‘TAKE HOME’ ASSESSMENT TASK
JUNIOR [7-10]

FACULTY: SCIENCE
YEAR / SUBJECT: 10

TASK NAME / NUMBER: STUDENT RESEARCH PROJECT

DATE ISSUED: WEDNESDAY 13/02/13 (Term 1 Week 3)  DUE DATE: WEDNESDAY 13/3/13 (Term 1 Week 7)

SYLLABUS OUTCOMES ASSESSED IN THIS TASK

The following outcomes will be assessed in this task (Board of Studies):

**Outcome 5.13:** A student identifies a problem and independently produces an appropriate investigation plan.

**Outcome 5.14:** A student undertakes first-hand investigations independently with safety and competence.

**Outcome 5.15:** A student gathers first-hand data accurately.

**Outcome 5.16:** A student accesses information from a wide variety of secondary sources.

**Outcome 5.17:** A student explains trends, patterns and relationships in data and/or information from a variety of sources.

**Outcome 5.18:** A student selects and uses appropriate forms of communication to present information to an audience.

**Outcome 5.19:** A student uses critical thinking skills in evaluating information and drawing conclusions.

TOTAL MARK VALUE: 32 marks

ASSESSMENT WEIGHTING: 25%

TEACHER[S]: Mrs Dougherty, Mrs Siddiqi, Ms Wotherspoon, Mrs Saran, Ms Ali & Mr Hackney

HEAD TEACHER: Mrs Dougherty

NOTE: THE SECTION BELOW MUST BE COMPLETED BY THE STUDENT

This is to certify that the attached assessment task is all my own work. I have not plagiarised through direct copying or ‘cut and paste’. I have included a bibliography that lists books, websites and other locations from which I have obtained information.

Student Name: ___________________________       Student Signature: ____________________________

For information relating to late submission or non-submission of assessment tasks and difficulties with technology, students should refer to their Assessment Schedules Booklet.

[This sheet must be submitted with your assessment task]
### Criteria

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| **PROPOSAL:** Submitted on time | 1 | | | **AIM:** Provides a statement about the objective of the experiment. | 1 | | | **HYPOTHESIS:** Provides a logical hypothesis relevant to the SRP. | 1 | | | **MATERIALS:** List of ALL materials used. | 1 | | | **METHOD:** | 2 | | | • Provides clear instruction of how the experiment was performed. | 1 | | • Lists at least ONE (1) safety factor that affects your method. | 1 | | • Independent variable (factor you vary) | 1 | | • Dependent variable (what you measure) | 1 | | • Identify at least TWO factors that are kept constant | 1 | | • State the control in this experiment | 1 | | • Includes repetition. | | | **RESULTS:** | 1 | | | • Observations recorded. | 1 | | • Results recorded in a table(s). | 1 | | • Provide graph(s) of results. | 2 | | • Includes photos, samples or models. | 2 | | • Averages worked out correctly. | 1 | | **DISCUSSION:** | 2 | | | • Discuss of results with reference to other sources of information. | 2 | | • Describes any factors that may have affected the results. | 1 | | • Identifying 2 changes if experiment was repeated. | 1 | | **CONCLUSION:** | 1 | | | • Attempts to draw a relevant conclusion from these results. | 1 | | • Explains whether or not the results supported the Hypothesis. | 1 | | **BIBLIOGRAPHY** | 1 | | | **PRESENTATION:** minimal 0 → 1, extra 1 → 2 | 2 | | | **EFFORT:** Elementary (0), Satisfactory (1), Substantial (2), High (3), Excellent (4) | 4 | | **TOTAL** | 32 | | | **TEACHER FEEDBACK** | | | | Teacher Signature: ____________________________ Date: ______ / ______ / ______
CRANE BROOK HIGH SCHOOL
SCIENCE DEPARTMENT

YEAR 10
STUDENT RESEARCH
PROJECT 2013

- ZERO MARKS WILL BE GIVEN IF YOUR ASSIGNMENT IS HANDED IN AFTER THE DUE DATE OF Wednesday 13/3/13. (You may submit your assignment early).
- An ‘N-AWARD’ WARNING WILL BE GIVEN FOR FAILURE TO SUBMIT A RESEARCH PROJECT.
- IT IS PREFERRED THAT YOU SUBMIT A PAPER COPY OF THIS ASSIGNMENT, HOWEVER, DIGITAL COPIES WILL BE ACCEPTED NO LATER THAN 3:00 pm ON THE DUE DATE OF 13/3/13.

Outline of Task:
- You are required to choose an investigation related to one of the topics you have studied in Science or in an area of scientific interest.
- The investigation must be a first hand investigation (e.g. testing material types OR biological/geological field study) that examines the relationship between two variables.

** NOTE: Your topic must be approved by your teacher before you progress with the investigation **

Getting Started (a few hints!):
1. SELECT your topic by:
   - talking to family and friends;
   - looking in newspapers or magazines or from TV or radio; or
   - the topic may be something you have been interested in for a while.

2. After selecting the topic you will need to:
   - Provide ALL resources for your investigation.
   - Research and report upon work related to your investigation.
   - Perform a risk assessment and conduct your investigation SAFELY. There are to be NO explosives, poisons, flammable substances; NO damage to the environment; and NO use of animals that will cause them harm.
   - Design and perform your investigation. Record and discuss your data.

3. COMPLETE the PROJECT PROPOSAL form and submit it to your teacher by FRIDAY 15/02/13.

4. BEGIN YOUR INVESTIGATION, keeping a journal of your progress. This will include ideas, sources of information, data and rough drafts of your report.

Project Ideas
You are to choose the topic of this investigation ON YOUR OWN. However, if you are having trouble you may use the suggestions below as a guide. Do not forget that you should choose a problem to investigate that can be solved using equipment you have at home.

1. Can music make plants grow faster?
2. Does sugar make plants grow faster?
3. Does viscosity affect the rate of which a weight falls?
4. How much weight will various fibres support before they break?

No suggestions given for Year 7, 8 or 9 Research Projects can be used.
**Writing your Report**

You are required to submit a NEATLY HAND WRITTEN or TYPED report about your project. The length of this should reflect 4 weeks worth of work.

The report should have the following headings:

- **TITLE:** Think up a short name for your project.
- **AIM:** The purpose of the experiment. What are you trying to find out?
- **HYPOTHESIS:** A “scientific guess” on what you think might happen in this experiment. This is the possible answer to your problem.
- **MATERIALS:** Make a list of all the equipment you used to carry out your experiment.
- **METHOD:** The method is the steps you followed when carrying out your experiment. This section can include labelled diagrams or photos showing how the experiment was set up. Specify what you will change (independent variable) and the factors you will keep constant in your experiment. Do you have a control? What measurements are you making? Remember that repetition of an experiment or using a larger sample gives more reliable results.
- **RESULTS:** This section contains your observations and measurements neatly set out in data tables and represented as graphs. You may also include sketches or photos to illustrate what you observed.
- **DISCUSSION:** In this section you should discuss your results with reference to other sources of information to validate or support your findings. Were there any factors that may have affected the results? You are to also identify at least two (2) changes that you would make to your experimental design if you were to repeat the experiment again.
- **CONCLUSION:** A summary of your experiment where you interpret what your results mean. Do your results answer your aim/hypothesis.
- **BIBLIOGRAPHY:** This is an alphabetical listing of all sources of information which may have helped your project. Include Internet web sites.

GOOD LUCK!
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