Summer Holiday Homework
Class – 12th Science

Holidays are about experiences and people, and turning into what you feel like doing at that moment. It's time to Relax, Reflect and Recharge!

Dear Parents/Students,

Kindly Note—

1. The Summer Break is scheduled from 27th MAY 2024 to 23rd JUNE 2024.

2. Regular classes will commence on 24th JUNE 2024 at Usual Time.

Plan out and complete the holiday homework in time. **In addition, revise the syllabus already completed**.

Please complete the work and submit it to the subject teachers in the first week of opening the school. Holiday's homework has been designed with the following objectives: To keep children connected with the syllabus.· To engage children constructively.· To help students prepare projects in consultation with the subject teacher.·

NOTE-- Holiday homework will be part of the subject enrichment activity for the First Term bearing 5 marks in each subject.

Hope to see you soon
Happy summers!

ENGLISH

Make a project file on the following topics -

MOHD. AARISH , ABHISHEK CHAUDHARY,APEKSHA ,ARYANANDINI , ASHITA, KHUSHI,KRITIKA,KRITIKA ,MISHTHI MLHOTRA ,PALAK GAUR , AKASH GIRI ,SHASHANK	(i) Acid attack-An attack on faced future.
PRIYANSHI KHUSHI ,RADHIK SHRMA, ROHAN, SALMAN, SALONI YADAV, SMRITI, SOFIYA , SHRISHTI SAINI ,TANU, AAKRITI JAIN , AVNI CHAUDHARY ,SHAURYA PATEL	(ii) Child Labour
AYUSH ,ADITYA KUMAR,AMAAN KHANA, ANKUR UPADYAY,ANSH SHARMA, ANUSHKA SARASWAT,ARPIT TYAGI,ARYAN, CHIRAG SHARMA , DIVYANSHU JOSHI,KAKUL CHAUDHARY ,SNEHA CHAUDHARY	(iii) Cybercrime and security
GUNJAN ,HARSH SHUKLA , HIMANSHU CHANDELA ,KARTIK PAL, KARTIKEY YADAV ,LALIT YADAV, MANSHI SHARMA, MOHIT PAL , NATIK THAKUR , NANCY RAJPUT ,KARTIK TIWARI ,TANUJ	(iv) Patriarchy and female Subjugation
NAVEEN TOMAR ,NIKHIL ,PIYUSH MALHOTRA ,PRAGYA SHARMA ,PRANEESH SINHA ,PRIYANSHU KUMAR TIWARI , RISHBH KUMAR SHARMA , SAYAL BHATI , SHRUTI CHAUDHARY , TANISH SHARMA ,MAHI ,KESHAV CHAUDHARY	(v) Mob Lynching
TANISHKA CHAUDHARY , TANISHKA CHAUHAN , UDIT KUMAR SHARMA ,UTKARSH SINGH,VANSHITA CHAUDHARY , ANUSHK NAGAR, TAYYAB , PARISH , GEETANJALI, PUSHPANJALI ,NEHA	(vi) Artificial Intelligence (AI)
JIYA, AASHI, AYUSH PATHAK , ASTHA CHAUDHARY, BHASKAR, BHAVISHYA DABAS ,DEVANSH CHAUDHARY , GRACY CHOUHAN , GUNGUN ,HARDIK SAGAR , PRACHI	(vii) A Thing of beauty
HARSHIT TYAGI, HARSH DAKSH ,JAINAB , JYOTI CHAUHAN ,KASHISH SINGH ,KHUSHI SHARMA , KISHAN, KUSH ,LAKSHAY, MADHUP SURAJ SINGH,RISHABH MISHRA	(viii) Indigo sharecropping
MANAN CHAUDHARY , NIDHI, NIKHIL SINHA , NISHANT SAMANIA ,PRATEEK CHAUDHARY, PRATIK MISRA , PREET KRISHNATREY , PREET NAGAR, RASHI, RADHIKA ,RITESH CHAUDARY	(ix) Plight of old age people
MOHD. AARISH , ABHISHEK CHAUDHARY,APEKSHA ,ARYANANDINI , ASHITA, KHUSHI,KRITIKA,KRITIKA ,MISHTHI MLHOTRA ,PALAK GAUR , AKASH GIRI ,SHASHANK	(i) Acid attack-An attack on faced future.

- Pick 4 new words daily from the newspaper and use them in your own sentences. (Prepare your own dictionary).
- Make a comic strip of the chapter 'The Last Lesson' on an A4 size sheet.
- Compose a short poem, expressing gratitude and affection for your mother. (Take hints from the poem My Mother at Sixty Six).

CHEMISTRY

INVESTIGATORY PROJECTS

STUDENT NAME	TOPIC
MOHD. AARISH , GUNJAN	Study of the presence of oxalate ions in guava fruit at different stages of ripening
ABHISHEK CHAUDHARY, HARSH SHUKLA	Study of the quantity of casein present in different sample of milk-
APEKSHA , HIMANSHU CHANDELA	Preparation of soya bean milk and its comparison with natural milk
ARYA NANDINI ,KARTIK PAL	Study of constituents of alloys(brass and bronze)
ASHITA , KARTIKEY YADAV	Study of effect of Potassium bisulphite as food preservative under various conditions
KHUSHI ,LALIT YADAV	Comparative study of the rate of fermentation of various food materials (wheat flour, gram flour, rice and potatoes)
KRITIKA ,MANSI MISHRA	Extraction of essential oils present in saunf (aniseed), ajwain(carum) and elaichi (cardamom)
KRITIKA (L.K),MOHIT PAL	Study of common food adulterants in different food stuffs
MISHTHI MALHOTRA ,NAITIK THAUR	Preparation of rayon thread from filter paper
PALAK GAUR, NANCY RAJPUT	Study of the presence of insecticides and pesticides in fruit and vegetables
PRIYANSHU KHUSHI , NAVEEN TOMAR	Study of the effect of metal coupling on the rusting of iron
RADHIKA SHARMA , NIKHIL	Preparation of aspirin and acetaminophen
ROHAN , PIYUSH MALHOTRA	Study on the effectiveness of different common oils in forming emulsions
SALMAN , PRAGYA SHARMA	Analysis of Honey
SALONI YADAV ,PRANEESH SINHA	Determination of caffeine in tea samples
SMRITI ,PRIYANSHU KUMAR TIWARI	Study on the variation of conductance with temperature in electrolytes
SOFIYA ,RISHABH KUMAR SHARMA	Preparation of potash alum from scrap aluminium
SHRISHTI SAINI , SAYAL BHATI	Determination of the contents of cold drinks
TANU,SHRUTI CHAUDHARY	Study of Dyeing of fabrics
AAKRITI JAIN, TANISHA SHARMA ,	Comparative study of commercial antacids
AYUSH ,TANISHKA CHAUDHARY	Industrial preparation of ethyl alcohol
ADITYA KUMAR ,TANISHKA CHAUHAN	Comparative study on the cleansing strength of different detergents
AMAAN KHAN ,UDIT KUMAR SHARMA	Study on the alcoholic Fermentation of molasses
ANKUR UPADYAY , UTKARSH SINGH	Analysis of Fertilizers
ANSH SHARMA	Study of digestion of starch by salivary amylase and effect of PH and temperature on it
ANUSHKA SARASWAT	Study on the preparation of pigments and poster paints
ARPIT TYAGI	Study of setting of cement
ARYAN	Comparative study of the rate of Fermentation of various food materials (Fruit juices)
CHIRAG SHARMA	Biodiesel formation
DIVYANSHU JOSHI	Chemistry in Black and White photography

HOME SCIENCE

- Make Prepare a practical file as per the given instruction in the classroom.
  (If any query contact your home science teacher)
  1. Practical 1 (Any one)
  2. Practical 2 (Any one)
  3. Practical 3
  4. Practical 4 (Any one)
  5. Practical 5
  6. Practical 6 (Any one)

BIOLOGY

Make investigatory projects on-

Arya nandini	Drugs
SALMAN	Life Cycle in Malaria
SalonI	Reproduction in humans
Khushi	Microbes and disease
Radhika	Cancer
Kritika	DNA fingerprinting
Aarish	Reproductive health
Priyanshi	Mendelian Disorders
Tanu Nagar	Biotechnology and it's Application
Abhishek chaudhary	Reproduction in Flowering Plants
Sofia	Sex linked inheritance disease
Smriti Sharma	Pathogens causing diseases
Shristi	Menstrual cycle
Apeksha	DNA Fingerprinting
Ashita	CANCER
Palak	Smoking
Kritika	Reproductive Health
Rohan	Genetic disorder
Misthi	AIDS

MATHEMATICS

LAB MANUAL (ACTIVITIES)

- Probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice. (Activity-27)
- To draw the graph of, using the graph of, and demonstrate the concept of mirror reflection (about the line). (Activity-5)
- To find analytically the limit of a function at and also to check the continuity of the function at that point. (Activity-9)
- To understand the concept of increasing and decreasing functions. (Activity-13)
- To understand the concept of local minima, local maxima and the point of inflection. (Activity-14)
- To construct an open box of maximum volume from a given rectangular sheet by cutting equal squares from each corner. (Activity-16)
- To verify that angle in a semicircle is a right angle, using vector method. (Activity-21)
- To measure the shortest distance between two skew lines and verify it analytically. (Activity-26)
- To explain the computation of conditional demonstrate a function which is not one-one but is onto. (Activity-3)
- To demonstrate a function which is one-one but not onto. (Activity-4)

Note Do the given assignments (Chapter-2, 3 and 4) in your homework copy. Do all the questions. If you have problems in assignments, they will be discussed when the school will reopen.

PHYSICS

Write the following practicals in lab manual prescribed by school.

- To determine the resistance per cm of a given wire by plotting a graph between voltage and current.
- To verify the laws of combination (series/parallel combination) of resistances by Ohm's law.
- To find the resistance of a given wire / standard resistor using a meter bridge.
- To determine the resistance of a galvanometer by half deflection method.
- To identify a resistor, capacitor, inductor and diode from a mixed collection of such items.
- To observe the difference between (i) a convex lens and a concave lens (ii) a convex mirror and a concave mirror and to estimate the likely difference between the power of two given convex /concave lenses.
- To design an inductor coil and to know the effect of (i) change in the number of turns (ii) Introduction of ferromagnetic material as its core material on the inductance of the coil.
- To design a (i) step up (ii) step down transformer on a given core and know the relation between its input and output voltages.

Investigatory Projects

- To study various factors on which the internal resistance/EMF of a cell depends.

(MOHD. AARISH, MISHTHI MALHOTRA, SOFIYA, ANSH SHARMA, HIMANSHU CHANDELA, NAVEEN TOMAR, SHRUTI CHAUDHARY)

- 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 an incandescent lamp (of fixed power) used to 'illuminate' the LDR.

(ABHISHEK CHAUDHARY,PLAK GAUR ,SHRISHTI SAINI,ANUSHKA SARASWAT ,KARTIK PAL,NIKHIL,TANISHA SHARMA)

- 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.

(APRKSHA ,PRIYANSHI KHUSHI,TANU,ARPIT TYAGI,KARTIKEY YADAV ,PITUSH MALHOTRA,TANISHKA CHAUDHARY)

- To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids.

(ASHITA, ROHAN, AYUSH, CHIRAG SHARMA, MANSI MISHRA, PRANEESH SINHA, UDIT KUMAR SHARMA

- 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.
  (KHUSHI,SALMAN,ADITYA KUMAR,DIVYANSHU JOSHI ,MOHIT PAL ,PRIYANSHU KUMAR TIWARI ,UTKARSH SINGH)

- 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.

(KRTIKA, SALONI YADAV, AMAAN KHAN, GUNJAN, NAITIK THAKUR, RISHABH KUMAR SHARMA, VANSHITA CHAUDHARY)

- To study the earth's magnetic field using a compass needle -bar magnet by plotting magnetic field lines and tangent galvanomete.
  (KRITIKA (L.K), SMRITI, ANKUR UPADHYAY, HARSH SHUKLA, NANCY RAJPUT, SAYAL BHATI)

1. To determine resistivity of two / three wires by plotting a graph for potential difference versus current.
2. To verify the laws of combination (parallel) of resistances using a metre bridge..
3. To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same. OR To convert the given galvanometer (of known resistance and figure of merit) into an ammeter of desired range and to verify the same
4. To find the frequency of AC mains with a sonometer

ACTIVITIES

1. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
2. To assemble the components of a given electrical circuit
3. To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram

SECTION-B (Experiments)

- To find the value of v for different values of u in case of a concave mirror and to find the focal length.
- To find the focal length of a convex mirror, using a convex lens.
- To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.
- To draw the I-V characteristic curve for a p-n junction diode in forward and reverse bias Activities.
- To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
- To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
- To study the nature and size of the image formed by a (i) convex lens, or (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).

PHYSICAL EDUCATION

Write the following practicals in lab manual prescribed by school.

- Physical fitness test : Sai Khelo India Test.
- Yoga:- Procedure for asana, benefits and contraindication for any two asanas for each lifestyle disease.
- Anyone IOA Recognized sport/game of choice. Labelled diagram of field and equipment. Also mention its rules, terminologies and skills.