



Hello

yes as you can see I don't like getting my photo taken, still if you set this on the mantelpiece it will keep the kids away from the fire.

My name is John Donovan. I graduated about six years ago with a BSc Hons in technology and design. I am currently a student on the PGCE post primary course at Jordanstown. My interest in SEN is a functional one, I believe that as second level teachers in an ever more inclusive era in education that it is beneficial to have an understanding of the widest possible spectrum of the school population. I suppose I feel that to be effective I need to be able to manage and respond appropriately to all the pupils I will encounter.

An example of a lesson taught within an SEN context :-

This was part of a clock project with LED's that lit up when the room got dark.

This lesson involved the pupils soldering various components onto a circuit board. The orientation of the components was important and I knew this would be difficult to manage with this group. The class was reduced in size and there were only twelve year 10 pupils with a high incidence of challenging behaviour, however they were one of my favourite classes to teach.

In preparation I removed all the opportunities for major frustration and attention breakdown by soldering red wires onto the + ve terminals and black onto the - ve terminals of all the components that required specific orientation. This meant that instead of running into big problems with cathodes, anodes, and components fitted backwards I and the pupils could easily see what they should be doing.

I produced an A4 print out of the circuit board showing the position and colour codes for all the components. The components were given out one at a time and pupils clearly told the name and basic details about what the item did in the circuit.

I had planned this practical session to be very snappy and quite fast paced as the soldering iron is quite a dangerous piece of equipment so all the pupils would finish soldering in one session and have a functioning circuit at the end.

My main concern was to reduce the opportunity for pupils concentration to wander and to try to enable them to get success and satisfaction from seeing the circuit they made working as it should. I passed around some batteries when we returned to the class room and we checked the circuits and discussed how it worked.

PGCE Technology and Design Lesson Plan Schedule		Student Name John Donovan	
DARK SENSOR		YR. 10z T+D	
		Date	Duration 70 MINUTES
Lesson Title SOLDERING COMPONENTS ONTO BOARDS		Teacher	

Lesson Aim:- TO FINISH SOLDERING OF CIRCUIT BOARDS

Learning Outcomes: *By the end of the lesson Pupils should be able to :-*

1. Recognise the importance of the orientation of some components
2. follow instructions in completing work
3. assess and improve quality of the solder joints they produce
4. Produce good quality soldered joints

Literacy and Numeracy

names of tools, components and processes will need to be explained.

Resources needed

printed plans of board layout - A4 size - 20 off
 kits of boards and components
 80 off flying leads for led and LDR connections
 soldering irons
 extension leads
 solder suckers, snips, solder etc.

Risk assessment and Safety procedures and preparation

I asses the risk to be medium
 pupils to discuss safety rules before entering workshop
 dome of how to hold tools when transporting and using them.
 Aprons to be worn
 stress danger of burns and need to be safety conscious

Pupils Previous Knowledge

not known

Key Skills, Concepts and Attitudes

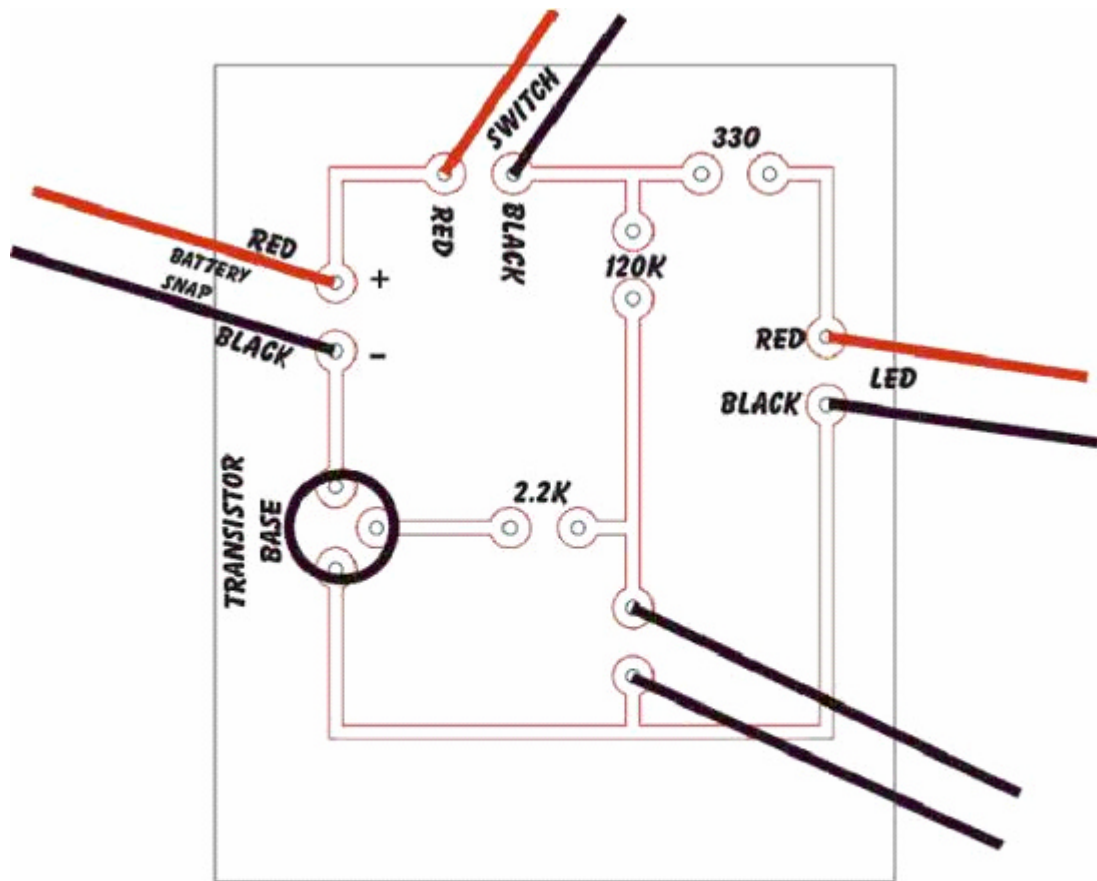
ability to listen and understand / follow instructions
 awareness of safe practice
 ability to identify hazards
 ability to know how successful they are at the task
 Ability to remain calm and behave in a respectful manner at all times

Homework

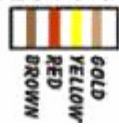
BRING IN PAINTED CLOCK FACES IF YOU HAVE NOT ALREADY DONE SO

PGCE Technology and Design Lesson Plan Schedule: Sheet 2		Name John Donovan	Class Year 10z T+D
		Title SOLDERING COMPONENTS ONTO CIRCUIT BOARDS	Date FRI 5 TH DEC 2003
Time	Content	Methods	

5 min	Settle class call roll -	Start outside the room keep the control tight
5 min	INTRODUCTION state objectives of lesson	run through the whole activity
10 min	PRESENTATION Set up each bench with two soldering irons Tell pupils to work with buddies	check that every one has what they need not plugged in yet
	Revue safety rules to be observed in workshop stress the need for co-operation	discuss specifically soldering iron burn hazard
	Give demonstration of method of soldering on a spare board. HEAT - WIRE - AWAY	absolute attention required during demo - class the chant heat - wire away
	Give out boards and put names on them	
40 min	APPLICATION give out battery snap show correct orientation	give pupils A4 board layout to aid in positioning and orienting components
	Set pupils to work - supervise and give one to one coaching to any pupil having difficulty.	supervise and give guidance as required
	Give out components one at a time keeping the most sensitive components to the end battery snap flying leads resistors LDR led transistor base	give brief description and function for each component
	extension class activity	check led orientation before soldering
10 min	CONCLUSION Stop class 15 min before end of time and start an orderly sequence of clearing up	Use white board and technologystudent.com to recap soldering techniques if any time is left at end. Copy into books - while I check the circuits
	EVALUATION success of the lesson can be judged by inspection the fruit of the pupils efforts to carry out instruction	run through class activity safety beware of applying too much heat use only a little solder
		bring clocks in painted for next week



120k Ohms



2.2k Ohms



330 Ohms

