



**GURU NANAK E.M. PUBLIC
SCHOOL**

CLASS – VIII

SUMMER HOLIDAY

HOMEWORK

SESSION : 2025 - 26

AIoT PROJECT
THEME: Crop Production (कृषि समागम)

ENGLISH

Activity 1:

"Harvesting Connections: The Intersection of Technology and Human Bond in Agriculture". Create a comic strip showcasing a harmonious blend of technology in agriculture, such as a farmer using modern machinery alongside traditional farming methods, with a community gathered around.



Activity 2: "Utilizing Adobe Express, design a poster illustrating the integration of medicinal plants into our daily routines."



HINDI

पाठ - 'पानी की कहानी' - के आधार पर 'कृषि में जल संरक्षण' विषय से सम्बन्धित महत्त्वपूर्ण बातों का प्रसारित करते हुए ससंचाई की प्रमुख विधियों पर ~~At~~express की सहायता से पी. पी. टी प्रस्तुतीकरण तैयार कीजिए।

2- पूरक पुस्तक 'पटारा' कहानी संग्रह की प्रथम पाँच कहानियों को पढ़ें प्रत्येक एक कहानी पर कक्षा की बाल सभा में अपने साथियों के सहयोग से ~~सू~~में प्रभाषिणी नाट्य मंचन प्रस्तुत करें।

3- अप्रैल में की कायणपत्रिका हहंदी व्याकरण की कॉपी में हलें का प्रथम चक्रीय परीक्षा हेतु ~~का~~ पुनराभ्यास करें।



शिक्षण अधिगम परिणाम:-

- हहंदी साहल्य के प्रगत रुधच ऐ पिास ।
- भाषिा कौशल ि व्याकरण का पिास ।
- रचनात्मक लेखन, सृजनात्मकता तथा भाषिसभव्यजतत का पल्लिन।
- मनन-धचंतन का पिास तथा मौसलकता में असभिद्वध।

धातुरूपाखण- परस्मैपदी - नम्, कृ, गम्, अस्, दृश् (लट्, लृट्, लङ् लकारों में)

4. पाठाधारत कायणपत्रिका को उत्तरपुजस्तका में पूर्ण रूप से शिक्षण अधधगम

कौशलम् -

ितय ननमाणण प्रकक्रया का ज्ञान ि शब्द भंडार में िद्धि। संस्कृत लेखन कौशल का सि सिबंधी व्याकरणक ि तकनीकी ज्ञान। धचंतन कौशल का षिकास।

AIOT PROJECT

Theme: Crop Production (Krishi Samagam)

Subjects Integrated: Science, Social Science, Mathematics, Information Technology, and Artificial Intelligence.

Problem Statement:

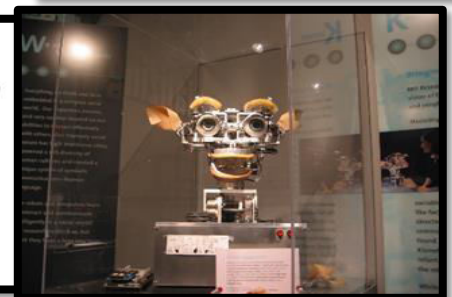
In light of India's status as the most populous nation, providing food for 1.4 billion people poses a significant challenge, exacerbated by a 17% reduction in cultivable land area. Addressing the need for increased food production with limited resources and harnessing new technologies to empower farmers digitally is imperative.

Solution:

SCIENCE

Create a digital or physical model or app and accompany it with a PowerPoint presentation demonstrating the experimentation of various factors and offering recommendations to farmers to enhance crop production under resource constraints. Additionally, propose solutions to mitigate the following issues in your presentation, dedicating a research page to each parameter listed below, emphasizing the importance of farmers testing them and transitioning from traditional to digital methods.

- Soil pH
- Soil moisture
- NPK level
- EC testing
- Different types of soil (crop-based)
- Water holding capacity of soil



SOCIAL SCIENCE

Related DRR topic:

- *Intensive farming and its impacts
- *Problem of burning agricultural waste and air pollution

India is an agriculturally important country. Two-thirds of its population is engaged in agricultural activities. Agriculture is a primary activity, which produces most of the food that we consume. Besides food grains, it also produces raw material for various industries. However, the practices like intensive agriculture and commercial farming are characterized by the use of higher doses of modern inputs, e.g. high yielding variety (HYV) seeds, chemical fertilizers, insecticides and pesticides in order to obtain higher productivity. This not only leads to land degradation but also to the problems like- burning agricultural waste leading to air pollution mainly in North India during winter. Project Work should include the following:



- *The problems associated with commercial farming
- *Identify the causes and harmful effects of air pollution because of burning agricultural waste in parts of North India
- *Work done by government bodies /NGO's to bring control on pollution levels in our cities
- *Implement practices that can reduce disasters caused by human actions
- *Case based study-Stubble burning in UP, Haryana and Punjab during winter seasons and effects
- *Create maps illustrating:
 - a. Types of crops grown in different regions of India
 - b. Various soil types found in different regions
 - c. Climatic conditions required for optimal crop growth
- *Find out about any one innovation that can help agriculture and prevention of air pollution and create a report of 2 pages along with a video or PPT with the help of adobe express.

Learning outcome: Students will be able to gain a better understanding of the potential risks involved in commercial farming and the strategies employed to mitigate and respond to such risks effectively. They will be able to incorporate disaster risk reduction measures in Agriculture.

ARTIFICIAL INTELLIGENCE

Utilize Teachable Machine to develop an AI model, application, or gadget that can identify different parameters for which farmers traditionally depend on laboratories or experts for testing.



MATHEMATICS & INFORMATION TECHNOLOGY

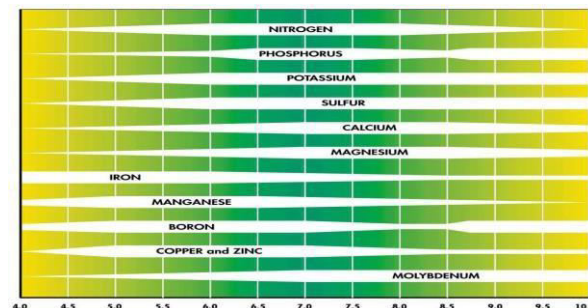
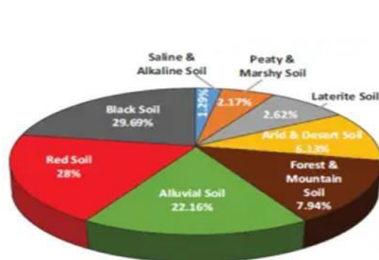
Data Analysis Assignment

Objective:

To gather data regarding various factors related to soil properties and conduct data analysis using spreadsheet software Microsoft Excel to present and interpret the data.

Instructions:

- Gather data on the following factors:
 - Soil pH
 - Soil moisture
 - NPK (Nitrogen, Phosphorus, Potassium) level
 - EC (Electrical Conductivity) testing
 - Different types of soil categorized by crop-based classification
 - Water holding capacity of soil
- Utilize Microsoft Excel to organize and analyze the collected data
- Present the findings in a comprehensive and interpretable manner using appropriate



graphs, charts, and statistical measures. Interpret the analyzed data to draw meaningful conclusions about the relationships between different soil properties and their implications for agricultural practices.

Submission Guidelines:

- Submit the completed data analysis report in Microsoft Excel format (.xlsx).
- Ensure that the document is neatly organized and clearly labeled for each factor analyzed.
- Include interpretations and insights derived from the data analysis.

Learning Outcomes:

Upon completion of this holiday assignment, students will:

- Gain proficiency in collecting, preparing, representing, and analyzing data.
- Cultivate an imaginative and creative mindset through the development of a gamified learning environment.
- Acquire knowledge and hands-on experience in training and constructing an AI model using Teachable Machine, aiding individuals without agricultural backgrounds in engaging with farming through machinery or an app.
- Enhance organizational skills and leadership qualities through collaborative group projects.
- Understand the significance of agriculture, crops, and natural resources in food production, emphasizing the avoidance of food wastage.

SL NO.	SUBJECTS	DATE OF SUBMISSION
1	HINDI	8 TH JULY,2025
2	ENGLISH, SCIENCE & AI	9 TH JULY,2025
3	SST & MATHS	10 TH JULY, 2025

Please note : The Holiday Homework will be considered for Project Based Assessment & carries a weightage of 10 marks in each subject.

ENJOY YOUR HOLIDAYS !!