



THE ICONIC SCHOOL

Learn Today. Lead Tomorrow.

Homework

SUMMER HOLIDAY HOMEWORK GRADE: XII (SCIENCE)

INSTRUCTIONS:

- *The holiday homework has to be done in notebook/scrapbook/A4 size sheets.*
- *The work should be creatively and neatly done.*
- *Make a front page mentioning your basic details “name, class”*



ENGLISH

Interview-Based research:

Example:

- Students can choose a topic on which to do their research/ interview, e.g., a student can choose the topic: “Evolving food tastes in my neighbourhood” or “Corona pandemic and the fallout on families.” Read the available literature.
- The student then conducts interviews with a few neighbours on the topic. For an interview, with the help of the teacher, student will frame questions based on the preliminary research/background.
- The student will then write an essay/ write up / report etc. up to 1000 words on his/her research and submit it. He / She will then take a viva on the research project. The project can be done in individually or in pairs/ groups

PHYSICS

Write the below listed practical in your practical file:

1. To study various factors on which internal resistance / EMF of the cell depends.
2. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equiconvex lens (made from a glass of known refractive index) and an adjustable object needle.
3. To investigate the relation between the ratio of (i) output and input voltage and (ii) number of turns in the secondary coil and primary coil of a self-designed transformer.
4. To study the factor on which the self-inductance of a coil depends by observing the effect of this coil, when put in series with a resistor/(bulb) in a circuit fed up by an A.C. source of adjustable frequency.
5. To estimate the charge induced on each one of the two identical Styrofoam (or pith) balls suspended in a vertical plane by making use of Coulomb's law.
6. To study the variations in current flowing in a circuit containing an LDR because of a variation in (a) the power of the incandescent lamp, used to 'illuminate' the LDR (keeping all the lamps at a fixed distance). (b) the distance of a incandescent lamp (of fixed power) used to 'illuminate' the LDR.
7. To Study of the Concept of Full Wave Rectifier and their application in daily life.
8. To Study the Magnetic Force on the Current-Carrying Conductor
9. To study the magnetic force between two parallel current-carrying conductors by experimenting with magnetic field lines surrounding them.

CHEMISTRY

Investigatory Project

An investigatory project to be done on **any one** of the topics listed below:

- Study of the presence of oxalate ions in guava fruit at different stages of ripening.
- Study of quantity of casein present in different samples of milk.
- Preparation of soybean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, etc.

- Study of the effect of Potassium Bisulphate as food preservative under various conditions (temperature, concentration, time, etc.)
- Study of digestion of starch by salivary amylase and effect of pH and temperature on it.
- Comparative study of the rate of fermentation of following materials: wheat flour, gram flour, potato juice, carrot juice, etc.
- Extraction of essential oils present in Saunf (aniseed), Ajwain (carum), Illaichi (cardamom).
- Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chilli powder and pepper.

The work should have Index page, Introduction of the project, observation table for experiment conducted, Result and Conclusion.

BIOLOGY

INVESTIGATORY PROJECT

GUIDELINES TO MAKE PROJECT

1. Select your topic under a sub – theme which completely maps with the sub–theme.
2. Source information on your project.
3. Work plan.
4. Make and test your hypothesis - design experiments to test your hypothesis.
5. Recording your data and observations.
6. Consult your guide (teacher / parent/ research scholar).
7. Calculations to draw conclusions.
8. Summarize results and derive conclusions.
9. Take photographs.
10. Define utility and further scope of Project.
11. Cost feasibility.

Roll No.1 Topic ----Drugs

Roll No.2 Topic ----Development of foetus

MATHEMATICS

Write the 10 listed activities of mathematics practical in your mathematics activity file.