Assign: 2  
Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour:\_\_\_\_\_\_

**Photosynthesis – Day 2 – Calvin Cycle**

**Remember what it means to be a plant….**

* Need to produce all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ necessary for growth
  + Carbohydrates, lipids, proteins, nucleic acids
* Need to store \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ (ATP) produced from \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_
  + In a more stable form
  + That can be moved around plant
  + Saved for a rainy day

**Light Reactions**

* Convert \_\_\_\_\_\_\_\_\_\_ every to \_\_\_\_\_\_\_\_\_\_\_\_ energy
  + ATP 🡪 \_\_\_\_\_\_\_\_\_\_\_
  + NADPH 🡪 \_\_\_\_\_\_\_\_\_\_\_ power
* What can we do now?
* Build stuff!!
* Photo\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What is the goal?**

* Want to make\_\_\_\_\_\_\_\_\_\_\_\_\_ (glucose)
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Draw the picture below showing carbon dioxide converting to glucose with the help of NADPH.

**Calvin Cycle = “\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”**

* \_\_\_\_\_\_ is going to be converted into \_\_\_\_\_\_\_\_\_\_\_\_\_ during the \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_
* This is often referred to as the “Dark Reactions”
  + Calling it the “Dark Reactions” is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + It doesn’t only happen in the dark, but rather in the \_\_\_\_\_\_\_\_ AND \_\_\_\_\_\_\_\_!
    - Remember \_\_\_\_\_\_\_\_\_\_\_\_ reactions can only happen in the \_\_\_\_\_\_\_\_\_\_\_!

**From Light reactions to Calvin cycle**

* Calvin cycle
  + Takes place in the chloroplast \_\_\_\_\_\_\_\_\_\_\_\_ (which is like the cytoplasm of the chloroplast)
* Need \_\_\_\_\_\_\_\_\_\_\_\_ of light reactions to drive \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the Calvin cycle
  + \_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_

**Calvin Cycle Summary**

* Consumed (\_\_\_\_\_\_\_\_\_) \_\_\_\_\_\_\_\_\_
* Produced (\_\_\_\_\_\_\_\_\_) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Regenerated (\_\_\_\_\_\_\_\_\_\_\_\_\_\_) \_\_\_\_\_\_\_\_
* Regenerated \_\_\_\_\_\_\_\_\_\_\_

**Photosynthesis Summary – Concept Map**

