

HOLIDAY HOME WORK 2026-27(SCIENCE)

CLASS 11

ENGLISH

1. Project Work

Poetic Devices – A Comparative Study

Language becomes powerful when we understand how it creates meaning and emotion.

Task:

Compare the following poetic devices:

- Simile and Metaphor
- Personification, Transferred Epithet, Apostrophe
- Metonymy and Synecdoche
- Alliteration, Consonance and Assonance
- Repetition, Anaphora, Refrain
- Oxymoron and Antithesis

For EACH device, include:

- Definition (*in your own words*)
- At least THREE examples (*minimum one from your syllabus*)
- One self-created example
- A short comparison (difference/similarity where applicable)

2. Research-Based Writing Tasks

(a) The Portrait of a Lady – Article Writing (Word Limit: 200–250 words)

Topic:

“Modern living has reduced the traditional value of joint families, leading to the neglect of the elderly.”

Write an article discussing:

- Views of the **older generation**
- Real-life examples

- Perspective of the **younger** • Your own opinion **generation**

(b) A Photograph – Poster Making

Topic: “Live in the Present, Let Go of Past Trauma for a Healthier Life” Your poster should include:

- A slogan • A clear message
- A meaningful visual idea

(c) The Summer of the Beautiful White Horse – Speech Writing

Topic: “Happiness is a State of Mind and Honesty is a Choice—They Nourish Each Other”

Imagine you are delivering this speech in a school assembly.

Word Limit: 150–200 words

PHYSICS

1. PROJECT WORK: - FOR XI TERM PRACTICAL EXAMINATION, ONE INVESTIGATORY PROJECT IS TO BE PREPARED.
2. The project file will be handwritten.
3. The observation sheets, graph etc must be hand made based on the reading/ observation taken by individual student.(A list of suggested Projects has been attached)

INVESTIGATORY PROJECT LIST

1. To study the changes in velocity of a body pulled by a constant force.
2. To study the conservation of energy of a simple pendulum using ticker -timer and tape.
3. To study conservation of energy of a body falling freely, using ticker timer and tape.
4. To estimate the size of molecule of an oil.
5. To study a thermocouple and variation of its e.m.f. with temperature.
6. To study the motion of a ball using the double inclined track /channel.
7. To study acceleration due to gravity with the help of ball rolling down an inclined plane and by applying the correction for rotatory motion.
8. To study the effect of nature of surface on emission and absorption of radiation.

9. To determine the coefficient of viscosity of a given viscous liquid by measuring the terminal velocity of a given spherical body.
10. To study the various factors (like distance between the electrodes, concentration of electrolyte etc) on which e.m.f. of the cell depends.
11. To determine the refractive indexes of various liquids by using hollow glass prism.
12. To study the effect of temperature on the elasticity of rubber band.
13. To study the tension on the pitch of a string.
14. To study the effect of mass on terminal velocity.
15. To study full wave , half wave and bridge rectifier.
16. To study the self-designed transformer.
17. To study the coefficient of restitution of elastic solids.
18. Calculate numerical aperture of the given optical fibre.
19. Solar powered grill from recycled carton box.
20. To light an LED Using a thermistor.
21. Raft powered by surface tension.
22. To study the tangent galvanometer.
23. To study about vibrational magnetometer.
24. To calculate the specific heat capacity of water.
25. To prepare the logic gates and study their input and output.
26. Analysis of voice frequency across ethnic identities.
27. To calibrate the ammeter by using potentiometer.
28. To calibrate the voltmeter by using potentiometer.
29. To study doppler effect and fibre gyroscope.
30. Analysis of black hole thermodynamics.

CHEMISTRY

An investigatory project is to be prepared for 11 class practical according to the instructions given below:

- a) It must be handwritten in your neat handwriting.
- b) It should include the main topic, certificate, acknowledgement followed by the index and main content.
- c) Project must be neat and clean.
- d) Make it more interesting by pasting pictures, photographs or samples wherever required.
- e) Last page includes conclusion of the experiment and then ends with bibliography.
- f) Analyze your result of the experiment in proper observation table with proper data.

1. Sterilization of water using bleaching powder: Roll No. 1,16,31,46,61

2. To prepare soya milk and compare with different samples of natural milk : Roll No. 2,17,32,47,62

3. Quantity of the presence of caffeine in different samples of Tea: Roll No: 3,18,33,48,63

4. Presence of oxalate ions in guava fruit and different stages of ripening: Roll No : 4,19,34,49,64

5. Effect of Potassium Bisulphate as a food preservative: Roll No: 5,20,35,50,65

6. Quantity of the presence of casein in different samples of milk: Roll No: 6,21,36,51,66

7. Extraction of various essential oils present in Ajwain (Carum), Illaichi (Cardamom) and Saunf (Fennel Seeds): Roll No: 7,22,37,52,67

8. Compare vitamin C in different fruit juices : Roll No: 8,23,38,53,68

9. Measuring the rate of evaporation of different liquids : Roll No: 9,24,39,54,69

10. To study the foaming capacity of different soaps: 10,25,40,55,70

11. Comparative study of the rate of fermentation in the following substances- potato juice, wheat flour, carrot juice, gram flour, etc.: Roll No: 11,26,41,56

12. Common food adulterants in fat, butter, oil, turmeric powder, pepper, chilli powder, sugar, etc.: Roll No : 12,27,42,57

13. Measuring solubility of saturated solutions: Roll No: 13,28,43,58

14. Measure the amount of acetic acid in vinegar: Roll No: 14,29,44,59

15. Determination of contents in cold drinks: Roll No: 15,30,45,60

BIOLOGY

BIOLOGY PROJECT WORK: - FOR XI TERM PRACTICAL EXAMINATION, ONE BIOLOGICAL BASED PROJECT IS TO BE PREPARED ON ANY TOPIC BY USING NCERT TEXT BOOK AND CBSE.NIC.IN. (A list of suggested Projects has been attached in the last)

Topics are following:

1. Different types of fauna and flora in India.
2. Scared grooves.
3. Radiation effect on living being.
4. Stem cells.
5. Role of antioxidants in human body.
6. Genetically disorder in human being.
7. Genome project.
8. Endangered species of fauna and flora.
9. Any chronic disease.
10. Malfunctioning of junk food etc.
11. To Study the Genetic Mutation: Types and its Causes

MATHS

1. Complete the following list of Mathematics activities

- **Activity 3:**To represent set theoretic operations using Venn diagrams.
- **Activity 4:**To verify distributive law for three given non-empty sets A, B and C, that is, $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$.
- **Activity 7:**To verify the relation between the degree measure and the radian measure of an angle.

2. Do any one project in Mathematics. Refer the following list of projects.

List of Projects

1. Project on history of Mathematicians: It may include history of Indian mathematicians such as Aryabhata, Brahmagupta, Varahamihir, Sridhar a, Bhaskar Acharya, Ramanujan

- etc., and history of foreign mathematicians such as Cantor, Pythagoras, Thales, Euclid, Apollonius, Descartes, Fermat, Leibnitz, Euler, Fibonacci, Gauss, Newton, etc.
2. On linear Programming problems related to day-to-day life like collecting data from families of their expenditures and requirements from the factories to maximum output.
 3. Collect data from dieticians, transporters, agents and formulate linear programming problems.
 4. Make a chart of the formulae of applications of calculus.
 5. Applications of conic sections, vectors, three-dimensional geometry, calculus, etc., in Mathematics and Physics.
 6. Mathematics and Chemistry: Study structure of organic compounds.
 7. Mathematics and Biology: Study of science of heredity etc.
 8. Mathematics and Music
 9. Mathematics and Environment
 10. Mathematics and Arts: Construction of shapes using curves
 11. Mathematics and Information and Communication Technology: Writing of Mathematical programmes, flow charts, algorithm, circuit diagrams etc.
 12. Collection of statistical data and analysing it for standard deviation and mean deviation.
 13. Observe the various patterns and properties in Pascal's triangle and make a project.
 14. Prepare a project based on the Fibonacci sequence, their properties and similar pattern found in nature.
 15. Form a differential equation for the growth of bacteria in different environments.
 16. Study the nature of mathematics and make a project showing where three aspects of nature of mathematics - formalism, logic, intuition is applied in the development of mathematics.
 17. Application of cavalier's principle in mathematics.

Note:

It is a sample list of projects. You can do any innovative projects other than the listed projects.

PHYSICAL EDUCATION

Project work to be done by class 11 Physical Education students as summer holiday homework.

(1) Detail of SAI Khelo India Test

(2) Detail of anyone IOA recognized Sport/Game of your choice

The project should be prepared using any practical manual file available in the market of any brand. The file should have a plain page on one side (white) for drawing or pasting pictures, and a lined page on the other side for writing details.

PSYCHOLOGY

Prepare a project file on a small study (Case study) that must involve different methods of enquiry like survey, interview, observation, psychological testing related to any one of the following topics:

- Bullying/Cyber bullying
- Mental health and wellbeing
- Impact of social media on the youth today
- Altruism and its impact on wellbeing
- Peer Pressure
- Anger management
- Sleep Hygiene
- Changing Gender roles and stereotypes
- Cooperation and Competition
- Compliance and Obedience

You can choose to do experiment on any topic covered in the course which may focus on cause and effect relationship.

Project Blueprint

Title page ,Acknowledgment ,Certificate, Abstract (1 page) ,Table of Contents (1 Page),Introduction (of the topic) (2 pages) ,Rationale (1 page), Methodology (3-4 pages) , Statement of the problem , Objective of the study , Hypothesis, Operational definition of the variables, Sample selection and criteria, Tools for data collection (with their description), Procedure for data collection, Result (1 page) , Interpretation of profile cases (1 page) , Conclusion (1 page), Reference (1 page), Appendix (Data collected sample)

Further instructions:

Maximum pages allowed- 20 pages.

Must be a cardboard vertical file. Plastic files are strictly prohibited.

ARTIFICIAL INTELLIGENCE

Activity 1: AI Around You

Observe your surroundings and identify at least 5 examples of Artificial Intelligence applications that you encounter in daily life. For each example, briefly explain how it uses AI.

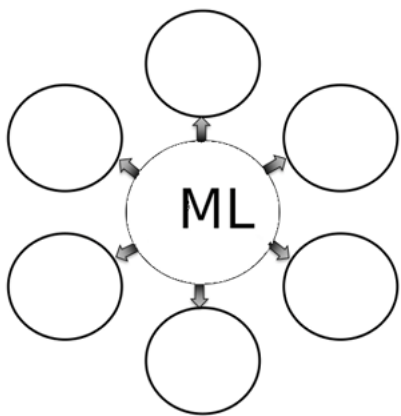
S.No.	AI Application	How it uses AI

Activity 2: AI in Education

Suggest some ways Artificial Intelligence can be used to enhance teaching-learning experiences in schools. Your suggestions can be in the form of text, diagrams or multimedia.

Activity 3:

Based on the understanding you have developed till now, how do you think Machine Learning could help some of the problems being faced currently by your school. Fill the problems in the blank circles given below:



Activity 4:

Create a dataset about yourself with the following attributes (fields):

Attribute Name	Size of the Field	Data Type
Name	100	Character
Age	3	Number
Address	200	String
Class	3	Character
Number of friends	3	Number
Number of FB posts	3	Number
Type of FB posts	Can you Guess	Can you Guess
Number of word docs you created	4	Number
Type of word docs you created	Can you Guess	Can you Guess

Now that you have created a dataset of your own, it is the time to categorise the data. Data can be sorted

into one of the two categories stated below:

- Structured Data
- Unstructured Data