

PICAXE Training Course (Foundation)
 Scheme of Work
Suitable for GCSE Electronic Products and AS Systems and Control
 E.Clarvis 2009

Part	Learning Objectives	Learning Outcomes "By the end of the lesson I will be able to:"	Resources
1	<p>Know what PIC stands for</p> <p>Know the advantages of a PIC over a conventional circuit</p> <p>Know how PICs can be programmed</p>	<p>Describe what PIC stands for</p> <p>Name three advantages of a PIC over a over a conventional circuit</p> <p>Name two ways a PICAXE can be programmed</p>	<p>PICAXE Workbook PIC 1 as reference</p>
2	<p>Know the difference between an input transducer and an output transducer</p> <p>Know the difference between a digital and analogue signal</p> <p>Know which transducers use analogue signals</p> <p>Know which transducers use digital signals</p>	<p>Name three input transducers</p> <p>Name three output transducers</p> <p>Name three digital transducers</p> <p>Name three analogue transducers</p>	<p>PICAXE Workbook PIC 2 as reference PIC 3 exercise</p>
3	<p>Know how to use the HIGH command</p> <p>Know how to use the LOW command</p> <p>Know how to use the TOGGLE command</p> <p>Know how to use the PAUSE command</p> <p>Know how to use the WAIT command</p>	<p>Draw the flowchart symbol for the commands: HIGH LOW TOGGLE PAUSE WAIT</p> <p>Write a program that will make an LED flash</p> <p>Modify program to flash different LED and at a different rate</p>	<p>PICAXE Workbook PIC 4 as reference PIC 5 programs 1 to 5</p>
4	<p>Know the advantage of the PINS command</p> <p>Know how to use the PINS command</p>	<p>Describe one advantage of the PINS command over the HIGH and LOW commands</p> <p>Write a program that will control 4 LEDS in a pattern using HIGH, LOW and PAUSE</p>	<p>PICAXE Workbook PIC 6 programs 5 & 6</p>

		<p>commands.</p> <p>Write a program that will control 4 LEDs in a pattern using the PINs command</p>	
5	<p>Know how to use the IF command with digital input</p>	<p>Draw the symbol for the IF command</p> <p>Write a program that will detect the position of a switch</p> <p>Write a program that will detect the position of two switches</p>	<p>PICAXE Workbook PIC 7 programs 7 &8</p>
6	<p>Know the advantages of using subroutines</p> <p>Know how to write a program using subroutines</p> <p>Know how to use the GOSUB and RETURN commands</p>	<p>Describe two advantages of using a subroutine</p> <p>Modify a program to include two subroutines</p>	<p>PICAXE Workbook PIC 8 program 9</p>
7	<p>Know what a variable is and how to use it</p> <p>Know how to use the READADC command</p> <p>Know how to compare two numbers</p>	<p>Describe what a variable is</p> <p>Write a program to switch on an LED when it is dark</p> <p>Write a program to switch on an LED when it is light</p>	<p>PICAXE Workbook PIC 9 programs 10 to 12</p>
8	<p>Know how to write a program that will make decisions and use subroutines</p>	<p>Write a program that will work as a digital light meter</p>	<p>PICAXE Workbook Program 13</p>