**Honors Biology**

**Light Dependent Reaction**

Name:

In what organelle does photosynthesis occur?

In what part of the above organelle does the light dependent reaction occur?

What is the point of the light dependent reaction of photosynthesis?

Where does the energy for the light dependent reaction come from?

What is the molecule that releases the first electron?

Where does that electron go?

What happens when an excited electron moves through a protein pump?

Diagram the movement of an electron into and out of a thylakoid:

What provides the power to the ATP synthase?

What are the two molecules that are bonded together to make ATP?

Why do the hydrogens move through the ATP synthase?

What are the two products of the light dependent reaction that are required for the Calvin Cycle?

Water is split by photons in a process called photolysis, why is this essential for the light dependent reaction to occur?

What four things (2 are the same) are required to make NADPH?

When light hits the photosystem I, it causes an electron to leave, how does the photosystem replace lost electrons?