(40 pts) Approx. 3 days

This second part of the unit is all about simulations and designing gliders. You'll start working with a program called AERY that is used to design and simulate balsa wood gliders. As you get started, you'll need to get used to the different options you have available and how to work with the AERY interface. Once you've got that under control, you'll design 2 basic gliders by playing with the AERY options, and then you'll design one final glider of your own creation. When you get an AERY NUMBER OF AT LEAST 150, you'll build it out of balsa wood and we'll get it flying! In this part of the unit, you'll need to focus on some notetaking as you do the following:

1. Watch the presentation on getting started in AERY, and take good notes. Feel free to include the "AERY Simulation" image as a reference for what menu options are available.
2. Complete the first AERY Challenges wherein you start with some basic parameters as given in the challenge, and then work to make your glider flyable *with an AERY number over 150*.
3. Now design your own glider! You can make it look like whatever you want **as long as it fits on one piece of wood** – which is a parameter you can set in the AERY design options. Design a glider with the highest AERY number you can get. Once you get a glider your happy with *and the AERY number is over 150*, then we'll print the plans and start building!
4. Watch the presentations on *Building Your Glider* and on *Trimming Your Glider*. Take some good notes.
5. Build your glider out of balsa wood. We have specific pieces of wood for the fuselage, and nice balsa wood to measure and cut for wings, tails, and stabilizers. You can add weight at the front of the glider with some clay, and you can add control surfaces (elevator/rudder) if you want as well.
6. Get your glider flying nice and straight down the hallway, and trim it out so it goes ***at least 50 feet*** on a single throw. Earn an achievement by getting it to 75 feet! (I've seen these gliders get close to 100 feet).

Part 2: Tasks	*5 points*	*4-3 points*	*2-1-0 points*
Notes on AERY	+ Take a full page of notes on building your glider and the related topics	- Less than a full page of notes on glider building	- Very brief or no notes.
Design 2 AERY Gliders	+ You made 1 standard glider starting with the given AERY parameters and got the AERY number over 150 + You made 1 canard style glider starting with the given values and got the AERY number over 150	- You only designed 1 of the 2 gliders - Your gliders did not get to an AERY number of 150	- You did not design the gliders - None of your gliders reached an AERY number over 150
	10 points	*5 points*	*0 points*
Design Your Own AERY Glider	+You designed your own glider in AERY + Your design had an AERY number over **150**	- You designed a glider in AERY with an AERY number between 130 and 150	- Your glider had an AERY number under 130
Build Your Own AERY Glider	+ You built your glider following the AERY plans and using the proper materials	- You mostly followed the AERY plans	- Your glider did not follow the plans at all - You did not build one
Get Your Glider Flying	+ Your glider can fly at least 50 feet on a single throw	- Your glider can fly more than 25 feet, but less than 50 feet	- Your glider can't fly 25 feet.
Achievement: Get your balsa wood glider to go 75 feet			