

## **Statistics Coursework.**

### **The Task:**

- My task is to research into the music industry and then create a questionnaire to find out what type of music people listen to. I will then need to record the results and create some sort of interpretations of the data to see if the results match my hypothesis.

### **Hypothesis:**

1. Most People in year 11 listen to drum and bass.
  2. Year 11 spend more money on music than year 7.
  3. New Metal/ Grunge music is the most unpopular genre of music in school.
- I think that most people in year 11 listen to drum and bass because it is now a growing, popular style of music and now is becoming a dominating genre of music.
  - I think that year 11 spend more money on music than year 7 because year 11's grew up loving music more. Year 7's are more interested in technology than what they are in music.
  - I think that New Metal/ Grunge music is the most unpopular style of music in school because nobody really likes that style of music unless they like being called names and also the music is quite heavy to listen too. It's too hard on the ears.

### **Introduction:**

- We as a group decided who should be within our group by thinking who the hardest workers are and who would actually want to do the work. The three of us (Barry Boston, James Bolton and Minesh Patel) are also friends so we knew that we would get along with each other. We thought this would be the perfect combination; with hard work and people who can get along and understand each other.
- We started working on the coursework immediately. We all started off by creating our questionnaires and collecting our data. Then we created our results tables.

- I chose all of the music that we used in our questionnaire by researching all of the most popular styles of music and then picking the most general styles to be entered within the questionnaire.

**Method:**

- I am going to collect my data by asking a number of random people from each year and recording their data within tables, after this I will put the results into graphs.
- I am going to decide on what questions to ask by using questions that are closed, not biased and give me the results I need.
- To stratified sample, I will find the total of each year and divide them by the total of the whole school. After I will times this answer by 5% of the total of the school= around 30 students.

**Selection and Collection of data:**

- I decided to collect primary data and I thought this would be an easier way to work out whether or not my hypothesis was correct.
- The data is representative of the population of the sample that I used. In some references it may be biased because it doesn't use the opinions of the total school population.

1<sup>st</sup> Pre-test questionnaire:

Why was each question biased?

1. -----
2. -----
3. Overlapping answers.
4. Question is too open.
5. Overlapping answers.
6. The question is biased.
7. It skips amounts.
8. Question is too open.

I looked at all of the flaws and created a corrected questionnaire, which I used as my final questionnaire.

The stratified methods I used:

5%=30 students

Year 7=  $119/588*30=7$

Year 8=  $121/588*30=7$

All Figures are rounded.

Year 9=  $136/588*30=7$

Year 10=  $106/588*30=6$

Year 11=  $106/588*30=6$

Total = 33 students.

The sampling method I used was stratified sampling because I thought it would be more accurate. In stratified sampling a population may contain separate groups of strata. Each group needs to be fairly represented in the sample. The number from each group is proportional to the group size. The selection is then made at random from each group.

### Presentation Of Data:

YEAR 7

		Answers							
Questions		a	b	c	d	e	f	g	h
	1	5	2						
	2	7							
	3	1			2			2	
	4	1	1	2		1			
	5	4	1						
	6	2	3						
	7				2				
	8	2	3						

YEAR 8

		Answers							
Questions		a	b	c	d	e	f	g	h
	1	6	1						
	2		7						
	3	2	1				1	1	1
	4	4	1		1				
	5	2	1	2	1				
	6	3	3						
	7	1			2				
	8	1	5						

YEAR 9

**Answers**

	a	b	c	d	e	f	g	h
Questions	1	5	2					
2			7					
3		1	1	1				3
4		2	3					
5	2		1	2				
6	4	1						
7	1	2		1	1			
8	3	2						

YEAR 10

**Answers**

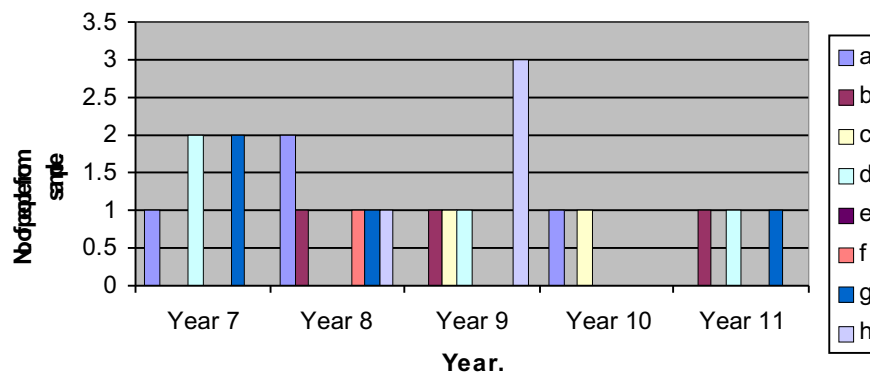
	a	b	c	d	e	f	g	h
Questions	1	2	4					
2				6				
3	1		1					
4	1		1					
5	1		1					
6	2							
7			1		1			
8	2							

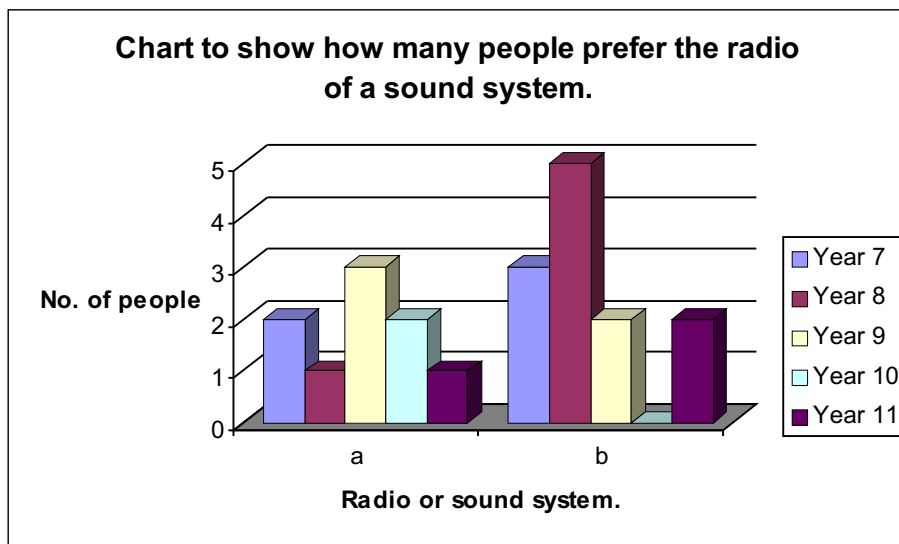
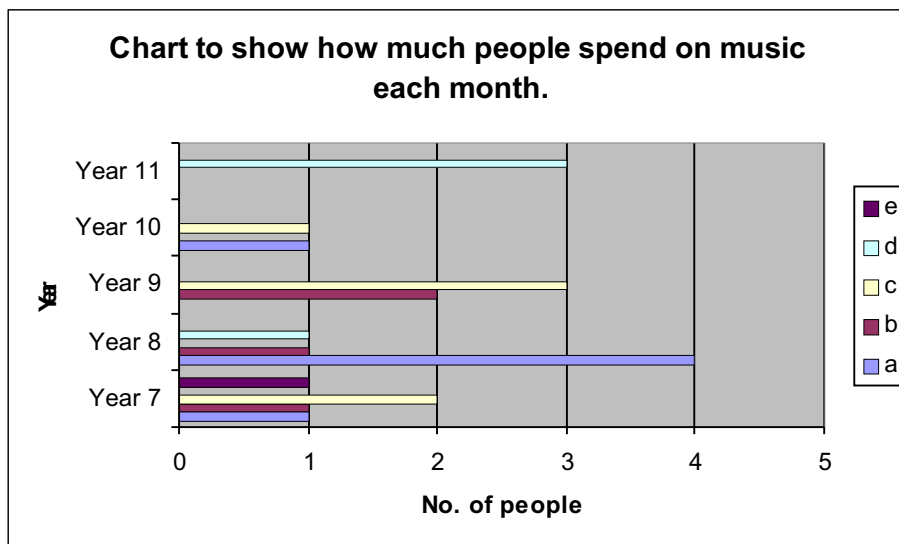
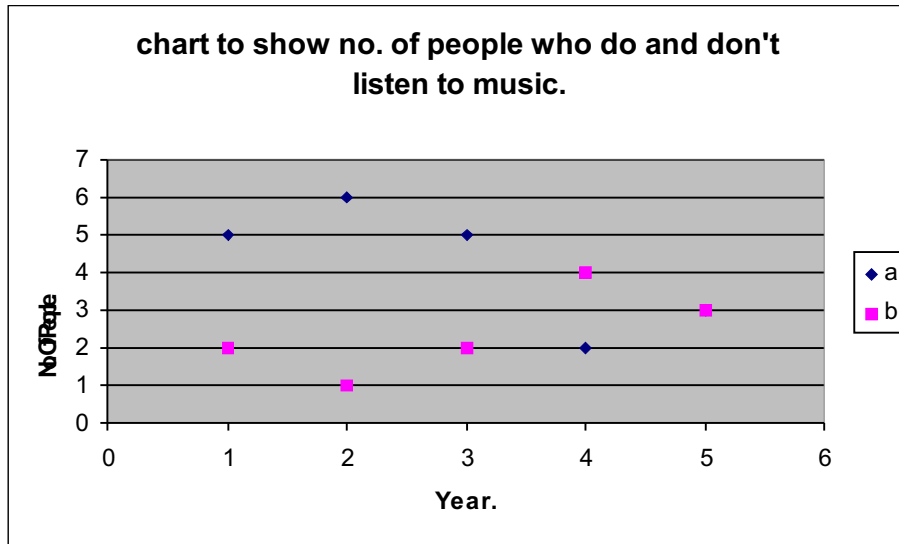
YEAR 11

**Answers**

	a	b	c	d	e	f	g	h
Questions	1	3	3					
2					6			
3		1		1			1	
4				3				
5	1	2						
6	1	2						
7	1							
8	1	2						

**Chart th show what genre of music people listen to.**





I have used these methods of presenting data because the tables may allow you to study the different types of answers given by each candidate and the graphs can show the variations between the answers given by the candidates.

**Interpretations and conclusions:**

I have found that my hypothesis was almost correct by in some places it wasn't like with the new metal hypothesis. As you can see from the diagrams, some people do still listen to this style of music and so it is also true that new metal/grunge is quite popular in school.