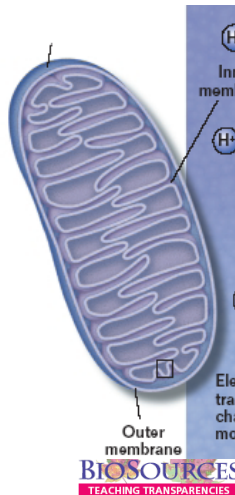


Oct 25 - 2:58 PM

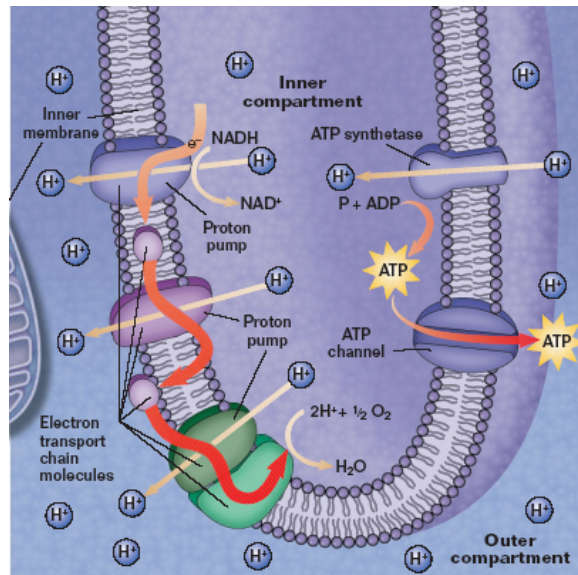
Electron Transport Chain-
series of molecules
through which the excited
electrons pass along the
thylakoid membrane.

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What is this?

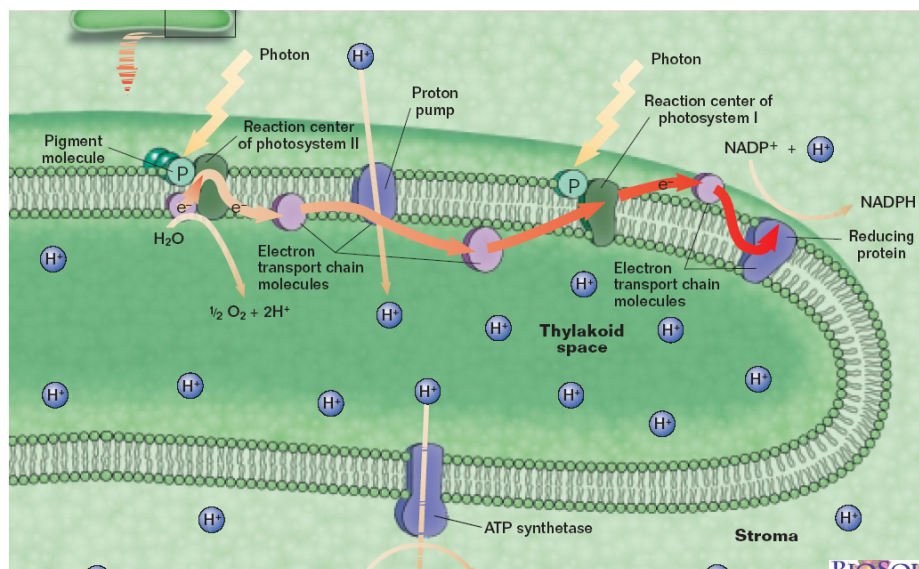


Oct 26 - 7:34 PM



BIOSOURCES
TEACHING TRANSPARENCIES

Oct 26 - 7:34 PM



BIOSOURCES
TEACHING TRANSPARENCIES

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**Movement of
electrons
provide the
energy to
make ATP.**

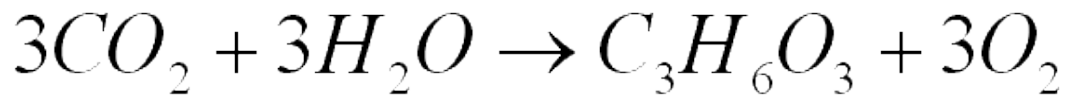
Oct 26 - 7:37 PM

Stage 3

**The ATP powers formation of
~~organic compounds~~ using CO₂**

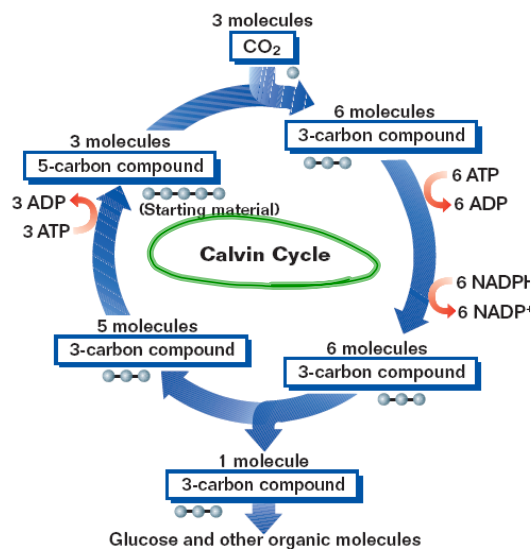
sugar

Oct 25 - 3:00 PM



**Transfer of carbon dioxide
to organic compounds in
called carbon dioxide
fixation.**

Oct 26 - 7:34 PM



BIO SOURCES
TEACHING TRANSPARENCIES

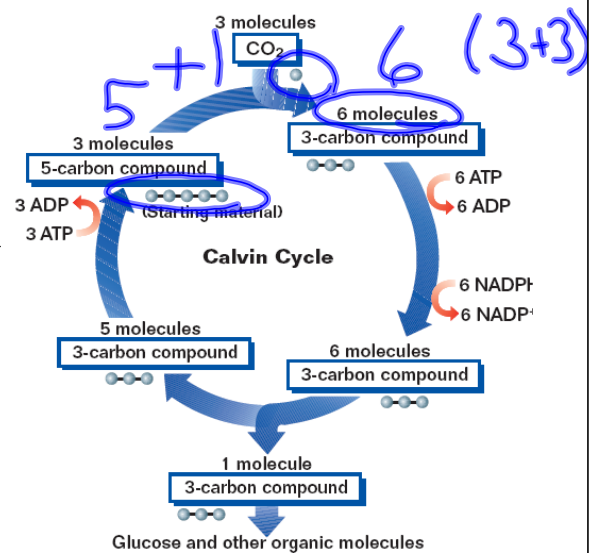
Go to this website for an Interactive Calvin Cycle

<http://www.science.smith.edu/departments/Biology/Bio231/calvin.html>



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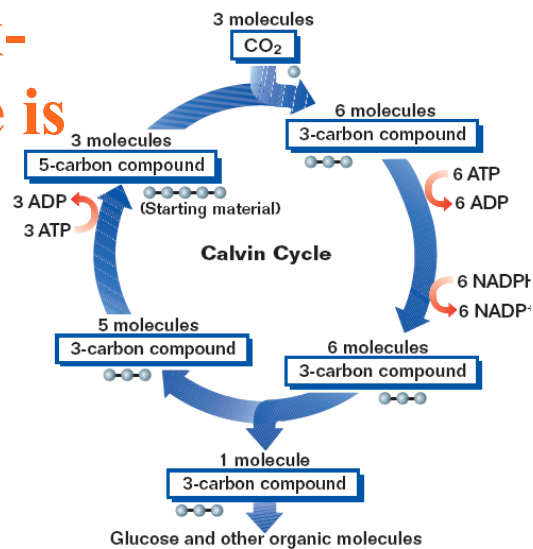
The Calvin Cycle begins when a Carbon atom from a CO_2 molecule is added to a 5-carbon molecule.



BIO SOURCES
TEACHING TRANSPARENCIES

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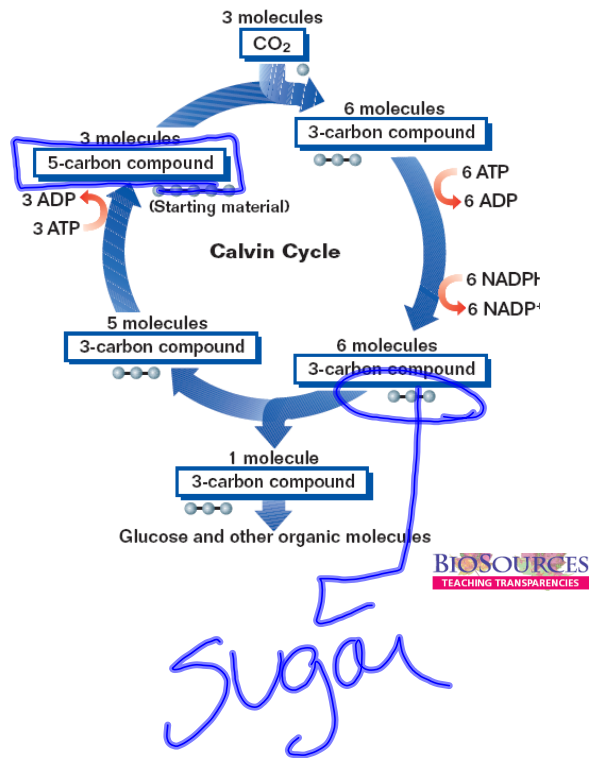
The resulting six-carbon molecule is unstable and splits into two.



BIO SOURCES
TEACHING TRANSPARENCIES

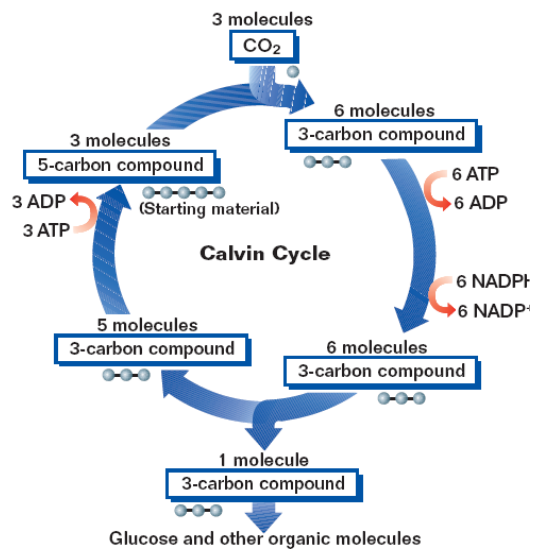
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One of the 3 carbon molecules is used to make organic compounds like sugar.



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The other 3 carbon molecules is used to make five-carbon molecules.



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