Developing your 3D designs

BRONZE Challenge:

Using the Elegoo design in the class activity, practice making hollow shapes to create a shell for it.

Think about how the shell would fit onto the robot and how to make sure you could still access the Arduino sockets and power switch.

SILVER Challenge:

Now you've had a go at making hollow shapes, take another look at your design;

1. Hollow out the areas containing components
2. If the Arduino is not protected, add a protective case
3. Make sure you have an opening for the download socket of the Arduino.

GOLD Challenge:

To complete your self-driving robot design, make sure that you've included these components:

- Arduino Uno
- IR-TCRT5000 sensor(s)
- Ultrasonic Sensor
- Motor Driver
- Battery Pack*
- Printed Circuit Board
- Power button or switch
- 2+ motors

**Dimensions of battery box = 3.5cm x 8.5cm x 2cm.*

Extension Challenge:

Adding optional additional components to your design. These might include:

- Solar Panel(s)
- LCD Display
- LDR(s)
- Micro-Servo(s)
- PIR
- Buttons
- LEDs
- Accelerometer

What next?

Here ends our 3d design topic.

Next week we'll start looking at how to create a website for your design blog.

Preparation: Start thinking and taking notes about why you've included your chosen components, how you came up with the design, problems you've had, and what you would change if you did it again.