Science Skills Year 8 booklet: 1

Sampling Investigations

Task 1 deadline (self-assessed):

Task 2 deadline (peer-assessed):

Task 3 deadline (teacher-assessed):

The tasks in this booklet relate to the investigation below. Read the following information before attempting any of the tasks.

The data which was collected:

Quadrat number	Number of thistle plants in each quadrat		
1	4	3	4
2	2	5	1
3	2	2	3
4	0	1	5
5	1	1	3
6	3	2	0
7	0	1	1
8	0	0	3
9	2	1	1
10	1	0	0
Total			

Task 1

Everyone to do-Match the key terms to the definitions:

Sample	Information we collect
Data	Part of a population
Quadrat	A square frame/grid used to sample slow moving organisms
Mean	Where an organism lives
Environment	An average – the total divided by how many pieces of data you have

Green: you will be tested on the spelling of the five key terms

Amber: you will be tested on the spelling and the definition of the key terms

Red: you will be tested on the spelling and definition of the key terms. You will also need to put each into a sentence

Killer: you will be asked for synonyms for the key terms (if there are any!)

Task 2

Green:

Explain why a quadrat can be used for sampling plants, but it is not very good for sampling animals. Aim for a minimum of 3 words, including 3 explaining terms.

Peer assessment:

STAR:

STAR:

WISH:

Amber:

Write a detailed method for the using a quadrat sample the number of thistles in a field. *Ensure that you are specific with what equipment you will use, your independent variable, your dependent variable and your control variables.*

You need to use a minimum of 50 words and chunk your information into manageable steps!

Peer assessment:

STAR:

STAR:

WISH:

Red:

Write an **alternative method** to the quadrat which involves a transect for measuring the number of thistles. *Ensure that you are specific with what equipment you will use, your independent variable, your dependent variable and your control variables.*

You need to use a minimum of 50 words and chunk your information into manageable steps!

Peer assessment:

STAR:

STAR:

WISH:

Task 3:

Green:

Using the table at the start of this booklet, total the number of thistles in each quadrat and the calculate a mean for each quadrat.

Amber:

Using the table at the start of this booklet, total the number of thistles in each quadrat and then calculate the mean, median, mode and range for each quadrat.

Explain in more than 30 words why you think the data varies in each quadrat. Use 3 explaining terms.

Hint: think about the conditions needed for plants to grow.

Red:

Using the table at the start of this booklet, total the number of thistles in each quadrat and then calculate the mean, median, mode and range for each quadrat.

Explain in more than 40 words why we would need to use more than 3 quadrats to have a *representative* sample of the field. Use 4 explaining terms.