Good news: it’s another snow day and a chance for some much needed re-charge

Bad news: it’s (now) three days less that I can focus your studies in Photosynthesis and Respiration before we HAVE to move on to the genetics unit.

So I came up with a plan of attack. Please use the organization I’ve put together for you to get the most out of the unit. The goal is not to simply complete the answers but to find understanding and cement knowledge- which is made more difficult without a teacher right next to you to guide you through it.

I’ve attached the links to 4 videos that explain the content as clearly and cohesively as possible. What I would like you to do is to

1. Set aside a 45 minute -1 hour block of time (depending on your motivation, desire to succeed, and personal obligations).
   1. Take detailed notes on the first video. Use these notes to study and organize your thoughts so you can fully understand the content.
   2. Organize, re-write, and sketch on your notes to make sure they make sense.
   3. Re-watch the video for understanding.
2. Next, (either right away or after a break) set aside another 45 minute -1 hour block of time (depending on your motivation, desire to succeed, and personal obligations).
   1. Take detailed notes on the second video. Use these notes to study and organize your thoughts so you can fully understand the content.
   2. Organize, re-write, and sketch on your notes to make sure they make sense.
   3. Re-watch the video for understanding.
3. Almost there… Set aside a 45 minute -1 hour block of time (depending on your motivation, desire to succeed, and personal obligations).
   1. Take detailed notes on the third video. Use these notes to study and organize your thoughts so you can fully understand the content.
   2. Organize, re-write, and sketch on your notes to make sure they make sense.
   3. Re-watch the video for understanding.
4. Finally, set aside a 45 minute -1 hour block of time (depending on your motivation, desire to succeed, and personal obligations).
   1. Take detailed notes on the last video. Use these notes to study and organize your thoughts so you can fully understand the content.
   2. Organize, re-write, and sketch on your notes to make sure they make sense.
   3. Re-watch the video for understanding.
5. Use your notes and understanding to answer the questions below. This can be done in outline form – needs to demonstrate understanding but doesn’t need extreme details or paragraphs.

Remember how brains actually formulate knowledge and understanding. They require small chunks of content, repeated over time, with feedback and personal organization. You’re literally filing the information into organized filing cabinets through neural connections in your brain. The more organized your thoughts are the more the content “sticks”.

I know it may seem like a lot but if you think about three days missed of school (= 336 minutes = 5.6 hours of lost educational time) the plan above doesn’t take more than you would have already put in. PLUS, these minutes can TOTALLY count towards your 10K and beyond minutes!

You are the master of your fate and the captain of your destiny.

<https://www.youtube.com/watch?v=g78utcLQrJ4>

Photosynthesis by Bozeman

<https://www.youtube.com/watch?v=pQ6Yqtu4obM>

Photosynthesis Raghavendra Rao

<https://www.youtube.com/watch?v=0UzMaoaXKaM>

Nature’s smallest factory: The calvin cycle-Cathy Symington

<https://www.youtube.com/watch?v=sQK3Yr4Sc_k>

Photosynthesis Crash Course Biology #8

**By the end of it all be able to:**

Specifically identify and discuss the mechanism of Photosystem II

Specifically identify and discuss the mechanism of Photosystem I

Explain how ATP synthase works clearly

Identify the major components of the calvin cycle and their purpose

* Rubisco
* G3P
* Carbon fixation
* Recycling of RuBP

Explain why photorespiration is so bad for a plant

Why do we call some plants C3 Plants and why did they develop their system

What are CAM plants and how do they work

What are C4 plants and how do they work

Discuss plant solutions to CO2 shortages

What is the relationship between particle and wavelength with regard to a photon

The major steps of the calvin cycle

* 1 Carbon fixation
* 2 Reduction
* 3 Regeneration of RuBP

The reason the calvin cycle has to run multiple times in order to produce one glucose.

BRIEFLY How are each of the following formed in the calvin cycle

Initial 6 carbon sequence

* PGA
* G3Ps
* Glucose
* RuBP

How is the calvin cycle a literal cycle