BHAI PARMANAND VIDYA MANDIR HOLIDAY HOMEWORK

CLASS IV

THEME-TECHNOLOGY AND SUSTAINABILITY IMPROVING OUR LIVES



Dear Children,

This holiday, let's take a closer look at how technology and sustainability are working together to make our world a better place. From solar panels that use sunlight to power homes, to smart inventions that reduce waste and pollution, technology is helping us care for our planet while making life easier and more fun.

Through this theme, you'll explore exciting ways in which science and creativity are shaping a greener, smarter future. Get ready to think, create, and discover how you too can be a part of this change!

Happy learning and enjoy your holidays!

TIPS FOR CHILDREN

- ❖ God gives us 24 hours in a day, let us take out a few minutes for Him and thank Him for the happy moments. Also ask Him to give us strength to cope up with our difficulties.
- ❖ Don't be lazy and become a couch potato! Do exercise and be fit and healthy. Revise all the concepts done in the class.

* Reading is fun and it helps us develop our vocabulary. Make it a habit to read story books.

TIPS FOR PARENTS

- ❖ Give your child saplings and ask them to plant them and water them and see them grow. Encourage them by saying that they will be presented with gifts for their good deeds.
- **❖** Make them sit by you and ask them what their needs are and satisfy some of the useful ones and explain to them which ones are essential and which ones are not. Give them a feeling that you are there for them.

HOLIDAY HOMEWORK

ENGLISH

Task 1: Pick your favourite story by any one of the following writers:

Charles Dickens, Sudha Murty, David Williams, Lewis Carroll and Roald Dahl.

Follow the Story Mountain to write your own version on an A4 size sheet. Use the steps below to plan your story. Also, write about the character you personally relate to and why.

Opening – Introduce the setting and characters.

Build-up – Introduce a problem or challenge.

Climax – The most exciting part where the problem reaches its peak.

Falling Action- The problem starts to get solved.

Ending – The story concludes, often with a lesson learned.

Task 2: Vocabulary Enrichment Flashcards- "Treasure Hunt of Words"

Task: Collect 25 new words (20 vocabulary + 5 metaphors) from real life or by reading. The words should have at least 6 letters. Additionally, students must paste a cutout on an A4 size sheet from the source where the word is taken from and highlight the chosen word clearly. Attach this sheet with the flashcard being at front.

Instructions:

- Make flashcards on plain sheets (Size: 15×10 cm).
- Get them laminated.
- Each flashcard should include:
 - o The word
 - o Meaning, synonym, and part of speech

- o Use it in a sentence
- o One symbolic drawing

Sources to explore: Magazines, newspapers, storybooks, novels and other resources of the vocabulary treasure hunt.

Examples of Metaphors:

- 1. The world's a stage Life is like a play, and we all have roles to act.
- 2. He has a heart of stone He is very cold and unkind.
- 3. She is the shining star of the class She stands out in class.
- 4. Time is a thief Time passes quickly and steals moments.
- 5. My brother is a walking dictionary He knows a lot of words and facts.

The students must use metaphors (other than the ones mentioned above) to make flashcards.

Task 3: Paragraph writing:

Write two paragraphs. (250-300 words)- One from each category below. (Usage of five idioms, three quotations and advanced vocabulary is mandatory.)

A. If I Could Invent a Gadget to Help Nature

OR

The Adventures of Eco-Bot (Eco-friendly Robot)

B. How Countries Use Technology to Save the Earth

OR

A Journey of a Famous Inventor

हिंदी

सामान्य निर्देश -

- ग्रीष्मकालीन गृहकार्य सभी विद्यार्थियों के लिए अनिवार्य है।
- अभिभावकों से अनुरोध है कि वे छात्रों को केवल उचित दिशा-निर्देशन एवं मार्गदर्शन प्रदान करें।
- सभी कार्य स्टयवस्थित ,श्द्ध वर्तनी एवं स्पष्ट रूप में क्रमबद्ध तरीके से लिखें।
- समस्त कार्य व्याकरण पुस्तिका में करें।

विषय: प्रौदयोगिकी और स्थिरता



प्रौद्योगिकी हमारे जीवन में स्थिरता बनाए रखने में महत्त्वपूर्ण भूमिका निभाती है। यह हमारे दैनिक कार्यों को सरल और शीघ्र पूर्ण करने में मदद करती है, जिससे समय और संसाधनों की बचत होती है। चिकित्सा, शिक्षा, परिवहन और संचार जैसे क्षेत्रों में तकनीकी विकास ने जीवन की गुणवत्ता को बेहतर किया है। आधुनिक तकनीकें ऊर्जा दक्षता, जल संरक्षण और हरित ऊर्जा के क्षेत्र में क्रांतिकारी परिवर्तन ला रही हैं। इसके साथ ही पर्यावरण संरक्षण में भी तकनीक का योगदान बढ़ रहा है।

उपविषय: स्मार्ट तकनीकें

निम्नलिखित प्रश्नों के उत्तर लिखिए -

- (क) तकनीक क्या है और यह किन-किन रूपों में हमारें जीवन में मौजूद है?
- (ख) तकनीक के क्या-क्या लाभ हैं?
- (ग) क्या तकनीक के कुछ नुकसान भी हो सकते हैं?
- (घ) आप तकनीक का उपयोग किन-किन कार्यों में करते हैं?

कार्य १ : अनुच्छेद लेखन

ऊपर दिए गए प्रश्नों के आधार पर निम्नलिखित संकेत बिंदुओं का प्रयोग करते हुए 'हमारे जीवन में तकनीक का महत्त्व' विषय पर १२०-१५० शब्दों मे अनुच्छेद लिखिए।

- तकनीक का अर्थ
- जीवन में उपयोगिता
- समय की बचत
- जीवन में सुधार
- पर्यावरण की रक्षा

कार्य २: चित्र वर्णन



उपर्युक्त चित्र के आधार पर ७०-८० शब्दों में लिखिए कि स्मार्ट तकनीक किस तरह से पढ़ाई में मदद करती है।

कार्य ३:कहानी लेखन

नीचे दी गई पंक्तियों को ध्यान से पढ़ें और आधुनिक तकनीकों का हमारे जीवन में प्रभाव बताते हुए कहानी को आगे बढ़ाएँ व शीर्षक भी लिखें। (१००-१२० शब्दों में)

मोहन ए॰ सी॰ के सुखद वातावरण में बैठा हुआ टी॰ वी॰ पर अपना पसंदीदा नाटक देख रहा था कि तभी अचानक बिजली चली गई और

SCIENCE

Task 1-Trash to Treasure/Poster making

Task 2- Working / Non-Working Model

Task 1) TRASH TO TREASURE - Every day, we throw away things like plastic bottles, newspapers, old clothes, egg cartons and cans. But many of these items can be reused or recycled to make eco-friendly products. By doing this, we not only reduce waste but also protect our environment.

Choose any 1 idea that turns waste (trash) into something valuable (treasure). You can use the discarded items of everyday use to make something useful and productive which can be used outdoors.

Suggested Topics -

- Old Tyre Garden Seats
- Plastic Bottle Bird Feeder
- Jar Lanterns
- Bottle Cap Mosaic Art
- Old T-Shirt Tote Bag
- Tetra Pack Planters or Seed Starters

OR

Prepare a poster on any one of the topics listed below

Topics of poster -

- 1) 5 R's of Waste Management
- 2) Sustainable Farming Through Technology
- 3) Tech Splash: Saving Water the Smart Way
- 4) Plastic Pollution vs. Green Technology

Instructions -

- Use discarded materials like old newspapers, used notebooks or sheets, straws, recycled papers and fabric scraps for making the poster and it should include the following -
- A colourful picture/ Illustration of the process or technology involved.

- A catchy slogan.
- Advantages of the process.
- Optional: Stick small samples of materials (clean and safe ones)
- Be neat and original! Use crayons, coloured pencils, or paints.

Task 2) Model Making

Some technological advancements in science meant for conserving our nature and environment are listed below. Prepare a Working and Non-Working Model on the same.

Also, prepare a research report on A4 SIZE SHEETS based on the topic of your model including following parameters -

- 1. Brief Description of the Technology
- 2. It's Impact on Society (positive or negative)
- 3. A modern-day example or application of the technology
- 4. How effective is it?
- 5. Your prediction: How might this technology evolve in the next 10–20 years?
- Roll No 1 5 Biogas Plant Model
- Roll No 5 10 Rainwater Harvesting and Filtration System
- Roll No 11 15 Green City Model
- Roll No 16- 20 Tidal or Hydropower Plant
- Roll No 21- 25 Vertical Farming
- Roll No 26-30 Eco-Friendly Transport System
- Roll No 31-35 Solar-Powered Gadgets
- Roll No 36 ONWARDS Mini Greenhouse

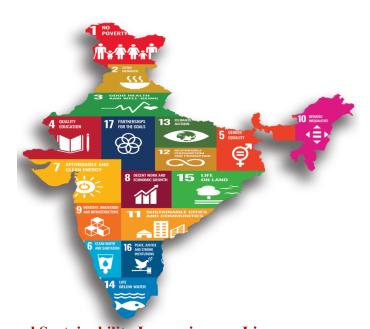
SOCIAL STUDIES

THEME:- TECHNOLOGY AND SUSTAINABILITY IMPROVING OUR LIVES

INSTRUCTIONS:

- Holiday Homework carries marks in assessment. Hence, submission of work post vacation is compulsory for all students.
- Originality of the work will be appreciated.
- Use 10-15 A-4 sized ruled sheets.
- Add pictures, data, diagrams and other decorative elements.
- Write in your own words, in clear handwriting.
- All the sheets should be attached properly in a punch file along with Name, Roll No., and Class.
- Keep your work neat and clean.

PROJECT (RESEARCH) WORK:



TOPIC:- Technology and Sustainability Improving our Lives

DESCRIPTION:- Make a Project on the topic:-

TECHNOLOGY AND SUSTAINABILITY IMPROVING OUR LIVES.

Refer to the following list in order to find the cities assigned to you based on your roll number:

1. Cities according to Roll No.:-



Roll No.	Subtopic	Indian Cities vs Foreign Cities
1 to 6	Renewable Energy and Power usage	Ahmedabad vs Copenhagen
7 to 12	Waste Management and Cleanliness	Indore vs Singapore
13 to 18	Public Transport and Mobility	Bengaluru vs Barcelona
19 to 24	Smart City Technologies	Pune vs Stockholm
25 to 30	Water Conservation and Management	Chennai vs Berlin
31 to 36	Air Quality and Pollution Control	Mysuru vs Tokyo
37 to 42	Green Urban Infrastructure	Chandigarh vs Zurich

According to the cities allotted to you, research on the following parameters and prepare your project:-

- 1. Impact of Weather and Climate:
- How does the rainfall, wind, sunshine duration affect the technology used in the city?
- 2. Influence of Physical features:
- Is the city located near rivers, mountains, desert or coastal areas?
- How do these physical features (rivers, mountains, desert, coastal area) affect the lifestyle and infrastructure of the city?

3. Government initiatives:

- Does the government promote awareness about clean energy or environmental care?
- Write any two government programs and policies that has been started in that city?

4. Cost effectiveness:

- Is the government of the city spending enough money to achieve its sustainability goals?
- Explain how the systems (like solar power, waste management) saving money in the long term?

Be creative! Make the project attractive and presentable.

MATHEMATICS

Instructions:

- Present your work neatly on A4 pastel sheets
- Apply concepts, show working, and give reasoning wherever needed.
- Use your own researched data in all calculations.

Activity-1:

Tech & Green Leaders Around the World

Objective:

To learn about the sequence (ranking) of countries that are leading in both technology and sustainability.

SEARCH WORK - Find out list of 7 countries known for being advanced in technology and sustainability. Their ranks are based on global innovation and environmental sustainability efforts. Based on the data collected:

- 1. Write the Names of countries and their population.
- 2. Draw or paste the flag of each country next to its name.

Answer the following Questions:

- a) Arrange the countries in ascending order and descending order based on their population.
- b) What is the population difference between the most populous and least populous countries in the list?
- c) Assuming half of the Switzerland population is using public transportation daily, calculate

the number of people using public transport.

- d) If South Korea has 1 million electric vehicles (EVs) and plans to increase this number by 1500 annually, how many EVs will it have after 3 years?
- e) Make a bar graph and compare the rank of the countries and their population.

Activity-2:

The Eco-Friendly Shopping Challenge

Scenario:

You've been given a budget of ₹1,20,000 to shop for eco-friendly and energy-saving gadgets for your classroom. Choose items that are both useful and sustainable. You cannot exceed your budget!

Available Items to Choose From:

Item Cost (₹)

Solar-powered calculator ₹10,250

Rechargeable batteries (4 ₹25,300

pcs)

LED Desk Lamp ₹15,450

Energy-saving fan ₹26,000

Recycled paper notebooks (3) ₹1,500

Solar charger ₹50,000

Smart water-saving tap ₹30,250

Plantable seed pencils (5) ₹2000

Tasks:

- 1. Choose items from the list that fit within the given budget.
- 2. Calculate the total cost of your chosen items.
- 3. How much money is left after shopping?
- 4. Estimate the total cost before calculating the exact amount—how close was your estimate.

THINKING CLASSROOM:

MULTIPLICATION – Complete TS 1 Pg no. 52 to 56 From TS 2 (Q1, 2,5) DIVISION – Complete TS 1, TS 2 and from TS 3 (Q1)

Worksheet: To be done on A4 size sheet

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