PROJECT #2. THE HALLOWEEN MASK.

Have some fun and make your own Halloween mask this year. You need to have it by Wednesday Oct. 30th in the class.

Step 1. Make the mold

- Wear your artist hat, and design a mask
- Design the mold: one option is to use Fusion 360, or you can use SolidWork, or any other software you want (If you want to use **Fusion 360**, On Monday, I'll show you briefly how, but to start, watch this video on the basic of head modeling:)

Note: You may skip the previous and next steps if you want to make the mold directly by carving a piece of wood or form clay/other materials or maybe any other creative methods you know for making the mold!

- 3D print the mold (you can use the 3D printer in Mech shop, or if you or your friend has one at home)

Step 2. Do some calculation:

You will be provided with a white sheet ABS of thickness *h=1/16 inch*. The specific heat of the material is 610 J/kg-∘C, density 1060 kg/m^3, find the suggested forming temperature T_f for ABS

from your lecture notes. The vacuum forming machine you will use has a heater with power =1500 Watt. The absorption coefficient of this material is a=0.3

1. Find out how long the sheet must be exposed to heater for a good forming?
2. Remember, the maximum stretching ration for this ABS sheet is about 5.

Step 3. Let's make the mask

With the mold you made go to UBC Frank Forward Building (I will tell you the exact room #, and available time slots), where my TA or myself will help you with the vacuum forming machine setup. (Please pair with 2 other friends and come together, it'll save lots of plastic, since with each sheet, we can make 3 masks or maybe 4)

Step 4. Wear the mask proudly on Wednesday 30th in the class, and on this Halloween!