

# Robotics

**Subject:** Robotics

**Number of Periods per week:** 1

**Class Teacher:** David Barnes

## **Aims and objective:**

The purpose of the module is to introduce students to the world of Robotics in a practical atmosphere. The robot kit is the ELEGOO Smart Robot Car V4.0. It is an educational kit based on the Arduino platform for beginners to get hands-on experience about programming, electronics assembling and robotics knowledge. It is an integration solution for robotics learning.

The Robot contains 24 kinds of module parts including obstacle avoidance, line tracking module and infrared remote control. The robot can be controlled via phone/tablet using Android and iOS system, etc.

## **Course content:**

The intended structure of the module will run as follows:

- **Week 1:** Introduction to project/Group
- **Week 2:** Begin Assembly
- **Week 3:** Continue Assembly
- **Week 4:** Assembly/Design Track/Programming
- **Week 5:** Programming/Design Track/Test Robot
- **Week 6:** Disassembly of Robot

## **Method of assessment:**

The module will be assessed under the following criteria:

- Assembly of robot
- Portfolio submission of progress throughout project including video of Robot completing obstacle course designed by group.
- Reflection of Module
- Participation in class and group work.



### Digital Learning Skills :

- The smart robot is equipped with the following settings: obstacle avoidance, line tracking module, infrared remote control.
- Developing various skills in using Applications. Controlling it via phone and tablets of Android and iOS system, etc.
- Developing portfolio design skills using Microsoft PowerPoint.

#### DIFFERENT MODES

