



**Dunman High School
Year 2 Biology**

DHS Year 2 INVESTIGATIVE SCIENCE FAIR 2008

In this competition, students will have to work on an investigative project based on their ideas, record their investigation in a log book, prepare a report that reflects different aspects of investigation and present their findings.

Aim:

- To give students the experience of conducting an investigative science project
- To provide students with a platform to exhibit and share their findings with other students.

Rules:

1. All projects must be Biology-related, involving experimentation and/or data collection.
2. Each group must have at least 4 members, and not more than 5 members.
3. **Project proposal forms are to be submitted by 31 January 2008.**
4. All groups are to keep a logbook to record the progress of their project. Teachers will look through them regularly.
5. **All groups will prepare the following by 31 March 2008:**
 - **A project report in the form of a display board**
 - **Project Logbook**
 - **10 min oral presentation with Q & A session**
6. Booking of laboratory facilities/ apparatus must be done one week in advance using the forms provided.
7. No experiments on mammals (e.g. mice or humans) are permitted.
8. **Date of submission of project proposal form: 31 Jan 2008**
9. **Date of submission of project: 31 March 2008**

Judging Criteria

<p>Scientific investigation (as reflected in the logbook)</p>	<p>Exploration of Scientific Thought</p> <ul style="list-style-type: none"> ▪ Review of relevant literature ▪ Crafting & refinement of research question ▪ Identification of variables <p>Thoroughness of Investigation</p> <ul style="list-style-type: none"> ▪ Good design of experimental procedure ▪ Use of controls as relevant <p>Analysis of Data and Evaluation</p> <ul style="list-style-type: none"> ▪ Presentation of data in appropriate form (e.g. tables, graphs) ▪ Analysis of data and making appropriate conclusions ▪ Link data collected to scientific thought/principles <p>Creativity, Originality and Future Application</p> <ul style="list-style-type: none"> ▪ Idea for project is original/novel ▪ Design of experiment is creative ▪ Possible future applications/directions discussed 	<p>40 marks</p>
<p>Presentation</p>	<p>Display Board Presentation</p> <ul style="list-style-type: none"> ▪ Layout is appropriate (appropriate font size, poster easy to read etc.) ▪ Relevant information presented (title, abstract, materials and methods, data collection, conclusion) <p>Oral Presentation</p> <ul style="list-style-type: none"> ▪ Speaks clearly ▪ Ability to engage audience ▪ Smooth and shows teamwork ▪ Ability to answer questions posed 	<p>20 marks</p>
<p>Total Marks</p>		<p>60</p>
	<p>To be converted</p>	<p>30</p>



**Dunman High School
Year 2 Biology
Investigative Science Project**

Proposal Form

Deadline of submission: 31 January 2008

Project Information (please write in block letters neatly)		
Title of Project*		
Class		
Teacher-in-charge		
Research Area (Please check box accordingly)	<input type="checkbox"/> Food Science	<input type="checkbox"/> Plant & Animal Life
	<input type="checkbox"/> Ecology & the Environment	<input type="checkbox"/> Life Sciences (DNA/ Microorganisms)
	<input type="checkbox"/> Medical Science	<input type="checkbox"/> Others please state: _____
Please state in <u>NOT</u> more than 100 words, a summary of the proposed project:		

*The project title should throw light on your investigation. It should NOT be an advertisement type of slogan.

Examples of bad project titles:

- A Magical Solution
- Save the World with Vegetables

Examples of good project titles:

- Investigations of the Breakdown of Aspartame
- To Study the Effects of Abiotic Factors on the Sungei Api Mangrove Swamp

Student Information	
Member 1 Name:	Class:
Email:	Contact No:
Member 2 Name:	Class:
Email:	Contact No:
Member 3 Name:	Class:
Email:	Contact No:
Member 4 Name:	Class:
Email:	Contact No:
Member 5 Name:	Class:
Email:	Contact No:

Team Name

Thank you for your application.
Please hand in this proposal form to your science teacher

DHS Year 2 INVESTIGATIVE SCIENCE FAIR 2008 Rubrics

Title of Project: _____

Class: _____

Group members' names:

_____, _____, _____
 _____, _____

	Developing 1-4	Developing 5-7	Accomplished 8-10	Score
Exploration of Scientific Thought	Research question is vague and confusing	Research question is somewhat sound, and lacks a few details	Research question is sound and precise, with clear purpose and appropriate details	
Thoroughness of Investigation	Experimental procedure is inaccurate with several mistakes	Experimental procedure is somewhat accurate, some details of controls and variables not provided	Experimental procedure is accurate, with the use of controls and relevant variables	
Analysis of Data & Evaluation	Data is presented with many inaccuracies and mistakes. None or very little analysis and conclusions were drawn.	Some data is presented in appropriate forms with some inaccuracies. Simple analysis and conclusions were drawn.	Data is presented in appropriate and accurate forms, with in-depth analysis and conclusions were drawn.	
Creativity, Originality and Future Application	Idea for project or design of experiment is not original or creative. None or very little possible future	Some parts of the project or design of experiment showed originality or creativity. Possible future applications were discussed but in	Idea for project or design of experiment is original or creative. Possible future applications were discussed accurately.	

	applications were discussed but with inaccuracies.	simple detail and some inaccuracies.		
Display Board Presentation	Layout was unattractive and disorganized. Information was incomplete or irrelevant.	Layout was somewhat disorganized and plain with little graphics. Some information was irrelevant.	Clear, attractive layout with relevant information presented.	
Oral Presentation	Group members are neither able to speak clearly nor engage audience most of the time. Teamwork is not shown. Not able to address most of the questions posed.	Group members speak clearly are able to engage audience in some parts and Some teamwork is shown. Able to address some of the questions posed.	Group members speak clearly and able to engage audience. Teamwork is shown. Able to address most of the questions posed.	
			Total	/60
			Converted marks	/30
		Punctuality - Project submitted on time.	Bonus marks (5 marks)	