

Ready steady RESET!

Once you're finished inventing, please reset your box like below. *The core components belong in the blue box as pictured and the rest in the white tray.*





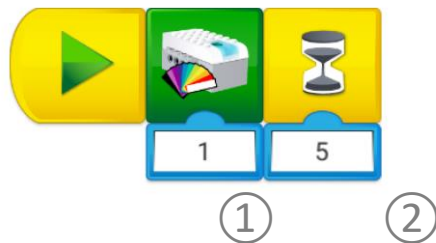
1 LIGHT



It would be great to use lights on your model to communicate information.

How might you use the light on your model?

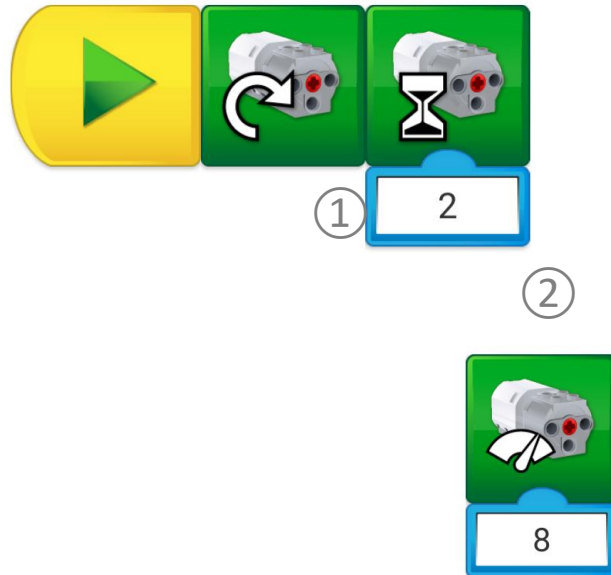
Here is a program to show a coloured



- ① Change the COLOUR of the LIGHT (click on the number to select the colour)
- ② WAIT 5 Seconds (The LIGHT will then go OFF)



2 MOVE



- ① Sets the *DIRECTION* of the Motor
 - ② Sets the *TIME* for the Motor to run
- Experiment with the Motor SPEED*

Practise getting your model's motor to move – forwards and backwards!



3 SOUND



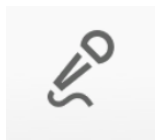
Think about the sound your model might make.

Here is how to add a sound...



You can change the SOUND by 'clicking' on the number – then choosing a new sound.

Here is how to add your own sound...



Click the Microphone to record your own sound.



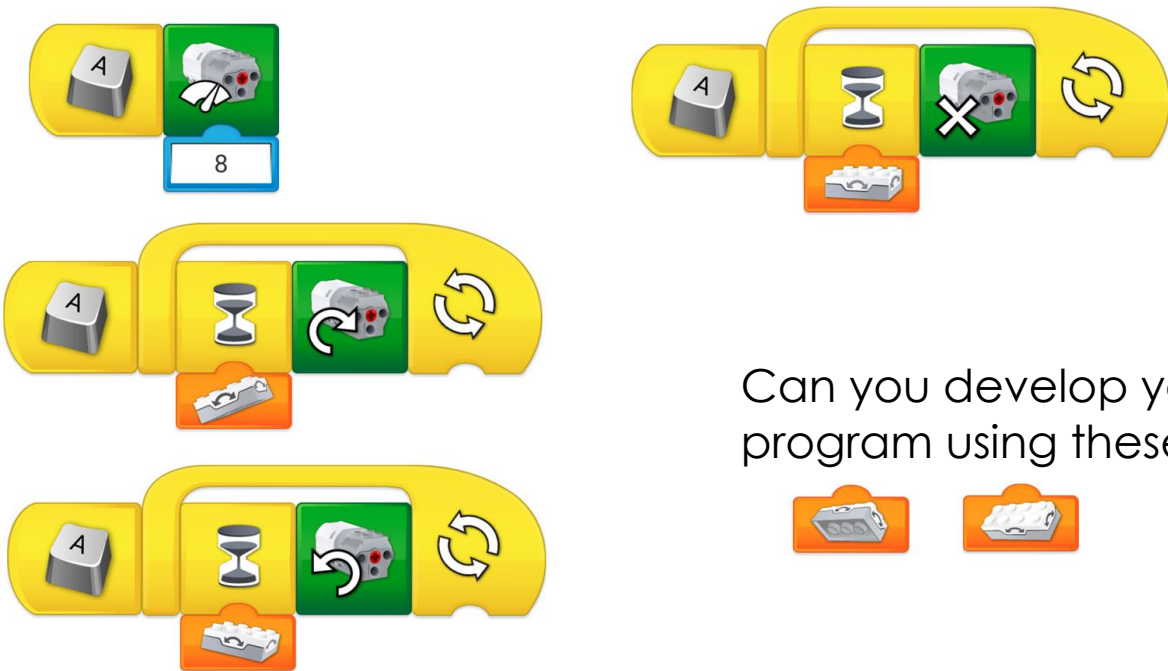


4 Using the TILT Sensor...



We can add the TILT sensor to our JOYSTICK.

Here is how to add the code for the TILT sensor...



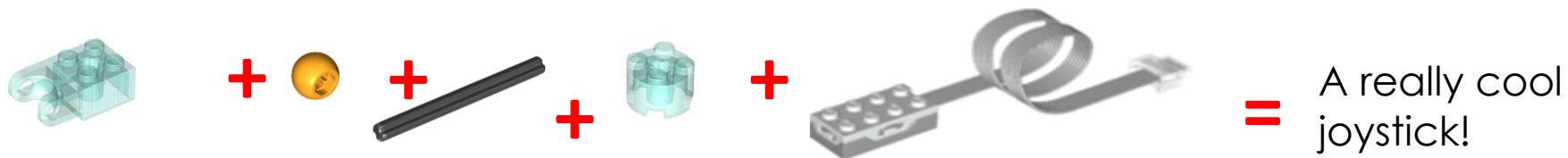
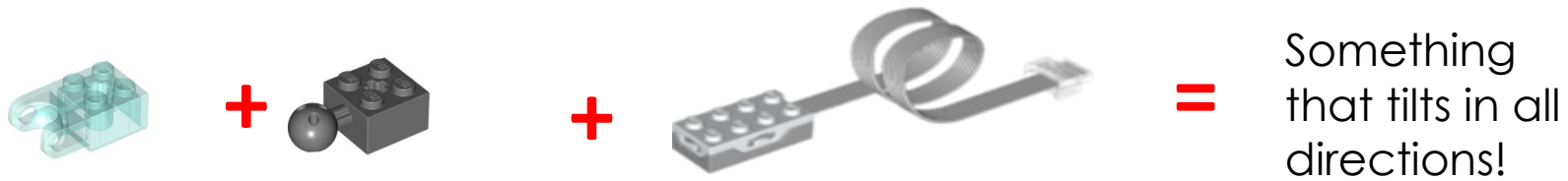
Can you develop your program using these?





5 Creating a JOYSTICK

KEY PIECES FOR TILTING!





6 Using a Motion Sensor



Here is how to add the code for the **MOTION** sensor...

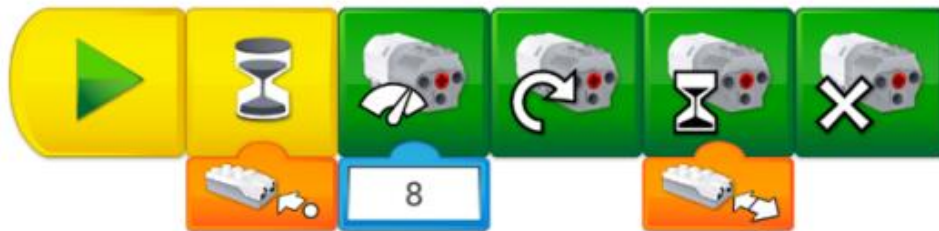


- ① Start the Motor **CLOCKWISE**
- ② Wait until the Motion Sensor **SENSORS MOTION**
- ③ Make the Motor **STOP**



6 Using a Motion Sensor

Here is how to use two different code blocks for the MOTION sensor...

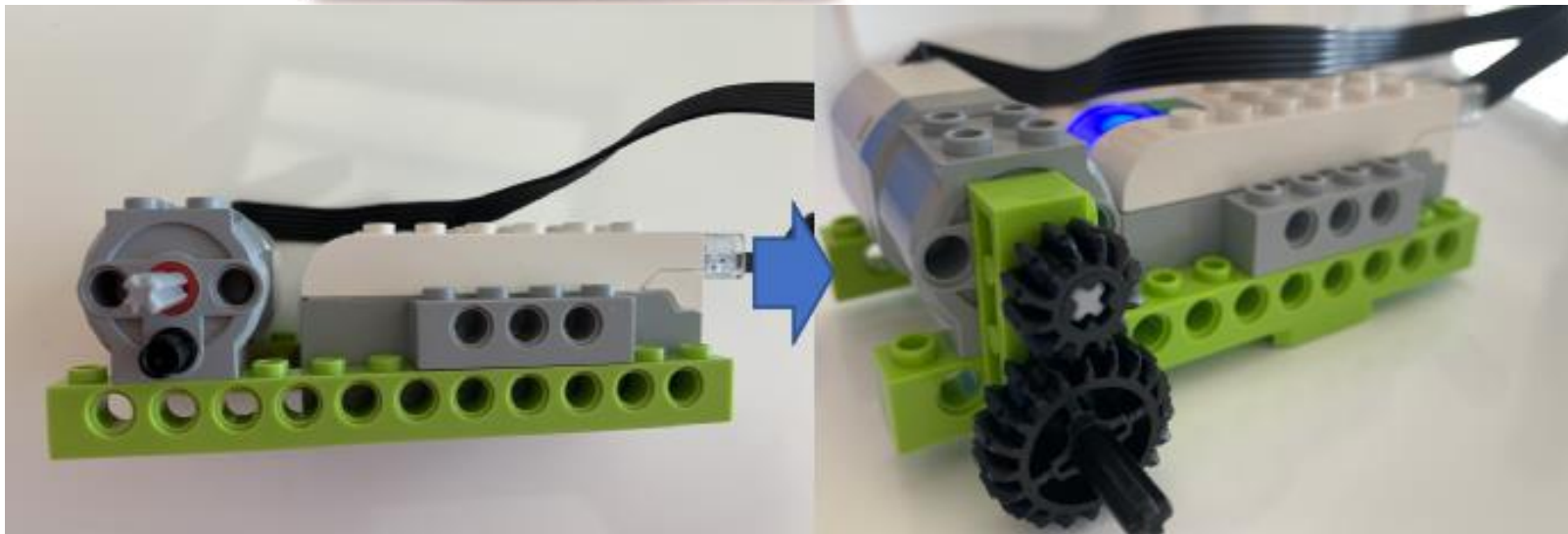


We can also add the MOTION sensor to a loop.



7 Deep Sea Crawler

Key Pieces

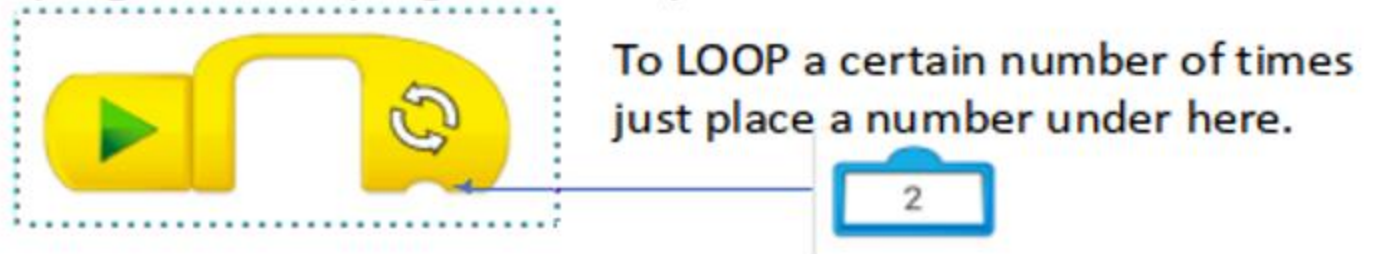




8 Loops and Multi-Tasking

LOOPS

You could add LOOPS to your program. Your program will repeat what is inside the LOOP.



MULTI-TASKING

We can start more than one program at the same time by linking them to the keyboard. In this example, by pressing 'A' both programs will start. (Just touch one of the 'A's) on the tablet/iPad/keyboard.





8 TIMER and other KEY BLOCKS

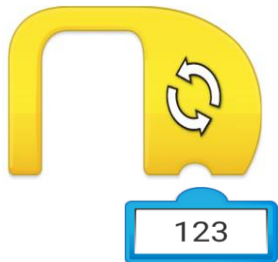
KEY BLOCKS...

You could add more LOOPS to your program.

Can you make a TIMER that will keep you on time? These are the blocks that I found useful...



Add this block to START your program when 'A' is pressed



Add a LOOP block. This block can be added to control the NUMBER of loops



Set the DISPLAY to a number. Hint – '0' might be a good one to start!



Use this block to add 1 to the DISPLAY



Add this block to WAIT a second