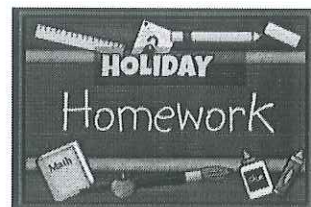




SILVER JUBILEE YEAR (1999-2023)  
HOLIDAY HOMEWORK

Dear Parents,  
*Greetings from New Al Wurood!*



GRADE 12, SCIENCE – HOLIDAY ASSIGNMENT, 2023

Subject	Assignment
PHYSICS	<p><b>. Assignment 1-</b></p> <p><input type="checkbox"/> Completion of Practical record work {8 Experiments (4 Experiments from each section) + 6 Activities(3 Activities from each section)}</p> <p style="text-align: center;"><b>SECTION- A</b></p> <p>1) To determine resistivity of two / three wires by plotting a graph for potential difference versus current.</p> <p>2) To find resistance of a given wire / standard resistor using metre bridge.</p> <p>3) To verify the laws of combination (series) of resistances using a metre bridge.</p> <p>4) To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.</p> <p style="text-align: center;"><b>OR</b></p> <p>4) To find the frequency of AC mains with a sonometer</p> <p style="text-align: center;"><b>SECTION –B</b></p> <p>5) To find the value of <math>v</math> for different values of <math>u</math> in case of a concave mirror and to find the focal length.</p> <p>6) To find the focal length of a convex lens by plotting graphs between <math>u</math> and <math>v</math> or between <math>1/u</math> and <math>1/v</math>.</p> <p>7) To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.</p> <p>8) To find the refractive index of a liquid using a convex lens and a plane mirror.</p> <p>*Details of the Activities have been shared.</p> <p><b>Assignment -2</b></p> <p><input type="checkbox"/> Planning and Preparation of Science Expo</p>
CHEMISTRY	<p><b>Assignment 1-Completion of records</b></p> <ul style="list-style-type: none"><li>● Salt analysis-8 Salts.</li><li>● 2 volumetric Analysis.</li><li>● Content based Analysis-Total 14 Expts.</li></ul> <p><b>Assignment -2</b></p> <ul style="list-style-type: none"><li>● Planning and Preparation of Science expo.</li></ul>

<b>BIOLOGY</b>	<p><b>Assignment - 1</b>  Completion of the following experiments in the record book</p> <ul style="list-style-type: none"> <li>- study of pollen germination</li> <li>- study of adaptations of flowers for pollination</li> <li>- study of gamete development in a mammal</li> <li>- study of blastula</li> <li>- study of exercise on controlled pollination</li> <li>- study of mitosis in onion root tip</li> <li>- study of isolation of DNA from plants</li> <li>- study of symbiotic association in root nodules of leguminous plants</li> <li>- study of cuscuta on host</li> <li>- study of lichen</li> </ul> <p>Completion of project work.  <b>Assignment -2</b>  Planning and Preparation of Science expo.</p>
<b>MATHEMATICS</b>	<p>Grade 12 Maths activities will be shared in the group</p> <p>Do the activities 2,3,5,9,13,14,19,20,26,27 and submit.</p>
<b>COMPUTER SCIENCE</b>	<p><b>Assignment 1:</b>  Practice 15 python programs as per the cbse guidelines. Programs pdf have shared through WhatsApp and email.</p> <p><b>Assignment -2</b></p> <ul style="list-style-type: none"> <li>• Form project team (min. 2 and max 3 members) and select the live python projects and Team leader will send details in the Whatsapp group.</li> </ul>
<b>ENTREPRENEURSHIP</b>	<p>TWO projects project as per the C B S E guidelines.</p> <ol style="list-style-type: none"> <li>1. Business Plan</li> <li>2. Market Survey</li> </ol> <p><b>(Guidelines for project are given in the CBSE Textbook.)</b></p>

**ASSIGNMENT No.II.**

**(Planning and preparation for Cluster Science expo during vacation)**

**SCIENCE EXPO-2023**

**(Classes 9-12)**

**OBJECTIVE:**

*The objectives of organizing Science Project Competition is to emphasize the development of science and technology as a major instrument for achieving goals of self-reliance and socio economic and socio ecological development.*

**The main theme of Science Exhibition:**

## “UNDERSTANDING ECOSYSTEM FOR HEALTH AND WELL-BEING”

### SUBTHEMES:

- 1) *Sub-theme I: Know your ecosystem*
- 2) *Sub-theme II: Fostering health, nutrition and well-being*
- 3) *Sub-theme III: Social and cultural practices for ecosystem and health*
- 4) *Sub-theme IV: Ecosystem based approach (EBA) for self-reliance*
- 5) *Sub-theme V: Technological innovation for ecosystem and health*

*Note: There are two categories*

*(i) Junior (IX & X)*

*(ii) Senior (XI & XII)*

### RULES:

*The exhibit /model include:*

1. *Working/Attractive models to explain a concept, principle or a process.*
2. *An indigenous design of a machine /device*
3. *An innovative /inexpensive design or technique*
4. *Application of basic principles of Science and Technology.*
5. *Scheme /design of a device or machine to reduce production cost .*
6. *Investigation based study.*

### INSTRUCTIONS:

1. *Teams are already assigned containing 3 to 4 members in each team.*
2. *Choose you own project(idea) which connects with the main theme and subtheme as well.*
3. *Prepare some essential questions which could brainstorm your idea.*
4. *Predict your experimental outcome.*
5. *Formulate hypothesis based on the predictions*
6. *Select dependent and independent variable*
7. *Procure materials required for your project*
8. *Plan of action to execute the idea , for example circuit diagram / model experimental set up (graphical or digital set up), even you can prepare PPT to show how you are going to execute your Idea.*

*Note: IF possible you can present your working model /still model also if it is ready.*

9. After the reopening of school , after vacation, each team has to submit your ground work done which are listed in the instructions with the help of PPT( Even you can present your model) if it is ready)

10. And then you can start the execution/assembling of your model.

Note: 1)For Classes(IX & X) ,this project will be considered as one of the SUBJECT ENRICHMENT ACTIVITY for SECOND TERM.

For Classes(XI & XII)This project will be considered as Investigatory project (based on the contents) {Physics,Chemistry ,Bio and Computer Science) as a part of Board practical examinations, So involvement of all the students is mandatory.

For queries and guidance you can contact your science teachers and regarding presentation you can contact English teachers.

**Supporting website for your reference**

<https://www.theedadvocate.org/18-of-the-best-12th-grade-science-projects-and-experiments/>

<https://science.wonderhowto.com/how-to/best-investigatory-projects-science-16-fun-easy-ideas-kickstart-your-project-0147689/>

Note: *Holiday homework has been designed with the following objectives in mind:*

- 1.To keep the children connected with the syllabus.
- 2.To enhance children's creativity and engage them constructively during the holidays.
- 3.To bring out the innate potential in children.

*Parents are the facilitators of the child at home and are requested to assist your child to do their holiday assignment and submit it on time after vacation as it will be graded.*

Regards,

Principal.

