The Ferrers Sixth Form

Applied Science Transition Tasks

Expectation:

- Complete all tasks

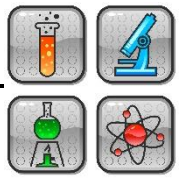
Specification:

- **Pearson BTEC Level 3 Extended Certificate in Applied Science – qualifications.pearson.com**

Key Resources:

- Collect a resource pack from Miss Burke or the science prep room
- If you are unable to collect the pack you need a pack of cress seeds, a shallow dish (a plate would work) and some kitchen roll or soil

Summer Task:



The purpose of this assignment is to demonstrate an understanding of photosynthesis and to write a scientific report.

Scenario:

You work for Premier Foods, Wisbech who produce salad for the major supermarkets. One of the large supermarkets has asked if Premier Foods can introduce cress to their salad range. Your boss has asked you to investigate the best condition to grow the cress in.

Task 1:

The Investigation

- Research photosynthesis and the variables which affect it. Include your research in the work you hand in. Reference where you have got the information from.

- Decide on a variable you are going to investigate e.g. growing the cress in different amounts of light.

- Plan a method for your experiment. Use the support sheets to help.

- Plant your cress seeds and wait for them to grow. (Measure their height every day and record.)

- Remember to make it a fair test. Include in your method how you will do this e.g. give the same amount of water to each plant.

Task 2:

2. The Report (and success criteria)

Your employer has asked you to write a report on your findings. Use the 'How to write a scientific report' info to help you do this. (P1)

Add to your report a detailed description on which variable you should focus on next to establish the optimum conditions for growing cress and the method that should be used. (M1)

Explain what factors would need to be considered by Premier Foods to make this a profitable business. You should consider limiting factors. (D1)

How to write a Scientific Report

Title

In the form of a question e.g. 'How does the amount of light affect cress growth?'

Abstract (WRITE THIS LAST but needs to be at the top of the report)

It is an overview of the whole report so somebody could read it 2 minutes and decide if the report is relevant to what they would like to find out without reading the whole report. It should be a few sentences to summarise the whole report.

Introduction

Write the purpose of the experiment and what you are trying to find out. State your hypothesis (what you think will happen) and explain how you came to that prediction. Use the previous research you have done and your knowledge.

Method (A step by step guide)

Details on how you tested your hypothesis and why you performed your study in that particular way.

Include your independent, dependent and control variables and a risk assessment.

Independent variable – What you changed
Dependent variable – What you measured
Control variables – Things you kept the same

Results

Results table.

Graphs, including a description of the trend of the graph.

Discussion

What do the results tell you? Consider whether the data you obtained supports your hypothesis. Does this agree with the literature you read?

Conclusion

Explore the implications of your findings and judge the potential limitations of your experimental design.

Recommendations for future experiments should be made here.

Reference List

Try to reference using the Harvard system

Success Criteria:

Task 1:

- Plan and carry out a suitable experiment and record results in a table.
- Challenge: Control as many variables as possible. Ensure results have minimal errors.

Task 2:

- Write up a scientific lab report including all of the sections described in the task description.
- Challenge: Describe the optimum conditions for plants and relate to your investigation