



Erasmus+



STEAM+



Robotic competition

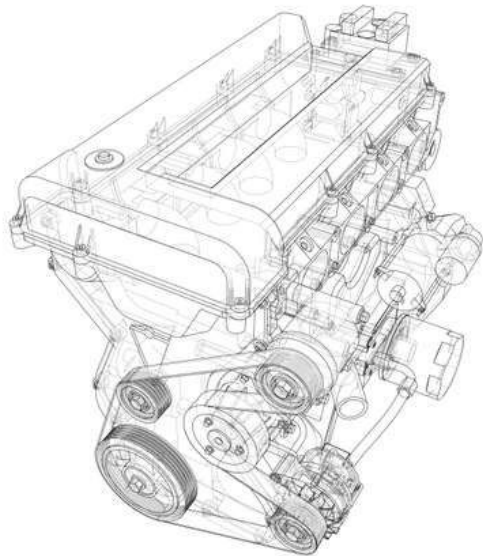
Hit the target with STEAM



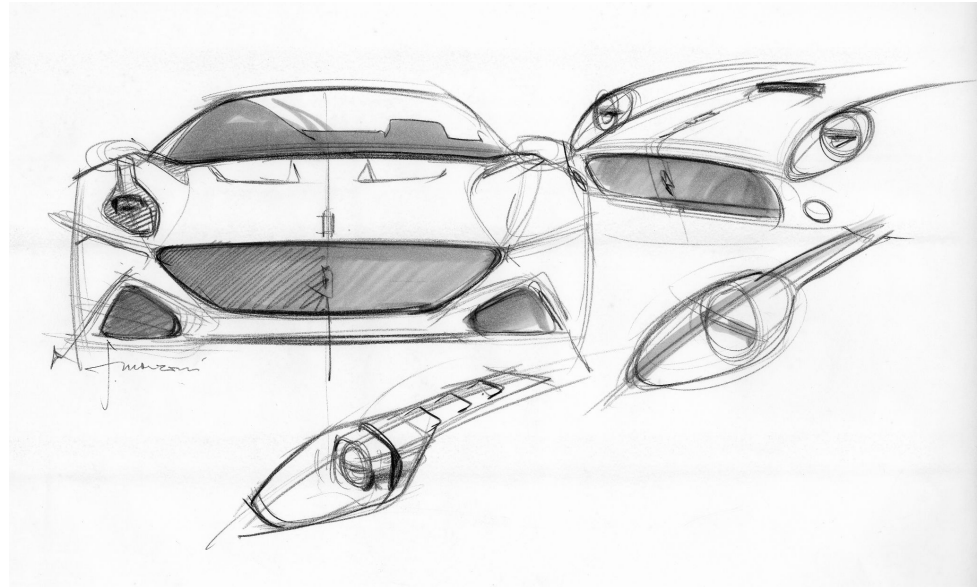
“Discovering my STEAM vocation” - Erasmus+ project -
C3 Italy

Robotic competition: 2 awards

Most efficient robot:
best job with less codeblocks

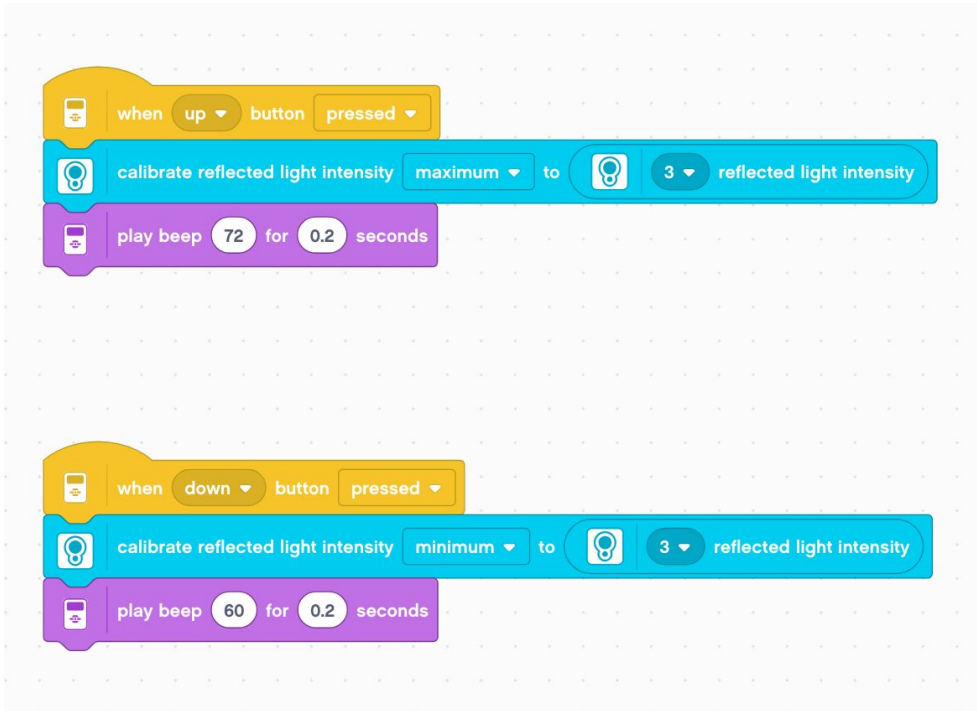


Most fascinating design:
use pieces of the kit, cardboard,
colors, tape, but first of all fantasy



Remember

For best performance the color/light sensor must be calibrated



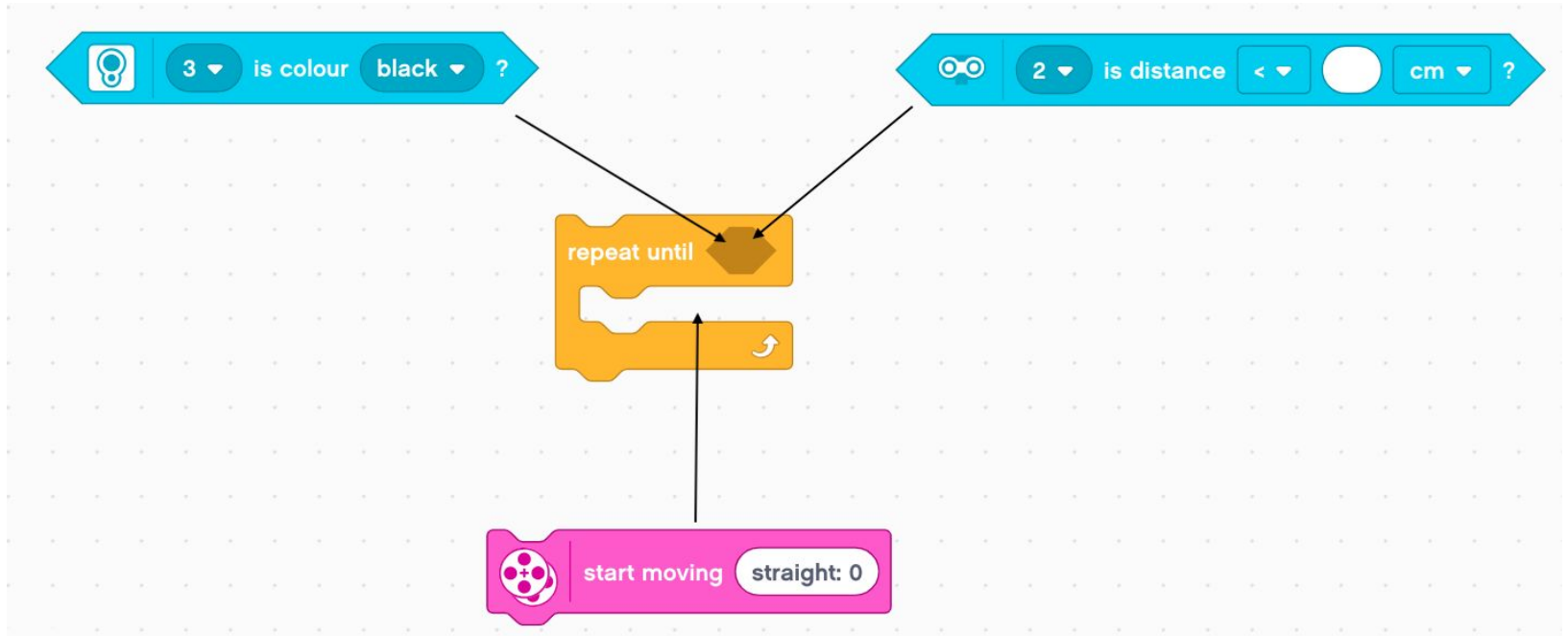
The image displays two Scratch code snippets on a light gray grid background. Each snippet consists of three stacked blocks: a yellow 'when button pressed' block, a blue 'calibrate reflected light intensity' block, and a purple 'play beep' block.

The first snippet is triggered by the 'up' button being pressed. The calibration block is set to 'maximum' and targets 'reflected light intensity' with a value of '3'. The beep block is set to play a sound of frequency 72 for a duration of 0.2 seconds.

The second snippet is triggered by the 'down' button being pressed. The calibration block is set to 'minimum' and targets 'reflected light intensity' with a value of '3'. The beep block is set to play a sound of frequency 60 for a duration of 0.2 seconds.

Hint

Use statements like this



The final challenge

1. First of all find the way to set, on the driving base, a contact sensor (on the top/rear) and a color/light sensor pointing to the floor
2. Build an arm with a proximity sensor and set it on the driving base (look at the example)
3. Program you robot to start when contact sensor is pressed and move forward until the black line
4. Program you robot to walk an equilateral triangle of at least 50cm on each side and return exactly to the starting position.
5. Program you robot to move forward until it comes near the target, then take it
6. Program you robot to turn right by 90° , move forward until the black line then leave the target
7. Program you robot to flash the light and play one or more sound