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**Year 12 General Human Biology**

**Task 5: Kitchen hygiene (25%)**

RESULT

/ 100

**Task 4**

**TYPE:** Investigation

**CONTENT:** Pathogens

**WEIGHTING:** 25%

**Student Name: ­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Due date: \_\_\_ / \_\_\_ / 2024**

**Teacher:** Mrs Cunningham

**CONDITIONS:**

Will be completed using both group and individual components. These will be clearly indicated.

There are 5 parts to this investigation

* Part B and Part E are to be done in groups.
* Part A, C and D are to be completed individually.

15 lessons allocated.

100 Marks (TOTAL)

**TASK DETAILS:**

Part A: Background research

Part B: Planning and conducting the investigation\*

Part C: Data processing and analysis, drawing conclusions and evaluating the investigation

Part D: Written report

Part E: Poster presentation\*

\* The components marked with an asterisk will be completed in groups.

Marks will be allocated as follows:

|  |  |  |
| --- | --- | --- |
| **Investigation Part** | | **Number of Marks** |
| Part A-C | **Logbook checkpoints** | **/ 30** |
| Part B | **Draft materials and method** | **/ 5** |
| Part B | **Safety and ethical considerations** | **/ 10** |
| Part C | **Group contribution** | **/ 5** |
| Part E | **Poster presentation** | **/ 15** |
| Part D | **Written Report** | **/ 35** |
| **Total:** | | **/ 100** |

**Task Information:**

In this task you will investigate the effectiveness of a hygiene practice used in a home or commercial kitchen to minimise the risk of spreading disease-causing pathogens found on surfaces.

You may use a practical performed in class, a related simulation or another practical related to this topic (as negotiated with your teacher) as the basis for your methodology and research question.

**Part A: Background research. (completed individually)**

* research
* the types of pathogens
* the best conditions for growing mould
* how the selected practice prevents the growth of pathogens

**Part B: Planning and conducting the investigation. (\* completed in groups)**

* design the procedure to followed\*
* identify practical activities to modify\*
* conduct a risk assessment and account for risks in the procedure\*
* conduct the investigation\*
* collect sufficient and relevant qualitative and/or quantitative data to address your investigation question\*

**Part C: Data processing and analysis, drawing conclusions and evaluating the investigation. (completed individually)**

* process and present the data appropriately
* analyse the evidence to identify trends, patterns or relationships
* analyse the evidence to identify errors and limitations with the data and procedure
* interpret the evidence to draw conclusion/s
* evaluate the relevance, accuracy, reliability and validity of data
* suggest possible improvements and extensions to the experiment

**Part D: Written report. (completed individually)**

* communicate findings in written report

**Part E: Poster presentation. (\* completed in groups)**

* summarise findings in a poster presentation. \*

\* The steps marked with an asterisk will be completed in groups. All others must be completed individually.

**Kitchen hygiene**

Society has benefited greatly from the knowledge about the nature and spread of pathogens, particularly those that live on surfaces. Many commercial kitchens have hygiene practices that are designed to reduce contamination and the risk of spreading disease causing pathogens. Some of these practices include, using antibacterial wipes or detergents, cleaning of dishcloths and tea towels and use of hair nets

You are required to design an investigation to access the effectiveness of a hygiene practice in reducing the spread of surface pathogens, particularly fungi or mould.

When conducting this investigation, it is important you follow the instructions provided by your teacher on the safe handling and disposal of pathogens.

The investigation will culminate in a written report to communicate your findings (individual), accompanied by a live poster presentation (group).

**Checkpoints:**

☐ Week 2 Research topic and construct question for investigation

☐ Week 2 Select practical activities and identify proposed modifications. Submit draft method\*

☐ Week 2-4 Conduct investigation

☐ Week 5 Analyse data, draw conclusions, and evaluate evidence

☐ Week 5 Submit draft written report

☐ Week 6 Poster presentation\*

☐ Week 6 Submit final written report

\* The items marked with an asterisk require only one group document to be submitted.

**Authentication strategies:**

The teacher will:

* provide class time for task completion.
* monitor progress at specified check points.
* collect and annotate drafts.
* monitor student contributions to the group task.

The student will:

* maintain a logbook to document their progress.
* complete self and peer assessments of contributions to the group task
* acknowledge all sources.

**END OF ASSESSMENT**