

Complete 5E Lesson Bundle

- **Lessons**
- **Activities**
- **Assessment**



SCROLL
to take a look inside!

Photosynthesis and Cellular Respiration 5E Lesson 7th, 8th, 9th Grade

Teaching Timeline

Lessons

Activities & Assessment



The 5 E's



✓ **Engagement Phase** - Creates interest and excitement for your students by asking questions and probing their initial conceptions.

✓ **Exploration Phase** - Students use and develop creative thinking skills, make observations, record results, and make connections through an investigation → Lab Station Activity

✓ **Explanation Phase** - This is the instructional phase where concepts are presented to the students in a clear and applicable way → Lesson.

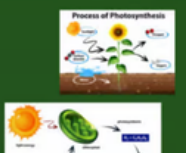
✓ **Elaborate Phase** - This phase involves the students completing an activity or assignment that forces them to expand their thinking and knowledge of the topic. They will propose solutions and extend their learning to new situations → Scavenger Hunt Activity

✓ **Evaluate Phase** - Your students will demonstrate their understanding and evaluate their own progress through an assessment → activity, assignment, or quiz.

Cellular Respiration and Photosynthesis Lesson

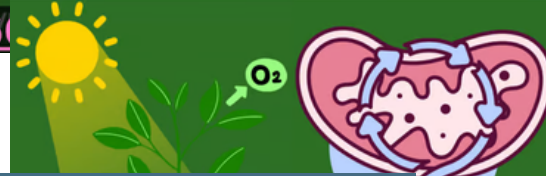
Middle School

- Earth's energy budget
- Cellular energy (ATP)
- Mitochondria
- Solar energy
- Chloroplasts
- Chlorophyll
- Photosynthesis
- Cellular respiration



PHOTOSYNTHESIS AND CELLULAR RESPIRATION LAB STATION ACTIVITY

Over 66



PHOTOSYNTHESIS COMIC BOOK ASSIGNMENT

Middle School

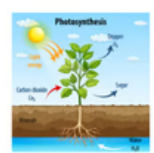
- Students create a comic book that narrates the journey of a carbon atom through the process of photosynthesis
- Full rubric included



PHOTOSYNTHESIS INFOGRAPHIC ASSIGNMENT

Middle School

- Students are tasked with creating an infographic that demonstrates their understanding of photosynthesis
- Full rubric included



TWF

Daily Teaching Schedule

Day-by-day teaching schedule so you'll know what to teach and when each day.

Photosynthesis and Cellular Respiration 5E Lesson

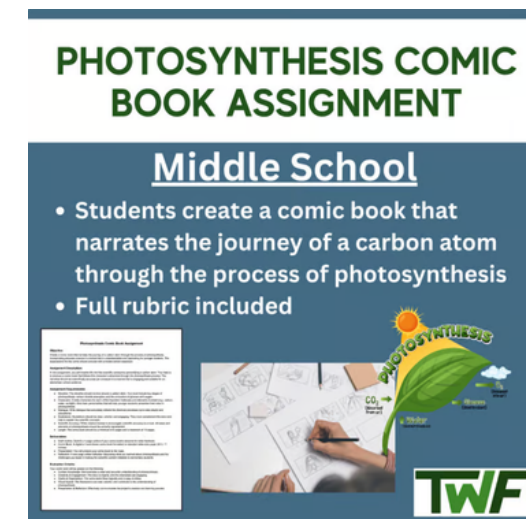
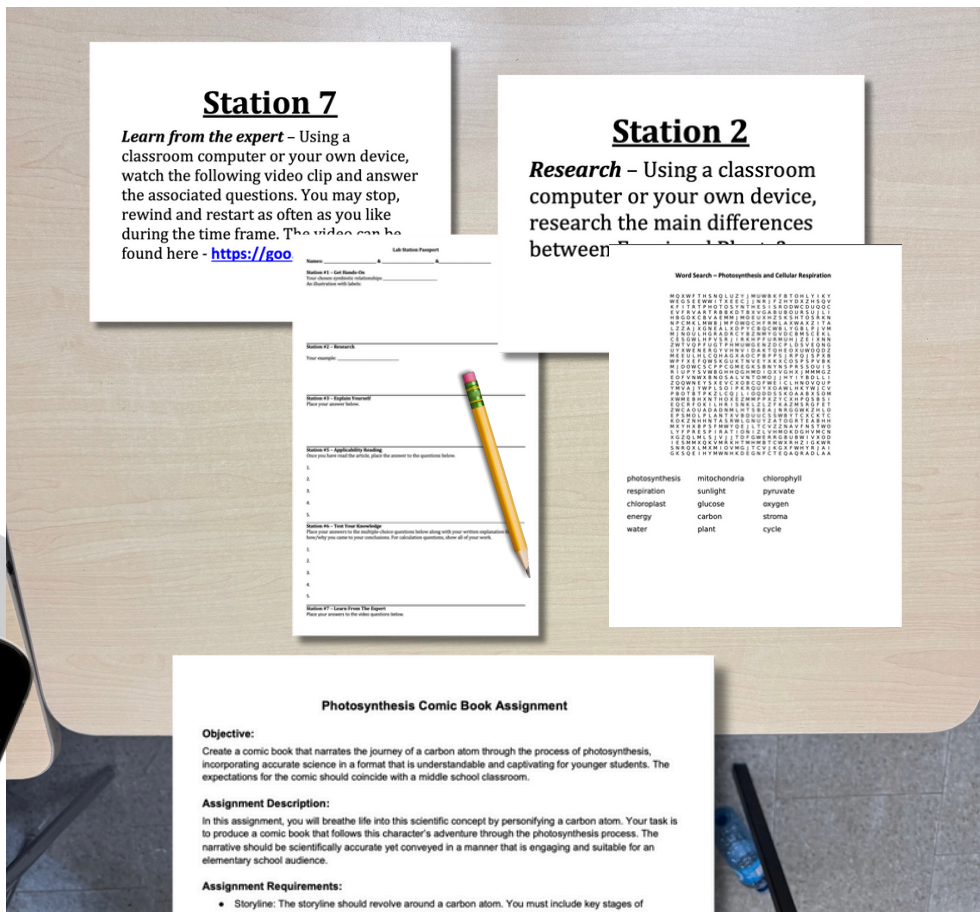
Grades 6-9	Photosynthesis and Cellular Respiration	Ongoing Lesson (4-6 hours)
Lesson Objective: Students will learn about the following: - The basics behind photosynthesis and cellular respiration. - How photosynthesis and cellular respiration are connected. - Important organelles involved in photosynthesis and cellular respiration specifically mitochondria and chloroplasts. - The reactants and products of both and how they are used by living things. - Earth's energy budget		
Possible Student Misconceptions: - Plants do not perform cellular respiration. - Oxygen is the main product of photosynthesis. - Plants only need sunlight to grow. - Photosynthesis and cellular respiration are unrelated. - Photosynthesis happens instantly. - Chlorophyll is the only pigment involved in photosynthesis. - Photosynthesis does not occur in cold or cloudy weather.		
Materials: 1 device (smartphone, Chromebook, laptop, tablet, or computer) per 3 students - A means of projecting a presentation - Internet access - General classroom objects		
Teacher Notes: - The presentations as well as the student notes are in Google and Office format which can easily be used in class or online - All videos can be accessed directly from the presentation. To retrieve them, click on the video icon while in slideshow mode and it will automatically open for you. If it doesn't for some reason, right-click on the image and click Edit Hyperlink or something similar. - I've created a video walkthrough if needed. It can be accessed here - https://youtu.be/oCIKIP9SaDQ - I don't believe in long lessons. If you feel your students are losing their focus, don't force it. Stop the presentation and give them a 5-minute break. If you'd like to show a quick video, I'd recommend my video collection here - http://www.teachwithfergy.com/science-videos/. There are tons of brain-break videos to choose from all grouped by category.		

Photosynthesis and Cellular Respiration - 5E Lesson			
Engagement Phase Your students will complete ' <i>Engage - Know, Want to Know, Explain</i> '. Teacher Notes: The students will be asked to write down what they know and what they don't know about photosynthesis and cellular respiration. They are to then look up what they don't know and include it on their sheet. Students should research at least 1 thing they don't know but more if they finish early.	Duration: 20-30 minutes Teacher Role – Facilitate learning and guide student understanding ☐ C ☐ e) ☐ C ☐ A: ☐ U of	Elaborate Phase Your students will complete – <i>Photosynthesis Comic Book</i> . This activity will require your students to move beyond what was covered directly in the lesson and allow them to further develop and demonstrate their understanding of photosynthesis. Teacher Notes: - Students will work individually or in small groups - Students will need one device per group	
		Duration: 1 week Teacher Role – Facilitate learning and keep students focused Goal ☐ Students use their newly obtained knowledge to propose solutions and extend their learning to new situations	
		Evaluate Phase Have your students complete – <i>Photosynthesis Infographic Assignment</i> Goal ☐ Students are given the opportunity to demonstrate their understanding and evaluate their own progress	
Exploration Phase Exploration – Lab Station Activity - In groups of 2-3, have your students complete <i>Exploration – Photosynthesis and Cellular Respiration Lab Station Activity</i>. Once they're done, they will submit their passport to you. Teacher Notes: - The complete instructions for my Lab Station activity can be found in the <i>START HERE – Instructions</i> file.	Duration: 20-30 minutes Teacher Role – Facilitate learning and guide student understanding ☐ S ☐ e) ☐ S cr ☐ S ol re cc		
Explanation Phase Lesson - The lesson include – '<i>Cellular Respiration and Photosynthesis Lesson</i>.' - There are multiple embedded videos and plenty of opportunity to engage, interact and check for your students' understanding throughout the lesson. Teacher Notes: - All videos can be accessed directly from the presentation. To retrieve them, click on the video icon while in slideshow mode and it will automatically open for you. If they don't open, right-	Duration: 20-30 minutes Teacher Role – Facilitate learning and guide student understanding ☐ S ur cc ☐ O e) di ☐ S w		

Each Phase is Clearly Described

Engaging Activities

1 Lab Station Activity with 7 Engaging Station Tasks



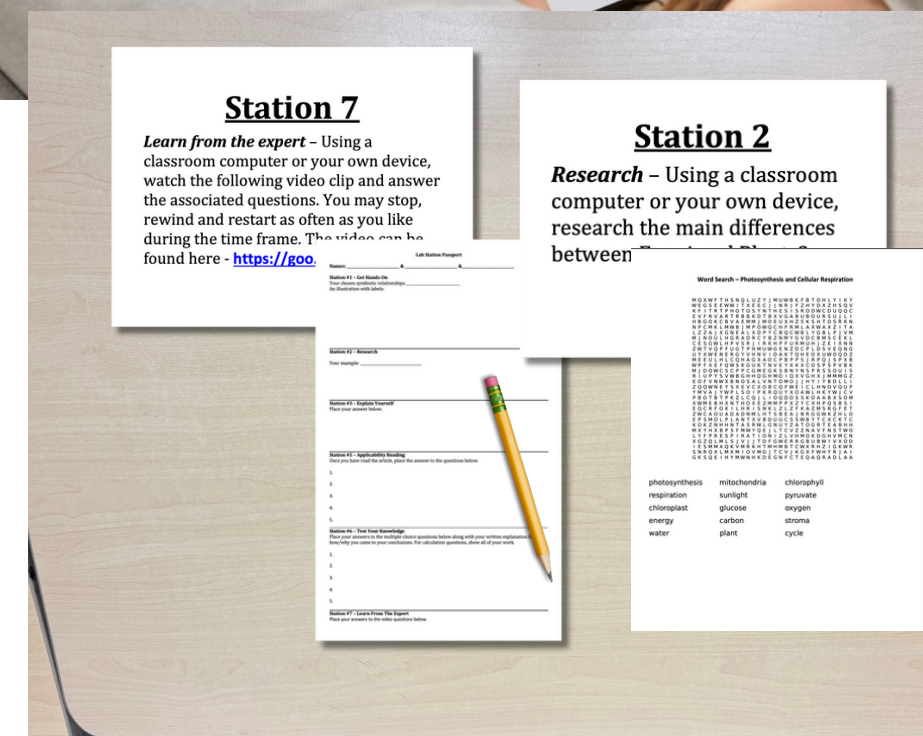
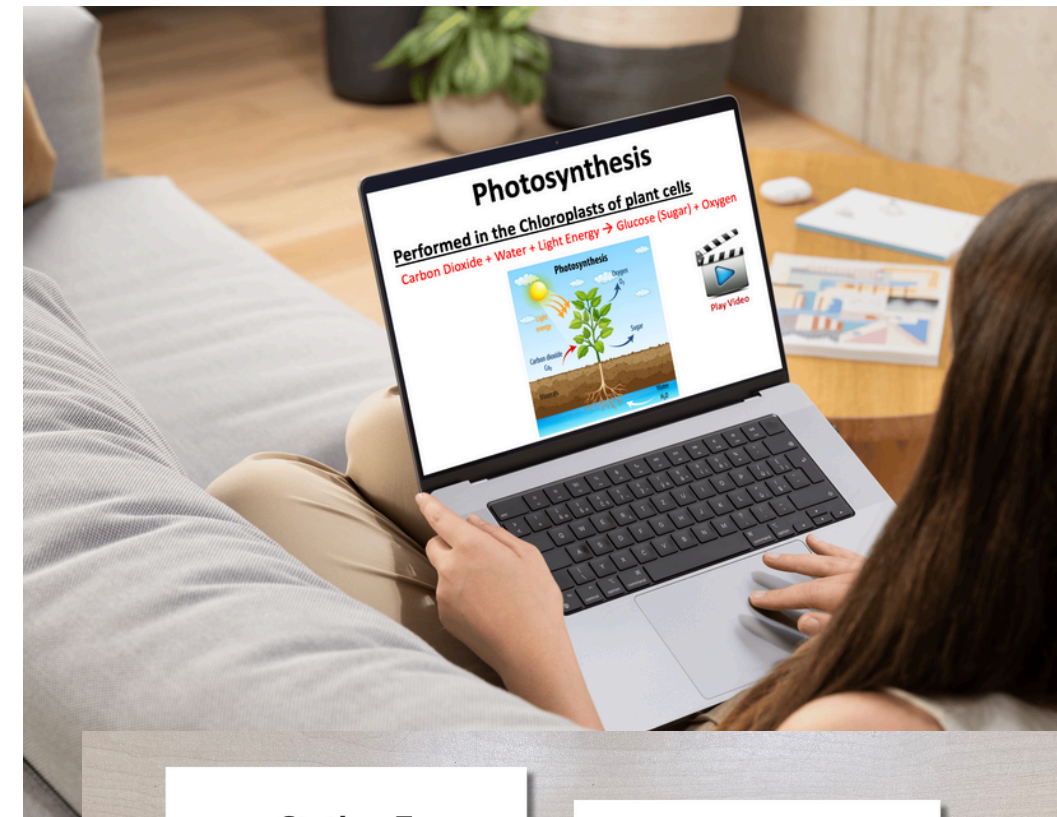
Photosynthesis Comic Book Assignment



Infographic Assignment

MY 5E LESSON BUNDLES SOLVE...

- ★ **Prep-time crunch** — ready-to-use slides, stations, activities, and quizzes cut planning to near zero.
- ★ **Engagement** — hands-on stations + readings and projects keep students active and curious.
- ★ **Unit flow** — 5E structure (Engage → Evaluate) gives a coherent, day-by-day sequence.
- ★ **Assessment** — activities and assignments provide evidence of learning that is quick to mark.



BY THE END OF THIS BUNDLE, STUDENTS WILL UNDERSTAND

- The basics behind photosynthesis and cellular respiration.
- How photosynthesis and cellular respiration are connected.
- Important organelles involved in photosynthesis and cellular respiration specifically mitochondria and chloroplasts.
- The reactants and products of both and how they are used by living things.
- Earth's energy budget

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WHAT TEACHERS SAY

★★★★★ Extremely satisfied - The Power Point and the guided notes worked so well in my classroom. It was very clear and easy for my students to understand!

★★★★★ Extremely satisfied - just what I was looking for- a short and sweet lesson on both of these topics- thanks!

★★★★★ Extremely satisfied - great resource! Thanks for sharing!

★★★★★ Extremely satisfied - I really enjoyed this resource and was able to use it in my class with no issues.

★★★★★ Extremely satisfied - I found this helpful for my unit in Biology.

★★★★★ Extremely satisfied - This is the perfect level that I needed for my students.