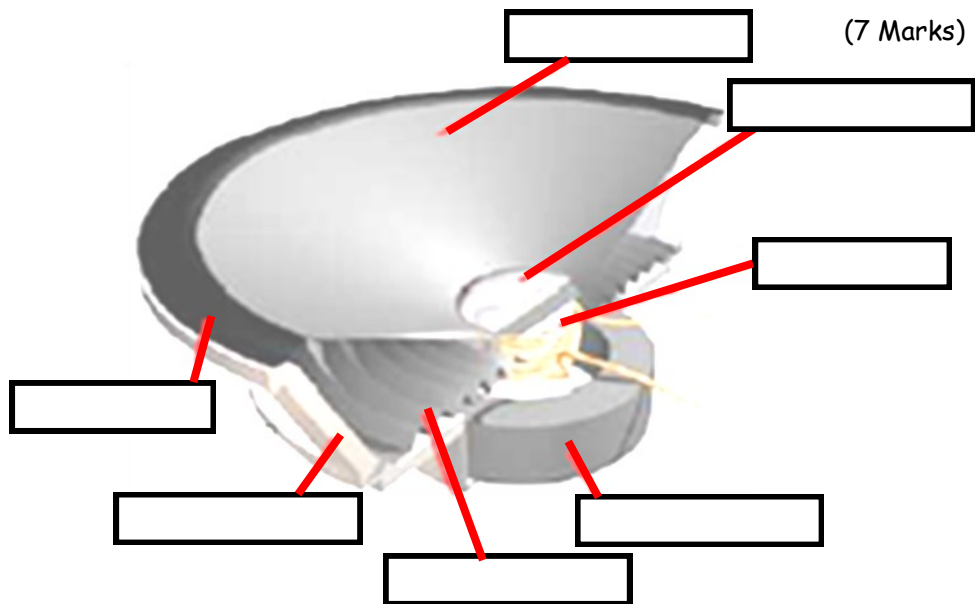


Task 5

On a piece of A4 paper, **draw the speaker** shown here. (3 Marks)

Label the different parts using the words below:

Magnet; Voice Coil; Basket; Suspension; Spider; Dust Cap; Diaphragm



Next to your speaker diagram, **explain**, in your own words, how speakers work. (10 Marks)

Your teacher will mark your ILA and award marks for each correct answer. The number of marks is clearly shown on each task. There are 6 additional marks available for quality and presentation.

Level 2	Level 3	Level 4
0 - 22 Marks	23 - 32 Marks	33 - 44 Marks
Level 5	Level 6	Level 7
45 - 58 Marks	59 - 67	68 - 75
Exceptional Performance (EP) level: 76 - 80 Marks		



Unity Passion Respect



Year 8

Design and Technology

INDEPENDENT LEARNING ACTIVITY.



NAME: _____

PD GROUP: _____

TECH GROUP: _____

DATE DUE IN: _____ To: _____

You have achieved a level ____ on this ILA. In order to progress to the next level you should _____

Task 1: Basic Electrical Principles

To be successful, you should write neatly in full sentences, one word answers will not receive any marks.

On a sheet of A4 paper answer the following questions:

1. What does the term voltage mean? (1 Mark)
2. What is the unit for voltage? (1 Mark)
3. What is the symbol for voltage? (1 Mark)
4. What does the term current mean? (1 Mark)
5. What is the unit for current? (1 Mark)
6. What is the symbol for current? (1 Mark)
7. Describe what the term conductor means **and** provide an example? (2 Marks)
8. Describe what the term Insulator means **and** provide an example? (2 Marks)
9. What does the term resistance mean? (1 Mark)
10. What is the unit for resistance? (1 Mark)
11. What is the symbol for resistance? (1 Mark)
12. What is the unit for power? (1 Mark)

Task 2: Resistor Colour Codes

The function of a resistor is to oppose the flow of current in a circuit. Resistors have different values of resistance to the flow of current. Complete the table shown below with the correct resistor values (include the units). The first one has been done for you.

Colour Coding	Resistor Value		
Red, Blue, Green	265 Ω	BLACK	0
Red, Red, Black		BROWN	1
Green, Red, Brown		RED	2
Violet, Orange, Orange		ORANGE	3
Blue, Black, Black		YELLOW	4
Red, Green, Green		GREEN	5
Gray, Violet, Red		BLUE	6
Yellow, Brown, Yellow		VIOLET	7
Orange, Red, Red		GREY	8
Orange, Orange, Orange		WHITE	9

_____ /9 Marks

Task 3: Soldering Safety

Copy the flow chart shown on the left onto a piece of A4 paper. (2 Marks)

Below are listed the steps for soldering, however, they are mixed up and need to be put in correct order in the flowchart.

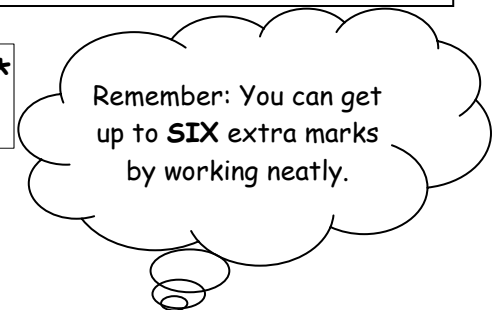
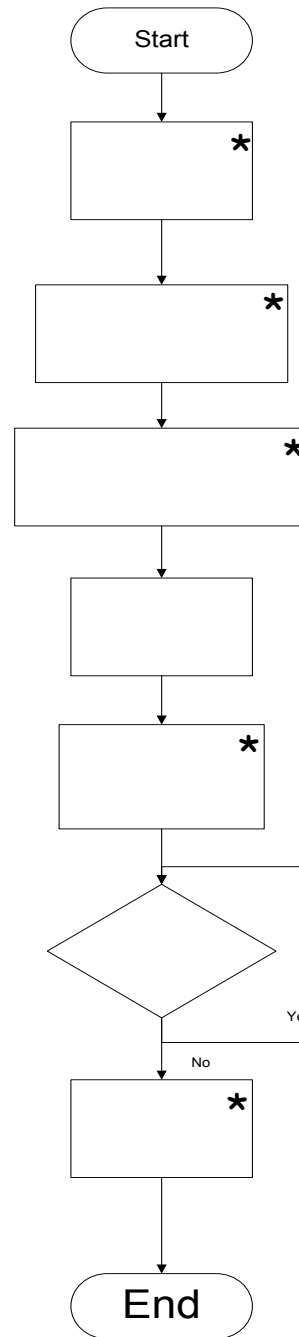
- Touch the solder onto the joint until it flows
- Bend the component legs and place into the correct holes
- Clean and tin the tip of the soldering iron
- Wait for a few seconds
- Is it a dry joint?
- Re-solder joint
- Snip off legs of component
- Place the soldering iron against the track and the wire of the component

(8 Marks)

For each stage marked with an *, list one important tool / or piece of equipment you would use.

These could include: Solder; Soldering Iron; Pliers; Sponge; Side Cutters. (6 Marks)

List 5 Health and Safety rules you need to follow when soldering. (5 Marks)



Task 4: Electronic Products

On a separate sheet of A4 paper, make a list of as many products in your home or at College as possible that have an electronic circuit. (10 Marks)