NCEA Level 1 AS’s to link to:

Implementation

Prototype

Design/write own brief

**Arduino concepts:**

**HOW to:**

Install and setup

Solder (breakaway male headers, can solder to)

Electronic circuits - components, electricity flow, equations

**Kit:**

Breadboards, motors, servos, LED's, LCD's, joystick, camera, stepper motors

**Sensors:**

IR, Ultrasonic, pedometer, accelerometer, humidity, potentiometers IR emitter/detector

**Shields:**

Ethernet/Wi-Fi, motor control, sound, multipurpose, battery, RFID, GPS, 3D print, weather

<http://playground.arduino.cc/Main/SimilarBoards#goShie>

AS 91057

AS 91044

AS 91046

T1 skills, sumo-bot, research own project

T2 sumo-bot, research own project

T3 own project (drawing, specifications, materials, testing)

After the sensor/kit exercises look at book: Programming Arduino, getting started with sketches by Simon Monk for some soldering/multimeter/programming lessons