

LAKSHMIPAT SINGHANIA ACADEMY

OPEN BOOK PROJECT

SESSION: 2024 – 2025

TERM: 1

CLASS - IV

THEME: Water Crisis & Ecosystem in the Desert

- ✚ All projects to be done **individually** by the students.
- ✚ Instructions given by each subject teacher to be followed.
- ✚ Hard copies of projects must be submitted to the respective subject teachers by 18th June 2024.

ENGLISH

CLASS: IV

FULL MARKS: 20

INSTRUCTIONS

- Use light coloured fabriano sheets for your project.
- Include suitable drawings/pictures to enhance your overall presentation.
- Refer to the internet to gather information but the matter must be written in your own words.

THEME: WATER CRISIS and ECOSYSTEM IN THE DESERT

LEARNING OBJECTIVES:

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

- know about the importance of water and the need to save water to prevent water crisis.
- know about the ecosystem of the hot and cold desert.
- learn how the camel and the polar bear survive in their environment
- learn how to design a flyer and write a dialogue
- augment their writing and imaginative skills
- enhance their creative and artistic skills

Water Crisis

The importance of water in our lives is known to all. We cannot survive without water. The growing demand for water due to population growth, urbanization and industrialization, has led to water scarcity. So it is time we all join hands to save water.

WHAT YOU NEED TO DO:

Be a Water Ambassador

You are a member of a club of your school that spreads awareness regarding water crisis and the need to save water. **Design an attractive flyer to be distributed among the school students. Be original and creative. Your flyer (in one page) must include:**

- The name of the club.
- The logo of the club.
- A slogan on saving water.
- 4 to 5 ways by which we can prevent wastage of water.
- Give relevant illustrations to make your flyer attractive and effective.

Remember: A flyer is used to share information about events, products, services or ideas. It is distributed to catch people's attention. It has a mix of words and pictures to create awareness.

Ecosystem in the Desert

Ecosystem is a community or a group of organisms that live in and interact with each other in a specific environment. A desert is a large region that gets very little rain each year. Very few plants or animals live in desert areas. A desert can be either hot or cold. Animals and plants that live in a desert have unique features that help them to survive in the extreme temperatures.

WHAT YOU NEED TO DO:

In Conversation With – Dialogue Writing

Find out about the ecosystem of the hot and cold deserts. What kind of climate do the deserts have and how do animals survive there?

Now, write an imaginary conversation between **a camel** and **a polar bear**. The conversation must include the following:

- Give a creative name to both the animals.
- What difficulties do they face due to the extreme temperatures and scarcity of water and food?
- Which physical features help them to survive?
- What message (if any) they would like to give to us?
- Draw or paste relevant pictures.

LEARNING OUTCOME:

At the end of the project students will be able to know about water crisis and ways to save water, the ecosystem of the desert, design a flyer and write a dialogue between a camel and polar bear.

RUBRIC

CATEGORY	4	3	2	1
CONTENT– Accuracy and research	All relevant details are included in the flyer and dialogue writing and reflect exhaustive research work done on the topics.	The flyer and dialogue writing contain almost all details with considerable amount of research work done on the topics.	The flyer and dialogue writing do not include all relevant details and research work done on the topics is not exhaustive.	The flyer and dialogue writing lack quite a few necessary details with little or no research work done on the topics.
STYLE OF WRITING – spelling, grammar, choice of words	The flyer and dialogue writing are clearly written with no grammatical or spelling errors. Choice of words is accurate.	The flyer and dialogue writing are clearly written with no grammatical or spelling errors. Choice of words could have been better.	The flyer and dialogue writing present some grammatical or spelling errors. Choice of words is limited.	The flyer and dialogue writing present many grammatical and spelling errors. Choice of words is extremely limited.
CREATIVITY AND ORIGINALITY	Displays great amount of creativity and originality.	Displays good amount of creativity and originality.	Displays limited amount of creativity and originality.	Displays lack of creativity and originality.
OVERALL PRESENTA TION	The planning and execution of the layout, design and presentation of the flyer and dialogue writing are excellent.	The planning and execution of the lay out, design and presentation of the flyer and dialogue writing are good.	The planning and execution of the layout, design and presentation of the flyer and dialogue writing are well done, but has scope for improvement.	The planning and execution of the layout, design and presentation of the flyer and dialogue writing have not been done properly.
ART INTEGRATION	The illustrations are relevant to the themes, exceptionally done and show creative and artistic expertise.	The illustrations are moderately relevant to the themes, quite exceptionally done and show some creative and artistic expertise.	The illustrations are relevant to some extent to the themes and average in creative and artistic expertise.	The illustrations are not relevant to the themes and lack creative and artistic expertise.

Class-IV
Subject- Hindi 2nd Language

F.M. 20

TOPIC- जल संकट एवं पारिस्थितिकी तंत्र

उद्देश्य (Objectives)

- कल्पनाशीलता का विकास
- रचनात्मकता का विकास
- भाषा शैली का विकास
- व्यावहारिक ज्ञान का विकास
- नैतिक मूल्यों का विकास
- समसामयिक समस्याओं के प्रति जागरूकता
- भाषिक क्षमता और वैचारिक क्षमता का विकास
- प्राकृतिक संपदा के प्रति जागरूकता



गर्मी की छुट्टी में, आप अपने परिवार के साथ रेगिस्तानी क्षेत्र की यात्रा पर जाने वाले हैं। जिज्ञासा से भरा आपका मन रेगिस्तानी क्षेत्र से जुड़ी जानकारी हासिल करने को तत्पर है। दिए गए लिंक की सहायता करें-

https://www.google.com/search?q=desert+ecosystem+diagram+in+hindi+&sc_esv=10710e6d746a2a0b&sc_upv=1&udm=2&cs=1&rlz=1C1OKWM_enIN1042IN1042&hl=en&biw=665&bih=655&sxsrf=ACQVn09Tuk-FGDOemJyTO5AGHRE4ss4-pA%3A1714460051344&ei=k5UwZvDTFO2mseMPsuyV6AY&ved=0ahUKEwiw6d2yremFAxVtU2wGHTJ2BW0Q4dUDCBA&uact=5&oq=desert+ecosystem+diagram+in+hindi+&gs_lp=Egxnd3Mtd2l6LXNlcnAilmRlc2VydCBiY29zeXN0ZW0gZGhZ3JhSBpbIBoaW5kaSBiPiNQiQVY1htwAXgAkAEAmAGhAaABmgYqAQQwLjEwuAEDyAEA-AEBmAiCoAKiAcICChAAGIAEGEMYigXCAgYQABgHGB7CAgYQABgIGB7CA

[gQABgwgjGEAAYBRgemAMAIAYBkgcDMS4xoAedBw&scient=gws-wiz-serp](https://www.gqabgwgjgeaaybrgemamaiaymbkgcdms4xoAedBw&scient=gws-wiz-serp)

एकल परियोजना कार्य

परियोजना कार्य से जुड़े आवश्यक निर्देश-

आवश्यकतानुसार A4 साइज पेज का इस्तेमाल करेंगे।

क) परियोजना कार्य - पत्रिका निर्माण

हिंदी परियोजना कार्य के अन्तर्गत आप एक पत्रिका का निर्माण करेंगे।

पत्रिका में निम्नलिखित बिंदुओं का समावेश होना चाहिए-

1. पत्रिका को एक आकर्षक शीर्षक दें, कुछ चित्र चिपकाएँ।
2. गर्मी के इस मौसम में जल संकट से बचने के लिए, किन चार चीजों को आप रेगिस्तानी क्षेत्र में साथ ले जाएँगे उसका चित्र नाम के साथ लिखें।
3. रेगिस्तानी पशु-पक्षियों को जल की प्राप्ति जिन स्रोतों से होती है। उन जल स्रोतों का उल्लेख दो वाक्यों में चित्र सहित करें।
4. रेगिस्तानी क्षेत्र की यात्रा के दौरान जल संकट से बचने के लिए आप कौन से चार उपाय करेंगे, लिखें।
5. परियोजना कार्य की प्रस्तुति व भाषा पर विशेष ध्यान दे।

विश्व के पटल पर जल-थल के कई रूप हैं। इस धरती के हर कोने में जीव जगत व्याप्त है। जल में मीन, आकाश में पक्षी तो धरती पर वन्य प्राणी हैं। थल का 33 प्रतिशत मरुभूमि है। इस मरुभूमि में विचरण करने वाले, जीवों का भोजन पेड़-पौधे, छोटे जीवों से लेकर - बड़े जीवों तक फैला है। अतः सब हम हिंदी पारियोजना कार्य में मरुभूमि के परिस्थितिकी तंत्र को दर्शाते हुए पत्रिका के अंतिम भाग में एक पोस्टर का निर्माण करेंगे। जिसमें निम्नलिखित बिन्दुओं का समावेश होना चाहिए-

पोस्टर का निर्माण

- थार मरुभूमि के पारिस्थितिकी तंत्र (ECO SYSTEM) को दर्शाते हुए पोस्टर का निर्माण करें।
- मरुभूमि की कठिनाईयों को दर्शाते हुए 2 स्लोगन और एक शीर्षक लिखेंगे।
- प्रस्तुति, वर्तनी और वाक्य संरचना पर विशेष ध्यान दें।

LEARNING OUTCOMES (अधिगम प्रतिफल)

इस परियोजना कार्य के माध्यम से विद्यार्थी मरूभूमि के जीवन को जानने में, मानव और जीव-जगत के संघर्ष को जानने में, नारा लिखने में, प्रस्तुति की कला को सीखने में सक्षम हुए।

RUBRICS FOR CLASS 4 HINDI PROJECT(UT_1)

मानदंड	4	3	2	1
विषय-वस्तु का प्रभावी और सृजनात्मक वर्णन	विषय सामाग्री से जुड़े तथ्यों पर गहरा शोध और लेख में सटीक एवं विषयानुरूप वर्णन है।	एक या दो तथ्यात्मक त्रुटियों के अलावा अधिकांश तथ्य सही एवं विषयानुरूप हैं।	कुछ तथ्य विषयानुरूप हैं पर तीन से अधिक त्रुटियाँ पाई गई हैं।	प्रयुक्त लेखों में विषय सामाग्री स्पष्ट नहीं है।
कलात्मक क्षमता एवं चित्र संकलन	परियोजना के विषय की प्रभावी अभिव्यक्ति के लिए रंगों साज-सज्जा और तस्वीरों का अच्छा उपयोग।	परियोजना के विषय की प्रभावी अभिव्यक्ति के लिए रंगों साज-सज्जा और तस्वीरों का कुछ उपयोग।	परियोजना के विषय की प्रभावी अभिव्यक्ति के लिए रंगों साज-सज्जा और तस्वीरों का कम उपयोग।	परियोजना के विषय की प्रभावी अभिव्यक्ति के लिए रंगों साज-सज्जा और तस्वीरों का अच्छा उपयोग नहीं किया।

भाषा का प्रयोग	प्रस्तुतीकरण में वाक्य-विन्यास, वर्ण—विन्यास एवं विराम चिह्न संबंधी त्रुटियाँ न होना। सहज एवं बोधगम्य भाषा का उपयुक्त प्रयोग।	प्रस्तुतीकरण में वाक्य-विन्यास, वर्ण—विन्यास एवं विराम चिह्न संबंधी कुछ ही त्रुटियाँ का होना।	प्रस्तुतीकरण में वाक्य-विन्यास, वर्ण—विन्यास एवं विराम चिह्न संबंधी त्रुटियाँ के कारण भाषा की उपयुक्तता का अभाव पाया जाना।	प्रस्तुतीकरण में वाक्य-विन्यास, वर्ण—विन्यास एवं विराम चिह्न संबंधी त्रुटियाँ के कारण विषयानुसार भाषा का प्रयोग न हो पाना।
दिशा निर्देशों का पालन/ समयनिष्ठता	दिशा निर्देशों का कड़ाई से पालन एवं समयानुसार कार्य सम्पन्न होना ।	अधिकांश निर्देशों का पालन एवं समयानुसार कार्य सम्पन्न होना।	बहुत कम दिशा निर्देशों का पालन एवं अतिरिक्त समय देने के पश्चात कार्य सम्पन्न होना।	दिशा निर्देशों का पालन एवं समयानुसार कार्य सम्पन्न न हो पाना।
समग्र प्रस्तुति	परियोजना का समग्र प्रभाव रोचक और आकर्षक।	परियोजना का समग्र प्रभाव ध्यान आकर्षण के लिए पर्याप्त।	परियोजना की समग्र प्रस्तुति को आकर्षक बनाने के लिए कुछ ही प्रयास किया गया।	समग्र प्रस्तुति को रोचक बनाने के लिए विद्यार्थी ने किसी प्रकार का प्रयास नहीं किया।

LAKSHMIPAT SINGAHNIA ACADEMY
OPEN BOOK PROJECT (UNIT TEST-I)
2024-25

Class-IV
Subject- Bengali 2nd Language

F.M. 20

TOPIC- মরুভূমিতে জল সংকট এবং ইকো সিস্টেম

উদ্দেশ্য (Objectives)

- কল্পনার বিকাশ
- সৃজনশীলতার বিকাশ
- ভাষাশৈলীর বিকাশ
- ব্যবহারিক জ্ঞানের বিকাশ
- মরুভূমিতে জল সংকট এবং ইকো সিস্টেম সম্পর্কে পরিচয়
- ভাষাগত ক্ষমতা এবং ধারণাগত ক্ষমতার বিকাশ



গ্রীষ্মের ছুটিতে, তুমি তোমার পরিবারের সাথে মরুভূমি অঞ্চলে বেড়াতে যাবে। তোমার কৌতূহলে ভরা মন মরুভূমি অঞ্চল সম্পর্কিত তথ্য পেতে আগ্রহী।

প্রকল্পের কাজ - ম্যাগাজিন তৈরি

ম্যাগাজিনে নিম্নলিখিত বিষয়গুলি অন্তর্ভুক্ত করতে হবে।

1) ম্যাগাজিনের প্রথম পৃষ্ঠায় (cover page) একটি আকর্ষণীয় শিরোনাম দাও এবং কিছু ছবি পেস্ট করো।

2. এই গ্রীষ্মের ঋতুতে জলের সংকট এড়াতে, একটি ছবির মাধ্যমে বোঝাও যে চারটি জিনিস তুমি তোমার সাথে মরুভূমি এলাকায় নিয়ে যাবে এবং তাদের নাম লেখো।

3. যেখান থেকে মরুভূমির প্রাণী ও পাখি জল পায়। ছবিসহ দুটি বাক্যে জলের উৎসগুলো উল্লেখ করো।

4. মরুভূমিতে ভ্রমণ করার সময় জলের সংকট এড়াতে তুমি কী চারটি ব্যবস্থা গ্রহণ করব তা লেখো।

5. প্রকল্পের কাজের উপস্থাপনা এবং ভাষার প্রতি বিশেষ মনোযোগ প্রয়োজন।

প্রকল্প কাজের দ্বিতীয় অংশ

পৃথিবীর ভূ-পৃষ্ঠে ভূমি ও জলের অনেক রূপ রয়েছে। জীবজগৎ এই পৃথিবীর প্রতিটি কোণে বিরাজমান। জলে মাছ, আকাশে পাখি আর স্থলে বন্য প্রাণী আছে। 33 শতাংশ জমি মরুভূমি। এই মরুভূমিতে বিচরণকারী প্রাণীদের খাদ্য গাছ-গাছালি, ছোট প্রাণী থেকে শুরু করে বড় প্রাণী পর্যন্ত। অতএব, বাংলা প্রকল্পের কাজে, তোমরা মরুভূমির ইকোসিস্টেমকে চিত্রিত করে একটি পোস্টার তৈরি করবে।

যার মধ্যে নিম্নলিখিত বিষয়গুলি অন্তর্ভুক্ত করা উচিত-

- ❖ A4 পেপারে তৈরি করবে।
- ❖ থর মরুভূমির ইকোসিস্টেম চিত্রিত করে একটি পোস্টার তৈরি করো।
- ❖ মরুভূমির অসুবিধাগুলি চিত্রিত করে দুটি স্লোগান লেখো, একটি আকর্ষণীয় শিরোনাম দাও।

LEARNING OUTCOMES:

- এই পরিযোজনা কার্যের মাধ্যমে শিক্ষার্থীরা মরুভূমিতে জল সংকট এবং ইকোসিস্টেম সম্পর্কে পরিচিত হবে।

Evaluation Rubric (2024-2025)

Skills দক্ষতা	Competency যোগ্যতা			
	4	3	2	1
বিষয়বস্তুর কার্যকরী এবং সৃজনশীল বর্ণনা	বিষয়ের সাথে সম্পর্কিত তথ্যগুলির উপর গভীর গবেষণা রয়েছে এবং নিবন্ধে বর্ণনাটি বিষয়ের সাথে সঠিক এবং প্রাসঙ্গিক।	দু-একটি তথ্যগত ভুল বাদে অধিকাংশ তথ্যই সঠিক এবং বিষয়ের সাথে সঙ্গতিপূর্ণ।	বিষয় অনুযায়ী কিছু তথ্য কিন্তু তিনটির বেশি ত্রুটি পাওয়া গেছে।	ব্যবহৃত নিবন্ধগুলির বিষয়বস্তু স্পষ্ট নয়।
শৈল্পিক ক্ষমতা এবং ছবি সংগ্রহ	প্রজেক্টের থিমকে কার্যকরভাবে বোঝাতে রং, সাজসজ্জা এবং ছবির ভালো ব্যবহার।	প্রকল্পের থিমের কার্যকরী প্রকাশের জন্য রঙ এবং ছবির কিছু ব্যবহার।	প্রকল্পের থিমের কার্যকরী প্রকাশের জন্য রঙ, সজ্জা এবং ফটোগ্রাফের ন্যূনতম ব্যবহার।	প্রজেক্টের থিমের কার্যকরী প্রকাশের জন্য রং, সাজসজ্জা এবং ছবির ভালো ব্যবহার করা হয়নি।
ভাষার ব্যবহার	উপস্থাপনায় বাক্য-বিন্যাস, বানান এবং বিরাম চিহ্নে কোনো ত্রুটি থাকা উচিত নয়। সহজ ও বোধগম্য ভাষার যথাযথ ব্যবহার।	উপস্থাপনায় বাক্য-বিন্যাস, বানান এবং বিরাম চিহ্নের কয়েকটি ত্রুটি রয়েছে।	উপস্থাপনায় বাক্য গঠন, বানান এবং বিরাম চিহ্নের ত্রুটির কারণে ভাষার উপযুক্ততার অভাব।	উপস্থাপনায় বাক্য গঠন, বানান এবং বিরাম চিহ্নের ত্রুটির কারণে বিষয় অনুযায়ী ভাষা ব্যবহার করতে না পারা।
নির্দেশিকা/সময়ানুবর্তিতা অনুসরণ করুন	নির্দেশিকাগুলি কঠোরভাবে মেনে চলা এবং সময়মতো কাজ শেষ করা।	বেশিরভাগ নির্দেশনা অনুসরণ করা এবং সময়মতো কাজ শেষ করা।	খুব কম নির্দেশনা অনুসরণ করে এবং অতিরিক্ত সময় নিয়ে কাজটি সম্পন্ন করা হয়।	নির্দেশিকা অনুসরণ এবং সময়মতো কাজ সম্পূর্ণ করতে ব্যর্থতা।
সামগ্রিক উপস্থাপনা	প্রকল্পের সামগ্রিক ছাপ প্রশংসনীয় এবং আকর্ষণীয়।	প্রকল্পের সামগ্রিক প্রভাব মনোযোগ আকর্ষণ করার জন্য যথেষ্ট।	প্রকল্পের সামগ্রিক উপস্থাপনা আকর্ষণীয় করার জন্য সামান্য প্রচেষ্টা করা হয়েছিল।	শিক্ষার্থী সার্বিক উপস্থাপনাকে আকর্ষণীয় করে তোলার কোনো চেষ্টাই করেনি।

LAKSHMIPAT SINGHANIA ACADEMY
MATHEMATICS
UNIT TEST 1– OPEN BOOK PROJECT

Class – IV

F.M. 20

THEME: 1. WATER CRISIS – We need the Blue to keep the Green

2. Eco system In the Desert

- The project will be done individually.
- Kindly paste or draw relevant pictures to enhance the presentation of your project.
- You may use the pictures given in the question paper.
- You may use colours wherever required.
- Make a cover page of your project mentioning the subject, topic, your name and class.

Through this project, students will be able to:

- get an idea of the water crisis both globally and locally and will try to conserve water
- revise and apply the concepts of Large numbers, Fractions and shapes
- apply their creativity and imagination to complete the project
- develop critical thinking and problem-solving skills

Water crisis is defined as a lack of safe water supplies. As the population of the world grows the environment becomes further affected by climate change, access to fresh water gradually diminishes. Almost two third of the world's population experience severe water scarcity for at least one month each year. India may not be the only country which is suffering from this difficult situation but is indeed in a critical stage. A lot of long term issues like unregulated construction, systematic destruction of lakes, hindrances to the natural underground flow of water and climate change has severely affected the availability of water in Bengaluru. Not only has this Silicon Valley several south Indian States like Andhra Pradesh, Tamil Nadu, and Telengana are facing serious water crisis this week.

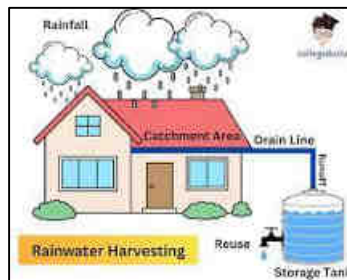
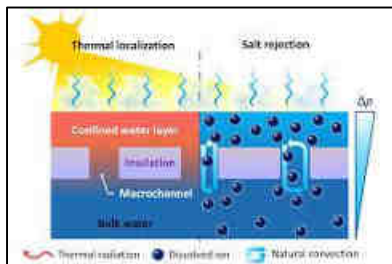


The World Bank Report has depicted the coming water crisis in India with the help of a bar chart. Let us analyse the data vividly:



- Which year shows the maximum amount of availability of water?
- What is the gap between the utilizable water and demand for water in 2050?
- In which year the gap between the utilizable water and demand for water was minimum?

I. Each of us need to take action on the water crisis. We can explore alternative water sources like rainwater harvesting, aqueducts, desalination, water reuse and groundwater extraction. These methods help increase water availability and accessibility for various purposes. Aqueducts are the channels to transport water. The Romans are considered the greatest aqueduct builders of the ancient world. Some of those aqueducts are still in use.



AQUEDUCT

I have already thought of an alternative source from the names mentioned above.

➤ Crack the code and guess the alternative source:

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

- Let us write the corresponding letters written with the numbers to find the alternative source of water after solving the sums given below:

i) $108 \div 108 = \underline{\quad}$

ii) sum of 5 times 3 and 2 = $\underline{\quad}$

iii) Multiply 3 with 7 = $\underline{\quad}$

iv) If we multiply any number with this number the product ends with either 0 or 5 $\underline{\quad}$

v) A single digit even number when multiplied by itself results in this single digit even

number = $\underline{\quad}$

vi) $21 \div 1 = \underline{\quad}$

vii) $105 \div 35 = \underline{\quad}$

viii) Half of 2 scores = $\underline{\quad}$

THEME: Ecosystem In the Desert

“An ecosystem is defined as a community of life-forms in concurrence with non-living components, interacting with each other.”

Desert Ecosystem:

Deserts are barren areas of land characterised by extremely high or low temperatures, with low rainfall and scarce or no vegetation. Deserts are examples of terrestrial ecosystems, which are found throughout the world. Neither all deserts are flat, nor do all deserts have cacti or oases. These are regions with a short rainy season. It is scorching in the daytime, and very cold at night in the desert.



A. Oasis – A sight of calmness in the land of desert

In ecology, an oasis is a fertile area of a desert or semi-desert environment that sustains plant life and provides habitat for animals. Surface water and land may be present, or water may only be accessible from wells or underground channels created by humans. Oasis are important habitats and water sources for dry land regions, sustaining $\frac{1}{10}$ th of the world's population despite taking up about $\frac{15}{1000}$ of land area. New research shows how the world's oasis all over have grown and shrunk over the past 25 years as water availability patterns changed and desertification encroaches on these wet refuges.

1. Let's create:

Make a model of oasis using different 3D and 2D shapes:

Instructions:

- Your model should have a minimum of 2- 2D and 3D shapes respectively
- You may refer to the link given below: https://youtu.be/sbZkT_MGe2k?si=F2aEfPTAagtwnOQ

B.Food chain-An ecological community

A desert food chain is a graphical representation showing who eats whom and thus the flow of energy in the desert biome. Like other food chains, there are two main types of organisms in a desert food chain: producers and consumers. A desert food chain is unique due to its harsh environment. In the desert, humans are the ultimate predators. Other apex predators compete with humans for food and survival.



1. Food Chain Multi-Step Word Problem:

Directions: Answer each problem below, then cut and paste the answers.

An anteater eats 2097 ants at each sitting while wood rat can eat 5678 scorpions. How many more insects a wood rat is eating than an anteater?

A Gobi bear can eat a total Of 45876 berries. It ate 14327 from a bush, 28364 from a tree, and the Rest from a vine. How many berries did the bear eat from the vine?







A worm can dig a total of 5,280 inches in a day. If it digs 1,393 inches in the morning and 2,383 inches in the afternoon, how many inches does the worm dig at night?

The cacti can grow 12 inches eachday. It grows for 7 days, and then someone comes and Trims 14 inches off. How long is the cacti plant now?

A squirrel collected 6745 acorns. It distributed all the acorns equally in 25 holes and ate the remaining acorns. Find the number of acorns the squirrel ate?

A rattlesnake can eat 976 lizards every month. How many will the rattlesnake have in 1year 9 months?

Directions: Solve the problems given above. Cut and glue the correct answer on top of the corresponding question.

 70	 3185	 20496	 3581
 20	 1,504		

LEARNING OUTCOME:

At the end of the project, students should be able to solve some mathematical clues, develop problem solving skill and revise the concepts of basic geometry and will be aware of the problem of water crisis. Children will also revise the concept of shapes and basic geometry and gain knowledge about the plant and animal adaptations necessary for survival in a desert environment and how energy flows through the ecosystem.

	4	3	2	1
Maths Content	Demonstrates a clear knowledge and application of maths skills.	Demonstrates a general knowledge and application of maths skills.	Demonstrates limited knowledge and application of maths skills.	Demonstrates no knowledge and application of maths skills.
Problem Solving (FOOD CHAIN)	Very good capacity of problem solving. Is able to calculate without any help.	Acceptable capacity of problem solving. Is able to calculate with little help.	Limited capacity of problem solving. Is able to calculate with teacher's intervention.	Poor problem solving capacity. Is not able to calculate even with teacher's intervention.
Logical Reasoning (DATA INTERPRETATION and DECODING)	Shows mastery Over logical reasoning.	Shows command Over logical reasoning.	Shows little bit awareness about logical Reasoning.	Not at all aware of the logical reasoning
Art Integration (OASIS)	The concept in the submission is exceptionally creative and well-integrated with art.	The concept in the submission is creative and well-integrated with art.	The concept in the submission shows little creativity and integration with art.	The concept in the submission lacks creativity and integration with art.
Overall Presentation	Very neat presentation	Moderately neat presentation	Average presentation	poor presentation

THEME: WATER CRISIS AND ECOSYSTEM IN THE DESERT**LEARNING OBJECTIVES**

Students will be able to:

- Understand the meaning of an ecosystem and represent the same through model making.
- Know and learn about the ecosystem in the desert.
- Identify the environmental challenges faced by our planet, Earth.
- Appreciate the importance of an ecosystem and understand how vital it is for the existence of human beings.
- Understand the need to adopt methods to conserve our valuable resource – Water.
- List some traditional methods used to conserve water.
- List the states our country that our hit by water scarcity.
- Experiential learning: Make a model to depict the ecosystem in a desert.
- Research about the traditional methods of water storage and conservation.
- Identify some modern methods to conserve water.
- Integrate Art Education and Social Studies with Science through this project.

Deserts are barren areas of land characterised by extremely high or low temperatures, with low rainfall and scarce or no vegetation. Based on the climate conditions, deserts are classified into two types – **hot deserts and cold deserts**. The **Sahara** located in North Africa is known as the world's largest and the hottest desert, covering over 8.54 million square kilometers. **Ladakh** is known as the cold desert of India. It lies in the Great Himalayas, in the state of Jammu and Kashmir.



Hot desert



Cold desert

In this project, we will talk about the **Hot Deserts**.

Hot deserts have an extreme climate and challenging environment. The desert ecosystem is devoid of any precipitation and rainfall. It is scorching during daytime, and very cold at night in the desert. It has very less diversity of life and little vegetation. An **ecosystem** is a geographic area where plants, animals and other organisms, as well as weather and landscape work together to form a bubble of life. Deserts are examples of terrestrial ecosystems, which are found throughout the world.



It houses animals and plants that have adapted in their own way to survive in the desert environment and can withstand the harsh weather conditions. Some animals that are found here are lizards, geckos, toads, jackrabbits, camels, snakes, spiders and meerkats. There are many different types of desert plants, including cactus, date palm, acacia, prickly pear, thorny bushes and yucca.

Using the information provided above and some research work, do the following as directed. The project will be done individually.

- Make a model to depict a Desert Ecosystem. Label the plants and animals and also mention one adaptive feature of each. (you may use sticky notes/flags to label)
- You may use cut outs, cardboard, dry leaves, newspaper and other waste materials (as much as possible). You may use your own creativity.
- You may use the links provided below for research work.

Video Links:

<https://www.youtube.com/watch?v=TfydfO114nY>

https://www.youtube.com/watch?v=mM_kA3q4Bkg

https://www.youtube.com/watch?v=BVIKn5iP_kc



WATER CRISIS

Water is what makes our planet so unique. Having clean water is vital to our individual health, our collective agricultural needs, and the needs of our environment.

However, rapid urbanization, industrialization and agricultural practices contribute to increasing water demand. Not enough consideration has been given to minimizing use and conserving water resources.



Come summer, and water becomes a commodity as precious as gold in India. The country has 18 percent of the world's population, but only 4 percent of its water resources, making it among the most water-stressed in the world. **By 2030, India's water demand is projected to be double the amount available.** In recent times, Bengaluru has received little rainfall due to human-caused climate change. Water levels are running desperately low, particularly in poorer areas, resulting in sky-high costs for water and a quickly dwindling supply.

India is prone to droughts as well as floods. As changes in the climate is increasing, unpredictability in weather patterns is evident. In order to boost water conservation and rain water harvesting in the country, the Ministry of Jal Shakti has taken up a nationwide campaign "**Jal Shakti Abhiyan - Catch the Rain**" (JSA - CTR) with the theme "**Catch the rain, where it falls, when it falls**" for creating appropriate rainwater harvesting structures in urban and rural areas of all the districts in the country, with people's active participation, during the pre-monsoon and monsoon periods. Also, reservoirs can help by storing water and releasing it when needed.

So, children let us also join hands with our Government and make an effort through this project to spread awareness towards conserving our valuable resource – Water.



Now that you are aware of the water crisis situation in our country, let us try to answer a few questions.

You may use **A-4 size sheets** to write the answers. Stick relevant pictures or drawings. Provide a **cover page** for the same.

Q1) Mention any **three** human activities that are responsible for the current situation of water crisis in our country.

Q2) Our ancestors used several traditional water conservation techniques. List any **three** traditional methods used store and conserve water. Write **2-3 lines** about each method.

Q3) Imagine that you have been appointed as the head of the Ministry of Water Conservation. As a responsible leader, what measures would you take to prevent the future generations from facing water crisis. (Mention any **two** ways.)

LEARNING OUTCOME:

At the end of the project students:

- Should have understood the meaning of an ecosystem and represent the same through model making.
- Should have known and learnt about the ecosystem in the desert.
- Should have identified the environmental challenges faced by our planet, Earth.
- Should have appreciated the importance of an ecosystem and understand how vital it is for the existence of human beings.
- Should have understood the need to adopt methods to conserve our valuable resource – Water.
- Should have listed some traditional methods used to conserve water.
- Should have known the states our country that our hit by water scarcity.
- Experiential learning: Should have made a model to depict the ecosystem in a desert.
- Should have researched about the traditional methods of water storage and conservation.
- Should have identified some modern methods to conserve water.
- Should have Integrated Art Education and Social Studies with Science through this project.

Some helpful links:

The Ecosystem in the Desert

<https://www.earthreminder.com/desert-ecosystem-types-characteristics/>

<https://courseware.cutm.ac.in/wp-content/uploads/2021/03/desertecosystem-170219115758.pdf>

Water Crisis

<https://gca.org/how-ancient-water-conservation-methods-are-reviving-in->

<https://www.cseindia.org/traditional-water-harvesting-systems-683>

RUBRICS**EVS 4 – OPEN BOOK PROJECT – UT1 (2024-2025)**

	4	3	2	1
Content - Accuracy and understanding of the theme	Demonstrates a clear understanding of the theme. The content is concise and accurate.	Demonstrates an adequate understanding of the theme. The content is adequately concise and accurate.	Demonstrates limited understanding of the theme. The content is somewhat accurate.	Demonstrates no understanding of the theme. The content lacks accuracy.
Creativity and Originality - Art integration	The submission reflects originality and is exceptionally creative and well-integrated with Art.	The submission reflects originality to some extent and is adequately creative and integrated with Art.	The submission is somewhat creative and displays little integration with Art. Shows little originality.	The submission lacks creativity and integration with Art. Originality is lacking.
Research Work - Use of technology and media (links provided)	Accessed suggested media and employed technology exceptionally for research work.	Accessed suggested media and employed technology adequately for research work.	Suggested media was somewhat accessed. Research work was inadequate.	Suggested media was not accessed at all. Research work is lacking.
Guidelines followed with timely submission	Guidelines have been strictly followed. The project was submitted on time.	Most of the instructions have been followed. The project was submitted on time.	Followed very few guidelines. The project was submitted beyond time.	Guidelines have not been followed. The project was submitted beyond time.
Overall Presentation – Layout of the project	Presentation includes relevant pictures/drawings to support the content. The presentation is exceptionally attractive and appealing in terms of design, layout and neatness.	Graphics used in the presentation support the content to some extent. The presentation is quite attractive in terms of design, layout and neatness.	Graphics are somewhat related to the content. Some attempt has been made to make the presentation somewhat attractive.	Graphics are not related to the content at all. Little or no effort has been made to make the presentation attractive.

Name: _____ Sec: ___ Roll no: ___ IV/Unit Test 1/SSC/2024-25

SUBJECT – SOCIAL SCIENCE

CLASS – IV

FULL MARKS - 20

Instructions:

- The project comprises research work, a survey, mood board making and map pointing.
- Read the instructions carefully and do the research work using the links provided.
- Refer to the internet to gather information but write the matter in your own words and be creative.
- Stick relevant and colourful pictures downloaded from the internet.
- Make sure your project is neat, creative, and interesting.
- The cover page must be vibrant and attractive.
- It is an individual work.

Theme:

WATER CRISIS AND ECOSYSTEM OF THE DESERT

LEARNING OBJECTIVES:

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

- ✓ know about the causes, issues and problems of water crisis through research
- ✓ survey about the use of water in their neighbourhood
- ✓ think of strategies to solve the problem of water crisis
- ✓ know about the ecosystem of the desert through research
- ✓ learn about the different types of deserts around the world
- ✓ develop a sense of curiosity and observation skills
- ✓ apply critical thinking skills while completing the project
- ✓ use their creative skills while making a mood board



1.

WATER, WATER, EVERYWHERE, NOT A DROP TO DRINK!

“When the well is dry, we know the worth of water”- Benjamin Franklin

Water crisis is the lack of freshwater resources to meet the water demand. Water scarcity limits access to safe water. When water runs dry people can't get enough water to drink, wash or feed crops and economic decline may occur. The essence of global water scarcity is the geographic and temporal mismatch between freshwater demand and availability. It is a ticking time bomb today.



There are two types of water scarcity-

- ❖ **Physical scarcity** occurs when the water demand is greater than the supply of water.
E.g. Dry parts of the world or arid regions are most often associated with physical scarcity.

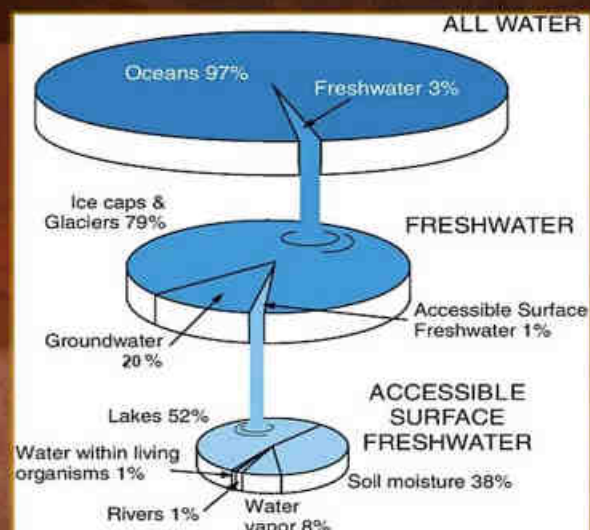
- ❖ **Economic water scarcity** occurs when water is adequate, but is unavailable due to economic reasons.
E.g. climate change, population growth, pollution, and government instability.



AVAILABILITY OF WATER ON THE SURFACE OF THE EARTH

Water Breakdown

- 70% of Earth is Water
- 3% of H₂O is Fresh Water
- Of Fresh Water
 - 79% is Glacial
 - 20% is Groundwater
 - 1% is Surface water
- Of Surface water
 - 52% is Lakes
 - 38% is Soil Moisture
 - 8% is Atmospheric Vapour
 - 1% in Living Organisms
 - 1% is Rivers



WHAT YOU NEED TO DO:

1) **Design a project file** on the water crisis based on your research under the following sub-topics. (Mention 2 points for each) Use A4 size papers (coloured or white) and staple them together.

- Causes
- Impact
- Issues/Problems
- Strategies for Conservation of water to meet the water crisis

2) **Do a Survey (Use the given form)**

Follow the given checklist to find out the water usage in the given categories
Staple it along with the file.

- ❖ Your Household
- ❖ Your neighbour's Household (any 1)
- ❖ Domestic help's Household

Your project file must comprise the following:

- a) A creative title for the project file.
- b) A beautiful, creative, and colourful cover page for the project file.
- c) An introduction and a conclusion based on the theme – WATER CRISIS
- d) A brief writeup on the causes, impact, issues/problems and strategies for conservation as asked.
- e) 3 Survey reports
- f) Support the information with relevant pictures/drawings.



Let's Become Aqua Smart!

SURVEY ON WATER USAGE

Name of the Person -	Household-			
<p>Calculate your family's water usage for a day.</p>  <p>Calculate your family's water usage over a week.</p>	ACTIVITIES	WATER/DAY/PERSON	WATER/WEEK	
	Bath (Bucket)			
	Shower			
	Hand/Face Washing			
	Teeth Cleaning			
	Dish Washing			
	Toilet Flush			
	Gardening/Car Cleaning			
	Drinking			
	Cooking			
	Clothes Washing			
	Outdoor Activities			
	Total Usage in a Week/Family			

Conclusion: _____



2.

ON A SAFARI TO THE SANDS

Desert is any large, extremely dry area of land with sparse vegetation. It is one of Earth's major types of ecosystems supporting a community of distinctive plants and animals specially adapted to the harsh environment. Desert environments are so dry that they support only extremely sparse vegetation. It covers one-third of the Earth's surface.



Deserts can be hot or cold. They can be found on every continent with the largest located in Antarctica followed by the Arctic, North Africa and the Middle East.

Some of the major deserts of the world are

- ✚ The Sahara
- ✚ The Arabian
- ✚ The Gobi
- ✚ The Kalahari
- ✚ The Deserts of Australia



Desert has many features, one of them being an oasis. An oasis is a small patch of vegetation surrounded by a desert. Communities have traditionally planted strong trees, such as palms, around the perimeter of oases to keep the desert sands from their delicate crops and water. An oasis is an area made fertile by a source of fresh water in an otherwise arid region. They provide rest, shade, water and food to the nomads who travel across the deserts.

LET US VENTURE TO THE
LAND OF SHIFTING
SANDDUNES...

WHAT YOU NEED TO DO:

a) **Design a Mood Board** in the form of a collage on the ecosystem of any one hot desert in the world based on the following sub-topics. Use a quarter chart paper (coloured). Border the chart paper with bright coloured Sellotape. A sample of the **Mood Board** is given below. Use colourful and bright pictures. Give a captivating caption to your Mood Board and label it wherever necessary.

- Hot deserts in the world.
- Flora and Fauna
- Landscapes

b) **Map pointing**

Mark the following on an outline world map. Support your map with a key.

- Continent where the Sahara Desert is located.
- Country where the Thar Desert is located.
- The World's largest desert is on this continent.

Mood Board Samples



USEFUL LINKS FOR RESEARCH WORK

For Ecosystem of the Desert

https://youtu.be/dsctmujzz14?si=k3JqL_qa7CZ1IKOL

<https://youtu.be/2PkRfpE0AgE?si=wBmCq2lbBurnXclw>

<https://youtu.be/IHmqc5J97Aw?si=FSZu3QRnK-hD6qVm>

https://en.wikipedia.org/wiki/Desert_ecology

Name: _____ Sec: ___ Roll no: ___ IV/Unit Test 1/SSC/2024-25

For Water Crisis

<https://youtu.be/IHmqc5J97Aw?si=FSZu3QRnK-hD6qVm>

https://en.wikipedia.org/wiki/Water_scarcity_in_India

<https://www.unicef.org/wash/water-scarcity>

<https://water.org/our-impact/water-crisis>

LET US ALL JOIN HANDS TO SAVE WATER



FROM SCARCITY TO SUSTAINABILITY

LEARNING OUTCOMES:

After the completion of the project students were able to -

- ✓ know about the causes, issues and problems of water crisis through research
- ✓ survey about the use of water in their neighbourhood
- ✓ think of strategies to solve the problem of water crisis
- ✓ know about the ecosystem of the desert through research
- ✓ learn about the different types of deserts around the world
- ✓ develop a sense of curiosity and observation skills
- ✓ apply critical thinking skills while completing the project
- ✓ use their creative skills while making a mood board

SOCIAL SCIENCE PROJECT RUBRIC

CLASS IV – UNIT TEST 1

CATEGORY	5	4	3	2-1
Content – Demonstrates a concise knowledge and understanding of the theme	Excellent research work is done. The content is very specific and relevant to the topic. Demonstrates very good participation in the project. Helps teammates and provides ideas.	Good research work is done. The content is relevant to the topic. Demonstrates adequate participation in the project. Helps teammates and provides ideas.	The research work and the content is satisfactory. Missed out on some important points. Demonstrates limited participation in the project. Is not keen to help teammates or provides ideas.	The content is not satisfactory. Lacks research work. Demonstrates lack of participation and involvement in the project.
Overall Presentation and Neatness	Exceptionally neat in presentation and the layout of the project is par excellence.	Neatly presented and the layout of the project is remarkably done.	Somewhat neat in the overall presentation and the layout of the project.	Untidy presentation and lacks proper layout of the project.
Creativity and Art Integration- (Cover page and Mood Board – Collage)	The cover page is phenomenally creative and artistic. The artwork is unique and relevant to the theme.	The cover page is somewhat creative and artistic. The artwork is neat and relevant to the theme.	The cover page lacks creativity. It is not so neat and relevant to the theme. Overall artwork is not so impressive.	The cover page is untidy and not relevant to the theme. Overall artwork is unimpressive.
Skill- Map Pointing	Map pointing is done very neatly and accurately. The map is supported by a correct key.	Map pointing is done neatly and correctly. The map is supported by a correct key.	Map pointing is done but lacks accuracy and neatness. The map is supported by a key.	Map pointing is done in an untidy way and lacks accuracy. The map is partly or not supported by a key.

LakshmiPat Singhania Academy
Open Book Project – Term 1 2024-25

Class: IV
Subject: Computer Education

Full Marks: 10
Date of Submission: After Vacation

Topic: Stepwise Solving of Human Activities in Water Crisis and Ecosystem using shapes and SmartArt of MS Word

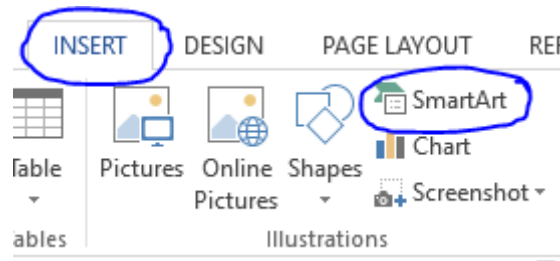
General instructions:-

- Use A4 size Fabiano paper to complete your project.
- Follow the instructions given below to prepare the project.
- Write your name, class and section clearly at the top of the Fabiano paper.
- It is an individual project.

Learning Objective

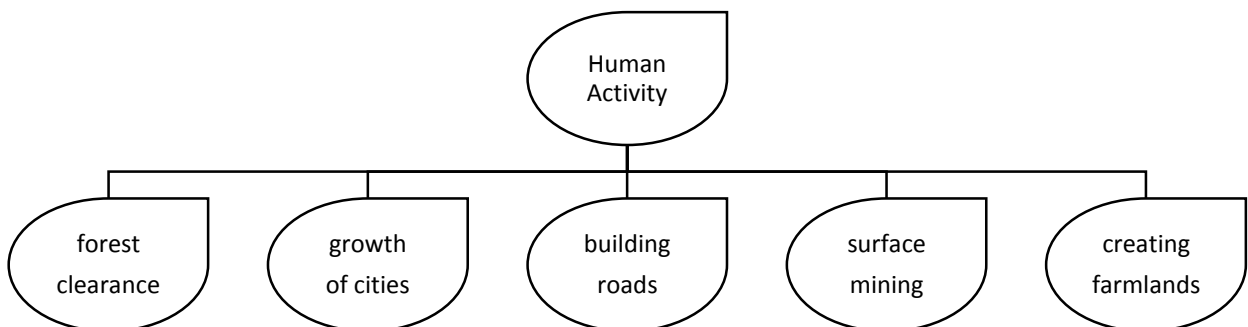
1. Understand the topic on water crisis and the ecosystem in the desert Areas
2. Learn the various ways save water
3. Think stepwise about the different ways of saving water
4. Use the SmartArt shapes to create their own hierarchy chart

SmartArt in MS Word: SmartArt refers to the range of graphics available in Word that you can use to create diagrams, such as flow charts, process charts, organisation charts etc.



Introduction

The water resources face a host of serious threats, all of which are caused primarily by human activity. The following chart shows how human activity have caused water scarcity and change in the ecosystem of the desert region.



To Do:-

- ✓ Think stepwise how your positive activities will help to solve the water crisis and improve the ecological system.
- ✓ Cut out 5 clouds or any other shapes with colourful papers.
- ✓ Stepwise paste the shapes and write inside the different activities you can do to help in improving the water crisis like planting trees, water harvesting, afforestation, take shorter showers, turn off taps while brushing etc.
- ✓ Write a one line slogan on a way that you adopt to minimise water crisis.

Learning Outcome

Student will be able to

- Understand the topic on water crisis and the ecosystem in the desert Areas.
- Learn the various ways save water.
- Think stepwise the ways of saving water.
- Use the Smart art shapes to create their own hierarchy chart in Fabiano paper.
- Write a one line slogan on a way that you adopt to minimise water crisis.

Resources:-

<https://www.greenfacts.org/en/water-resources/index.htm#4>

<https://www.volusia.org/services/growth-and-resource-management/environmental-management/sustainability-and-resilience/water-conservation/25-ways-to-save-water.stml>

Rubrics:-

Criteria	2.5	1.5	1
Creativity and Artistic skill	Excellent document layout with proper use of colour, text and image.	Good document layout with proper use of colour, text and image.	Limited document layout with proper use of colour, text and image.
Stepwise designing the ways of saving water	Creative and innovative designs translated into tangible sketches and diagrams. Clear depiction of the ways of saving water	Tangible designs with some creativity and innovation. Sketches and diagrams depict the ways of saving water adequately.	Basic sketches and diagrams with limited creativity or innovation. Adequate depiction of the ways of saving water but lacking in detail or clarity
Writing Slogan	Slogan is catchy, clear, and effectively promotes voting for the right person.	Slogan is clear but may lack impact or effectiveness in promoting voting for the right person.	Slogan is vague or unclear in promoting voting for the right person

<p>Overall Understanding of the Project</p>	<p>Demonstrates a comprehensive understanding of ways of saving water for the better future Clearly presents information and effectively supports explanations.</p>	<p>Demonstrates a good understanding of both topics. Presents information adequately, with some room for improvement in clarity or detail.</p>	<p>Demonstrates a basic understanding of the topics, but lacks clarity or coherence in presentation. Explanations may be superficial or incomplete.</p>
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