The Raspberry Pi is the latest craze among DIY makers. It is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch and Python.

Unlike the sessions for the younger students, the students taking this session will be taking home a working raspberry pi robot. This robot can be remote controlled using either wi-fi or Bluetooth.

SOS students taking this session will be learning the following:

a) Basics of computers with an emphasis on the Linux operating system.
b) Principals of electricity.
c) The Python programming Languange
d) Basics of electronics (Ohm's law)!
e) Basics of Robotics.
f) How to safely connect and wire devices to the Raspberry pi.
g) Much much more.

Here is some of what each student will be taking home with them:

a) The latest Raspberry pi: Raspberry pi model 3 B+. This device has wifi and Bluetooth built in.
b) A micro-SD card with the latest software (Raspbian)
c) A "HAT" that fits onto the pi so that it can control motors.
d) A raspberry pi camera.
e) A robot kit containing: two drive wheels, two DC motors, castor wheel, metal chassis, top metal plate, mounting hardware.
f) Battery supply with batteries.

If possible, the SOS student will need to bring a smart phone so that we can download a Bluetooth app used to control the robot.

Items that we will provide, but will not go home with the student:

a) Standard USB keyboard
b) Standard USB mouse
c) Standard Video monitor.