INTEGRATED HOLIDAY HOMEWORK

CLASS-VIII

'Exhilarating days are here again! It's time for Summer Vacation and fun filled activities'

Dear Parents,

For this summer vacation, we have planned assignments and activities to keep the children engaged and also help them in channelizing their energies. Kindly help and guide your ward in completing his/her work and also exploring his/her creative self.

General Instructions

- The Holidays Homework must be done in a very neat and presentable manner.
- The child will be assessed for the presentation, neatness, completion of all the given questions and timely submission.
- Compile and submit all your work in a folder with your name, roll no and class clearly written on the top.
- The students will do their respective projects assigned according to their given Roll Numbers.

    ➢ Roll No 1-10 – Project A (Gadgets and Gizmos, Inventing the Modern World)
    ➢ Roll No 11-20 – Project B (Space and Astronomy)
    ➢ Roll No 21-30- Project C (Incredible India)
    ➢ Roll No 31-40 – Project D (Global Lockdown: Revival of Earth's Glory)

- The compulsory section of Mathematics should be done by all the students.

Group A

GADGETS AND GIZMOS, INVENTING THE MODERN WORLD

Learning Outcomes

After successful completion of the project the students will be able to:-

- To examine the utilization of gadgets in today's world.
- Acquaint themselves about the different gadgets available in the market.
- Inspire by the life of Indian CEO of Microsoft.(Mr Satya Nadella)
- Acquire more knowledge about the history behind the inventions of latest Gadgets.
- Comprehend how human beings are dependent on Gadgets nowadays.
- Encourage the students, look around and co-relate mathematics with the gadgets they see every day.

Let's start by giving a definition to the word "Gadgets". A gadget is a small tool such as a machine that has a particular function but is often thought of as a novelty. In today's life we try to maximize our tasks within an allotted time. Without the use of modern gadgets it is not possible to accomplish our daily tasks and we are also not able to do our work with efficiency. We cannot even dare to imagine our life without laptop, smart phones, cell phones, notebooks, microwaves and so on. Today's gadgets are the only way we can make our life comfortable and easier. The advancements in the field of science and technology have resulted in better gadgets for masses. These gadgets have enhanced our life style by leaps and bounds.

Design a **Magazine** depicting how Gadgets and Gizmos have revolutionized our day to day activities and lives. You can develop your content around the following hints:

English

- Modern life has paved the way to a mechanical and a dependent life on gadgets. They play a significant role in day to day life of every human being, thus occupying major part of their house. Write an article on Useful aspects of gadgets and their service to mankind
- Self-composed poems on Gadgets and their usage. (Be creative and the poem should be original creation and not copied or reproduced.)

Or

Comic strips on Gadgets and Technology. (Example given below)

Hindi

- आज का समय टेक्नोलॉजिकल रेवोल्यूशन का है। रोज़ ही नए-नए गैजेट्स आ रहे हैं। इससे हमारी लाइफ़स्टाइल काफी प्रभावित हुई है। खासकर कम्युनिकेशन के क्षेत्र में तकनीकी बदलाव का असर काफी देखने को मिल रहा है। अब ज़माना पूरी तरह से स्मार्टफ़ोन का आ गया है। खास बात ये है कि स्कूल जाने वाले बच्चे भी स्मार्टफ़ोन से लैस नज़र आते हैं, जबकि देखा जाए तो उन्हें इसकी ज़रूरत नहीं। वैसे तो कई स्कूलों में बच्चों को मोबाइल फ़ोन ले जाने पर पाबंदी है, बावजूद इसके देखने में आता है कि कम उम्र बच्चे और किशोर स्मार्ट फ़ोन का यूज़ करते हैं। इसके कई बुरे प्रभाव हैं। आज गैजेट के कारण बच्चों किस तरह से प्रभावित हो रहे हैं , अपने छोटे भाई को पत्र लिखें ।

Maths

- Take any 3 gadgets say 3 different mobiles. Find their length and width (Breadth) and height. Find the surface area of the gadget.
- Draw a bar graph showing yearly growth of mobile users in India between 2014 and 2020.

Science

- Collect information about 10 modern gadgets available in market. Mention the following about gadgets: - (1. Company name making that gadget 2. Logo of the company 3. Technology behind the gadget 4. Features of the gadget 5. CEO of the company 6. Company headquarters)
- Write some facts about CEO of Microsoft.

Social Science

- You are an archaeologist specializing in the study of the modern era. You are interested in investigating about critical inventions in the modern period that have changed the lives of people. Make a chart with detailed information (Type of invention/Year of Invention/Name of the Inventor/Purpose and Usage in today's life) on any two inventions from the modern age. Do conclude the work with your personal opinion (100 words) regarding the importance of those inventions and how they are relevant even today.

Sanskrit

- आधुनिक तकनीक विषय पर चित्र सहित एक लेख संस्कृत में कम से कम १०० शब्दो में लिखो.

Computer

- Collect information about 5 gadgets namely (Audio Sunglasses/Drones/Smart Watch/Temperature Controlling Mug/Hidden Camera Spy Pen Recorder) and present the information in Power Point along with pictures.

Give a special touch to your Magazine in whichever way you like to make it attractive and creative.

Learning Outcomes

After successful completion of the project the students will be able to:-

- Enhance their knowledge about space and life on the planet Mars.

- Obtain knowledge about ISRO and its missions.

- Label and Locate the different space research centers of world.

- Comprehend the working principle behind the Rocket Launching. (3rd Law of Motion).

- Appreciate the wide variety of objects contained in the Universe

- To develop statistical approach in the students, while looking at data pertaining space and astronomy.

- Give examples of what the future may hold for space travel.

Humans have long gazed toward the heavens, searching to put meaning and order to the universe around them. Although the movement of constellations — patterns imprinted on the night sky — was the easiest to track, other celestial events such as eclipses and the motion of planets were also charted and predicted. Imagine yourself as one of the astronomer who wants to circulate a **newspaper titled "SPACE AND ASTRONOMY"** for the awareness of the people.

You can develop your content around the following hints:

English

- The possibility of **life on Mars** is a subject of huge interest in astrobiology due to its proximity and similarities to Earth. Evidence of past liquid water on the surface of Mars suggests that this world once had habitable conditions and leads to the question of life. If there was life on Mars, it would be interesting to determine if it represented a separate origin from life on Earth. Write a short paragraph on "Life on Mars- dream or a distant reality".

Hindi

- भारत के वैज्ञानिकों ने यह दिखा दिया है कि वो किसी भी क्षेत्र में पीछे नहीं हैं इसका सबसे बड़ा उदाहरण है चंद्रयान इस विषय पर मैगजीन के लिए एक लेख (आर्टिकल) लिखें जिसमें भारतीय वैज्ञानिकों प्रशंसा की गयी हो । । चंद्रयान के द्वारा उन्होंने भारत के झंडे को ऊँचा उठाया है । (Hindi)

Maths

- Represent the number of space bound rockets successfully launched from the year 2013 to 2019 by Indian space agencies, on a bar graph.

- Find out distance of sun from all the planets. Represent it in standard form.

Science

- Research on two important missions of ISRO Mangalyaan and Chandrayaan (purpose/aim/cost and expenditure involved/success/failure/important people associated to the missions and its future aspects)

- Bag extra brownie points by making working model of rocket

- You may add cartoon strips describing your encounter with Alien while travelling to space to make it attractive.(Example given below-)

Social Science

- Show space stations of India and World on World political map and a brief specification of each.
- Write a small paragraph on ISRO (Indian Space Research Organization) covering the following points: Year of formation/Functions/Milestones starting from the year 1962 till present in the form of a timeline.

Sanskrit

- भारत के द्वार भेजे गये चन्द्रयान पर चित्र सहित मित्र से संस्कृत में एक संवाद लिखो

Computer

- Make a report on Mangalyaan using MS Word. (Include the following points History/Origin/Date of Launch /Mission objectives/Space craft design/Mars Orbit Insertion/Present Status)

Give a special touch to your Newspaper in whichever way you like to make it attractive and creative.

<center># GROUP C</center>

<center>## INCREDIBLE INDIA</center>

Learning Outcomes

After successful completion of the project the students will be able to:-

- Understand that India is a mosaic of multicultural experiences with a rich heritage and myriad attractions, the country has its own distinctive identity.
- To acquire more knowledge about different states of India.
- Comprehend about the wildlife sanctuaries in India.
- Acquaint with the fact India offers a range of vast tourism choices, diverse in land and nature, cuisine, dance forms, music, arts, spirituality, history; even these vary as you journey from one state to another.
- Scientifically make their choice of state.
- To help the students understand that Incredible India is not just a phrase but there are numbers to prove this statement.

"India is a vast country; it contains multitudes." Country as diverse as India is symbolized by the diversity of its culture. The plurality and multiplicity of the Indian Culture is evident to the whole world as India has one of the world's largest collections of songs, music, dance, theatre, folk traditions, performing arts, rites and rituals, languages, dialects, paintings and writings that are known, as the 'Intangible Cultural Heritage' (ICH) of humanity. India believes in the adage "Unity in diversity". People of different states are living together with different language, culture, and heritage. India is incredible because of its monuments, forests and the rich cultural heritage. It is our responsibility to maintain the true essence of its diversity.

Let's explore our knowledge towards our motherland i.e. India by creating a **BROCHURE** on "Incredible India".

You can develop your content around the following hints:

English

- While human life has perennially been under threat of pollution, monuments haven't been spared either and are being adversely impacted by contaminated air. Pollutants like sulphur dioxide and nitrogen dioxide, generated by vehicles and industries, react with air moisture to form acids that eat into the marble resulting in change of colour and even corrosion. Keeping in mind the above view Write a poem or an article on the theme "Effects of Pollution on the Heritage buildings."

<center>**Or**</center>

Imagine that any 5 states of India are discussing about their popularity with each other. Write down their dialogue conversation in the form of a comic strip.

Hindi

- भारत एक ऐसा देश है जिसका इतिहास सांस्कृतिक धरोहरों से मालामाल है इसके राजवंशों के ठाठ -बाट की जानकारी एकत्रित करके भाषण तैयार करें |

Maths

- India is a country of treasures and wonders which never fail to impress tourists. Helps tourists know more about Aryabhatta the mathematician, who surprised the world with his mathematical inventions, and let the world, know that India is truly incredible.
- Represent India's happiness ranking in last five years in the form of a bar graph.
  Or
  Represent the population of 5 top most populated states of India in the form of a bar graph.

Science

- Which is the densest forest state of India? Explain the suitable conditions of that state for the growth of the forest.
- Mention which state or city will you choose to stay on basis of environment condition and state its reason.

Social Science

- National Parks and Wildlife Sanctuaries in India have something refreshing to offer you. The wildlife calling is indeed adventurous and enthralling, there is nothing like spotting rare and common species in their natural habitats.
  Research on wildlife sanctuaries in India and collect the following information about 10 sanctuaries of India with their pictures
  (Write their best time to visit/Whythey are famous for/what type of species of animal pres ent there/Write about their endangered and extinct species in the sanctuaries).

Or

  Ask your child to identify the five chosen states and their capitals on a physical map of India. Make a comparative table/ chart/poster for the five chosen states on the following aspects (Physical features /Clothing /Food / Types of vegetation)

Sanskrit

- भारत में अनेक प्रकार के नृत्य किये जाते हैं , एक चार्ट द्वारा अलग -अलग नृत्य की वेशभूषा को दर्शाओ I नृत्य का नाम तथा राज्य का नाम भी लिखो I

Computer

- Make a digital poster on "Incredible India" showing the glory of India on any of the topic (Famous dances, Religions, Famous places, Festivals, Vedas)

GROUP D
GLOBAL LOCKDOWN: REVIVAL OF EARTH'S GLORY

Learning Outcomes

After successful completion of the project the students will be able to:-

- Sensitize themselves towards Mother Earth and the impact of their actions on Nature.
- Understand the importance of maintaining Ecological Balance.
- To help the students understand that even for qualitative knowledge of environment, understanding of numbers is required.
- Rethink the way we approach climate change and the role we could play in saving the environment.
- Comprehend positive impact of Global Lockdown on Earth's Glory.

At present, the country is undergoing through a difficult phase, and observing a complete lockdown, due to the widespread of corona virus. On the contrary, the Mother Nature is rejoicing with the move as the people are tucked at their homes giving her a chance to relax and heal from all the pollution caused by the humans over past many years. If people release pressure on nature, as we can see happening now, nature bounces back. There is a huge resilience in nature to restore itself, which gives a lot of hope. People across the world over are rediscovering: how to live with Nature, rather than against it. In the thick of all the gloom and doom, there is a silver lining. Mother earth seems to have rejuvenated itself – smog has given way to blue skies, marine life is seeing increased activity, pollution levels have dropped, and animals as well as birds are moving about on their own accord. Keeping in mind the above view design a **Portfolio on Revival of Mother Earth during pandemic.**

You can develop your content around the following hints:

English
- Write an Autobiography on "Nature". (Imagine that you are Nature and enjoying the positive effects of Global Lockdown. Explain your experience of healing without any human interference in the form of Autobiography.)
- Evidently, Mother Nature is reacting positively to the global lockdown. Without us humans in the way, nature is thriving. Draw Posters showing the condition of Mother Earth before and after Global Lockdown and make it creative by adding attractive slogans to it.

Hindi

- " पृथ्वी और पर्यावरण संरक्षण के लिए समय - समय पर लॉकडाउन क्यों जरुरी है " इस विषय पर दो मित्रों के बीच संवाद लिखिए I

Maths

- Find the Air Quality Index of Delhi, Mumbai, Kolkata and Chennai on 1st February 2020 and on 11th may 2020.
  a. Represent the data on a double bar graph.
  b. What you can conclude from the data?

Science

- Report of NASA showcasing decline in levels of noxious nitrogen dioxide and Satellite pictures showcasing drop in air pollution.
- Elucidate the effect of Global Lockdown on river Ganga and Yamuna as well as collect the data of fishes appearing in river Ganga as well write what are the suitable conditions for the survival of dolphins.(Change in level of pollution of river Ganga and Yamuna/Is the water has become suitable for drinking?/Recents details of fishes appearing in the river/level of water in the rivers)

Social Science

- Make a collage or video depicting how Mother Earth, Animals and Plants are taking charge when human beings are in lockdown.
- Collect and Compare pictures of Mother Earth depicting condition of wildlife, rivers and air quality before and after lockdown and their impact.

Or

Mention the names any 5 animals along with their pictures which are recently seen returning to their natural habitat due to the Global Lockdown.

Sanskrit

- वर्तमान के लोकडाउन का पर्यावरण पर क्या प्रभाव पडा पत्र द्वारा अपने छोटे भाई को समझाओ ।

Computer

- Design a Power Point Presentation(Only 8 slides) on Revival of Earth's Glory. (Mention about its impact on Rivers/Monuments/Animals/Pollution Level/Quality of Water along with attractive pictures)

Give a special touch to your PORTFOLIO in whichever way you like to make it attractive and creative.

MATHEMATICS

Q1. Solve using distributive Property:

$$\frac{-3}{4} \times \frac{2}{3} - \left(\frac{-3}{4}\right) \times \frac{5}{6}$$

Q2. 13 and 31 are mirror images of each other and their squares 169 and 961 are also mirror images of each other. Find two other such pairs.

Q3. A car is travelling at the average speed of 50 km/hr. How much distance would it travel in 1 hour 12 minutes?

Q4. Represent $\frac{-5}{11}, \frac{7}{3}$ on number line.

Q5. What number should be added to $\frac{8}{14}$ to get $\frac{-2}{7}$?

Q6.Express the following into Positive exponential form.

(i) $\left(\frac{3}{2}\right)^{33} \div \left(\frac{2}{3}\right)^{-35}$ (ii) $\left(\frac{-2}{3}\right)^{10} \times \left(\frac{-2}{3}\right)^{-15}$

Q7. By what number should $(15)^{-1}$ be divided so that quotient may be equal to $(-5)^{-1}$?

Q8. Find six rational numbers between 3 / 8 and -1 / 2.

Q9. The product of two rational numbers is – 12 / 35. If one of them is 3 / 5. find the other rational number.

Q10. Multiply 6/13 by the reciprocal of -7/16.

Q11. Rajni had a certain amount of money in her purse. She spent ₹$10\frac{1}{4}$ in a school canteen, bought a gift worth ₹ $25\frac{3}{4}$ and gave ₹$16\frac{1}{2}$ to her friend. How much she have to begin with?

Q12. Which is greater

(i) 3^2 or 2^{-3} . (ii) $(-3/4)^2$ or $(-4/3)^2$

Q13. Find the value of x if $\left(\frac{11}{9}\right)^3 \times \left(\frac{9}{11}\right)^6 = \left(\frac{11}{9}\right)^{2x-1}$

Q14. Divide the sum of -13 / 5 and 12 / 7 by the product of –31 / 7 and –1 / 2.

Q15. Which rational number has no reciprocal?

Q16. Simplify ($3^{-7} \div 3^{-9}$) $\times 3^{-4}$.

Q17.How many rational number exit between any two distinct rational numbers?

Q18. Simplify and write it in exponential form $(- 5)^4 \times (- 5)^3 \times (- 5)^2$

Q19. If 25 x = 125 y then x: y =

Q20.Write the standard form of

- i)   0.00000068
- ii)   405000000000
- iii)   0.0002034
- iv)   2035600000