Handbook of Joyful Learning

CENTRAL BOARD OF SECONDARY EDUCATION

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भारत का संविधान

उद्देशिका

हम, भारत के लोग, भारत को एक सम्पूर्ण [1]प्रभुत्व-संपन्न समाजवादी पंथनिरपेक्ष लोकतंत्रात्मक गणराज्य बनाने के लिए, तथा उसके समस्त नागरिकों को:

सामाजिक, आर्थिक और राजनैतिक न्याय,
विचार, अभिव्यक्ति, विश्वास, धर्म
और उपासना की स्वतंत्रता,
प्रतिष्ठा और अवसर की समता
प्राप्त कराने के लिए
तथा उन सब में व्यक्ति की गरिमा
[2]और राष्ट्र की एकता और अखंडता
सुनिश्चित करने वाली बंधुता बढ़ाने के लिए

दृढ़संकल्प होकर अपनी इस संविधान सभा में आज तारीख 26 नवम्बर, 1949 ई॰ को एतद्द्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।

1. संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977) से "प्रभुत्व-संपन्न लोकतंत्रात्मक गणराज्य" के स्थान पर प्रतिस्थापित।
2. संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977) से "राष्ट्र की एकता" के स्थान पर प्रतिस्थापित।

भाग 4 क

मूल कर्त्तव्य

51 क. मूल कर्त्तव्य – भारत के प्रत्येक नागरिक का यह कर्त्तव्य होगा कि वह –

(क) संविधान का पालन करे और उसके आदर्शों, संस्थाओं, राष्ट्रध्वज और राष्ट्रगान का आदर करे;

(ख) स्वतंत्रता के लिए हमारे राष्ट्रीय आंदोलन को प्रेरित करने वाले उच्च आदर्शों को हृदय में संजोए रखे और उनका पालन करे;

(ग) भारत की प्रभुता, एकता और अखंडता की रक्षा करे और उसे अक्षुण्ण रखे;

(घ) देश की रक्षा करे और आह्वान किए जाने पर राष्ट्र की सेवा करे;

(ङ) भारत के सभी लोगों में समरसता और समान भ्रातृत्व की भावना का निर्माण करे जो धर्म, भाषा और प्रदेश या वर्ग पर आधारित सभी भेदभाव से परे हों, ऐसी प्रथाओं का त्याग करे जो स्त्रियों के सम्मान के विरुद्ध हैं;

(च) हमारी सामासिक संस्कृति की गौरवशाली परंपरा का महत्त्व समझे और उसका परिरक्षण करे;

(छ) प्राकृतिक पर्यावरण की जिसके अंतर्गत वन, झील, नदी, और वन्य जीव हैं, रक्षा करे और उसका संवर्धन करे तथा प्राणिमात्र के प्रति दयाभाव रखे;

(ज) वैज्ञानिक दृष्टिकोण, मानववाद और ज्ञानार्जन तथा सुधार की भावना का विकास करे;

(झ) सार्वजनिक संपत्ति को सुरक्षित रखे और हिंसा से दूर रहे;

(ञ) व्यक्तिगत और सामूहिक गतिविधियों के सभी क्षेत्रों में उत्कर्ष की ओर बढ़ने का सतत प्रयास करे जिससे राष्ट्र निरंतर बढ़ते हुए प्रयत्न और उपलब्धि की नई उंचाइयों को छू ले;

[1](ट) यदि माता-पिता या संरक्षक है, छह वर्ष से चौदह वर्ष तक की आयु वाले अपने, यथास्थिति, बालक या प्रतिपाल्य के लिये शिक्षा के अवसर प्रदान करे।

1. संविधान (छयासीवां संशोधन) अधिनियम, 2002 द्वारा प्रतिस्थापित।

THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a [1]**SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC** and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the[2] unity and integrity of the Nation;

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949, do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "unity of the Nation" (w.e.f. 3.1.1977)

THE CONSTITUTION OF INDIA

Chapter IV A

FUNDAMENTAL DUTIES

ARTICLE 51A

Fundamental Duties - It shall be the duty of every citizen of India-

(a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;

(b) to cherish and follow the noble ideals which inspired our national struggle for freedom;

(c) to uphold and protect the sovereignty, unity and integrity of India;

(d) to defend the country and render national service when called upon to do so;

(e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;

(f) to value and preserve the rich heritage of our composite culture;

(g) to protect and improve the natural environment including forests, lakes, rivers, wild life and to have compassion for living creatures;

(h) to develop the scientific temper, humanism and the spirit of inquiry and reform;

(i) to safeguard public property and to abjure violence;

(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;

[1](k) to provide opportunities for education to his/her child or, as the case may be, ward between age of 6 and 14 years.

1. Subs, by the Constitution (Eighty-Sixth Amendment) Act. 2002.

Foreword

National Education Policy (NEP) 2020 aims for India to have an education system by 2040 that is second to none. With the quickly changing employment landscape and global ecosystem, it is becoming increasingly critical that children not only learn, but more importantly learn how to learn. Education thus, must move towards less content and more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields. Pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible, and, of course, enjoyable (NEP 2020) .

In alignment with the NEP, Central Board of Secondary Education has taken quite a few measures to make learning at schools holistic, skill-driven, competency-oriented and joyful. Joyful Learning necessarily imbibes the element of deriving pleasure with a sense of achievement and accomplishment during the process of learning. It enables the learner to improve all 21st century skills. Whether it is Experiential Learning, Art-Integrated Learning, Activity-Based Learning or Project-Based Learning or any other approach, as long as it facilitates curiosity and inquiry in a learner and helps him/her to attain the feeling of creating something new, it is a step towards Joyful Learning. All these approaches help a learner to develop competencies required by him/her in real-life.

The present Handbook has been created as a resource for practitioners and explains, in detail, the concept of Joyful Learning, the science behind it, ways to make a classroom joyful. Focus in the Handbook is to give clarity about integrating various subjects to achieve joyful teaching and learning. Suggestive exemplars of integrated lesson plans have been given in this hanbook for reference. It also explores a new dimension of using a home space like Kitchen as a resource for Joyful Learning, specially in the times like Covid-19.

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CHAPTER 1

Curtain Raiser: We are Back Again!

I am sure you remember us! We are Uday and Roshni. We met you in Handbook for Students. In that Handbook, we explored a few ways to be ready for the 21st Century.

Then we brought for you the Handbook on 21st Century Skills, to facilitate a clear understanding of these important skills, and also chart out the ways to collectively collaborate towards attaining the 21st century skills in each learner.

NOW, WE ARE HERE BEFORE YOU WITH THE HANDBOOK OF JOYFUL LEARNING.

Together, we shall understand the concept, do's and implementation of making learning joyful for students.

CHAPTER 2

Joyfully We All Shall Learn!

Roshni, I begin with my first question. What is joyful learning?

Uday, I shall begin with a little background information.

O Great! That will make my concepts clearer.

- Various ways like project - based learning, active learning, inclusive classrooms, activity - based learning, integration of arts and STEM encourage learning beyond the classroom boundaries.
- Though all these transformations have been way different from each other in form and function, all these are directed towards common objective of engaging learners in the classroom.

That means, an attempt to spark up the curiosity of learners, give expression to their creativity, nudge them to imbibe values and build character, form meaningful connections through collaboration, thereby making learning authentic and meaningful.

- The broader aims of all these initiatives, however, are effective only if they are successful at weaving the element of joy into learning experiences.
- Joyful Learning brings sparkle in the eyes of students and excites and empowers them to engage with learning experiences in fun-filled, playful manner.

Got it?
Some serious theory, now!

2.1. Meaning of Joyful Learning:

According to Oxford Dictionary, "Joy is a feeling of great pleasure and happiness.". Alice Udvari - Solner and Paula M. Kluth in their book "*Joyful Learning – Active and Collaborative Strategies for Inclusive Classrooms (2007)*" define "*Joyful Learning*" in context of education as:

"Joyful learning means positive intellectual and emotional state of learners. This state or experience is achieved when an individual or a group is deriving pleasure and a sense of satisfaction from the process of learning."[1]

THE TAKEAWAY:

Joyful Learning is the mode of learning in which learners are given opportunities to experience emotions of surprise in delightful ways, nurture their curiosity, while interacting with meaningful content through a supportive community of classmates / peer group and teachers.

1. https://link.springer.com/referenceworkentry/10.1007%2F978-1-4419-1428-6_795#howtocite accessed on 6th December 2020.

What about the ways through which classrooms become joyful?

- A joyful classroom engages learners actively and infuses enthusiasm and joy through activities in the form of games, stories, role plays, puzzles, hands on activities, songs and dance.
- Superior learning takes place when classroom experiences are enjoyable and relevant to students', by ensuring that all subjects are integrated in a manner which encourages the learners to build connections with the real world.

So, what you mean is, learning will be more relevant, engaging and deeply rooted in honing skills and competencies?

Absolutely, Uday! The idea is to ensure that values and life-skills are seamlessly embedded and competencies like Citizenship and Character are also efficaciouslty mapped in the curriculum. A natural corollary is the cross-cutting theme of Environment and Conserving Water that has been interspersed in the lesson plans designed under the 'Joyful' umbrella.

I am confused. Is it not what is expected to be done in Art-Integrated Learning or Experiential Learning?

THE TAKEAWAY:

My dear Uday,

Art integrated learning/Activity Based Learning/ Fun, games and studies/Sport Integrated Learning/ Inquiry based learning/ Collaborative learning/Assessment as learning/Learning by doing/ Best Teachers' method!

All these forms of teaching-learning make a classroom joyful. We get joy when we achieve something after doing or experiencing it ourselves.

Okay! Finally, I Got it.

Means, if we study through the ways incorporating various art-based/ sports –based/ real life activities/ practical activities, we are actually experiencing the doing of the task and learn while experiencing that. Naturally, it fills us with joy.

Don't you remember setting the stage and props for the annual drama show. It was such a joy!

Yes, indeed.
Now, we shall understand some science behind joyful learning.

Roshni, from where do you get all this knowledge?

Uday ji!!!

1st, there is no shortcut to success.

2nd, I study and research through various available sources; internet, books, my own experiences, my observations.

NOW PAY ATTENTION!

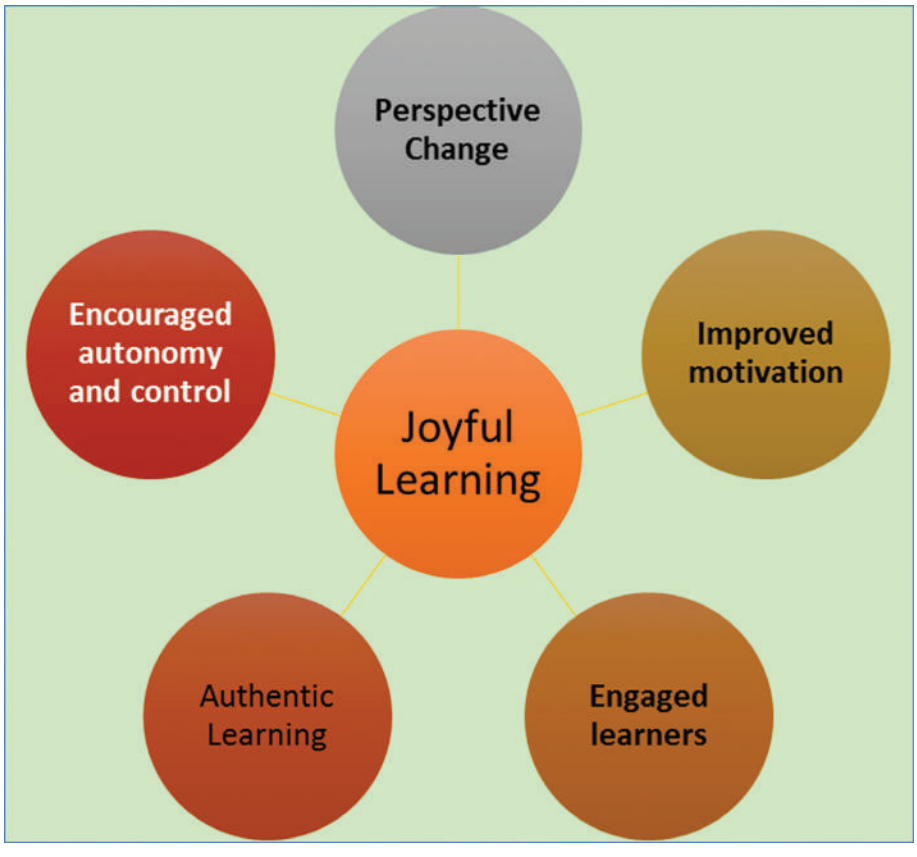
2.2. Some Science Behind Joyful Learning:

THE TAKEAWAY:

Neuroscientists have studied that optimal learning takes place when such conditions are provided to the brain which can trigger brain to change in response to stimuli. Engaged and motivated students, under minimal stress, have high cognitive abilities, make connections and experience "aha" moments (Willis, 2007). https://www.psychologytoday.com/files/attachments/4141/the-neuroscience-joyful-education-judy-willis-md.pdf

- ✓ Research conducted on brain validates the fact that when the element of fun is missing from the learning, the element of actual learning taking place also remains absent.
- ✓ In a study conducted by education theorist Krashen (1982), it was proposed that when learning is associated with strong positive emotions (joy), retention of learning by students takes place.[2]
- ✓ On the other hand, according to a study published in a journal of National Centre for Biotechnology Information (NCBI) by Christianson (1992)[3], clinical evidence of cognitive psychology studies show that boredom, stress, confusion, anxiety and low levels of motivation hinders learning.
- ✓ Michael F. Opitz and Michael P. Ford in their book "Engaging minds in the classroom: the surprising power of joy", suggest that knowledge and skills must be acquired in a way that cause happiness. They further propose that in order to imbibe new ideas and take risk of learning new content, persistence and willingness to work through difficulties is required. Such an experience brings joy to students.

Let me explain this.



1. Krashen, S. (1982). Theory versus practice in language training. In R. W. Blair (Ed.), Innovative approaches to language teaching (pp. 25–27). Rowley, MA: Newbury House.
2. Christianson, S.A. (1992). Emotional stress and eyewitness memory: A critical review. Psychological Bulletin, 112(2), 284–309.

2.3 What happens in Joyful Learning?

What Happens in the Process of Joyful Learning?	What does it lead to?
Perspective Change	✓ Practicing Joyful Teaching Learning brings change in perspective; from didactic teaching learning approach to constructivist approach, from teacher-centered learning to student-oriented, from passive teaching to active engagement and from stand - alone subjects to integrated learning. ✓ All would suffice to ensure actual learning taking place, if associated with the element of joy.
Improved motivation	✓ Students become self-motivated to explore ideas and concepts and put their best efforts to express their learning. ✓ Joy acts as an intrinsic driving force to direct learning towards meeting objectives.
Engaged learners	✓ If lesson plans are designed in such a way that students participate actively in the learning process, Learning is not only a fun-filled exercise but evokes other aspects associated with learning process like taking pride, brainstorming, asking questions and reflective thinking. ✓ Learners are actively involved in the learning process, enjoy their learning, make connections with themselves and the world around them and construct meaning in their own contexts.
Authentic Learning	✓ Joyful learning lessons are built around learning experiences that let learners relate to their local environment and their past knowledge and experiences through activities like plays, stories, songs, art, music and drawings.
Encouraged autonomy and control	✓ Joyful learning accentuates self-directed learning ability among learners as learners enjoy their learning and the learning is implied instead of imposed. ✓ In a joyful learning classroom, traditional chalk-talk methods of teaching are replaced with experiences that are personalized to needs and interests of learners, focused towards process more than the product and value individual expressions and reflections of learners.

THE TAKEAWAY:

Impact of joy on the overall learning can be summed up as follows:

- ❖ Joy, as an important component of true learning, encompasses collaboration, connection, sharing and pride.
- ❖ For an instance, emotions like joy, pride and curiosity are evident in a classroom where children learn about fractions, parts of a flower, molecules through activities like paper folding, poems and theatre respectively.

Joyful Learning

Joyful Learning means bringing the element of happiness and joy while learning. This enables learners and teachers to experience teaching- learning in a stress-free environment. Joy comes when a child feels h/she has created something new. It could occur after completion of a lesson by her/himself, it could occur when the given task is done independently by the students, it could occur while doing an activity in or outside the classroom.

Therefore, a teacher must start his/her lesson with the following questions:

How can these joyful experiences be meaningfully organised?

How do we ensure that these educational purposes are indeed being accomplished?

What purposes should the lesson seek to achieve?

What joyful experiences can be provided that are likely to achieve these purposes?

For details , refer to: http://cbse.nic.in/newsite/attach/10.04.2019.pdf

Designed by Finance & Investment Cell, Hindu College (Shivam Kumar Singh)

CHAPTER 3

Crucial Terms for Joyful Lessons

Before proceeding further, let me explain a few terms that have been used in this handbook.

Where have we used these terms?

These are the terms referring to various kinds of strategies used to make lessons joyful.

Also, for the skills that are developed while learning joyfully.

3.1. 21st Century Skills:

3.1.1. Critical Thinking is the capability of objective analysis of information and includes the following qualities:

- fairness and open-mindedness;
- activeness and being informed;
- willingness to question or to entertain doubts;
- being independent.
- recognizing and assessing values, peer pressure and the media influences (for a creative understanding of critical thinking, refer to CBSE's comic book 'Cogito')

3.1.2. **Problem Solving** is the skill of:

- identifying the relevant piece of information when faced with a mass of data (most of which is irrelevant),
- discarding information that may not be useful to give new information, and finally,
- relating one set of information to another in a different form by using experience, relating new problems to ones we have previously solved.

3.1.3. Creativity and Innovation:

These are the skills to explore and create fresh ways of thinking. Creativity refers to new way of seeing or doing things and includes four components:

- fluency (generating new ideas),
- flexibility (shifting perspective easily),
- originality (conceiving of something new), and
- elaboration (building on others' ideas).

Innovative Skills mean skills for thinking creatively to develop something new/ unique / improved / distinctive.

3.1.4. Collaboration:

Collaboration is the ability to effectively work together with others. This skill involves working together while taking actions respecting others' needs and perspectives and contributing to and accepting the finale. Collaboration helps to develop interest and fun in the teaching learning process. It effectively broadens the cultural, social, and environmental boundaries and helps a child to understand social and environmental concerns better.

3.1.5. Communication:

Communication refers to the ability to express one's opinions, desires, needs, apprehensions etc. oneself appropriately, verbally and non-verbally.

3.1.6. Flexibility and Adaptability:

Flexibility and Adaptability refer to a person's ability to change his actions and steps taken by him according to a new situation, and efficiently facing an unprecedented situation, without compromising on ethics and values.

Adaptability can be defined as creating modifications or changes in oneself to suit the new environment. For students, these can be understood as the skills required being flexible and adaptive to the situations around them and finding the best possible solution to go forward despite adverse conditions.

3.1.7: Leadership and Responsibility:

Leadership is the ability to lead a team and be capable of effective team management in relation to real world challenges. These skills teach a child how to support the development of key personal qualities such as perseverance, being committed and responsible, resilience and self-confidence and how to foster a commitment to life-long learning.

Being **Responsible** means being a good and effective/sensitive citizen. Be aware of the important social and national issues that may have an impact on our daily lives both as a human-being and as a student, be aware of the important social and national issues that may have an impact on lives in future both as a human -being and as a student, be aware of our fundamental duties and rights and embed the core democratic values of India and strive to live by them.

3.1.8 Initiative and Self-Direction:

Initiation skill involves the ability to begin a task independently. It helps the child to build his/her own path of development.

Self-direction is a skill to work with integrity on self-motivation and taking initiatives.

3.1.9. Productivity and Accountability:

Productivity in the student can be understood as fulfilment of any task within a given time period.

Accountability can be understood as feeling responsible for any task done. Developing these skills in a student helps him/her to work effectively and also make him/her reliable for other peers by being accountable for his/her actions.

3.1.10. Social and Cross-Cultural Interaction

These are the skills to communicate, work collaboratively and effectively in diverse social and cultural environments

3.2. Commonly Used Terms/ Strategies

3.2.1 Rally Robin:

In this strategy facilitator will give such kinds of questions to learners which have several answers. Learners will be divided into groups and write their answers and then, one by one, each answer will be discussed by the facilitator in the class

3.2.2 QAXP:

Under this strategy, class will be divided in groups of four. Student 1 from first group will ask question. Student 2 from the same group will answer the question. Student 3 will add to the response of student 2 without repeating anything what student 2 had already told. Student 4 will tell question and response of student 2 and 3 by paraphrasing it. Topic for the question will be chosen by both students and facilitator together. Topics can be chosen on the level of problems faced by learners.

3.3 Dictoglass:

This is a strategy to reconstruct the text by learners close to original text through words and phrases chosen by them. It can be done in groups or on individual basis. It will help students to think creatively and also they will know how to form sentences and what all punctuation rules they need to keep in mind while recreating the text.

3.4. Think Pair Share:

This is kind of activity where a teacher chooses a text to ask a question from the children. Children will think about the topic. They will then find themselves a partner and form a pair and then they share their thoughts with each other. After the discussion happens in pairs, facilitator will include whole class and then discuss about the question broadly.

3.5. Visual Artwork:

This will help children to understand the text better by seeing images, sculptures and making collages on the topic.

3.6. Concentric Circles:

Learners will form concentric circles by facing each other. Facilitator will give them a question which they will discuss with their partner. Then student standing on the outer circle will move right or left as per teacher instructions resulting in changing of partner. Facilitator will give them new question to discuss with the new partner.

3.7. Fish Bowl:

This is an activity that helps in maintaining large group discussion. Class will be divided in small groups of 4-5 students and teacher will give some topics to discuss in groups to students.

3.8. Graffiti Board:

This is a writing space provided by teacher where everyone shares writes their thoughts on different topics. This will help children to learn about each other's ideas.

3.9. Fan N Pick:

It is a simple learning strategy. Class will be divided into groups of 4 students. Student 1 will fans out a card and will say, ''Pick a card'', student 2 will pick a card which has some question return on it related to the topic. Student 3 will answer that question. Student 4 will paraphrase, clarifies, praise the answer. This activity will be repeated by changing the roles in the group so that each child has to play each role and no one child dominates in the group.

3.10. Crack the Code:

This activity can be used in various forms. Facilitator can make some codes for children to decode and get the message of teacher. Later children can also make their own codes to give information to each other.

3.11. Hot Seat:

This is a fun activity in which learners will chose them as a character and will answer the question as that character. For example, if a child chooses to be a vegetable, then they will tell about their qualities and benefits which people get from them. This will help children to learn about each vegetable uniqueness and benefits.

3.12. DRTA:

Directed Reading Thinking Activity is a comprehensive activity in which teacher will read a text and ask children to make question and do predictions. Students will read further to see if their predictions are correct or not. This activity can be done in groups, on individual basis or in whole class depending on the topic and teacher

CHAPTER 4

The Do's for Making a Classroom Joyful

Uday, with all the talk and discussions done till now, I can think of a few things that are required to convert a class into joyful classroom.

Please show! I am all ears.

4.1. Principles for planning Joyful Learning lesson plans

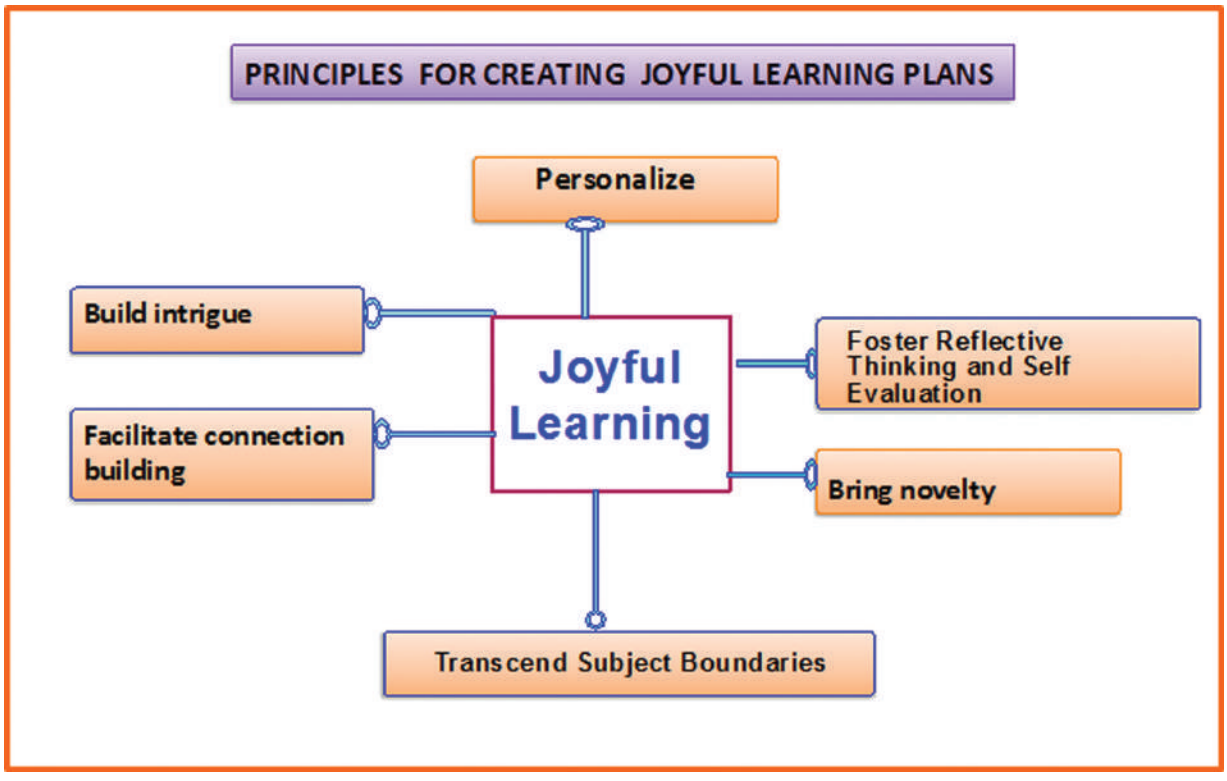
- ✓ Planning lessons that facilitate joy to permeate in classroom learning requires a great deal of contemplation as all learning experiences may or may not be joyful.
- ✓ Judy Willis, a renowned neuroscientist and middle school teacher in her article "The Neuroscience of Joyful Education", proposed three important neuroscience concepts (RAD) to be considered while planning joyful lessons:

THE TAKEAWAY:

Teachers should design lesson plans in such a way that they excite students towards learning, challenge their thinking, elevate level of dopamine and reduce stress and anxiety.

- ➢ Novelty promotes information transmission through Reticular Activating System.
- ➢ Stress free classrooms promote learning and retention through Amygdala Affective Filter.
- ➢ Learning linked with pleasurable associations leads to release of Dopamine (the happiness hormone). Increased dopamine levels, according to studies, result in enhanced motivation, perseverance, attention and creativity.

In order to provide joyful learning opportunities, the following principles may be applied:



4.1.1 Build intrigue

- ✓ The teachers should strive to incorporate element of curiosity in the lesson plan.
- ✓ The experiences should be planned in such a manner that make students wonder and ponder, thereby challenging their thinking.
- ✓ For example, making a flying object out of available materials, making patterns out of objects, designing a ludo game on skip counting are some of the learning experiences that would compel learners to brainstorm and think creatively.
- ✓ The learning experiences should be so designed that they facilitate and encourage exploration.

4.1.2. Personalize

- ✓ One of the objectives of joyful learning is to ensure that learners with varied abilities meaningfully interact with the educational content individually, as well as in group.
- ✓ In order to achieve this objective, it is crucial that learning experiences are tailored according to diverse needs and abilities of learners.
- ✓ One size- fits-all based experiences totally mutilate the core objective of joyful learning, that is, to make learning an enjoyable and interesting experience for all learners, irrespective of their abilities and learning styles.
- ✓ When students are given choices in the way they study or express their learning, stress level diminishes and students are able to direct their learning at their own pace, without fear of failure.

4.1.3. Facilitate connection building

- ✓ Learning triggers emotions of joy and wonder in learners only if they are able to make some connections of the current experience with their previous experiences and past knowledge.
- ✓ Therefore, it is the responsibility of teachers to make provision for learners to be able to make relevant, meaningful connections while learning.
- ✓ Learners of a joyful lesson plan should be able to answer, "Why are we learning this?".
- ✓ For example, a learning experience on 'breathing' would only spark joy and enthusiasm and bring 'aha' moment only when learners will be able to relate it to their life (recall how their breathing rate changes when they run or exercise) and world around them (how fish breathe through gills).

- ✓ A joyful learning lesson plan thus cannot be planned in isolation with the existing world and teachers should brainstorm experiences in such a way that learners, at some point, are successful in building those underlying connections in joyful manner.

4.1.4. Bring novelty

- ✓ Children are natural learners and under stress free environment, they can create something new out of the available materials.
- ✓ You must have seen children creating some different structures using blocks, rather than merely imitating the designs already available with them. This willingness to create something unique can be effectively utilized by teachers while creating lesson plans.

- ✓ The lesson plans may include learning experiences in which learners have to create something unique, based on their knowledge, past experiences and using their creativity.
- ✓ For example, in order to sensitize students towards saving water to ensure its future availability, teachers may design a learning experience wherein learners are required to make a model of a rain harvesting system using clay, blocks or any other easily available material.
- ✓ Not only such experiences would bring 'aha' moments of joy and instill a sense of achievement in learners, they will also serve the purpose of the lesson, to make learning happen in authentic, real terms.

4.1.5. Foster reflective – thinking and self-evaluation

- ✓ Lesson plans designed to incorporate joyful learning should provide opportunities to students for self-reflection and evaluation.
- ✓ The experiences should be chosen in such a way that students are able to check for themselves, what they did well, what they could have done better.
- ✓ Individual expressions are outcomes of a joyful learning lesson plan. Teachers may use progress charts for students to mark their learning progress, at different stages of the lesson plan.

4.1.6. Transcend subject boundaries

- ✓ Most of the real-world concepts are not confined to subject boundaries and learners also analyze and understand them through a broader lens, going beyond the subject.
- ✓ For example, distance and speed are concepts of Science but include Mathematics in explaining how speed changes with the change in distance and time taken. The same concept can be extended further including social studies when students explore how speed of cars is slow while driving uphill and how physical features of a place impact driving speed.

- ✓ On the other hand, when learning experiences are planned subject-wise, they incapacitate learners to make meaningful connections with the real-world, thereby impeding learning.

4.2. A Joyful Classroom – sample case study

Ms. Rita Baweja*, Environmental Science teacher of grade 2, wants to teach 'types of plants' to her students. To make the lesson interesting, she weaved a variety of joyful learning experiences for her students. The lesson in her class progressed as follows:

- ➢ She took students on a **walk of the school garden,** there she asked students to observe different plants on parameters like name of the plant, long/short, soft stem/hard stem, need support/don't need support. She asked students to draw a table with these column headers and ask names of plants from the gardener in the school. She then took students on the nature walk and instructed them to do the activity in 30 minutes of time. After 30 minutes, students returned to the classroom.
- ➢ The teacher conducted a **bundling activity** where she asked students to one by one speak about the plant they had observed, and she kept on writing details under different columns: herbs, shrubs, creepers, climbers and tree. She then collated students' findings under these categories.
- ➢ Carrying forward the same activity, Mathematics teacher taught students to make a Tally table describing numbers of plants observed belonging each category; how many herbs, how many shrubs etc. were found by students. She then explained how they can represent the tally information through a bar-graph showing numbers of plants being observed from each category as part of garden walk activity.
- ➢ Next day, Ms. Rita reiterated features of herbs, shrubs, creepers, climbers and trees in relation to what students had observed during garden walk. Some students also shared that they had similar plants in their homes and in neighbourhood. The teacher asked them to create a **Graphic Organizer** of any one plant they had in their home or in neighbourhood and present it in the class.
- ➢ On the same day, in sculpture class, students learnt to make **clay models** of different types of plants on the basis of features they have studied. Students were asked to make clay models of any one type of plant and capture even minute but important details also in their clay models (like providing support in case of climber, hard and bushy stem of shrub) using different sculpture tools. The teacher intervened during creation of models and while students were giving their models a finishing touch. It was decided that these models will be exhibited during class PTM (Parent Teacher Meeting) in the coming week. The activity engaged students actively and students had

fun messing with clay and shaping their models. **Students experienced 'ahaa' moments when they clay model was ready and looked very similar to the plant they had observed or seen in their surroundings.**

➢ Next day, theatre class teacher scripted a **theatrical presentation** in which students were given characters of different plants who were talking about their importance and uses. The students excitedly rehearsed for the activity and the activity was to be presented before parents on Earth Day. The lesson culminated in the theatrical presentation followed by a reflection sheet filled by all students. At the end, students were given reflection sheets to rate their learning about the topic on a five-point rating scale and write down their feelings; which learning engagement excited them the most, which they could have done better and reasons thereof.

* Fictional character. Similarity, if any, unintended.

✓ In the above- mentioned lesson, students learnt different subject topics but through integration of the common theme across all subjects.

✓ At the same time, they engaged themselves with the lesson actively and were given opportunities to reflect on their learning experiences.

THE TAKEAWAY:

This lesson plan infused in them skills like Communication, Critical thinking, Collaboration, Creativity and attitudes like confidence and cooperation. Planned in collaboration with all subject teachers as well as activity teachers, the plan seamlessly blended subjects while addressing a common theme.

4.3. A CASE STUDY: Nali – Kali approach of teaching learning[4]

Literally meaning 'Play and Learn', Nali Kali was a UNICEF assisted Pilot project run in H.D. Kote Mysore District, Karnataka, based on learning model followed by Rishi Valley schools in Andhra Pradesh. Nali Kali model was specifically designed as a joyful learning educational reform, designed to meet the needs of multi-grade, multi- level classrooms of Government Primary schools in Karnataka. It aimed at breaking down teacher-student hierarchy, eliminating stress of traditional examination system and retains children in school through play-based learning.

4.3.1 Salient Features:

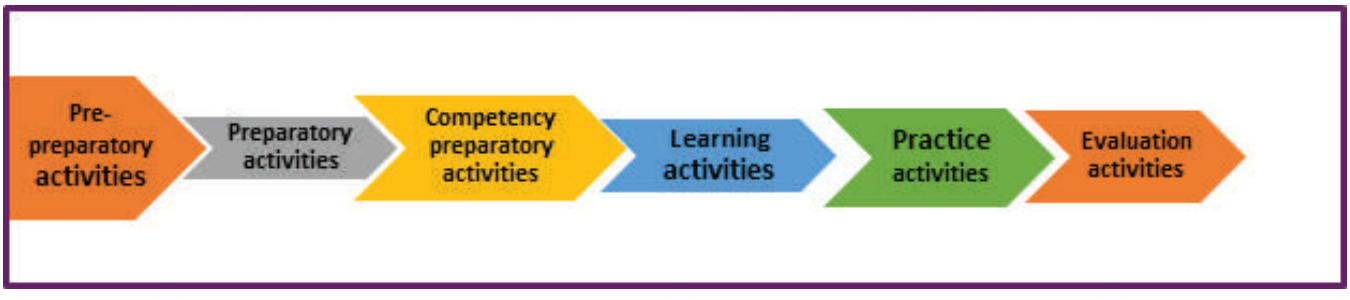
Salient features of Nali-Kali teaching approach were:

- Learning through exploration
- Attainment of Minimum Levels of Learning (MLL) by students through play, active engagement and peer-teaching.
- Accommodating various learning styles
- Focus on reflective thinking and self-evaluation

4. http://ssakarnataka.gov.in/pdfs/int_lep/nk_report.pdf

4.3.2. Nali-Kali Classroom Process:

- The curriculum was divided into small units called 'phases' or 'milestones' and arranged in the form of a ladder.
- Milestones were set for each subject and in order to attain mastery over each milestone the child needed to go through several learning activities called "learning steps".
- The activity cards having textual materials, songs, art and craft tasks, roles and puzzles is used to facilitate learning.
- Students can choose any card of their choice to acquire mastery in a subject.
- A non-threatening evaluation system is deployed on a comprehensive and continuous basis.
- Students' knowledge and skills are evaluated in the form of a learning ladder.
- The classroom management approach flexible in nature wherein nature of activity taken up by child was enforced rather than caste, gender age or abilities of students.
- Nali – Kali model specifically caters to multi-level, multi-grade classrooms where students sit in circles called learning cycles.
- The children pick up a card and sit in the appropriate learning cycles. Once the child completes the task/milestones, the child reports to the teacher and will mark entry in the progress chart.



THE TAKEAWAY:

- ✓ Children, in this approach, learn at their own pace and formation of group changes according the activity being done by children. The learning ladder shows the progress of the child. This is a step towards Competancy Based Education.
- ✓ The role of teacher is of a facilitator of learning who plans all tasks/milestones and assists students in picking up their learning cards and form peer-supported and participatory learning groups. The teacher is also required to mark students' progress on learning ladder (the progress chart) and help slow learners understand and ***complete their task***.

CHAPTER 5

Joyful integration of Subjects: Exemplars

This chapter delineates the lesson plan exemplars having integration of various subjects. Various chapters of different subjects, but having similar themes, have been integrated to carry out the joyful teaching and learning.

Let's have a look:

Instructions- A reference guide to reading the lesson plans

1. The learning engagements/activities given in the exemplar plan are suggestive, not mandatory and can be moulded as per the need and feasibility of the learners.
2. Matrix is representative of the flow of lesson plan. Each row with the mentioned day shows possible subject wise learning engagements.
3. The implementation stage for a subject and the proceeding further for the same or another subject may go hand in hand.
4. Integration of one subject into another may/may not be arrived at during the implementation stage. But the final integration must be representative of topic in its entity.
5. The 'Learning Logs' are the evidences of learning that the learners keep with themselves. This will differ from class to class and subject to subject. The notebook work (guided/independent practice) also acts as a learning log for the learner.

5.1 –Class I-Integrated Lesson Plan

<table>
<tr><th colspan="2">Lesson Plan/ Learning Plan Grade: I</th></tr>
<tr><td>Topic: Birds, our flying friends</td><td>Topic: EVMS: Birds
English: Once I saw a little bird, Mittu and the Yellow Mango
Math Magic: Numbers
Hindi Rimjhim: आम की टोकरी
लालू और पीलू
मैं भी, चार आने</td></tr>
<tr><td>Concept (If Applicable)</td><td>Numbers</td></tr>
<tr><td colspan="2">Mapping of skills/competencies/attitudes:</td></tr>
<tr><td>Competencies:
Critical Thinking
Communication
Collaboration
Creativity</td><td>Life Skills:
• Responsible decision making
• Creative problem solving
• Appreciation and Preservation of nature
• Sensitive towards nature
Core Values;
• Environmental awareness
• Care and compassion
• Harmony towards birds.
• Citizenship
• Character</td></tr>
<tr><td colspan="2">Assessment: Observation, discussions, Questioning, Group tasks, Role play, worksheets</td></tr>
<tr><td>Lesson Plan Duration:</td><td>8 days</td></tr>
<tr><td></td><td>Nature walk, Flip book, origami, Role play, Concrete objects, clay activity, visuals and poster making</td></tr>
<tr><td>Questioning Technique/s to be Used:</td><td>probing questions, closed ended questions and open-ended questions</td></tr>
<tr><td colspan="2">Learning objectives: By the end of the topic, the learners will be able to:
• identify and name different birds.
• relate and apply understanding of numbers in real life.
• develop sensitivity towards birds amongst his peers, seniors and other members of the school.</td></tr>
<tr><td>Resources Required:</td><td>• Chart papers, bindis, cutouts, clay, colours, audio visuals etc.</td></tr>
</table>

5.1.1. Implementation of lesson plan- Stage 1		
Subject	Day	Learning engagement
Nature Walk(MATH)	1	• Facilitator will take the children for a **nature walk** and ask them to collect as many as twigs as they can. • Once all the children come back in the classroom facilitator will divide them into group of four each. Each group will be provided with a blank paper folded into half. ➢ Each group will be asked to count the twigs collected by them in total. ➢ Write the numeral on the first one-half side of the given paper if they know. ➢ Now s/he will ask them to make a group of tens of the twigs and then write the numeral on the other half side and compare if they are getting the same number? • This activity will help learners understand that each number is nothing but the group of few tens and ones and numeral for the same is easily generated if ones know the number of tens and ones.
Recite a Rhyme (EVMS)	1	• To introduce the poem, the facilitator **will take two hand puppets of birds** and recite the poem- Two little dicky birds. *Two little dicky birds* *sitting on a wall,* *one named Peter* *and one named Paul.* *Fly away Peter and fly away Paul.* • The facilitator will tell the students that the two birds have come to their class today to tell their story. • We, birds feel very nice when we fly high above in the open sky. We can see the beautiful gardens, rivers, tall trees, beautiful and colourful earth. But we feel sad when we see the garbage lying here and there, huge and tall buildings, smoke and pollution. • **Anticipated Oho moment as they will realize that we as humans are filling our Earth with garbage.**
Dreams (EVMS)	1	• The facilitator will ask the students to share their feelings how they would feel if they were a bird. • The students will share their feelings in front of their friends.
Origami bird (ENGLISH)	1	• The facilitator will provide the students with origami sheets and each student will make a bird using paper folding, under the guidance of the facilitator. **Anticipated AHAA moment, the students will enjoy making bird using origami sheet)** • Later the facilitator will recite the poem 'Once I saw a little bird' with proper modulation.

		• The students will recite the poem with correct pronunciation and modulation. • The facilitator will write the new vocabulary words on the board and the students will read the words aloud. • The facilitator will ask the students to look for rhyming words from the poem
Playing with concrete objects (MATHS)	2	• Facilitator will divide the class into groups with two- three member each to make approximately 10 groups. Now she will randomly give each group pencils/ crayons/ erasers/ keeping in mind the numbers 51 to 60. • Now she will ask each group to make bundles of 10 each of the objects given to them. She will then ask following questions to each group one by one- 1. How many groups of tens they can make? 2. Is there any object left? 3. What are these left objects called? 4. Can you tell the numeral for the same? 5. Is their number is same as another group? 6. Which is greater? • Facilitator will write the responses of all groups one by one and generate the counting 51 to 60 in sequence. • In a same manner, the counting 61 to 70 will be taken up followed by the exercise in the book.
Describe the picture (ENGLISH)	3	• The facilitator will write the new words on the board and ask the students to read them aloud again and again. The facilitator will show a cutout of a parrot and a crow and ask the students to the special features of the birds. The students will share their responses based upon the colour of feathers and the beak.
Playing with concrete objects (MATH)	4 and 5	• Facilitator will provide the ice-cream sticks to each child keeping in mind the numbers 71-80 first • Now she will ask each child to make bundles of 10 each and tie them with a rubber band. She will then write the number 70 on the board ask : ➢ How many tens and ones are there in 70? ➢ Which number they think will come after it? • S/he will then ask the children who has 7 tens and 1 one? • Children with 7tens and 1 one will stand up. • S/he will continue the same till 80 and write the numbers on the board as well in the sequence. • Students will go around the class to look bundling for different numbers. • In a same manner the counting 81 to 90 will be taken up followed by the exercise in their book.

5.1.2. Proceeding further		
Subject	Day	Learning engagement
Related Exercise (English)	2	• The students will attempt the related exercises given at the back of the lesson under the guidance of the facilitator.
Brainstorming (EVMS)	2	• The facilitator will ask the students to brainstorm and share the feature of birds, how birds are different from other animals. The student's responses will be marked on the board. The anticipated student's responses will be – birds have beak, they can fly, they have feathers, they are small etc. • The facilitator will summarise the various points and explain to the students that birds are small animals which have wings and can fly. The facilitator will ask few closed ended questions to the students like, Q1. Name the birds that you have seen around your house. Q2. Name a bird which has colourful feathers. Q3. Name the national bird of India. The students will share their responses. • The facilitator will show PPT/pictures/cutouts of birds and the students will try to identify and name the different birds.
Enactment (Hindi)	2	• अध्यापिका छात्रों को फेरीवाले का अभिनय करने के लिए प्रोत्साहित करेगी। • **(Anticipated AHAA moment, the students will enjoy playing the role of a hawker)** • तत्पश्चात् पाठ आम की टोकरी का पठन व लयबद्व रूप से कवितावाचन
Read a chapter (ENGLISH)	3	• The facilitator will do the model reading of the lesson 'Mittu and the yellow Mango' from the text book. The students will attentively listen and underline the new words.
Role Play (ENGLISH)	3	• The facilitator will enter the class with a box containing hanging placards of parrot and crow, an inflated balloon and an artificial mango. The facilitator will ask the students to volunteer for role-play activity. The students can use the props provided by the facilitator.
Audio Visuals (EVMS)	3	• The facilitator will proceed the topic of birds and its home by sharing that just like human, birds too need a house to be safe and protected and to keep their eggs and young ones safe. Most of the birds make their nest on tree branches or roof tops. Birds lay their eggs in the nest and keep their young ones safe in the nest till the time they learn how to fly. • The facilitator will show a video to the students using the given link - https://www.youtube.com/watch?v=zFV1K8N37ps • The facilitator will sensitize the students not to disturb the birds in the nest and motivate the students to plant more trees as they are a home to birds which are our flying friends.
Read and Recite(Hindi)	4	• पाठ लालू और पीलू का पठन। अध्यापिका उच्च स्वर में पाठ का उच्चारण करेंगी। तत्पश्चात् छात्र पाठ मैं भी का एक स्वर में पठन करेंगे। अंत में छात्र पाठ पर आधारित अभ्यासकार्य करेंगे।

Share and Discussion (EVMS)	4	• The facilitator will tell the students that today they will share some interesting information about birds. • The facilitator will share with the students that just like crow and parrot, as we come to know from the lesson 'Mittu and the parrot', other birds also make sound. Birds usually communicate with two types of sounds. They make a call, which is a single sound. Some birds sing a song, which is a series of notes. Birds like cuckoo, mynah and nightingale make sounds that are sweet and musical. • Parrots and mynah can copy human sounds. • Let's proceed further and learn what birds eat.
Sharing an incident (EVMS)	4	• In the lesson 'Mittu and the mango tree', Mittu loved to eat mangoes. The facilitator will ask the students to share an incident if they have seen any bird eating. The students will share their experience. • The facilitator will share with the students, information about eating habits of birds. Different birds have different eating habits. Usually birds eat insects, worms, seeds, nuts, fruits and berries. But birds travel to far places to find food for their young ones. More over due to a smaller number of trees, birds find difficulty in finding food for themselves. • The facilitator will motivate the students to create bird feeder in their garden, to provide food and water to the birds easily.
Read and Recite (HINDI)	5	• पाठ मैं भी का पठन। अध्यापिका उच्च स्वर में पाठ का उच्चारण करेंगी। तत्पश्चात् छात्र पाठ मैं भी का एक स्वर में पठन करेंगे।
A New Reader (HINDI)	5	• अध्यापिका द्वारा बच्चों को 5 समूहों में बाँटकर एक –एक समूह में पाँच–पाँच पंक्तियों का वाचन खेल के माध्यम से करवाया जाएगा। जैसे समूह में एक छात्र को पढना है और अध्यापिका के रुको कहते ही दूसरे समूह को तुरंत पढ़ना आरंभ करना है ।
Creative Writing (ENGLISH)	5	• The facilitator will draw a web diagram on the board with the help of the students describing a parrot. The students will be provided with the describing words for a parrot. The facilitator will guide the students to write a paragraph on parrot using the given adjective. The students will do the task in their notebook.
Visuals (EVMS)	5	• The facilitator will show a pot/pictures/cutouts of different birds and ask the students to observe the birds minutely for a minute and then share their observation. The anticipated responses will be - different birds have different kinds of beak and claws. • The facilitator will share some more interesting facts about birds. • Birds like eagle and hawk have sharp pointed beak as they are flesh eating birds. On the other hand, ducks have flat and board beak. Ducks also have webbed feet so that they can swim in water. But other birds and cannot swim in water as we have read in the Hindi lesson 'मैं भी'.
Read and Recite (HINDI)	6	• कविता चार आने का पठन। अध्यापिका उच्च स्वर में कविता का उच्चारण करेंगी। तत्पश्चात छात्र कविता मैं भी का एक स्वर में पठन करेंगे। • Open ended ques. अगर आप के पास चने बच जाते तो आप किसे खिलाते और क्यों?

Clay Activity (MATH)	6	• Facilitator will divide the class into groups in such a way that she gets 10 groups in total. • Now each group will be provided with the clay and ask to make clay balls of medium size with a hole to make garland beads. • They will make garland of 10 beads each. (Thread will be provided by the facilitator) • Now each group will be provided with one number each randomly from 91 to 100 and asked to group their beads accordingly. • Groups need to represent their given number by showing garlands and one's beads. • **(Anticipated AHAA Moment, the students enjoyed making a necklace using clay beads).** • This activity is followed by the exercise in the book.
Role Play (English)	6	• The facilitator will guide the students to do a role play activity and paying emphasis on the importance of trees for birds and animals. The students will sit in groups made by the facilitator and discuss how to present the role play. At the end each group will present their play in front of the other groups.
Visuals (MATH)	7	• The facilitator will start the day by showing a video. • https://www.youtube.com/watch?v=0TgLtF3PMOc • After the video, facilitator will ask the learners to sing the counting together- • Learners will write the counting under HTO in their note books. 51 to 100.
Pause and Ponder (EVMS)	7	• The facilitator will ask the students to share how we can show our care and affection towards birds. The student's responses will be marked on a chart paper. The chart paper will be placed on the soft board. The expected student's responses will be planting more trees, do not disturb or tease the birds, keeping bird feeder and water bowl, etc.
Show and tell, bird fun (MATH)	8	• Facilitator will divide the class into groups of four each. Cut outs of birds and packets of bindis will be kept at one side of the teacher's desk. Group needs to display the number given to them by bundling the bindis on birds. On each bird not more than 20 bindis can be pasted. Time given for the activity will be 15 minutes. • Each group will decide their leader, resource person, timer and presenter. • Task- Show the number given • Facilitator will write few numbers from 51 to 100 on few chits and keep them in a bowl. ➢ Leader of the group will pick one chit and tell the number to his group members. ➢ Resource person will bring the cutout of the birds and bindis.

		➢ As a group they will paste the bindis on the cutout and display the number. ➢ Timer will keep a track of time and intimate the group accordingly. ➢ Presenter will present the number given to them to the whole class • Exemplar will be shown to the learners by the facilitator to guide them. • **(Anticipated AHAA Moment, the students enjoyed pasting bindis on the cutout of birds)**

5.1.3 Lesson Plan: Stage 2 – Assessment	
Formatives/Unit test	• EVMS: MCQ – On birds. • Math : Worksheet on numbers • English: worksheets • Unit test sheets
Teacher Interventions	• The facilitator will intervene during the implementation/ process of the activities wherever required.
Extending the Lesson Further	• **Day 8 : Learning Engagement – Poster making (EVMS)**
	• The students will design a poster on the theme – sensitivity towards birds under the guidance of the facilitator. • The posters will be displayed in the corridors, inside the classrooms and near the reception to develop sensitivity towards the birds
Summative Assessment	
ENGLISH and EVMS Pen paper Test—including questions like MCQ's, complete the statement, word attack, question answers **HINDI** मूल्यांकन पत्रिका, अभ्यास पत्रिका एवं कार्य पत्रिका के द्वारा छात्र एवं छात्राओ के ज्ञान का मूल्यांकन होगा। अभ्यास पत्रिका के द्वारा चैक लिस्ट बनाई जाएगी और उस चैक लिस्ट के आधार पर सुधार कार्य किया जाएगा। **MATH (Pen Paper test)** Facilitator will ask the learners to write counting under HTO and provide missing number worksheets.	

Thus, this lesson plan covers 01 topic of EVMS, 02 topics of English, 01 topic of Maths and 05 topics of Hindi. It uses a variety of joyful activities with several AHAA moments and diverse ways of assessments. Similar process has been followed in the subsequent suggestive exemplars.

5.2 Class-II Integrated Lesson Plan

<table>
<tr><th colspan="2">Lesson Plan/ Learning Plan Grade: II</th></tr>
<tr><td>Topic: Water is life, treat it right.</td><td>EVMS: Judicious use of water (No prescribed book)
English: Marigold: Unit 4- Rain (Poem)
Math Magic: Chapter 7 – Jugs and mugs
Hindi Rimjhim: Chapter 1 - ऊँट चला</td></tr>
<tr><td>Concept</td><td>Judicious use of water</td></tr>
<tr><td colspan="2">Mapping of skills/competencies/attitudes</td></tr>
<tr><td>Competencies:
Critical Thinking
Communication
Collaboration
Creativity
Accessing and analyzing information</td><td>Life skills:
• critical thinking and problem solving
• creative thinking
• effective oral and written communication
Core values:
• Environmental awareness
• Social responsibility and accountability
• Problem solving
• Citizenship
• Character</td></tr>
<tr><td colspan="2">Assessment:
• Observation by the facilitator
• Presentation- Just a minute
• Reflection writing of Slogan March (Sensitize People)
• Quiz</td></tr>
<tr><td>Lesson Plan Duration:</td><td>8 days</td></tr>
<tr><td>Learning Engagements for Active Learning:</td><td>Brain storming, Find the blue and green in me, Pause and Ponder, Think, pair and share, Rhyme Recitation, Quiz time, Creative Time, Nature walk, Concentric Circles, Pour and Observe, Creative Writing, Wonder-Wall, Gallery Walk, Slogan March</td></tr>
<tr><td>Questioning Technique/s to be Used:</td><td>• Probing and Exploring based questions
• Questions based on comprehension</td></tr>
<tr><td colspan="2">Learning objectives: By the end of the topic, the learners will be able to:
➢ identify the importance of Rain as a natural resource of water.
➢ analyze and compare the capacity (half/ full, more/less) of vessels according to their size/ shape.
➢ create ways and means of sustainable use of water in daily life through their understanding of concept of capacity.
➢ understand the characteristics of camel, the ship of desert.
➢ reflect on the way humans should utilize and conserve water.
➢ to create awareness in the community to be water prudent.</td></tr>
</table>

5.2.1. Implementation of lesson plan- Stage 1		
Subject	Day	Learning Engagement
Find blue and green in me! (EVMS)	1	• The facilitator will divide the class into groups and will provide them each with a big circle representing Globe/ Earth. Then s/he will ask them to look at the globe and try to color the water as blue and the land as green. S/he will also tell them to draw black outlines for the countries and continents if they want. This activity will help them observe the globe and use their understanding to create the Earth. It will help them have a fair understanding of the fact that more than 70% of earth is covered with water.
Origami (English)	1	• The facilitator will ask a question from students. • **From where do we get water on Earth?** **or** • **What is the biggest source of water on Earth?** • Most of the students will come up with common answers. **Rain.** ➢ Then the facilitator will ask few more questions to get learners connected to the topic. ➢ Which season is going on? ➢ In which season do they see a rainbow? ➢ What is the color of clouds during that season? ➢ Which activities do they enjoy in that season? ➢ What all do you see during rainy season? • The teacher will get their responses in the form of words like clouds, puddles, umbrellas and boats etc.
		• S/he will provide them with a sheet to create a boat with paper folding. The whole process of creating the boat will be taken step by step and the students will follow the instructions and create their own boats. Then the students will be taken to the school pool where they will float their boats in the water. The students will be excited to perform this activity. Then the teacher will ask, 'Could they float their boat in the classroom?' The students' response would be 'No'. Then the teacher will ask 'Why? What is required to float a boat?' The response would be, "We need water for the boat to float." • **Anticipated Ahaa… moment** as the students will feel happy to see that they could create a boat and boat requires water to float
		• Once the facilitator enters the class, all the students will share their experience of floating paper boats in the water. The facilitator will use their responses and ask them **'What if we don't have enough rain/water?'**

Pause and Ponder	1	• The students will say they will not be able to drink water, take a bath, cook food, etc. • Then the teacher will ask them, so what should one do to save water? • The students will come up with varied responses, which will be written by the facilitator on the board e.g. Close the tap while brushing, take a bucket bath instead of shower bath and pour less water in a glass for drinking and refill it further, if required. The facilitator will keep on adding responses. This will help them understand the fact that we need to save each drop of water. • To ignite learner's mind, the facilitator will show topic "JUGS and MUGS" from the NCERT book and give them a minute to express their understanding related to it in short.
Wonder Wall (HINDI)	1	• बच्चे खेल शिक्षक के साथ में पैक कक्षा से वापिस आए। बच्चों ने आते ही पीने का पानी का माँगा तो अध्यापिका उन्हें अनुमति देदी। अध्यापिका ने उनसे पूछा कि आप को पानी की आवश्यकता क्यों पड़ी तो बच्चों ने बताया कि अभी हम बाहर खेलकर व दौड़ लगाकर आ रहे हैं जिसके कारण हमें प्यास लग रही है। अध्यापिका ने यहीं से अपनी बात आरम्भ की कि हमारे अलावा पानी की आवश्यकता और किस – किस जानवर को होती है जो बिना पानी के जीवित नहीं रह सकते ? • चार – चार के समूह में बच्चों को बिठाएंगे और वह सोचकर काग़ज पर लिखेंगे जैसे – मछली, मगरमच्छ, व्हेल, आक्टोपस आदि और इन्हें बोर्ड पर पेस्ट करेंगे। • फिर अध्यापिका बच्चों से पूछेंगी कि ऐसे कौन – कौन से पौधे व जानवर हैं जो कम पानी में भी जीवित रह सकते हैं । अध्यापिका बच्चों के साथ रेगिस्तान में पाए जाने वाले जानवरों के विषय में चर्चा करेंगी।
Audio Visual (ENGLISH)	3	• The facilitator will show them a video on uses of water. • Video link on uses of water https://www.youtube.com/watch?v=WOFGFwyXft8
Think pair and share(ENGLISH)	3	• Then the facilitator will divide the class in pairs and ask students to go through the reading. • **Guided practice – Read the given passage** • **Uses of water** • We all use water for drinking, washing, cleaning, cooking, and growing food — making it the most precious resource for survival. All water that we use comes from rain which fills local lakes, rivers, streams or underground aquifers, depending on your city and state. We use water in the following ways. • **Household Uses** • Common household works consume a lot of water in bathing and toilets, washing machines and kitchen sink. Much of our freshwater resources are also used for watering lawns, flower beds, and vegetable gardens, as well as washing cars and filling swimming pools.

		• **Communities** • Cities use water for firefighting, street cleaning, and watering public areas such as parks and roads. Think about all the water that is used by restaurants, hospitals, laundries, dry cleaners, golf courses, hotels, car washes, beauty shops, barber shops, gas stations, and health clubs as well as the other businesses in town. These all add up to quite a big demand on local water supplies. • **Farming** • The amount of water needed to run a farm is tremendous. When we think of water in a farm, we think of watering crops; but the amount of water needed on a dairy farm is just as large. • **Recreation and Transportation** • Many people enjoy fishing, boating, sailing, canoeing, rafting, and swimming, as well as many other recreational activities that depend on water. (Source: https://www.thebalancesmb.com/how-do-we-use-water-and-why-conserve-3157863) • Then the facilitator will ask them to read and discuss the sheet and enlist the various uses of water on an A4 sheet. The sheet would further be displayed in the classroom.
Concentric Circles (HINDI)	3	• कविता का रोचक ढंग से वाचन किया जाएगा। उस के बाद अध्यापिका बच्चों को दो गोले में (बाह्य व आंतरिक) आमने – सामने खड़ा करके भाव–भंगिमाओं के अनुसार कविता का सस्वर वाचन करेंगे। तत्पश्चात् अध्यापिका एक डिब्बे में कविता से सम्बन्धित कुछ तुकान्त शब्द लिखकर पर्ची रख देंगी। अब बाह्य गोले में खड़ा बच्चा अपने सामने खड़े बच्चे के डिब्बे से एक पर्ची निकालेगा और एक नया तुकान्त शब्द आंतरिक गोले वाले बच्चे को देगा जैसे • अब इसी प्रकार क्रमशः इस प्रक्रिया को दोहराया जाएगा। इस क्रियाकलाप के द्वारा बच्चों ने तुकान्त शब्द सीखे
Enact a story and Make lemonade (MATH)	3	• The facilitator will create 4 groups in a class and would ask them to read the story (Village fair), discuss it amongst themselves and demonstrate or enact the chapter in front of the class. Each group will come up with an act based on the story. • Then the teacher will provide them with lemons, sugar and salt. The students will mix all the ingredients in a big bowl, then add water and prepare lemonade in the class. Then the facilitator will provide them big glasses and ask the students to fill them with lemonade. The students will tell they could only fill 20 glasses and that would not suffice for all the classmates, then the facilitator will provide them small glasses and they could fill further make 40 glasses with it. So, all students will be able to get lemonade. • Anticipated **Ahaa**. Moment as they make lemonade and everyone would have it. • This activity will develop their understanding that large vessel can hold more quantity and small vessel can hold less quantity.

Comprehension Exercise (ENGLISH)	3	• The facilitator will explain an exercise (ring the vessel with more water) in NCERT book and the students will complete the activity independently.
Quiz time (EVMS)		• The students will be divided in groups and will be asked riddles, or questions and the students will play quiz and answer questions like: ➢ Close me if I am not in use. (tap) ➢ I am very deep. People fill buckets of water from me using rope. (well) ➢ Boats sail in me. (water bodies like rivers, lakes) ➢ I have holes in my body, kids love to use me during bath. (shower)
Unseen Comprehension (ENGLISH)	4	• The facilitator will take up an unseen passage to check their understanding and ask questions. • Comprehension Passage • Read the following passage and answer the given questions: • Water is essential for every living being. We need water to drink, cook, clean and bathe. We also require this natural resource for agriculture, industries and transportation as in boats and ships. • The Earth is covered with 70% water and often called the 'Blue Planet'. Even though we have so much water on the earth, only 1% is usable as the rest is either salt -water, as found in seas and oceans or is frozen in ice caps. • With an increase in population, the demand for this limited resource is also increasing. Today, water scarcity is a problem faced by many people throughout the world. It is high time we take steps to use this important resource judiciously so that we have enough water for everyone in the future. **Q1 What problem is being faced by people throughout the world?** _____ **Q2 How can we have enough water for everyone in the future?** _____ **Q3 Fill in the blanks:** i) Water is _____ needed for every living being. ii) Water is a _____ resource. **Q4 Complete the sentence:-** 1) Other than drinking, cleaning, cooking, bathing water is also required for _____ _____

Create a Graphic Organizer (HINDI)	4	• विद्यार्थी जी•ओ• बनाना सीखेंगे और दो जी•ओ• बनाएंगे • प्रथम ऊँट : रेगिस्तान का जहाज़ • द्वितीय रेगिस्तान में मिलने वाली वस्तुएं
Mind Mapping(MATH)	4	• The facilitator will show the video with pauses and motivate them to notice the jugs and mugs learning in the story. https://www.youtube.com/watch?v=7ZijU7tGrzM • The facilitator will pose them a question based on story line and simulate their thinking. **Q.** The crow found a big vessel with very low volume of water which he can't drink, but instead of flying away to find another resource, he used the same water smartly as per the condition. This happened every time in the areas suffering from scarcity of water. This area is increasing everyday due to insensitivity to the use of water. What is that ONE thing you will not do/ do to save water? For example, I will not leave water in my glass OR I will take only that much water in my glass which I can finish. The learners will answer it in one sentence on post it and paste it on a chart paper to make a wonder wall.

5.2.2. Proceeding Further		
Subject	Day	Learning Engagement
Web chart (EVMS)	2	• The facilitator will talk about natural and manmade resources of water and will show them the flash cards of the related vocabulary, and then she will ask them to create a web chart for both natural as well as manmade resources.
Read and Recite (ENGLISH)	2	• The facilitator will read the poem aloud and the students will close their eyes to listen and visualize the beauty of the nature. During second reading, the students will refer to the book and follow the teacher as s/he recites the poem with proper voice modulation and gestures. • Referring to the picture the facilitator will discuss the following comprehension questions to recall the poem and to check their understanding: ➢ Where does the rain fall? ➢ What do people use when it rains? ➢ How do children save themselves from getting wet? ➢ Do children enjoy jumping in the puddles? • The students will solve vocabulary exercises in book with the help of the facilitator e.g. complete the story in the book etc.

Pour and Observe(MATH)	2	• The facilitator will arrange various objects like water bottles, glass, jars (live objects in class) of different size/ shapes along with a small glass and water (can be done in variations with same objects) The students will now pour water in different vessels by measuring with the small glass. They will further record their observation in their notebooks. They will draw the vessel in front of their observations. This activity will help them understand the capacity of the vessel. • The facilitator will further show them a related video. https://www.youtube.com/watch?v=oHtYkElKf_o
Nature Walk (HINDI)	2	• बच्चों को बाहर मैदान में लेकर जाएंगे और रेतीली ज़मीन पर कुछ कदम चलने का अनुभव करने के लिए कहेंगे उसके बाद कक्षा में आकर अध्यापिका बच्चों से पूछेंगी कि क्या वे कल दिया गया गृहकार्य ढूंढकर लाए हैं। कुछ बच्चों ने कहा हाँ जी। ग़ाज़ियाबाद / भोपाल / रेगिस्तान के चित्र देखते हुए पूछेंगे–
		• चित्र देखकर जगह बताएं यह कौन सी जगह का चित्र है? – रेगिस्तान • रेगिस्तान मे हमें क्या दिखाई देता है ? • रेगिस्तान का जहाज किसे कहते हैं ? • ऊँट का चित्र दिखाकर उसकें बारे में चर्चा – • ऊँट पानी को कैसे बचाता है? • तब अध्यापिका बच्चों को पाठ से अवगत कराएंगी और • कविता का रोचक ढंग से वाचन किया जाएगा।
Enlist (HINDI)	2	• The facilitator will take a class discussion on plants and animals seen in the deserts and then the students will write three names each in their notebooks and they will even paste pictures of those as a home assignment.
Drawing is fun(EVMS)	3	• Facilitator will discuss various sources of water and will also create a scene using sources of water. Students will make a connection with real life experiences and will draw a related composition. They will colour it to add to its aesthetics. The students will feel happy to create the drawing. Their work would be displayed in the classroom for others to observe and appreciate.
Creative Writing (HINDI)	4	• अध्यापिका सम्पूर्ण पाठ की चर्चा करेंगी तथा बच्चे पाठ के माध्यम से पानी के सदुपयोग व संरक्षण के विषय में अपने विचार लिखेंगे।
Learning Engagement: Analysis(MATH)	5	• The facilitator will ask the students to record water consumption in their family for two days to see how much water they use every day. The measurement will be done with a jug at home. The follow up exercise will be taken as --- Find out different ways in which you can reduce water usage and stop its wastage. • The students will write their answers on a coloured A4 size sheet and will pin them up in their class. This activity will remind them time to time of what they can do to reduce wastage of water.

<table>
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<table>
<tr><th>Activities</th><th>Day 1</th><th>Day 2</th></tr>
<tr><td>Drinking</td><td>3 jugs</td><td>3 jugs</td></tr>
<tr><td>Cooking</td><td>6 jugs</td><td>6 jugs</td></tr>
<tr><td>Washing</td><td>25 jugs</td><td>15 jugs</td></tr>
<tr><td>Bathing</td><td>20 jugs</td><td>18 jugs</td></tr>
<tr><td>Gardening</td><td>10 jugs</td><td>5 jugs</td></tr>
<tr><td>Cleaning</td><td>10 jugs</td><td>5 jugs</td></tr>
</table>
• To support their ideas to save water and use it wisely, they may reuse RO water and AC water in washing, cleaning and gardening activities and will try to reduce their water consumption during bathing (by using buckets instead of taking showers).
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<tr>
<td>Gallery Walk(Math)</td>
<td>6</td>
<td>
• The students will bring their charts to school after the survey, highlighting the following:
➢ Use of water at home (picture or descriptions)
➢ Vessels through which water is used/ taken
➢ Ways or moments where water is not used judiciously and the suggestion for the same (can be discussed with parents or neighbours)
• Then all the charts brought by the learners will be displayed in the class and they will have a gallery walk.
• It will be followed by their reflection on the activity/ its learning and any one suggestion which they liked from their others' chart during Gallery walk.
• English: Rain
</td>
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<tr>
<td>Presentation –Just a minute</td>
<td>7</td>
<td>
• Students will be given a topic, "Water is our friend, and we need to save it."
• The students will be given 20 minutes of time to think and then speak for at least a minute or so to share the views related to the topic. They could derive the details from the reference reading and audio - visual shown to them during the class.
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<tr>
<td>Slogan March</td>
<td>8</td>
<td>
• The students with the guidance of the facilitator, will hold their banners and will take out a rally or slogan march in the school premises. They will speak out the slogans and spread awareness in the society to use water smartly. Then they will be asked to write their reflection in their notebooks.
</td>
</tr>
</table>

5.2.3. Learning logs

<table>
<tr><th>Subject</th><th>Day</th><th>Learning Engagement</th></tr>
<tr><td>Web Chart (EVMS)</td><td>2</td><td>• To create a web chart of natural resources and manmade resources of water</td></tr>
<tr><td>Enlisting (HINDI)</td><td></td><td>• उसके बाद बच्चे रेगिस्तान में पाए जाने वाले तीन – तीन पौधों व जानवर के नाम अपनी उत्तरपुस्तिका में लिखेंगे साथ ही गृहकार्य में उन के चित्र भी लगाएंगे।</td></tr>
<tr><td>Observation Record(MATH)</td><td></td><td>• The learners will work in a pair for this activity where they will compare the capacity of their vessels with the help of a common glass. They will observe and note down their observations.
<table>
<tr><th>S.no.</th><th>Name of vessel/ student</th><th>No. of glasses to fill the vessel</th></tr>
<tr><td>1.</td><td>Vessel 1</td><td></td></tr>
<tr><td>2.</td><td>Vessel 2</td><td></td></tr>
<tr><td>Conclusion</td><td>Vessel 1___ Vessel 2</td><td></td></tr>
</table></td></tr>
<tr><td>Independent Practice(ENGLISH)</td><td></td><td>• The students will reflect their understanding related to uses of water on an A4 sheet through a flow chart, like- Washing, Bathing, Cooking, Cleaning etc.</td></tr>
<tr><td>Listing(Hindi)</td><td></td><td>• बच्चे एक बड़ा गोला बनाने का क्रियाकलाप कर तुकान्त शब्दों की सूची बनाएंगे।</td></tr>
<tr><td>Graphic Organizer (GO) (Hindi)</td><td></td><td>• 1 ऊँट की विशेषताएं
• 2 रेगिस्तान की विशेषताएं</td></tr>
<tr><td>Drawing is fun</td><td></td><td>• The students will create a composition using at least 2 sources of water in it.</td></tr>
<tr><td>Slogan March(EVMS)</td><td></td><td>• The students will be asked to write their reflection of the slogan march in their notebooks.</td></tr>
</table>

5.2.4 Lesson Plan: Stage 2

Formatives/Unit test	• EVMS: Checklist- Do's and Don'ts for saving water. • Math: Worksheet on capacity check and more less • Hindi: Creating Graphic Organizer on why camel is the ship of the desert. • English: Recitation time: Any poem on Rain • Unit test paper
Teacher Interventions	• Guiding them with folds during creating boat with paper folding. • While attempting comprehension passage.

	• पाठ वाचन के समय हुई अशुद्धियों को अध्यापिका ने सुधार किया। • The facilitator intervened during the implementation/ process of activity of vessel during Math. • While making sentences for some learners during Wonder wall activity. • Providing clues and guiding questions to help students while creative writing.
Extending the Lesson Further	➢ ***Learning Engagement: Survey (Math)*** • The learners will do a survey/ observation at home and prepare a chart on following points:- • Compare and list the house- hold chores which require more water and can be replaced by either less water or by reusing water. (picture or descriptions) • Vessels through which water is used/ taken (Capacity check) • Ways or moments where water is not used judiciously and the suggestion for the same (can be discussed with parents or neighbours) • ***Learning Engagement: Create a banner/poster (EVMS)*** • The students will create a poster or a banner with the help of their parents and write a slogan related to the judicious use of water. They will talk and sensitize their neighbours regarding the same. • **Learning Engagement (Hindi)** • बच्चे जानेंगे कि रेगिस्तान में कम पानी होता है अतः वे यह जानने की कोशिश करेंगे कि वहाँ पर लोग पानी कैसे बचाते और संरक्षित करते हैं। पानी बचाने के लिए रेगिस्तान के लोग क्या – क्या तरीके प्रयोग में लाते हैं उसके लिए मोबील/फ्लैश कार्ड बनाएंगे व अपने विद्यालय, घर तथा अन्य जगहों पर लगा कर लोगों को जागरुक बनाएंगे।
Summative Assessment	
• Pen paper Test (Fill in the blanks, Match the following, MCQs, One-word answers)	

5.3 Class III -Integrated Lesson Plan

Lesson Plan/ Learning Plan Grade: III	
Topic :	• **Topic: EVMS: Chapter 4: Our First School** • **Chapter 21: Families Can be Different** • **English: Unit 9 -He is my brother, Unit 8 - My Silly Sister** • **Math Magic: Chapter- 4 Long and Short** • **Chapter 8 - Who is Heavier?** • **Hindi :** नाना–नानी के नाम • बहादुर बित्तो
Concept *(If Applicable)*	**Families, family tree, structure of a family, customs in a family, measuring length and weight**
Mapping of skills/competencies/attitudes:	
<u>Competencies:</u> **Critical Thinking** **Communication** **Collaboration** **Creativity**	• **Life Skills:** ➢ Effective oral and written ➢ Communication ➢ Problem solving ➢ inter-personal skills • **Core Values:** ➢ Caring and compassion ➢ respect for self and others ➢ trust ➢ togetherness ➢ citizenship ➢ character
Assessment: • Think pair and share, • brain storming, • picture writing, • family tree, • share the story, • crack the customs, • interview with grandparents • paragraph writing	
Lesson Plan Duration:	10 days

Learning Engagements for Active Learning:	• Brain storming, musical chair, think pair and share, interest role play, clay modeling, model reading, brain storming, word chain, track the shortest route, fire in the mountain, crack the customs, group and gossip, visit to play zone, graffiti board, make meaning from the muddle, rolled and mold, round robin, share the story, picture writing
Questioning Technique/s to be Used:	• Probing questions, open ended questions

Learning objectives:

By the end of the topic, the learners will be able to:

- *Understand the importance of family*
- *Understand the structure of the family and customs followed in a family*
- *Identify and use different devices of measuring length (ruler, metre rod, inch tape)*
- *Identify and describe different ways of measuring weight (pan balance, weighing balance, spring balance)*
- *Apply measurement techniques to measure length and weight of objects correctly*
- *Understand the importance of family and different types of families*
- *Create clay models of weighing bars representing their family members in their decreasing order of weight*
- *Compare objects and family members on the basis of their height and weight*
- *Value family as an important source of strength, support and happiness through discussion with their peers*

5.3.1. Implementation of lesson plan- stage 1

<table>
<tr><th>Subject</th><th>Day</th><th>Learning Engagement</th></tr>
<tr><td>Draw, describe and do the dab (EVMS)</td><td>2</td><td>

The facilitator, as a facilitator, will share about his/her family (members in the family and what do they do) and then s/he will ask students to draw a picture of their family (in the form of cartoon drawings or stick figures) in their notebook and complete the information in the table given below. One row has been filled in as sample data
My Family Record

<table>
<tr><th>Name of the family member</th><th>Relationship with them</th><th>One word to describe them (beautiful, caring, helpful, Loving etc.)</th></tr>
<tr><td>ABC</td><td>Father</td><td>Hardworking</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
</table>

(In order to excite students to complete this activity, those who would complete their work fast will stand up in Dab Dance move. The facilitator will come to know who has done the work fast. Dab is a dance move done as shown in the image given


Image Source: www.canstockphoto.com

Ahaa moment…When the students would end their activity with Dab dance move, they will be excited to do it fast and once all students complete the activity, the facilitator can ask the entire class to do Dab move once more just to bring excitement and smile on their face!!!

</td></tr>
<tr><td>Read and Relate (My Silly Sister) (English)</td><td>2</td><td>

The facilitator will conduct one round of model reading of the lesson ‘My Silly Sister’ in the class with correct pronunciation, punctuation and stress. The facilitator will further discuss and explain the lesson. Then students will be divided into groups and each group will be asked to read the chapter and answer questions given in Talk Time of the chapter. The students would collate their responses of questions in groups and share them with the facilitator and the facilitator would discuss them with the students.
Paragraph Writing
The students would be asked to write a paragraph on their sibling and how do they share their relationship with their sibling. The paragraph can be titled with captivating

</td></tr>
</table>

<table>
<tr><td></td><td></td><td>captions like – ‘My brother – gaming champion’, ‘My sister – doll lover’ etc.</td></tr>
<tr><td>Metric Funtusia (MATH)</td><td>2</td><td>
• The facilitator will introduce different units of measuring length (m, cm) and unit of measuring distance. The facilitator would arrange an inch tape and will demonstrate how to use inch tape to measure height.
(A day before this class the facilitator would divide class into groups and ask one student per group to bring an inch tape from their home)
• Now, the facilitator will ask students, sitting in their groups, to estimate length of their nose, hands, head and ears and that of their peers. Students may be challenged for this activity by estimating figures in centimeter and then setting a time limit so that they may estimate the length of the object first before exactly measuring it with inch tape. The results will be recorded in a table as given below
<table>
<tr><th>Body Part</th><th>Estimated (My measurement)</th><th>Exact length (my measurement</th><th>Estimated (My friend’s measurement)</th><th>Exact length (my friend’s measurement</th></tr>
<tr><td>Hands</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Nose</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Head</td><td></td><td></td><td></td><td></td></tr>
</table>
• Students completing the activity within the stipulated time will inform about the same by doing bingo, hi five or any other joyous gesture.
• Ahaa moment …for all those students whose estimations will be very close to exact measurement.
• Students will then compare their measurement with their friends and answer questions given on page 51 of textbook.
</td></tr>
<tr><td>Rule and Ruler(Math)</td><td>3</td><td>
• Facilitator will initiate few activities given on Page 47 of the textbook such as how many steps etc. before introducing ruler and its units.
• The facilitator will recall the home assignment given on day 1 when student measured length of arms of their family members using hand span. Facilitator will help students further understand how to use the ruler correctly. Students will measure length of few things ex- dice, leaf, wax colour etc. They will find out few things which are 10 cm long or fall between 10 cm and 20 cm and will draw them. (Pg 48, 49).
</td></tr>
<tr><td>Catch the context clues(English)</td><td>4</td><td>
• The facilitator will divide students in groups and then ask them to find out difficult words from the chapter ‘My Silly
</td></tr>
</table>

		Sister'. One representative student from the group will speak one word and the facilitator will list that word on the board. Once all groups have given difficult words, the facilitator will read aloud one difficult word before the class and ask each group to find its meaning in reference to the context of the chapter (they will be allowed to open their textbook to find meaning). The facilitator will set the timer in an alarm clock/smart phone and students would be required to find meaning in context of usage of the word in the textbook within the time frame. The moment alarm clock will buzz, all students will freeze in the position they will be in until the facilitator says 'over'. Then the facilitator will ask meaning of the word from each group and the group giving the meaning closest to its actual meaning would be declared winner for that round. Similarly, meanings of all other words will also be derived from students based on their understanding of the text. To make the activity easier, the facilitator can tell students the paragraph number in which that word has been used. Simultaneously, the students will write meanings of the words in their notebooks. • **Anticipated Ahaa moment will be there for group of students whose meaning of the word would be similar/ closest to the actual meaning of the word**
Trace the shortest route (MATH)	5	• The facilitator will discuss activity given on Page 52, ' Gibli and the Grains' and demonstrate how to find shortest route. Thereafter, referring to chapter 'Bahadur Bitto' of Hindi, the facilitator will tell students to imagine that 'Bitto' from Hindi Chapter 'Bahadur Bitto' has to go to a temple as a custom in her family. There are three possible ways to reach the temple and students will find the shortest route by measuring the distance in centimeter using ruler. The following image will be printed on paper and will be distributed to all students in the class.  **Route A** _____cm **Route B** _____cm **Route C** _____cm **Shortest Route :** Route _____

'Mera Sathi kaun' (HINDI)	5	• The facilitator will select difficult words from the chapter and note them down in her record (a day before, the teacher can also ask students to give difficult words from the chapter). The facilitator will then randomly whisper words to some students and meanings to other students. Then the teacher will ask that student, who has been given a word, to stand up and say aloud. "Surya ka saathi Suraj hai , Shaant ka saathi Maun Mera Shabd hai _____ mera saathi kaun' • The student will say aloud the word given to him/her in the blank given above. Listening to this, that student who would feel that the meaning given to him/her matches best with the word said aloud, that student will move towards the student who just said aloud the word and stand next to that student. Similarly, one by one teacher would ask all students with word to say aloud the above lines and the students with meaning would pair up with student with word. The facilitator will not disclose correct answers until all words are paired up with their meanings. Once all words will be covered, the facilitator will one by one confirm the word-meaning pairs and then write them on the board and students would note them down in their notebook. • In this activity, if some students do not get word or meaning, they could be asked 5to speculate the meaning of words in reference to their usage in the chapter.
Chunk Reading (English)	6	• The facilitator will read and explain the lesson 'My Brother' from the textbook and learners will be asked to work in groups to recreate the text.
Word Chain (ENGLISH)	7	• The facilitator will accumulate all keywords in the chapter through students' responses and write them on the board. Then the facilitator will introduce Word Chain game wherein students will be divided into groups and will be given one keyword each. Students in each group will frame a sentence using the keyword given to them. The facilitator will assign time limit for this activity and each child in the group will represent one word of the sentence formed by the group. Students can be asked to make small placards representing their word. Once the time limit will lapse, the teacher will speak aloud **"Lock the chain"** and quickly students carrying placard of words in group will stand in correct order to represent their sentence and lock their hands together. The quicker the group will stand in correct order of words to form sentence with the given keyword with their hands locked, the more points they would score in the game **(Anticipated Ahaa moment ….)**. The facilitator can set scores according to time taken by students in forming chain of words (for example if time

		taken is less than 2 minutes, 10 marks , between two to three minutes – 5 marks and so on). Any group unable to make proper sentence can be assisted by the facilitator. The facilitator will check sentences and write them on the board which will then be noted by students in their notebooks.
Fire in the mountain(EVMS)	7	• The facilitator will introduce the game Fire in the mountain – the learners will form a circle and one child will stand in- between, they will all move in circle shouting fire in the mountain run run run. The child in the centre will call any number like 3, 4, 6 the learners will form group as per the numbers. The learners who will be left have to move out from the game. The game will be repeated till only few children are left in the circle. ➢ After the game facilitator will ask the learners few questions like- ➢ How did you feel when you join a group of required number? ➢ How did you feel if you could not join any group? ➢ Do you like to be with people? ➢ The facilitator, on the basis of students' responses will build the understanding that just like there can be many types of groups, there can be different types of families like Nuclear family, Joint family • **Small family / Nuclear family** A family consisting of a pair of adults and their children is called small family or nuclear family. • **Big family / Joint family / Extended family / Un-divided family** Joint family or big family is large in size consisting of members of 3 or more generations such as grandparents, parents, siblings, uncles, aunts and cousins living together in one home.
Question hour (English)	8	• The facilitator will divide students into groups and then ask them to discuss question answers of the chapter. Each group will be given one question and once all have framed their answer, the facilitator will discuss them in the class and thereafter students will note them in their note book.
Create and Communicate(EVMS)	8	• The facilitator will divide the class into groups of five, assigning one family story (given on pages no 140 to 143) to each group and time to read the story. After reading the story, each group will draw a family tree of the family of their story on the floor of the classroom (using chalk/sketch pen) and stand according to the family tree position. Each student of the group will represent one family member of the story and stand in that position in the family tree. Once

		all groups will form such family tree according to the story assigned to them, each member of the group in that family will speak about its title and role in the family (like student representing 'dada' in Sitamma family will speak about his role and position title in the family tree, 'Sitamma' will speak about her position and so on). Once all groups will share their family tree with the rest of the class, the facilitator will ask them to answer all questions related to different stories in their notebook.

5.3.3. Proceeding further		
Subject	Day	Learning Engagement
Think pair and share (HINDI)	2	• Students in pairs would think about the topic **'My vacation at my grandparent's home'** and then share their reflection with their peers. To make the activity successful facilitator should allot time duration for thinking and reflection and then for discussion among peers.
Pause and ponder	3	• The facilitator will ask nick names of all students and then ask them to discuss with their seat partner about ways in which they are like their family members. Students would then read the story 'Anwari's Family' given on Page 27 and answer the questions that follow (on Page 28). • Students would also ponder over questions given under **'Think and Write'** given on page 28 and discuss them with their peers.
My Inspiring Corner (EVMS)	4	• Referring to page 28 of the textbook, the facilitator will ask students what they have learnt from their family members and from whom? The facilitator will label four corners of the classrooms with family titles like 'father/grandfather', 'mother/grandmother', 'brother', 'sister'. When the facilitator will signal the activity, all students will move towards corner representing family member who has inspired them and from whom they have learnt some virtues and skills. The teacher will set time for allowing students to move to their respective corners. When all students will move to their inspiring corners, they will discuss the anecdote (incidents) when they learnt some skill or virtue from their family member among groups of their inspiring corners. Each inspiring corner group will make a web chart listing learning from that family member. Once all groups have created their web charts (within the stipulated time), the facilitator will display them on the board and read aloud what all learnings students would have acquired from their family members. **(students sharing their anecdotal stories with their group members can turn out to be an ahaa moment in their learning)**

Model Reading (Bahadur Bittoo)	4	• The teacher will read the chapter with proper modulation and students will repeat after her. The teacher will explain the essence of the chapter to be courageous in difficult times.
Make meaning from the muddle(ENLISH)	4	• The facilitator will divide the class in groups for each question given on page 84 and 85 of the textbook. Each group will be asked to find answers to each question (so for seven questions seven groups can be made). The facilitator will set the time limit for completing the task and after the time limit has lapsed, the teacher will ask each group to share their answers. The facilitator will keep writing answers on the board as shared by each group and will check them through discussion with students at the end. In this manner, answers of all the questions will be derived from students through facilitator support while encouraging group learning.
Helping Hand (ENGLISH)	4	• The facilitator will ask students to express their reflection on how they help their family members at home, then they will share their reflection with the whole class.
Measure with Meter (MATH)	4	• The facilitator will bring a meter rod in the class and a day before the lesson, ask students to bring a small rope or ribbon. The facilitator will divide students in groups of four and will make meter ropes (as explained on page 53 of the textbook) for all groups. Groups will then be instructed to complete exercises given on page 54 and 55 of the textbook using meter ropes. Page 56 will be given as independent practice for home.
Express through enactment (EVMS)	5	• The facilitator will discuss the meaning of customs in reference to 'Surekha's Story' as given on page 29 of the textbook. The facilitator will then divide the class into groups. In each group, students would be allotted a part of the classroom space to enact customs or practices followed in their homes before their group members. The group members will then find out the custom and then next member of the group will enact. All members of the group, once they will guess the customs of their peers, attempt questions given on page 29. • Students would rejoice on enacting some routine practices like touching feet of elders, keeping shoes at a designated place, praying every day, offering water to tulsi plant/ sun etc. Those who would guess the custom/practices correctly would be delighted when they would be able to guess them correctly **(Anticipated Ahaa moment)** • As an independent practice, students will be asked to interview their grandparents about any funny incident in their childhood.

Rapid Fire Round (English)	6	• The facilitator will first ask questions from within the story 'My Brother' to summarize the key points and then ask questions given on page 92 of the textbook to elicit responses from students and check their understanding. Questions will be asked by the facilitator in the form of rapid- fire round in which students will have to respond to the question very quickly. If they will not be able to answer the question they will say 'pass' and the question will move to the next child sitting. Once all questions have been covered students will be asked to write answers of questions given on page 92 and peercheck their work. The facilitator can come back to those students who could not answer, to check their understanding again and problems they faced in understanding the question and responding to it.
Near and Far (Math)	6	• The students will read 'Trip to Agra' based on it, they will be given a map to analyse which places are nearer or farther from main railway station after studying the map carefully Pg. 57. They will also attempt exercise given on page no.58.
Group and Gossip (EVMS)	6	• Students will be divided in groups and they will gossip about the funny incident as shared by their grandparents. They will then be asked to write their feelings on incidents shared by their peers in one or two sentences on an A4 size sheet that will be shared per group. These reflections will then be collated from all groups and summarized by the teacher.
Crack if you catch the ball (HINDI)	6	• The facilitator will pass the ball on which questions will be pasted in the form of slips pasted across the circumference of the ball. Both open and closed ended questions can be covered in this activity. The slips will be colour coded and the facilitator will throw the ball towards students (the ball to be used in this activity should be very light in weight and not too big). The student catching the ball will read the question as per the colour code given by the facilitator. Once the student will answer the question pasted on the ball, the ball will be sent back to the facilitator and will then be thrown at some other student. (a variation of this activity could be sequential passing of the ball from one student to another to check their understanding about the lesson)
Brainstorming (MATH)	7	• The facilitator will ask students to take out their pencil box, lunch box, water bottles and any book and keep them on their table. The facilitator will then ask students to take pencil box in one hand and a book in another and check which one is heavier. Similarly, they will be asked to take their water bottle (filled with water) in one hand and their

<table>
<tr><td></td><td></td><td>lunch box in another and find out which one is heavier. The facilitator will then introduce units of measurement gms and kgs and ask following questions :
➢ Which unit will you use to measure the weight of your body?
➢ Which unit will you use to measure the weight of a packet of chips?
➢ Which unit will you use to measure the weight of 10 toffees?
(to enable better understanding of concept, the facilitator can show a video like the one available at https://www.youtube.com/watch?v=unkO9M8um6I)</td></tr>
<tr><td>Question Hour (HINDI)</td><td>7</td><td>• The facilitator will discuss question answers of the chapter with students and then students will note them in their notebooks.</td></tr>
<tr><td>How much weight (Math)</td><td>8</td><td>• Students will complete activities given on page 115,116, 117 and 119 and guess weights objects given. Page no 117 will be given as independent activity to be completed by students from home.
• Facilitator will provide the students with a table wherein they will ask and write the weight of their family members and will find out the person with the maximum and minimum weight in the family (independent activity to be done from home)
• They will also arrange their family members in descending order according to their weight.
<table>
<tr><th>Name</th><th>Relationship</th><th>Weight (kg)</th></tr>
<tr><td>Ritu verma</td><td>Mother</td><td>65</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Share your story (HINDI)</td><td>8</td><td>• The facilitator will ask students to share any story their family members had shared with them in which they battled any situation with courage and determination. The facilitator will ask students to write about that incident in their words on A4 size sheet. Once all students will complete the activity, the facilitator will pin up all their work on display around the classroom and will ask students to take a round of the classroom and read stories shared by their peers.</td></tr>
</table>

Graffiti Board (ENGLISH)	9	• In order to develop feeling of empathy in students and sensitize them towards children with disabilities, the facilitator will conduct Graffiti Board activity. The facilitator will divide the class in groups and each group will discuss questions given under 'Team Time' section on page 93 of the textbook. Students will be allotted time to discuss the questions and each group will write their collated reflections in the form of answers to these questions. One by one each group representative will move towards the graffiti board and write reflections of own group.
Rolled and Mold(MATH)	9	• The facilitator will ask students to depict weight of their family members by making clay models of family members keeping in mind their weight (as recorded by them as home assignment). Students will make clay models of their family members and then arrange them in decreasing order of their weight. The activity can be made more exciting for students by asking them to identify the family member by looking at their clay models (students in this case will not label the models as brother, sister, father, mother etc.). • **Anticipated ahaa moment for those who will be able to identify models correctly).** (instead of clay, play dough and fevicol mould it can also be used, sculpture teacher in school can help students make perfect models of family members.
Exercises (EVMS)	9	• On the basis of their understanding of the family trees and roles of members as depicted during activity on Day 9, students will answer questions given in the textbooks (from page 140 to 143)
Picture Writing	10	• The facilitator will read pages 103,104 and 105 of Chapter 16 'Games people play' of Looking Around textbook. The students will complete exercises given on pages 106 and 107. • 108 and 109 will be given as home assignment
Fun with Family	10	• The facilitator will ask students one by one what fun they have with their family during free time. Students will be guided to speak about games that they play with their family members. The discussion will then be steered about activities enjoyed by family members. The facilitator will first share about own family members and interests pursued by them and then will ask students to write about them as given on page 110 of Looking Around textbook.

5.3.4. Learning Logs		
Subject	Day	Learning Engagement
ENGLISH		• Family tree, paragraph on family member, word meanings, page 84,85, sentence formation, page 92
EVMS		• Table on describing family, page 28, web chart , page 29, question answers on page no 141, 142 and 143
MATH		• Table on hand span, home assignment on family members, page 51, page 48,49, trace the shortest route sheet, page 54, 55 and 56 (IP)
HINDI		• Family member table, word meaning, Q Ans.

5.3.5 Lesson Plan: Stage 2	
Formatives/Unit test	• EVMS • Short question and answers on types of family, roles of family members. ➢ Group Activity: Discussion and debate on types of families ➢ Individual Activity -Make a family tree. ➢ Students will make a PowerPoint presentation of different types of families • ***Hindi & English*** The facilitator will ask the learners to read and comprehend the given passage and answer the questions. **Reference to Context** • **Math** Students will create a bar graph on height and weight of family on computer /paper and compare their graph with their peers. • **Metric Maestro** • A fair will be arranged in an open area. ➢ Entry to the arena will be given on basis of solving a question related to measurement. ➢ Once learner solves the question correctly, facilitator will provide entry ticket. ➢ The fair will have different corners. Facilitator will send learners in group of 4. ➢ In the first corner, they have to measure each other's height and record on the provided sheet. ➢ In the second corner, they have to weigh the vegetables and record. ➢ In the third corner, they will measure the length of different objects kept on the table. • Learners will be encouraged with badges of appreciation for completing the task appropriately. **(Ahaa moment)** • Metric Maestro title will be given to the student who has earned maximum badges.

<table>
<tr><td>Facilitator Interventions</td><td>

The facilitator will encourage students in all engagements to participate actively.
The facilitator will keep taking rounds in the classroom while students would engage in individual as well as group activities so that any learning gaps can be identified and addressed effectively.
The facilitator may also adjust the learning engagements and tailor them to requirements of the class. Hesitant as well as introvert students would always be specially observed and encouraged by the facilitator.

</td></tr>
<tr><td>Extending the Lesson Further</td><td>

Learning Engagement – A visit to Play Zone (Math)
The facilitator will schedule a visit to play zone of the school. A day before the visit, students will be asked to bring an inch tape from home and teacher can arrange a weighing balance machine from Math lab in the school. The facilitator will then take students to play zone of the school where they may see different types of swings and activity corners with tables and other related equipment. Students will be asked to measure length/height of at least five items in the play zone using measuring tape and record their findings in the given table.

<table>
<tr><th>Item observed</th><th>Length, Height</th></tr>
<tr><td>See-saw</td><td></td></tr>
<tr><td>Slide</td><td></td></tr>
<tr><td></td><td></td></tr>
</table>

Learning Engagement – Sign Language (English)
The facilitator will show a video on sign language and explain how words can be communicated through sign languages. Then the facilitator may ask students to form groups and express one simple sentence using sign language and ask their peers to recognize the sentence correctly. This activity would also sensitize students towards disabled people.
Design your own family game
The facilitator will ask students to design a unique game which they can play with their family. The game so designed can then be discussed in the class. The students will design the game on a sheet or other available items and will also frame rules and instructions to play the game.

</td></tr>
<tr><td colspan="2">Summative Assessment</td></tr>
<tr><td colspan="2">Pen Paper Test</td></tr>
</table>

5.4 Class-IV Integrated Lesson Plan

<table>
<tr><th colspan="2">Lesson Plan/ Learning Plan Grade: IV</th></tr>
<tr><td>Topic : The colourful culture</td><td>EVS : Looking Around
L- Changing Families L- Hu Tu Tu, Hu Tu Tu
L- Changing Times L-Eating Together
L-Food and Fun L- The World in my Home
English : Marigold
L- Nasruddin’s Aim L-Hiawatha
L- The Scholar’s Mother Tongue
Hindi : मुफ्त ही मुफ्त
Math : L-Smart charts</td></tr>
<tr><td>Concept (If Applicable)</td><td>Culture</td></tr>
<tr><td colspan="2">Mapping of skills/competencies/attitudes:</td></tr>
<tr><td><u>Competencies:</u>
• Critical Thinking
• Communication
• Collaboration
• Creativity</td><td><u>Life Skills:</u>
• Critical thinking and problem-solving
• Collaboration
• Ability to influence others
• Initiative and entrepreneurialism
• Effective oral communication
• Effective written communication
• Curiosity and imagination
<u>Core Values :</u>
• Social responsibility and accountability
• leader ship initiatives ,
• respecting each other
• Co-operation
• Citizenship
• Character</td></tr>
<tr><td colspan="2">Assessment: Observation by the facilitator , anecdotes , group activities , role play</td></tr>
<tr><td>Lesson Plan Duration:</td><td>10 days</td></tr>
<tr><td>Learning Engagements for Active Learning:</td><td>Dictogloss , Concentric circles, Reciprocal reading, Role play, Graffiti Board, Think-Pair-Share, audio-video ,PPT.</td></tr>
<tr><td>Questioning Technique/s to be Used:</td><td>Probing questions ,Comprehension based questions, Open/ close ended questions, Reflective questions</td></tr>
</table>

Learning objectives:

By the end of the topic, the learners will be able to:

- *conduct interviews of elderly people in their neighborhood and record/tabulate the information.*
- *classify the information into traditional and modern.*
- *compare and contrast ways of celebrating festivals, food cooked and eaten in different households.*
- *Write a script for theatrical presentation to highlight the differences.*
- *read the chapter/poem with clarity and appropriate pronunciation.*
- *Acknowledge that mother tongue is the first and the primary language of a person.*
- *Celebrate every language as a means of communication and promote the use of one's mother tongue.*

5.4.1. Implementation of lesson plan- stage 1

Subject	Day	Learning Engagement
Graffiti wall (Integrated EVMS)	1	• Students will paste /draw or write about what does the term 'culture'mean to them. Learners will create a collage or GO's on ¼ sheet and paste it on the graffiti wall.
Move the Circle (Integrated Math)	1	• Facilitator will bring a big hoopla to class. With the help of big wool/thread she will help learners to measure the circumference of it.Then, she will divide the circumference in various ratios like 3 equal parts .Further the facilitator will give the concept of pie chart/ chappati chart to the learners.
Integrated English	2	• The learners will recite the poem 'Hiawatha' with appropriate intonation and expression. • They will understand the idea conveyed by the poem. • They would communicate the central idea by writing it down or with pictorial illustration
Integrated Hindi	2	• Class will be divided into groups according to states like उत्तर प्रदेश, गुजरात, पंजाब, बंगाल राज्य के नाम से बच्चों को समूह में बाँटकर उनकी भाषा में सब्जियों के नाम से अवगत कराना जैसे – आलू को बटाटा ,प्याज को काँदा। **<u>Anticipated aahaa moment</u> – Students will be surprised to know about the different names of the same vegetables .** • Students will enjoy presenting the group wise stalls of different state- food along with dressed in the attire of that particular state and learning some common slogans or phrases in that state's language-which would create fun and frolic in the surroundings, and will also enjoy yummy delicacies of different states brought by their friends. Ahaa! Yummy food, fun with languages- vannakam, tame kem chho.., aja assa panjabi pakwana tayiaar kithe hana.. khamba gani sa padharo mahre rangilo rajasthan ma… asalaam waleookm..)
Jig Saw (Integrated math)	3	• Class will be divided into group of 5 students each. Each group will choose any one state of India out of the selected states (based

		on popularity) and will discuss about the food ,costume and festivals of that state . Learners will jot down the points. Each child of this group will then go to the other group of other states respectively and will discuss the special feature of his /her state with other team members after the discussion each child will be aware of the food, costume, festivals of different states as well. Further learners will do a survey on the culture of various states. (we took it as activity where in children brought something from home as well.)
Paired Interviews (Integrated EVMS)	4	• Students will discuss the answers with their partners and try to explore the changes and different answers .Facilitator will discuss with the students and help them in finding the answers.
Talk with an expert (Integrated EVMS)	5	• Facilitator will invite two people from the parent community. a) a builder b) a grandparent. They will explain different ways in which houses were built then and now, materials and equipment used, need for doing so.
Integrated PSPE	5	• Students will be taken to the ground. They will play games like Kho-Kho and Kabbadi. • Round 1: Students will play the games without setting rules. • Round 2: Students will set the rules before playing and discuss it with the coach also.
Aim is the game (Integrated English)	6	• The facilitator will show a video of the famous episode from 'Mahabharata'-the shooting test of the Pandavas and Kauravas and encourage them to infer the lesson learnt. This would also bring into the discussion on 'Arjuna Awards' the highest award bestowed on a sportsperson.
Dictogloss (Integrated English)	7	• Reading of the excerpt given in the book from the chapter - Nasruddin's Aim. A Silent Reading to shortlist key words : [skill, defending, stung, remark] • Focus on the meanings of these words during discussion and model reading. This will make learners concentrate on listening and understanding the text. • Summarize and narrate the story in your own words while using all the key words. [in groups of four or five]
Dictogloss (Integrated Hindi)	7	• Reading of the excerpt given in the book from the chapter – MUFT HI MUFT. A Silent Reading to shortlist key words. • Focus on the meanings of these words during discussion and model reading. This will make learners concentrate on listening and understanding the text. • Summarize and narrate the story in your own words while using all the key words. [in groups of four or five]
Presentation (Integrated EVMS)	8	• Each student will present the flash cards and speak two-three lines about the festival.

5.4.2. Implementation of lesson plan- stage 1		
Subject	Day	Learning Engagement
Pictorial representation (Integrated art)	2	• Facilitator will display the information brought by the students on the class board. She will discuss the changes with the students. They will draw/ sketch any part of the information to represent the changes that occurred in their families pictorially.
Circle circle (Integrated math)	2	• Various art forms will be discussed in the class and a video will be shown to the students on – warli , madubani etc A data will be given to the students about various art forms and students will create a pie chart of the data given to them.
Integrated EVMS	3	• Facilitator will read the lesson 'Changing Families' aloud followed by discussion. Based on the information gathered by them, they will discuss and share the reasons for changes in families.
Integrated English	3	• The students will be encouraged to write down a word/ phrase which is unique to their mother tongue and cannot be expressed in English. • They would be asked why is it unique to their mother tongue and if given a chance, how would they like to translate it.(coin a new word for it)
Pictograph (Integrated Math)	5	• On the basis of the survey conducted by the students on various type of festivals / food etc, a pictograph will be create by the students with the teachers guidance
Dictogloss (Changing times) (Integrated Times)	6	• Teacher will read the lesson from the textbook and learners are asked to work in cooperative groups to recreate the text. • Teacher will ensure that each student must note down the key words and the members of the group must pool in their ideas to reconstruct the text. Facilitator will ensure the effective contribution by each student.
Integrated EVMS	7	• Facilitator will read the lesson **'Hu Tu Tu…'** aloud followed by discussion. Based on the information gathered by them, they will discuss and share the reasons for changes in families.
Dictogloss **(Eating Together) (Integrated EVMS)**	8	• Teacher will read the lesson from the textbook and learners are asked to work in cooperative groups to recreate the text. Teacher will ensure that each student must note down the key words and the members of the group must pool in their ideas to reconstruct the text.
Integrated English		• Facilitator will show a video of mid-day meal scheme. She will also discuss the need of introducing it.

Integrated EVMS	10	• Facilitator will read the lesson **'Food and Fun'** aloud followed by discussion. Based on the information gathered by them, they will discuss and share the reasons for changes in families.
Role play (Integrated EVMS)	11	• Facilitator will divide the class in groups. Each group will be given a situation from lesson-**'The World in my Home'** • Each group will present an enactment/ role play on the given situation.

5.4.3. Learning Logs

Subject	Day	Learning Engagement
Interview (atleast three elderly people in the family)	1	• Students will conduct an interview of atleast three elderly people in the family or from the neighbourhood. • They will tabulate the information.

	Then	Now
No. of members in the family		
Reasons for increase/ decrease in the family members		

Structure of their house		
Material used in building the house		
Festivals celebrated		
Ways of celebrating festivals.		
Food cooked during festivals		
Games played		

Home task- Changing families	3	• Students will attempt the exercises in the textbook.
	4	• Comprehensive exercises based on the chapter will be done under the guidance of the facilitator.
	4	• Students will make chappati chart / piechart in the note books.
Home task – Changing times		• Students will attempt the exercises in the textbook.

Home task –hu tu tu	6	• Students will attempt the exercises in the textbook.
Home Task	7	• Students will ask their parents about any one festival that they celebrate on the given pointers. ➢ Name of the festival. ➢ Why do we celebrate? ➢ Costumes we wear. ➢ What special dishes are prepared and why? • Students will prepare flash cards.
Home Task – Eating Together	8	• Students will attempt the exercises in the textbook.
	8	• Students will make a pictograph in their notebook
Home Task (Food and Fun)	9	• Facilitator will ask the learners to prepare any one dish being prepared on the festivals for the class party next day.
Home Task- The World in my Home	11	• The World in my Home. • Students will attempt the exercises in the textbook.

5.4.4. Lesson plan : Stage 2

Subject	Day	Learning Engagement
Formatives / Unit Test	5 &6	• The Arjunas and the Eklavyas • The learners will be divided into groups of four.They will be encouraged to pick any sportsperson of their choice. The facilitator will ensure that the groups differ in their choice of sportspersons and also consider female sportspersons. • They will be instructed to research and find all about the sportsperson in terms of ➢ childhood aspirations ➢ role model ➢ ambition ➢ skills and attitudes ➢ their mentors and coaches • The learners will be given a free hand vis a vis the presentation of their findings. • They may ➢ design a ppt ➢ prepare a mobile ➢ write the biography ➢ enact vital episodes of his/her life ➢ draw to depict the life events.

Venn Diagram	7	• Students will draw venn diagram of the houses in old times and modern days. Pointers: material used, number of rooms, no. of family members etc.
Teacher Inventions	9	• Students will prepare a PPT on any two festivals and give a detailed explanation about it. The learners will be encouraged to form their own groups with classmates having common mother tongue. • They would be given some preparation time to prepare a skit /song/dance with mother tongue being their means of communication. • The facilitator will let the learners infer mother tongue is the first language learnt.

5.4.5. Summative Assessment	
Day 12,13,14	Students will present a cultural program. Each student can choose to represent a particular state. Facilitator will group the students according to the choices made by them. They will prepare a theatrical presentation to represent the chosen state. Also, a food fare will be organized where they can present the cuisine of the chosen state.

5.5 Class V-Integrated Lesson Plan

Lesson Plan/ Learning Plan Grade: V	
Topic : Health and Well Being	**EVS: Looking Around** L- Who will do this work L- A Treat for mosquitoes L- Tasting to digesting **English: Marigold** L- Wonderful Waste **Hindi :** जहाँ चाह वहाँ राह एक माँ की बेबसी (कविता) **Math:** L-Smart charts L- Field and fences
Concept *(If Applicable)*	**Health and well being**
Mapping of skills/competencies/attitudes:	
Competencies: • Critical Thinking • Communication • Collaboration • Creativity	**Life Skills:** **Thinking skills -**Self-awareness, problem solving, decision making, critical and creative thinking, reflection **Social skills -** Interpersonal relationships, Effective Communication skills, Empathy, Cooperation **Emotional skills -** Managing feelings/ emotions, dealing with stress, Empathy **Core Values:** Caring, empathy, Social responsibility and accountability, sensitivity to disadvantaged, critical thinking and problem solving, decision making • Citizenship (Civic responsibility) • Character (Zest)
Assessment of value through	Pose, Pause, Pounce, Bounce; Picture composition; Pocket a letter; poster making; Nukkad natak
Lesson Plan Duration:	10 days
Learning Engagements for Active Learning:	**Inside – Outside Circle , Through ICT, Visual Art, Thumbs up Thumbs down , SLAP , Nukkad Natak, Debate , Graphic organizers, Dictogloss , Audio – Video, Reflection**
Questioning Technique/s to be Used:	**Probing questions, Pose Pause Pounce Bounce, Comprehension based questions, Open/ close ended questions, Reflective questions**

Learning objectives:

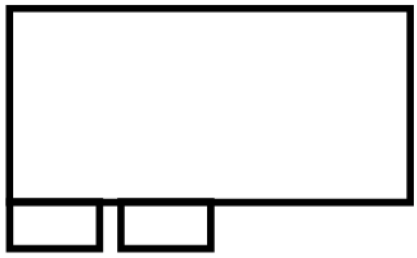
By the end of the topic, the learners will be able to:

- *explain the importance of sanitation for wellness and prevention of diseases.*
- *apply measures for cleanliness and disease prevention.*
- *interpret that digestion is a process of change of food from complex to simple form*
- *compare healthy and unhealthy food and plan a healthy meal chart for their family.*
- *design a health magazine based on factors that contribute to well being of an individual .*
- *relate and understand the importance of food in our life.*
- *infer and complete comprehension- based exercises and vocabulary tasks.*
- *infer and write the answers to open ended questions.*

5.5.1. Implementation of lesson plan- stage 1

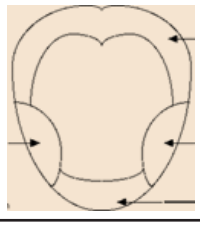
Subject	Day	Learning Engagement
Picture priorities (Integrated EVMS)	1	  • Thinking about hygiene • Facilitator will show two slides on the screen – first one of a dirty car and second one of a clean car. • Facilitator will ask learners- ➢ "Do you see differences between these two cars?" ➢ Answers might include, "One is dirty." "One looks nicer than the other." • Learners in group of 5 will think and write the possible reasons for difference in both the cars. • Anticipated responses – proper care , timely cleaning etc. • Facilitator will further relate the discussion with the care of the body . So practicing good personal hygiene that is cleaning, grooming and caring for body is imperative to keep it strong and healthy.
Pose, pause, Bounce (Integrated English)	1	• Facilitator will discuss with the students ''Eat green to keep green." If we eat green -fruits and vegetables then their peels, which are actually a waste can be used further as they are biodegradable .Whereas if we eat junk like chips their waste (wrappers) will create harmful effects as they are non-biodegradable.

		• **Pose:** Facilitator will pose a question "What are the benefits of having clean environment?' • **Pause:** Facilitator will give time to think and discuss. • **Pounce:** Facilitator will take out a slip and the students whose roll number will come out will give answer. • **Bounce-**Facilitator will bounce the question from student to student and will encourage others to add their view.
Thumbs up down! (Integrated Hindi)	1	**Thumbs Up ! Thumbs down!** **Healthy/ Unhealthy** • Facilitator will divide the class into two groups. S/he will give few situations to each group. One group will enact and the other group will put their thumbs-up for healthy and thumbs down for unhealthy activities. For example- 1. Eat open food from road side vendor. 2. Eat lots of fruits and vegetables. 3. Getting 8-10 hours of sleep a night. 4. Brush our teeth once a day. 5. Exercise every day. So on……. • Facilitator will clarify any incorrect responses using the information provided.
Dictogloss (Integrated English)	2	• Reading of the excerpt given in the book. • A silent reading to shortlist key words[tempting, waste, whipped, fresh, scraps, commanded, poured, traditional] • Focus on the meanings of these words during discussion and model reading. This will make learners concentrate on listening and understanding the text. • Summarize and narrate the story in your own words while using all the key words. [in groups of four or five]
Picture Composition (Integrated Hindi)	2	• The learners would be divided into heterogeneous groups of five .Each group would be handed over a picture clip essentially highlighting the cleanliness drive overtaken by students / people in the community. The facilitator would instruct the learners to compose a passage based on the picture clip . (15 min) • Once the passage is written , the group members will take turns to read it out emphasizing that cleanliness is one of the prerequisites for community health and hygiene.
Simulations (Integrated math)	2	• Facilitator will discuss that apart from taking balanced diet, regular exercise is very important for our body. Facilitator will take the students for yoga session as it enhances our flexibility, strength, coordination.

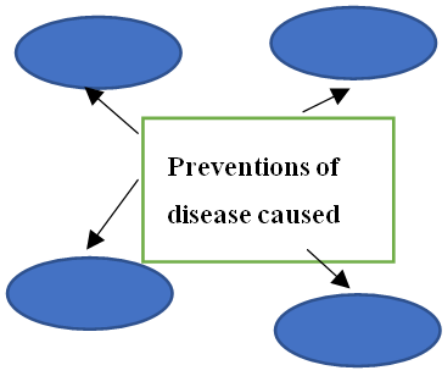
<table>
<tr><td></td><td></td><td>
• After the yoga session facilitator will ask the students to guess how many yoga mats with an area of 10320 sq cm will come in their yoga room with dimensions as 516 X 400 sq cm

• Ahaa! Moment as they can verify their calculation by actually placing the yoga mats.
</td></tr>
<tr><td>Integrated EVMS</td><td>3</td><td>
• <u>Drop a question</u>
In connection to the previous day facilitator will drop a few questions :–
➢ If a child eats unhealthy food for few days then what will be its consequences ?
➢ Why do children suffer from deficiency diseases the most?
• <u>Anticipated Responses-</u>
➢ We like to eat food of our choice .
➢ We are not concerned about the nutritive value of the food item that we eat.
➢ Facilitator will then ask them to check it within their own table group and discuss in the class.
</td></tr>
<tr><td>Health Care (integrated Math)</td><td>4</td><td>
• The students are now aware that health and hygiene go hand in hand .Facilitator will discuss that though we try our level best to keep our body healthy and fit but still at times we fall sick and need to be hospitalized . As the expenses of hospitals are too high so people these days prefer to take Mediclaim policies which help them financially. S/he will also talk about the benefits of taking policy followed by a research assignment.
• Learners will be asked to do a survey that-
“How many of your neighbors have taken the Mediclaim policy?”(Learners will go and talk to 10 of their neighbors and collect data).
</td></tr>
<tr><td>Taste for Tongue- Integrated EVMS</td><td>5</td><td>
• The students are aware of the four basic tastes.
• They will open their fruit box/lunch box and write down the food item and the corresponding taste against it.
<table>
<tr><td>Sour</td><td>Mango, curd</td><td>Bitter</td><td>Bitter gourd</td></tr>
<tr><td>Sweet</td><td>Apple , mango</td><td>Salty</td><td>Vegetable</td></tr>
</table>
</td></tr>
</table>

		Ahaa! Moment as students will be surprised to know that their lunch box contains almost all kind of food with basic tastes .
SLAP (Integrated EVMS)	7	• This is very interesting activity in which students listen to the clues and try to hit the card before their groupmates do. ➢ Food nutrient cards (fats / iron/ vitamins/ proteins etc.) will be placed facing upside in each group of 6. ➢ Learners will stand in a circle around the table. ➢ Facilitator will call out the name of food item ➢ For example- rice, curd, spinach etc. ➢ The learner who slaps the correct card keeps the card. The student with maximum cards is the winner of the game. ➢ (It would be a fast recap of the nutrients of food in a joyful way.)

5.5.2. Proceeding Further		
Subject	Day	Learning Engagement
Through ICT	2	• Facilitator will show a video related to sanitation and cleanliness. https://www.youtube.com/watch?v=Ej22NMueDoE • **Followed by a discussion on –** ➢ *Remembering those days.* **An incident from Mahatma Gandhiji's life (from NCERT chapter – Who will do this work)** ➢ **Swachh Bharat Abhiyan or Swachh Bharat Mission-a nation-wide campaign in India for the period 2014 to 2019 that aims to clean up the streets, roads and infrastructure of India's cities, towns, and rural areas**.
Fan and Pick	3	• Facilitator will write few questions on the fan cards which will be picked by the students one by one and will be subsequently answered by the other students - ➢ Diseases caused due to dirty surroundings. ➢ Diseases caused by mosquitoes – Malaria – its diagnosis, symptoms,treatment and preventions. (Chapter from NCERT book- A Treat for Mosquitoes).
Picture Study	3	• Facilitator will show a picture of street food market. Learners in group of 4 will discuss and write their observations. Facilitator will discuss about- ➢ Diseases caused due to housefly (Chapter from NCERT book- A Treat for Mosquitoes) ➢ Preventions of diseases caused due to contaminated food and water.

		• Facilitator will then discuss about various communicable diseases and the ways they spread.
Vocab Spin Wheel	4	• The facilitator will divide the class into groups of four each. The learners will be provided with the new vocabulary words from the text 'Wonderful Waste'. They will design a spin wheel relating to the vocabulary words taken from the text. They will refer to the example given below. The word should be used to reflect the theme 'Health and Hygiene'. Example: Serve ➢ Meaning to give food or drink to someone during a meal. ➢ Synonym- Dish up ➢ Sentence- The meal was served to the guest. ➢ Reference to the story- The cook served the new dish prepared from the vegetable bits to the guest in the kingdom which is now a traditional dish Avial in Kerala. ➢ Enactment by the learners
Pocket a letter (Integrated Hindi)	4	• The learners will write a letter to their cousin/friend encouraging him/her to initiate a 'best out of waste' project in his/her school/ locality. The learners would also mention how they created artifacts from waste material and contributed to "Swachh Bharat Abhiyaan", reducing the waste in the surroundings and promoting 'health and well being' of the fellow citizens. • **Ahaa! Moment. as the learner will mention that he/she has collected all plastic bottles from the flats in the society and used them to create an artifact for the exhibition.** • The facilitator will show a video on the launch of 'swachh bharat abhiyan by our honorable prime minister. Link : https://youtu.be/2qDMK0woMNU
Bar Graph (Integrated math)	5	• Based on the data collected by the students on the health policies, facilitator will divide the class in groups of 5. The groups will include learners from different locality .Learners will share their gathered data and make a bar graph/ line graph and try to infer about the locality where people are more aware of mediclaim policies.
Taste buds	6	• Facilitator will distribute a large printout of tongue with all taste areas marked. The students in their table group will write the food item they have brought against the specific taste area. • The learners will write one-lines on which taste bud is used the most by all the table groups. 

		• Explanation and discussion on taste buds and taking care of oral hygiene from (NCERT Lesson- From Tasting to Digesting)
Integrated Math	7	• Facilitator will show a video to the students about the area of few sports activity (https://www.youtube.com/watch?v=BJ2efNF18ag • Then she will ask to learners to find the standard area required for any 4 sports.
Good food, Good health (ICT)	8	• Video on food pyramid will be shown in the class. https://youtu.be/0KbA8pFW3tg • The facilitator will explain the importance of good and healthy food and the consequences of not taking healthy diet. (NCERT chapter – From tasting to digesting) • **Probing question-** "There are many people in our country who do not get proper food. What are the reasons for this? • **Think Pair Share** Learners in pair will think and discuss the reasons why some people do not get proper food. They will take turns to share their views.

5.5.3. Learning logs		
Subject	Day	Learning Engagement
Poster Making	1	• Learners will draw a poster on – **"Clean India'** highlighting the importance of sanitation and hygiene for healthy living.
Graphic organizer	2	• Learners will make a web chart on the ways of preventing the diseases caused due to mosquito bite. 
	3	• Learners will write few preventive measure to save themselves from food and water borne diseases on half A4 sheet. • Comprehensive exercises based on the chapter – Jahan Chah wahan rah will be done under the guidance of the facilitator.

	5	• Learners will list down the ways of taking care of oral hygiene with special reference to tongue/ taste buds.
Art work	8	• Learners in group of 6 will make a food pyramid by either drawing or pasting the pictures of food items.

5.5.4 Lesson Plan: Stage 2	
Formatives/Unit test	➢ *Learning Engagement:* Nukkad Natak • Learners in groups will present a Nukkad Natak in the different areas of school on the topic- *" Health is Wealth"* • Presentation should include- ➢ Sanitation and hygiene ➢ Balanced diet ➢ Exercise and vaccination etc. • Learning Engagement--Debate : ➢ A debate will be held in the class on the topic ➢ Fast / junk foods should be banned in school canteen. ➢ Facilitator will divide the class into groups with 4 in each group. Two groups at a time will debate.
Teacher Interventions	• Facilitator will provide a blank wheel divided into four sections. Ask the learners to write 4 things in each section. • *I know* the factors that contribute to healthy living. • Factors *I feel* can also be added to the list. • Things *I found* difficult to understand. • Resources *I could* use to know more about the topic. • Learners will complete this wheel and give to facilitator. Facilitator will then try to help them to explain the topics which they found difficult or they want to add on. • The facilitator will provide prompts and clues for making the assignments student friendly • Facilitator will observe and provide remedial and extra classes to help those who may find it difficult to understand any part of the chapter
Extending the Lesson Further	• Creating healthy plate : Learners will prepare a healthy plate or diet chart for themselves and their family members on an n A4 sheet. They can either draw/paste pictures or can simply write the name of the food items that should be included in the plate or diet chart. Each learner will paste their chart on the class board. A class discussion will be held thereafter. 

	HEALTHY PLATE Ahaa! Moment as the students will be astonished to see the healthy plate which they have designed is almost same according to the age of the family members • *Learning Engagement -II* little architect • Students design a floor plan of 10 bedded hospital house using 15 cm X 15 cm paper and find the floor area of OT, 2 private rooms, 1 big common room, 2 small doctor Chambers, common room, washroom etc. Students compare their hospital floor plan with their friends. They even make drawing of furniture in their floor plan like bed, sofa, tables etc. • Ahaa! Moment as the students will become little architect in designing their plan. • *Facilitator guides the student to take scale of 1m=1Cm while designing a floor plan*

Summative Assessment

HEALTH MAGAZINE

Learners will design a health magazine based on research conducted on at least three different individuals of different age group and work nature.

* Questionnaire for interviewing the individuals based on their eating habits , diseases they have suffered in the recent past because of their eating habits

* Categorization of their diseases/ ailment if any under communicable / Non- communicable category

* Vaccination program they have undergone with evidence of the same

*A venn-diagram/ compare contrast chart to compare eating habits of any two individual. Learner can take into account two individuals with healthy/unhealthy diet and lifestyle.

* Planning a program for the individuals with unhealthy habits to streamline their meals.

(program might include guest lecture by dietician / nutritionist on importance of health meal, its effect on digestive system and other organs and future possible serious ailments they might suffer from.)

* The health magazine should conclude with an article on-

" Healthy mind lives in a healthy body"

5.6. Class VI- Integrated Lesson Plan

Lesson Plan/ Learning Plan Grade: VI	
Topic: Energy	• **Science** Physics: L-12 Electricity and circuits Biology: L7-Getting to know plants • **Social Studies** Geography L-6 Major Landforms of the earth • **English:** Honeycomb –L-12 A Pact with the Sun • **Math:** L-9 Data Handling • **Hindi** L-6 पार नजर के
Concept *(If Applicable)*	**Conservation of Energy**
Mapping of skills/competencies/attitudes:	
<u>Competencies:</u> Critical Thinking Communication Collaboration Creativity	**Skills:** Life Skills: Thinking skills Self-awareness, problem solving. Decision making Critical thinking Creative thinking Social skills Interpersonal relationships Effective communication Empathy Emotional skills Managing feelings/emotions Dealing with stress **Core Values :** Social Responsibility and Accountability towards the natural resources, EnvironmentalAwareness and Appreciation, Problem - Solving Approach towards energy conservation, Taking Leadership Initiatives, Respecting each other, Cooperative Group tasks, Citizenship, Character
Assessment of value through	Observation by the facilitator, Think-pair-share, Progress chart created for self-assessment, Group Discussions, Role-play and Opinion of peers, simulations, Quiz, Pictograph, bar graph
Lesson Plan Duration:	6 days

Learning Engagements for Active Learning:	• Nature walk, chart paper Brain Storming, Think Pair Share, Live objects in the classroom, PPTs, Dictogloss, Concentric circles, Visual Artwork, Role Play, Videos
Questioning Technique/s to be Used:	• **DEAL-Describe Explain Analyze Link** • Pose, Pause, Ponder, bounce • R.A.F.T., Brainstorming, Quiz, Rally Robin, Bundling, Think, pair, share • QAXP • Probing Questions
Learning objectives: **By the end of the topic, the learners will be able to:** ➢ *By the end of the topic, the learners will be able to:* ➢ *Sensitize the people and encourage energy conservation.* ➢ *Drawing and interpretation of bar graph and pictograph.* ➢ *Need and use of solar energy.*	

5.6.1. Implementation of lesson plan

Subject	Day	Learning Engagement
Physics	1	• Think Pair Share • The facilitator announces a statement "Electric cell is used in various appliances like torch, remote, etc." • Where does it gets electricity from? • The students are given sufficient time to think and gather their thoughts, after which the students pair themselves and share thoughts with each other. • The facilitator will now discuss about the electric cell and its positive and negative terminals. • The facilitator asks the learners to look for things that use battery at home.
Maths	1	• The facilitator initiates a conversation by telling the students about Solar energy. Solar energy is the energy we get from the sun. The sun has been producing energy for billions of years. It is a completely free, renewable source and now it can be harnessed. Solar energy technologies use the energy of the sun to light homes, heat water and generate electricity. They will also be told about renewable and non- renewable sources of energy. • (READING OF PICTOGRAPH) • FOLLOWING PICTOGRAPH SHOWS THE SOLAR ENERGY PRODUCED IN THESE CITIES IN THE YEAR 2010. STUDY THE GRAPH AND ANSWER THE QUESTIONS THAT FOLLOW:

City	Energy production	
CHENNAI	■■■■■■■■	
BANGALORE	■■■■■■■■■■	
DELHI	■■■■■■■■■	
MUMBAI	■■■■■■■■■■■■	

■ = 2GW

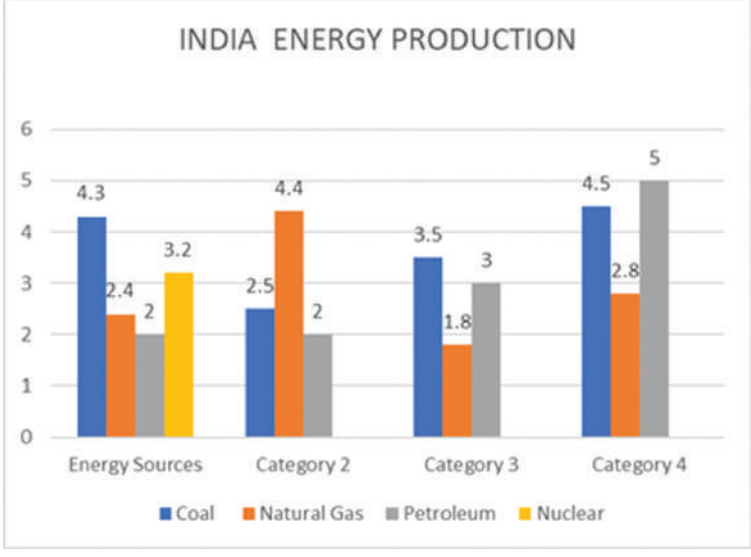
Q1. Name the energy obtained from sun.

Q2. Is the energy in Q1 renewable or non- renewable?

Q3. Which city produced the most in 2010?

Q4. Write the total production of Chennai and Mumbai together.

- Students will be asked to gather the information about the use / production of Solar energy in any 4 states and represent it using Pictograph



- 1 UNIT ON Y AXIS = 0.5 GW
- The points on the y axis represent the energy production in gigawatt by various sources in the year 2011.

Q1 What does the graph depict?

Q2 What is the difference between the production of Petroleum energy and nuclear energy?

Q3 What is shown on the X axis of the graph?

Q4 What is the scale of the graph?

Q5 Read the energy production by coal and Compare it with the energy produced by natural gas

<table>
<tr>
<td>Biology</td>
<td>1</td>
<td>
• Facilitator will take the class out for a walk within the school campus and will ask them to keenly observe the plants in terms of height, thickness of stem, strength of stem, colour of stem, pattern of veins on the leaves, structure of roots. The class will be divided into 8 groups of five students eachfor this campus walk. After a 15-20 minutes' walk, the entire class will come back
• The students in their groups will be given specific time to write down their own observations about the plants they observed in a table form-
<table>
<tr><th>Height</th><th>Colour of the stem</th><th>Strength of the stem</th><th>Position of branches</th></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table>
• Students will be further asked if there is any other variety of plants. (Probing questions)
• Are there any plants which do not come in these categories?
• Which kind of plants do not stand upright on their own?
• Pondering Question: Why climbers can climb up by the support of neighbouring structures whereas creepers cannot?
• THINK-PAIR SHARE
• Students will be asked to discuss in pairs about the size of fruit borne by creepers and climbers. They will write a few names for each.
• (AHAA moment….Students will realize that fruits of creepers are heavy and huge so they are unable to climb)
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<tr>
<td>English</td>
<td>2</td>
<td>
• Read to comprehend, Dialogue writing.
• The teacher will do the model reading of the chapter emphasizing on the factors needed by a human body for healthy living and explaining the difficult vocabulary or phrases given in the text. Children will do the individual reading after the model reading followed by a discussion on the need of natural resources.
• The learners will write a dialogue between a doctor and a patient highlighting the importance of natural resources like sun ,water, plants
• Here the facilitator will ask the following questions –
1) Why is sunlight necessary for plants?
2) Can there be life without the energy given by sun?
3) Can this energy be used for any other purpose?
• Students can be given some time to discuss in pairs and write in a paragraph about the uses of solar energy.
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</table>

Geography	2	• The teacher will show the pictures of various land forms. S/he will ask the students to divide themselves into group of four. They will be asked to take out their drawing files and draw and colour the picture of a hilly region with glaciers. The teacher after the picture drawing session will ask the students to brain storm the uses of mountains. The students will talk about the rivers which have their origin in glaciers. The teacher will further probe the uses of these rivers bringing them to the water in the rivers used for irrigation purposes and generation of hydro-electricity. S/he will share some articles with them which will inform them that hydroelectric power plants provide electricity to families, farms, schools at reasonable rate. • **Activity:** ➢ The facilitator will provide the students significant information and ask students to discuss ways to conserve energy by doing simple things like turning off the lights when not in use ➢ The students will understand that land forms are closely connected with natural resources and these natural resources make our survival possible. ➢ Individual Practice: The students will read and research about various land forms.
Hindi	2	• Dictoglass • छात्रों को चार–चार के समूह में विभाजित किया जाएगा। अध्यापक पाठ के महत्वपूर्ण अंशों को प्राथमिकता के आधार पर पठन करेंगें और छात्र इस दौरान महत्वपूर्ण शब्दों और वाक्यांशो को लिखेंगे। • तत्पश्चात अध्यापक निर्देश देंगे कि– • समूह A पाठ का एक भाग बताएगा जिसे समूह B द्वारा आगे जारी रखा जाएगा। • गुप C कक्षा के लिए कुछ महत्वपूर्ण प्रश्न रखेंगे । • और ग्रुप D संक्षेप में प्रस्तुत करेगे। • शिक्षक गद्य को सक्षेप में बताने के लिए कक्षा में प्रश्नोतरी लेंगे। • सभी समूह इस गतिविधि के माध्यम से शब्दकोश ज्ञान में वृद्धि के साथ–साथ सूर्य, पेड़ – पौधे व प्रकृति का आनंद लेंगे। यह क्रिया छात्रों के लिए (Ahaa Moment) होगी। समूह में बैठे विद्यार्थी निर्धारित अंश का पाठन करेंगें। • निर्धारित अनुच्छेद पर चर्चा करेगें। • संक्षेप में पाठ का सार बताया जायेगा। पाठ का पुनः स्मरण करवाने के लिए Dictoglass का प्रयोग करते हुए सौर ऊर्जा एवं पर्यावरण प्रदूषण पर विचार प्रस्तुत करंगे। अध्यापक छात्रों के स्मरण हेतु निम्नलिखित बिंदुओं पर प्रकाश डालेंगे। • सौर ऊर्जा के सामान्य जीवन में उपयोग पर चर्चा की जाएगी। • सौर ऊर्जा के अन्य स्त्रोत के संबंध पर चर्चा की जाएगी। • छात्र सौर ऊर्जा के महत्त्व को समझते हुए उसके प्रति सकारात्मक सोच को विकसित करेंगे। • छात्रों ने उत्साहपूर्ण ढंग से गतिविधि को पूर्ण किया।

<table>
<tr>
<td>Physics</td>
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• Rally Robin
• The facilitator will show the “electric bulb” and ask the students about its working.
• The facilitator also asks about the reason behind the bulb getting fused.
• The students, in pair after peer discussion take turns stating responses on what are the reasons. The facilitator then explains about the importance of filament.
• Day 3 : Math : (Learning Engagement 3).
• (Reading and Drawing of Bar Graph).
• Students will be asked to go through the link OR will be provided the data of :
• India’s top 5 states by installed solar power capacity .
• https://energy.economictimes.indiatimes.com/news/renewable/indias-top-10-states-by-installed-solar-power-capacity/68739456
<table>
<tr><th>States</th><th>Cumulative Capacity (in MW)</th></tr>
<tr><td>Karnataka</td><td>3657.52</td></tr>
<tr><td>Rajasthan</td><td>2317.11</td></tr>
<tr><td>Andhra Pradesh</td><td>2170.32</td></tr>
<tr><td>Tamil Nadu</td><td>1822.57</td></tr>
<tr><td>Gujarat</td><td>1587</td></tr>
</table>
• Children will be helped to draw the bar graph (by rounding off the Cumulative Capacity to whole number) for the given data on the graph paper.
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<tr>
<td>Geography</td>
<td>4</td>
<td>
• The teacher will discuss the climatic conditions and various flora fauna found in various landforms. The students will be provided waste material like broom sticks, grass ,newspaper, stones, bottle corks and other locally available material colours, paints ,brushes. They will divide themselves into three groups and they will create three major landforms i.e. Plains, mountains and plateaus.
• The students will swap their land forms and explain the features of the land form created by the other group. They will learn about the land forms on their own which will be an ever-lasting learning.
• The students will learn to appreciate others, do justice to the land form assigned to them and they will also listen to each other carefully.
• AHA moment will be when they will create the landforms using the available material. Critical Thinking (reasons effectively) Communication (communicates clearly, accesses and evaluates information)
</td>
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</table>

English	4	• Vocabulary • The teacher will divide the class into four teams. Each team will throw a word turn wise and the team who is supposed to answer will raise as many hands as possible. Now the questioning team will select the respondent from the answering team. If the selected respondent answers correctly then it will score the points as per the number of hands raised or else the questioning team will secure the points as per the number of hands raised by the respondent team. • This activity will enhance their vocabulary.
BIOLOGY	4	• Nature walk- observations • The students are divided into two groups and are moved to the school playground. They are asked to observe the pattern of veins on the leaf and the type of root of different plants. • Once the students return to the class they are asked to note down their observations in a table- • Plant Pattern of veins Kind of root • Venn Diagram (Compare and Contrast) • The students will be asked to 'Compare and contrast' between Reticulate and parallel venation. They will sit in groups of five and draw the diagram of types of venation and roots. • (**AHAA** moment…….Students will be able to find the type of root in a plant without taking out the plant by simply looking at the pattern on the leaf)
PHYSICS	5	• **Password** The facilitator will show an arrangement containing electric wires, electric bulb, electric cell and ask the students to guess the word. • **Electric Circuit** The facilitator will explain about the direction of current in the electric circuit and show how the bulb will light up when connected to an electric cell when the circuit is complete. • **Simultaneous Round Table** The facilitator will divide the students in a group of 4 and will provide electric bulb, wire and electric cell along with a safety pin which the students will design and practice circuit building within a given duration. The facilitator signals that the time is up, students will pass the circuit and continue adding or correcting if something is not placed properly. • The facilitator will then explain the role of a switch, which is explained with the help of safety pin.
Geography	5	• The teacher will ask the students to read about mountains and help them to extract the information from the content. The students will understand the formation of three kinds of mountains.

		• After the discussion and explanation, the facilitator will divide the class into three groups. Each group will present different kinds of mountains in the form of poem/couplet or a song. The other two groups will guess that which form of mountain is being presented. • AHA moment when the students will make a poem/couplet, or a song and others will be able to guess it.
English	5	• Summarization • The students will be asked to summarize Saeeda's feelings in their own words as she desperately waited for the sunshine to help her mother recover from the illness.
Geography	5	• The students will read the chapter in the class and the teacher will discuss the main features of plateau and plains. The students will be shown related power point presentation /video after the discussion. • The students will be divided into groups and asked to draw a game on the floor related to plains or plateaus. • (The players will get an extra chance if they jump onto feature like gold mining/ fertile land or lose if it is steep slope / deforestation.) • This game will give them the clear understanding of the landforms. They can improvise by adding mountains also to the game.
Physics	5	• The facilitator will write different materials and objects on the board. The students will be divided in two teams, they will listen and run to the board to find the word being described (conductor or insulator). • The facilitator will explain the uses of conductors and insulators. • Critical Thinking: reasons effectively • Communication-communicates clearly.

5.6.2. Learning logs

Geography

The students will depict their understanding of various land forms by showing a role play on all the three land forms.

The role play will include the renewable resources present on these land forms and how they are useful to us.

Maths

- collection and representation of data using tally marks
- drawing and interpretation of pictograph
- drawing and interpretation of bar graph

Biology

Learners will discuss and attempt the questions asked in the textbook based on theirunderstanding.

English

The children will attempt the exercises given at the back of the chapter.

Physics

The facilitator will provide a circuit along-with various materials and ask the students to identify and classify these materials as conductors or insulators.

Conductors	Insulators
1	
2	
3	
4	
5	

RAFT

अध्यापक प्रत्येक छात्र को चार–चार के समूह में विभाजित कर उनकी रुचि के अनुसार पात्रता देकर गतिविधि से संबधित दिशा निर्देश देंगे –प्रत्येक समूह में एक छात्र समाज सुधारक बनकर अपने विचार सौर ऊर्जा पर प्रस्तुत करेगा। समूह का दूसरा छात्र उस विचार को तार्किक मंथन के आधार पर उसमें सुधार का प्रस्ताव दे सकता है। समूह का तीसरा छात्र उस विचार को साहित्य की किसी विधा कहानी आदि में प्रस्तुत करेगा। समूह का चौथा छात्र उस विचार को सर्वसम्मति से प्रस्तुत कर उसके लाभ गिनाएगा।

समूह में बैठे विद्यार्थी निर्धारित अंश का पाठन करेंगे।

- निर्धारित अनुच्छेद पर चर्चा करेंगे।
- पाठ का पुन : स्मरण करवाने के लिए संक्षेप में पाठ का सार बताया जायेगा।

छात्रों का आत्मविश्वास और प्रायोगिक ज्ञान का स्तर उच्चतम शिखर पर है।

Ahaa Moment

5.6.3. Lesson Plan :Stage 2

Formatives/Unit test	**Geography** • The students will be told that energy is already present, it is not created but is transformed from one form to another. The students will be asked to mime and show energy transformation from various renewable resources available on land forms they read e.g. water to hydro electricity. Electrical energy etc. • They will write slogans on energy conservation and pin them in the classrooms and corridors to bring the awareness **Maths** Pen paper test (UT) integration of ICT • SOLAR ENERGY is a goal that is being discussed globally. Keeping in mind the development of the country we should be sensitizing our children towards these indexes of development. • The students will collect the information regarding the production of solarenergy all over the world and prepare a Bar Graph for top six countries using Microsoft Word by inserting *a graph*. **Biology** Bio Poem: Each child will write a poem 'I wish I were a.....\.(part of the plant) and will highlight its characteristics and uses.

	e.g., I wish were the stem because I love to support people Learners will be divided into groups and asked to make a PPT / flash cards/chart (using A 4 sheets) by drawing pictures differentiating between different types of roots./venation. **English** The students will make a ppt / draw a picture with a small write up , on importance of natural resources and their conservation **Physics** The facilitator will divide the students in a group of four and will develop and execute a school energy audit. Based on their findings, they'll implement an energy conservation plan and make recommendations that could further reduce electricity at school. Each group will therefore present a PPT on the above information.
Teacher Interventions	• **Geography** The teacher will discuss the relation between land forms, the natural resources and their conservation • **Maths** The facilitator helps the students in understanding the concept with the help of videos, activities and classroom discussions • **Biology** Before the expert groups give a presentation on the functions of plant parts, the facilitator will discuss to check proper comprehension. She
	may help them in formulation of questions for discussion in the class. • **English** The teacher will discuss the wastage of natural resources in the contemporary world. • **Physics** The facilitator helps the students in understanding the concept with the help of videos, activities and classroom discussions.
Extending the Lesson Further	• **Geography** The students will create a nukkad natak to sensitize people about various resources made available to us through these land forms and their conservation. (simple tips to conserve energy like not littering the surroundings, keeping the taps closed, turning off the fans and lights when not in use will be informed through this natak) • **Maths** The students will be divided in group of 4 each and will make a presentation on the need for Solar energy and present it in front of the class • **Biology** Students will be divided into groups of eight. Five members of the group will make a poster to summarize the content of the chapter and other three members will write about them.

	• **English** ➢ Cubing ➢ The teacher will divide the class into six small groups. She will give them 'solar energy' as a topic to ➢ Describe; This group will describe the solar energy, its main features ➢ **Compare: This group will choose some other form** of energy and compare that how is it similar or different to solar energy ➢ Associate: This group will inform that what else can they associate with this solar energy and what real life situations can they relate with this topic ➢ Analyze: Why should we be using solar energy? (renewable source, easily available, pollution free etc.) ➢ Apply: What uses does it have? How can it be applied to real life situation? ➢ Argue: What arguments can be made for or against solar energy? (time consuming, very expensive, limited usage in areas with heavy rainfall) ➢ The students will write the script based on the Cubing activity and present a small Nukkad Natak on responsible consumption. They will spread the awareness that sustainable consumption and production are all about doing more and better with less. ➢ Creating a nukkad natak to sensitize people around will be an AHA moment for the students.
	• **Physics** ➢ The facilitator will now divide the students in a group of 4 to make a poster on the given topic "Why do we need to conserve energy?" The students will collaboratively work, realize the need of energy conservation and creatively design the poster leading to the AHAA moment! . ➢ The learners will therefore realize that energy needs to be conserved to preserve the resources for longer use and "the change needs to start with their own lifestyle choices. "The learners will be asked to make changes in their energy use and encourage others to do the same for future benefits.

5.6.4 Summative Assessment (How will the facilitator check that learning objectives have been achieved?)

Pen paper Tests (details enclosed)

- **Pen paper Tests (details enclosed)**
- **Pen paper Test**
- **collection and representation of data using tally marks**
- **drawing and interpretation of pictograph**
- **drawing and interpretation of bar graph**

(fill in the blanks, match the following, mcqs, one word answers)

an open ended question on solar energy.

advantages and disadvantages of solar energy

le: pose, pause, pounce and bounce

1 सौर ऊर्जा के आदर्श स्त्रोत में क्या गुण होते हैं? तर्क सहित विचार प्रस्तुत कीजिए।

2 छोटू का परिवार कहाँ और कैसे रहता था ?

3 ऊर्जा की बढ़ती माँग के पर्यावरणीय परिणाम क्या हैं?

4 ऊर्जा की खपत को कम करने के लिए उपाय लिखिए।

Exercises on the types of roots, uses and importance of parts of a plant, .

(Fill in the blanks, Match the following, MCQs, One word answers)

Through Pen Paper Test Students will be assessed critically:

4 UNIT TESTS	**25 Marks each**
HALF YEARLY EXAMINATION	**80 Marks**
ANNUAL EXAMINATION	**80 Marks**
INTERNAL ASSESSMENT	**10 Marks**
Notebook Submission	**5 Marks**
Lab Practical (Subject Enrichment)	**5 Marks**

5.7 Class VII -Integrated Lesson Plan

Lesson Plan/ Learning Plan Grade: VII	
Topic :	**Topic:** • **Science:** Ch18- wastewater story Ch 5 – Acid, Bases and Salt • **SST : Geography:** Ch :5 Water • **Civics:** Ch 2, Role of Government in health • **Maths :** Ch 11- Perimeter and Area • **Hindi:** Chapter 19, आश्रम का अनुमानित व्यय
Concept	• Manage waste for a better future
Mapping of skills/competencies/attitudes:	
<u>Competencies:</u> Critical Thinking Communication Collaboration Creativity	• **<u>Life Skills:</u>** Self-awareness, Problem Solving, Decision Making, Critical and Creative thinking, Interpersonal Relationships, Effective Communication, Managing / Dealing with emotions, Collaborating effectively with others, Accessing and analyzing information, reflection. • **<u>Core Values</u>** Social Responsibility and Accountability towards environment, Appreciation, Openness to new ideas and change, taking Leadership Initiatives, Positive Outlook, Cooperation, Respect for all, Citizenship, Character
Assessment	Observation by the facilitator, Anecdotes, JAM, Group Discussions, Role-play and Opinion of peers, Grading, Quiz, Project Work, Comprehension Questions, Rubrics and Checklists
Lesson Plan Duration:	9 days
Learning Engagements for Active Learning:	• **Nature walk, chart, live objects in the classroom, Visual artwork, Simulations, Brainstorming, Bundling, Graffiti Board, Cover puzzles**
Questioning Technique/s to be Used:	• **Probing, open-close ended questions, short and long comprehension questions**
Learning objectives: **By the end of the topic, the learners will be able to:** • *identify how different pollutants pollute land, enter the various sources of water and the role human activities play in increasing pollution* • *describe the various stages of treating wastewater*	

- *categorize waste into bio degradable and non-biodegradable ones for proper management*
- *organize role-plays, nukkad-nakat to sensitize locals on waste management and disposal*
- *combine the knowledge to bring about a change in the local community (individual and community level)*

5.7.1. Implementation of lesson plan

Subject	Day	Learning Engagement
Science	1	• ***Simulation/Brainstorming*** https://www.youtube.com/watch?v=vP3pbh_-pu8 ➢ An initiation through the video (without the sound) will help the learners identify the various kinds of waste thrown into the environment through various human activities. **OR** ➢ Alternatively, the students can be taken near a water body/dump yard and asked to check the kinds of waste they can see around them ➢ They are grouped (4-5) and asked to note down some waste products that can cause severe damage to the environment/ some that can be reused/ biodegradable.
Maths	1	• **Classification** The facilitator will show a variety of objects (after the students have discussed) in the classroom and handover a few slips to the students and ask them to classify it under the heads of perimeter and area. *(This will help the students in case they are not able to identify some real-life examples).*
Hindi		• **Mind-mapping** ➢ The students are aware of 'Swacch Bharat Abhiyan'. The facilitator gives a few points about the disciplined life of Gandhiji and his thought on cleanliness. The students are asked to sit in groups of six and think ways of minimizing use of resources at individual level. ➢ This will be discussed in the class in groups. ➢ The facilitator may follow it up by a passage or dialogue writing. ➢ This is a prelude to the lesson, 'आश्रम का अनुमानित व्यय'. (reducing waste and using resources carefully)
Chemistry	2	• ***Live objects in the classroom.*** The facilitator brings some vinegar/lemon juice, meetha soda, tooth paste, tomato sauce, common salt, sugar to the classroom. From here the students (in groups of four/five) will generate the properties on the basis of their 1. Taste 2. Solubility in water

		3. Identification. • From here, she/he will take them deeper into the understanding of acids, bases and salts.
Civics	2	• **Picture Priorities** Probing Questions asked
		➢ What is health according to you? ➢ What is the impact of surroundings on health? ➢ Has disposal of waste got anything to do with being healthy? ➢ Which disease can break out due to mismanagement of waste? • The students are made to sit in group of four where two of them are to comment on the first kind of pictures and the other two on the other kind. • **Kind 1:** The facilitator shows some pictures of malnourished children/ long lines in front of hospitals/ filled wards in the hospital/ filthy roads. • **Kind 2:** Alongside, she shows pictures of hospitals with clean rooms, trained doctors and nurses, clean manicured lawns and parks. • The students are asked to note down the ➢ Similarities ➢ Difference From here, the role of the government in health is initiated.
Biology	2	• **Mind-mapping: Ways of disposing waste into a water body** The students will be seated in groups of five/six and asked ways in which they can dispose of waste generated at home and what kind of waste is harmful to be thrown in water bodies. How should sewage be disposed?
Math	2	• ***Graffiti Board; Independent/Guided Practice*** • **Perimeter and Area.** The facilitator would ask the children to think how to paint the classroom if the door is to be left and only the walls to be whitewashed? The students here would be left to think for sometime, discuss and then arrive at the conclusion. • ***What all other real-life examples can be generated?*** • ***The learners will be asked to note down some areas where they can utilize this learning. These examples will be put up on the Graffiti board and more ideas added till the end of the chapter based on the concept of area and perimeter in various fields.*** • **(Anticipated AHAA moment: the students will use this knowledge at homes too and find the areas where perimeter and area are used)**

Chemistry	3	• ***Laboratory Visit*** Visit to the school lab to check for Acid, bases and salt and their reactions under the guidance of the facilitator.
Math	3	• Hands-on • The facilitator will ask the students to bring bread/cut-out (similar to a parallelogram. It will be cut into two triangles and the area measured by taking the formulae ½ *base* altitude. Then it will be multiplied by two and area of the parallelogram worked out. They will check for accuracy. • They will also check the same considering the bread as a rectangle and check the difference • ***(Anticipated AHAA moment: The students will find that the measure of the parallelogram can be found by combining the areas of two triangles. They will also come to know that if the area of parallelogram and that of a rectangle will be similar or not)***
Geography	5	• ***KWL*** • The facilitator asks the students to collect a few things like sand, pebbles, an old transparent box, few objects that can used as huts and recreate how a Tsunami occurs. • From this, she will ask the children, a. What do you observe? b. What do you know? c. What did you learn from the experiment? d. What more would you like to know?
Biology	5	• ***Bundling/ TPS(Think-pair-Share)*** • The facilitator asks students to individually list down ten things as waste that can be categorized under three broad heads 1. Can't be reused 2. Can be recycled and reused (non-biodegradable) 3. Can be used again and again (biodegradable) • This list is to be compared in a group of two and bundled. Students are then required to find which waste in generated the most by listing which items they use the most at home. A bird's eye view of the waste generated and disposed is formed. This will give an idea of the areas where waste can be reduced.

5.7.2. Proceeding Further		
Subject	Day	Learning Engagement
Geography	1	• Guided Reading and explanation: • Chapter 5: **Water**
Maths	2	• ***Guided and independent practice*** • Exercise 11.1 in the notebook
Chemistry	2	• Reading and comprehension of the lesson Acid, bases and Salt
Geography	2	• ***Research*** Reading of Chapter on Water. (NCERT) The students are given some links to research about the depleting ground water levels (Chennai/Delhi) https://www.indiatoday.in/india/story/india-water-crisis-rivers-lakes-schemes-governments-environment ***OR*** • Alternatively, students can collaboratively collect newspaper articles/ magazines etc. to check for the depleting levels of water across the globe. • This will be followed up in the next class.
Hindi	2	Reading and explanation of आश्रम का अनुमानित व्यय का पठन एवं चर्चा
Civics	2	Reading of the importance of Health from Chapter 2
Math	3	Guided and independent practice, 11.2
Geography	3	• **Concentric Circles/ GDs(Group Discussions)** • The students will be asked to make two circles, one inner and one outer and share their findings in the link/ magazine or newspaper with the partner facing them. After one minute, the facilitator will ask the circle to move to left or right thereby changing partners. This way, each child would have shared at least 6 to 7 facts about the depletion of underground water level. • This will be followed up by the explanation of the chapter forward and Ocean Currents.
Hindi	3	Reading of the lesson continued.
Biology	3	Reading and understanding of Sewage and Treatment of polluted water.
Civics	3	Reading of the difference between public and private healthcare.
Hindi	4	• ***Pass the Ball/ Parcel*** • The facilitator will bring a ball/take one from the sports room and take the students to the school ground. They will recapitulate the lesson and the facilitator will further take some comprehension questions with them.
Biology	4	• ***DRTA- Direct Reading and Thinking Activity*** • The facilitator will make the students read the steps of waste water management. They will sit in groups and analyze and make a flow chart of the steps involved.

Maths	4	Guided practice, 11.2
Maths	5	• ***Hands-on/Guided practice*** • The students will be asked to slices and arrange it one after the other in such a manner that it forms a parallelogram (refer to NCERT book). • This will act as an initiation to exercise 11.3
Chemistry	5	• ***Visit to the school ground/ talk to the gardener*** • Chapter on Acid, bases and Salts continued. • Understanding the concept of soil neutralization using bases. Visit to the school ground and talking to the school gardener
Biology	5	• ***DRTA (learning engagement 2): Good Housekeeping Practices, Sanitation and Diseases*** • Reading of the section of the chapter on Housekeeping practices, Sanitation etc. This will be linked to disposal of waste on land as well as water. The students will make GOs, Mind-maps to express their comprehension.
Hindi	5	• प्रश्नोत्तर तथा अन्य विद्याओं से पाठ चर्चा
Civics	5	• ***Brainstorming/making Mobiles*** • The facilitator asks the learners what is the role of the government in public health care and how they can help the government in maintaining health of the public through proper disposal of waste? • At individual level • At group level • As a social responsibility • ***(Anticipated AHAA moment- the students can set up bins to segregate bio degradable and non-biodegradable waste for the school/ make a recycling plant/ Collect the biodegradable waste to make manure for giving to the farmers for better crop growth)***
Geography	6	• Reading of Tides, Ocean Currents with comprehension exercises and map work.
Biology	6	• ***Simulation/Brainstorming*** • Facilitator shows the student a video using given link and asks following questions https://www.youtube.com/watch?v=c1YObAVJYos&feature=youtu.be&t=306 Q) Which river do you think is shown in the given video? Q) Is the water of the river fit for human consumption? Q) If not, what are the reasons behind it? Q) Is this water be used for any other purpose? • The facilitator asks the students to prepare a mind-map/ points regarding condition of river Yamuna.

		1. Students may use simple material to depict it 2. Write the reasons / factors responsible for such condition. (or rivers across India) • ***Students will sit in groups and then discuss about the video for 15 minutes.*** • *Each group will then share its points regarding the severity of condition of river Yamuna and the factors responsible.*
Chemistry	6	• Attempting comprehension exercises in the notebook.
Hindi	6	• ***Creative Writing*** • विद्यार्थी 'स्वच्छता का दीप जलाएँगे, भारत को रोगमुक्त बनाएंगे' विषय पर अनुच्छेद या कहानी या वार्तालाप लिखेंगे।
Civics	6	• Comprehensive exercises in the notebook.
Maths	6	• Guided practice of exercise 11.4 (initiation)
Biology	7	• Attempting comprehension exercises in the notebook
Maths	7	• Guided practice of exercise 11.4 (initiation)
Integrated Visit to a waste/ water treatment plant/nearby farm	7	• The facilitator organizes a visit to a waste or water treatment plant in the locality and asks the students to chalk out a plan for their school/nearby vicinity. ***OR*** • Those going to the farm will make study of the plants getting affected due to the increase in level of chemicals in soil and the ways to neutralize it. • This will be followed up by taking collective actions at various levels.
Integrated ART in the local community	8	• The learners are separated in groups and ask permission from the school authority for setting up a waste recycling plant in the vicinity. For this, they do the following activities (anyone or depending upon choice) • Informing all the classes to bring their old notebooks, books, papers that are to be disposed and collect it at one place • Find the cost of fencing an area that is provided by the school management for setting up the plant • Bring old buckets, bins (collected from donation) from all who can give it for recycling and segregation of degradable and non-degradable waste • Tie up with the local governmental body/ farmers for collection of degradable waste to make manure • Own a small water body and take onus of its maintenance through ***'shram-dan'*** • The students of Grade 7 can start a 'Saptahik-patrika' at the school level with contribution from various class levels to promote judicious use of recyclable products. Actual pictures of students to appreciate efforts form a part of the weekly/monthly in-house journal. • ***(Anticipated AHAA moment : Doing and executing plans on what they have learnt would provide a platform to the students to voice their opinions and work in the lines of what they have learnt)***

Integrated ART in the local community 2	9	• The students design a nukkad-natak for sensitizing the locals on disposal of waste with the help of the facilitator. • People are sensitized, and the learners set up recycled bins to help in disposal of waste. OR • Going to restaurants in the local areas and conducting a survey on the daily leftover food. This can be coordinated with the help of a facilitator or school administration. The leftover food can be distributed. • A municipal body can be contacted to use the biodegradable waste of food outlets.

5.7.3 Learning Logs

1. ***Math/ Bio/Civics/ geography/chemistry: Notebook work***
2. ***Hindi: Notebook, School Journal/magazine/article or paragraph writing***
3. ***Chemistry: (Lab Activities)*** Student will form groups of 5-6 and each group will be provided with a soil sample. Each group will get soil sample from different spot. Each group will then perform practical activity as steps given below:

a. A pinch of soil is tested with moist litmus paper to identify that it is acidic. (Will also show other colour change)

b. 1g of soil sample is dissolved in 3 test tubes each containing 5mL of water and will be labelled as A, B & C.

c. Phenolphthalein, methyl orange and litmus indicator are added in the Test tubes A, B & C and record observations.

d. They will add stock solution NaOH in three samples till desired colour change is observed in tabular form.

Table-1: Before adding NaOH

	Sample-A	Sample-B	Sample-C
Indicator	Colour	Colour	Colour

Table-2: After adding NaOH

	Sample-A	Sample-B	Sample-C
Indicator	Colour	Colour	Colour

Facilitator will discuss the terms like neutralization, acid, base, indicator etc. after practical. Facilitator will assure that each group gives one correct definition after discussion by guiding them.

4. *DRTA exercises*
5. *Mobiles*
6. *Scripts for nukkad-natak*
7. *Questionnaires formed for skype session or visit to the waste treatment plant*

Lesson Plan: Stage 2	
Formatives/Unit test	• Research work can be taken as a formative assessment by the facilitator. • Script writing for the role-plays to sensitize people around can form a way of assessing student's learning. • Contribution of waste management at school level can form a part of formatives for continuous and comprehensive evaluation. • Unit tests: Subject wise (25 marks) to check conceptual understanding.
Teacher Interventions	Teacher invention may be required at the following stages : • Helping students connect to area and perimeter in real life. • Facilitator will have to initiate students into the life and thoughts of mahatma Gandhi and his vision behind cleanliness and give deeper insights into "Swacch Bharat Abhiyan'. • Intervention during finding properties of Acids, bases and Salts. • Arranging visits to farms, waste management or water recycle plants. • Contacting Government agency for collection of leftover food. • Seeking permission from school management to set up recycling plant. • Providing links for research and guide for information literacy. • Understanding the role of media as an important tool to bring change. • Assisting children in the labs to check for properties of acid, bases and salts and checking soil for its properties. • Arranging for place to sensitize locals.
Extending the Lesson Further	• Students will involve themselves in Conserve water campaign in which all the groups will work in tandem and execute various measures in daily life to conserve water/ recycling waste. • Own a small water body and take onus of its maintenance through ***'shram-dan'*** • The students of Grade 7 can start a 'Saptahik-patrika' at the school level with contribution from various class levels to promote judicious use of recyclable products. Actual pictures of students to appreciate efforts form a part of the weekly/monthly in-house journal.

Summative Assessment	
Through Pen Paper Test Students will be assessed **critically:**	
4 UNIT TESTS	25 Marks each
HALF YEARLY EXAMINATION	80 Marks
ANNUAL EXAMINATION	80 Marks
INTERNAL ASSESSMENT	10 Marks
Note Book Submission	5 Marks
Lab Practical (Subject Enrichment)	5 Marks
Through lab Practical Students are assessed for **Collaboration, Critical thinking.**	

5.8 Class VIII- Integrated Lesson Plan

Lesson Plan/ Learning Plan Grade: VIII	
Topic :	Change - Inevitable in this *world*
Concept *(If Applicable)*	The only thing constant in life is change.
Mapping of skills/competencies/attitudes:	
<u>Competencies:</u> Critical Thinking Communication Collaboration Creativity	• Self-Awareness, Problem Solving, Decision Making, Critical and Creative thinking, Reflection • Interpersonal Relationships, Effective Communication, Empathy • Managing/Dealing with emotions, Empathy • **Core Values** • Social Responsibility and Accountability towards the natural resources, Environmental Awareness and Appreciation, Taking Leadership Initiatives, Citizenship, Character
Assessment	Observation by the facilitator, Anecdotes, Progress chart created for self-assessment, Group Discussions, Role-play and Opinion of peers, Grading, Quiz, and Project Work.
Lesson Plan Duration:	11 days
Learning Engagements for Active Learning:	• ***Brainstorming , bundling , dictogloss,role play , simulation ,, told us…. made us wonder , DRTA, Visual art/ Article writing***
Questioning Technique/s to be Used:	• Open ended , probing questions, objective question

Learning objectives:

By the end of the topic, the learners will be able to:

- *Recognize the factors which have brought the changes in the society*
- *Analyze the transitions which lead to changes.*
- *Describe force, pressure and friction and its significance in life*
- *Infer the causes which bring change scientifically and socially both*
- *Examine the effect of friction on moving objects*
- *Analyze that friction impedes the movement*

5.8.1. Implementation of lesson plan –Stage 1		
Subject	Day	Learning Engagement
Hindi (dictogloss)	1	Chapter 2 • लाख की चूड़ियाँ • विद्यार्थियों को शहरीकरण एवं व्यावसायीकरण की वजह से ग्रामीण उद्योगों, हैण्डीक्राफ्ट, रिश्तों के स्वरूप एवं संस्कृति पर होने वाले नकारात्मक प्रभाव के बारे में जागरुक करवाएगा।
English	1	***Throw the ball followed by picture reading)*** ***Chapter 3 The Glimpses of the past*** • The facilitator will form heterogeneous groups of 4-5 children each and will throw a ball randomly towards each of the groups. The learners who catch it will come and pick a card from a bowl which contains number 1 to 9. A theme is mentioned on each card. The themes are taken up from the chapter "The Glimpses of the past". In this way all the groups will get a theme from the chapter. Each group will read the picture given to them, discuss and write their interpretation of the same as a whole. • ***(Day 1 will make the children understand that changes can be seen almost in all the aspects of the society.)***
History	2	• ***Chapter 8 Women caste and reform*** • The facilitator will ask the students to show the life of women in the last five decades on a timeline. It will a group activity where each group will present one timeline. Based on the timelines, the facilitator will start the discussion followed by the reading of the chapter in the form of a dictogloss.
History (Dictogloss)	2	• ***Chapter 8 Women caste and reform*** • Timeline will be followed by dictogloss where the facilitator will read the chapter and students will listen and note down the key findings as a group. (The teacher might read text twice if required).
Science, Force and Pressure	2	 • ***(Brainstorming)*** • ***Science : Force and Pressure*** • The facilitator will show few pictures to the learners and will ask

		them to reflect on it as far as the word "CHANGE" is concerned. In case , the pictures are not available , the facilitator will give ask questions probing questions which will make them conclude that some changes are natural changes like (infant to adult , seed to flower and some changes occur when some external force is applied to them. E.g. kicking a football , pushing and pulling bring a change in the position of objects)
Science, Force and Pressure	2	• ***(DRTA – Direct Reading and Thinking Activities)*** • The facilitator will give one topic to each group of 4-5 students to read and think and discuss on it. The facilitator will trigger students thinking to relate FORCE with real life. The discussion will range from force required to push /pull a chair to the force required to lift a car with a crane.  • Each group then presents it to the whole class and makes notes of it. • Day 2 : Learning engagement 5 – (Blindfolded in pair - touch and feel) • Math :Visualizing solid shapes • Two children will be made blindfolded. Blindfolded pair of children will be made to touch an object from different sides (TOP, SIDE,BACK, BOTTOM) but not as a whole and will be asked to guess the shape of those sides as square,rectangle, circle etc.) . Further they will be asked to guess the object. They might guess it same or different depending on their perception. • The facilitator can use the objects available in the class or she can arrange it from elsewhere also. • It will be an anticipated AHAA moment for the children as they will feel great if both the children guess it correct and they all will enjoy it also. • A discussion followed by this activity will make them understand that when they touched the object, it appeared to be 2D but actually it was a 3D object. • Discussion on 2D &3D shapes.

5.8.2. Proceeding further

<table>
<tr><th>Subject</th><th>Day</th><th>Learning Engagement</th></tr>
<tr><td>Hindi</td><td>3</td><td>• Dictogloss
• Hindi : Chapter 2 - लाख की चूड़ियाँ</td></tr>
<tr><td>English</td><td>3</td><td>• Choice board
• Chapter 3 The Glimpses of the past
• The facilitator will draw the following choice board on the board and will ask each student to choose any one form of the mentioned activities.
<table>
<tr><td>Visual</td><td>Mathematical</td><td>Kinesthetic</td></tr>
<tr><td>Linguistic</td><td>Musical</td><td>Interpersonal</td></tr>
</table>
• The students will form homogeneous groups (Students of same choice in one group) and will present one aspect of the chapter in their own way.
• This will be an anticipated AHAA moment as children will get an opportunity to express their understanding of the chapter in their own way. It will certainly boost their confidence and interested in learning.</td></tr>
<tr><td>History</td><td>3</td><td>• Dictogloss contd.
• Chapter 8 Women Caste and Reform</td></tr>
<tr><td>Science</td><td>3</td><td>
<table>
<tr><td>Description situation</td><td>Description of the situation Action : (pushing/ pulling/ picking/ hitting/lifting/ lowering/ flying/ kicking/ throwing/ shutting/ flicking)</td><td>Change observed?

(yes/no)</td><td>Forces are due to an Interaction (yes/no)</td><td>Change in the state of motion Yes/no</td><td>Change in the shape of ob-ject</td></tr>
</table>
• <u>Fill the grid</u> Force and Pressure
• The facilitator will provide the students with the following grid and asked them to fill it collaboratively.</td></tr>
</table>

An open ended question will be asked from the students. Children will be asked to think about it from all possible perspectives.

What do you mean by Change? Why does it occur?

Every student will write the answer on an A4 sheet and put the answer on the class boards

<table>
<tr><td>Hindi</td><td>4</td><td>• लाख की चूड़ियाँ
• पाठ के आधार पर रोल प्ले करेंगे।
• ''बदलाव ही शाश्वत है।'' विषय पर लेख लिखेंगे।</td></tr>
<tr><td>Math</td><td>4</td><td>• Visualizing the 3D shapes
• Exercise 10.1 to be done in the notebook.</td></tr>
<tr><td>Science</td><td>4</td><td>• Dictogloss/discussion)
• Force and Pressure
• Reading and explanation of the chapter contd.
• The facilitator will make children perform simple experiments with the help of balloons and water, so that they deduce the facts about pressure.
• Facilitator will ask few probing questions also so that learners deduce the facts of pressure.
• Why water balloons hurt more when thrown from a greater height?
• Why water guns have small holes and not big?</td></tr>
<tr><td>Hindi</td><td>5</td><td>• Dictogloss
• Hindi : चिट्ठियों की अनूठी कहानी
• The class will be divided into groups of 4-5 students each. Dictogloss will be followed by the group wise presentation the next day.</td></tr>
<tr><td>Math</td><td>5</td><td>• My side n view
• Math : Chapter 10 : Visualising solid shapes
• The facilitator will distribute a small card silently with either 6 or 9 written on it in the class and will ask the students to read the digit written on it. Some of them will read it as 9 and others will read it as 6.
• The facilitator will discuss the reason for different answer and will conclude that our opinion is based on our side/perception. The students will be asked to think on this at home
<table><tr><td>6</td><td>9</td></tr></table>
• Related exercises in the notebook.</td></tr>
<tr><td>History</td><td>5</td><td>• (DRTA – Direct reading and thinking activities)
• Women Caste and Reform
• As the facilitator takes the chapter through DRTA , the learners are involved in active thinking
• (The facilitator will prepare the learners to make connections between the force required for the changes / reform in the society and the force required bringing a change in the position of objects.</td></tr>
</table>

<table>
<tr>
<td>Science</td>
<td>5</td>
<td>

Told us ….Made us wonder
Force and Pressure
The facilitator will give one situation as mentioned below and ask learners to reflect on it as far as force and pressure are concerned

After the discussion the facilitator will make them sit collaboratively (heterogeneous groups) and ask them to mention atleast 5 such situations where they observe the difference in the impact as force and pressure are applied. Students will be given a choice to do it in the form of drawing, text, performing art/role play. They will also show it in a tabular form.

<table>
<tr><th>Told us</th><th>Made us wonder</th></tr>
<tr><td></td><td></td></tr>
</table>

This will be an anticipated AHAA moment as students will enjoy making connections and sharing the same in the class.

</td>
</tr>
<tr>
<td>English</td>
<td>5</td>
<td>

Macavity – The Mystery Cat
Recitation and discussion of the poem followed by an activity “Perceiving it …my way” where the learners will be asked to write / enact on the possible ways the mystery cat would have behaved in different situations.
(This is an anticipated AHAA moment as the session will be witty, humorous and completely joyful for the students.)

</td>
</tr>
<tr>
<td>Science</td>
<td>6</td>
<td>

(Brainstorming)
Science :Friction
➢ Why is heat produced when we rub our hands?
➢ Have you ever thought that why vehicle slows down when brakes are applied?
➢ Why is it difficult to walk on a smooth and wet floor?
➢ Why do we fall when we step on a banana peel?
➢ What causes wear and tear of tyres of moving vehicles?
➢ Why are wheels used to move heavy luggage easily?
The facilitators will form groups and asked children to brainstorm on the above probing questions. Followed by the brainstorming session the facilitator will ask each group to share their findings with the other groups.

</td>
</tr>
</table>

Hindi	6	• चिट्ठियों की अनूठी कहानी • रोल प्ले – कला गतिविधि आदि
Math	6	• ***Brainstorming)*** • ***Math : Visualizing Solid Shapes*** • ***Related exercises in the lab.*** • Through discussion the facilitator will also emphasize that what we see is depends on our perception also. E.g.when it rains, some of us feel very happy while few of us feel as if the sky is sad and crying today. • The facilitator will throw a question: Playing mobile games is ok for us as children but our parents do not like it. Why?
History	6	• ***Dictogloss*** • ***The Making of the National Movement: 1870s--1947*** • Dictogloss will be followed by a discussion. The discussion will make the children understand the need and progression towards nationalism. They will be asked to show it on a timeline/flowchart collaboratively.
History	7	• ***The Making of the National Movement: 1870s--1947*** • Dictogloss will be followed by a discussion. The discussion will make the children understand the progression towards different movements which led to independence. The learners will also realize the reforms/movement resulted in the CHANGE in the mindset of the people which started from a thought (perceiving things differently and acting accordingly). • The learners will share their learning from the chapter visualizing solid shapes where they learned to see things according to our perspective / side and form opinion. • It will be an anticipated AHAA MOMENT for them as they will be able to integrate their learning as a whole and relate it with their lives also.
Civics	7	• ***Law and Social Justice*** • As students have already read about a constant thing in life which is CHANGE, the facilitator will ask few questions • The major social reforms / movements/changes in the society are for the betterment. Do you all agree?
		E.g. Triple Talaq, Article 370 were the changes wanted by our society since long but they are implemented now. Why? • With the help of these probing questions, the facilitator will derive the need of law and justice associated with a change.
Hindi	7	• ***Dictogloss*** • ***Hindi :*** जहाँ पहिया है • पाठ के द्वारा बदलाव के सकारात्मक आवश्यकता के प्रति जागरुक कराया जाएगा।
Civics	8	• Direct Reading & Thinking Activities • Law and Social Justice

Hindi	8	• Think pair, share • Hindi : जहाँ पहिया है  • The learners will discuss and write an article on an A4 sheet and put it on the board of the class. • The facilitator will encourage the learners to cite such example which they experienced in the society.
Integrated projects	9-12	• **Integrated project 1** "...उन जंजीरों को तोड़ने का जिनमें वे जकड़े हुए हैं, कोई-न-कोई तरीका लोग निकाल ही लेते हैं..." आपके विचार से लेखक 'जंजीरों' द्वारा किन समस्याओं की ओर इशारा कर रहा है? • The learners are asked to observe the pictures given above carefully as a group (collaboratively) • (To bring a change in the position of an object, we apply force as we intend to change its position. To change the position correct amount of force is required. Putting pressure at appropriately to perform a certain task as per our requirement is another dimension to it. Friction plays a major role in bringing a change or in completion of a task. Friction needs to be reduced/overcome to perform a task. • Based on the above clues and the pictures the learners will reflect upon. It will be an integration of scientific approach of force, friction, pressure and social reforms and changes. . The presentation can be in the form of a role play/ visual art/ video making/ppt/song/poem/article writing/mime/ performing art.
		• The facilitators will facilitate the process so as to bring the best out of their learners. • The parents will be invited for the show where children will display / perform their work. It will be in the form of a gallery walk and the show in the auditorium. Parents will be asked to write their feedback after the show which is going to be motivating and encouraging for the students.

5.8.3 Learning logs
Notebooks, articles, posters on A4 Sheets

5.8.4 Lesson Plan – Stage 2	
Formatives/Unit test	• Integrated project
Teacher Interventions	• Mindful teacher's intervention to facilitate learning process
Extending the Lesson Further	• Think of a change which you want to bring in the society. Discuss the phases of its implementation. How will you legalise it? • https://bit.ly/2mdCc0s
Summative Assessment	
Pen paper test **4 UNIT TESTS** **25 Marks each** **HALF YEARLY EXAMINATION** **80 Marks**	

CHAPTER 6

Kitchen As A Resource For Joyful Learning

Rationale:

The Board, vide Circular No. Acad-34/2020 dated 14th May, 2020, has urged the school heads to ensure implementation of Competency Based Education by creating such learning environments that enable students to engage in meaningful learning processes. As mentioned in the said circular, Competency based teaching and learning can be pursued through various methods which are experiential in nature to make learning joyful. But the closure of the schools due to COVID-19 Pandemic and lack of face to face interaction may pose challenges in adopting varied methods of teaching to achieve the desired level of learning. Therefore, in the context of the present situation and for the long-term development of capabilities and competencies in the learner, such experiential methods need to be adopted which can be easily implemented and focus their efforts on learning and its outcomes. This also means utilizing resources that are around the students when they are at their homes. Kitchen is one such resource.

6.1. The Kitchen is a Laboratory outside School, a Space for Learning:

Someone has rightly said, "the kitchen is a laboratory, and everything that happens there has to do with science. It's Biology, Chemistry, Physics.Also there's History and art; Mathematics and Economics too".[5] This all seems true when we see the components of our kitchens; when we see the spices we taste, the weighing scales we use, the flame of the gas stove that burns in different colours, the firewood we use in the traditional Kitchens, the different types of fuels we use in the Kitchen all will prove that the Kitchen is a Laboratory both the letter and spirit.

The biggest and unseen challenge of COVID 19 has given an opportunity to find innovative solutions for learning. The lockdown has redefined the roles of parents and schools. These times have re-discovered and re-established the roles of homes as learning spaces. And even more importantly, it has re-ignited the focus on learning becoming a habit, a lifestyle that is integrated into every aspect of our daily lives, and not just something that can be done only at a school.

These lockdown times have given an opportunity of using Kitchen as an interesting space to learn while staying indoors; of utilizing kitchen as a readymade laboratory to learn a plethora of subjects and concepts. Kitchen can be used for the empowerment and wellbeing of individuals and families; for promoting the values of caring, sharing, accepting responsibility, communication, reflection budgeting and planning. It can help learners to envision and uncover those unrealized possibilities and potentials in the familiar domain of their own homes.

We shall highlight using kitchen as a learning space, a laboratory in today's time, when the school laboratories are closed. In fact, Kitchen is that space of our home where we gather our energy for the entire day, through the food prepared; where we learn the most important life skills for survival, i.e. cooking; where we also learn Science, Engineering, Mathematics, Technology through classification, organization, quantities, proportions, thermal conductivity, chemical reactions, audits, optimization, hygiene, timing, nutrition, and many more; where we learn about interdependence, collaboration and joy of working with other individuals.

5. https://altonbrown.com accessed on 27.08.2020

6.2. Kitchen: A Learning Ground for 21st Century Skills and Competencies:

The 21st Century Skills of 4Cs: Critical Thinking, Creativity & Innovation, Collaboration, Communication, IMT: Information Literacy, Media Literacy, Technology Literacy and FLIPS: Flexibility and Adaptability, Leadership and Responsibility, Initiative and Self-Direction, Social and Cross-Cultural Interaction can be developed by working in a kitchen.We shall explain a few of them:

Skill	Kitchen Activity
Critical Thinking, Creativity & Innovation, Collaboration, Communication	• Mixing and matching different ingredients; learning and applying the sciences behind kitchen processes. • Creating new items; working together with parents/ siblings or even alone under the guidance of someone.
Social and Cross- Cultural Interaction	• Learning about cuisines of various states and countries.
Problem Solving	• Creation of new recipes according to the financial condition and family preferences.
Responsibility	• Being a dutiful child, helping parents in various chores of kitchen.
Information Literacy, Technology Literacy	• Digitally researching on various facets related to kitchen; utilizing the internet to access and analyze information.

6.3. Kitchen for Constructivist Learning:

Constructivist Learning manifests a learner's construction of new meaning based on his/her experiences. Thus, the two important elements in this process are i) what a learner already knows and believes, ii) ideas and knowledge with which he comes in contact, which amounts to his/her experience. According to Richardson, "Constructivist pedagogy is thought of as the creation of classroom environments, activities, and methods...that focus on individual students developing deep understandings in the subject matter of interest and habits of mind that aid in future learning."[6] Everything around a learner provides a learning experience and can be utilized for this.

6.3.1 Kitchen for Experiential Learning:

Experiential Learning (EL) is considered to be the most effective pedagogy to ascertain the implementation of constructivism. In an ideal EL cycle, learners experience the following four stages in a sequence: 1) concrete experience; 2) reflective observation; 3) abstract conceptualization; and 4) active experimentation.

Bawden (1998) has summarised the EL process as follows:

- "The process of learning starts with the immersion of the learner in a concrete experience from which as many observations as possible are gathered and perceptions recorded.
- This stage of information gathering is then followed by a phase of thinking, during which attempts are made to understand what has been experienced - and sense is made out what has been sensed.
- This stage is followed, in turn, with plans for action based on the understanding achieved.
- Finally, the planned action is taken, and as this changes the situation, the whole process is repeated, and more knowledge created."

6 Richardson, V. (2003). Constructivist pedagogy. *Teachers College Record, 105(9)*, 1623–1640

In today's times, when students are at their homes, a kitchen is one such resource that can help in learning through real-life experiences and where multi-sensory experiential learning can happen. Take for example:

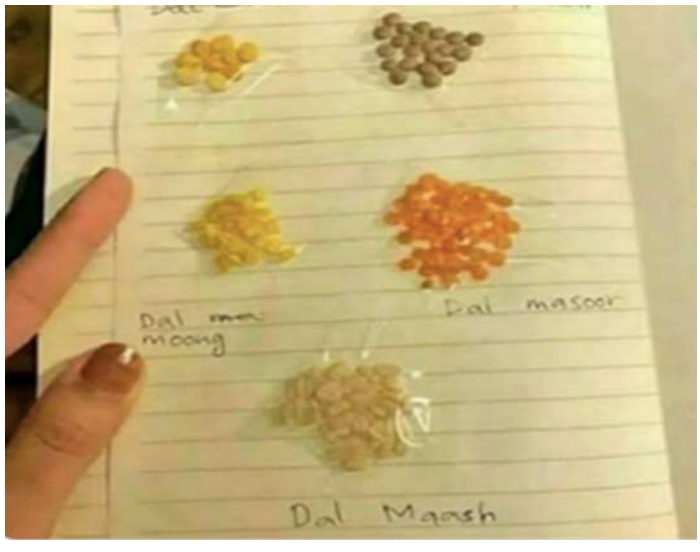
> *Cooking engages students at an almost instinctive level; the smells, sounds, sights, textures and tastes excite senses and intellects. The constant action and requisite involvement needs everyone's participation. Students also engage with forms of knowledge from a wide variety of disciplines (including anthropology, nutrition, economics, biology, ecology, political science, history etc.) to fully understand the cooking processes, and learn how to integrate data and analyze information from diverse source.*[7]

When the schools are not functioning physically, the environments that are in the reach of a student are to be used. Kitchen can be used both for theoretical concepts and practical applications. Beginning from the theoretical basics, look around the kitchen and you will find examples to enhance your conceptual clarity. See various *shapes* through the utensils about which you learn in your books - the round 'saucer', cylindrical 'belans', spherical 'tawa'; *Acids and Bases* in the form of cooking items like Lemon, Vinegar, Baking soda, Salt etc.; concept of *heat* from gas stoves and traditional stoves; *history of Mughals* through the 'Paranthas and Pooris', geographical and climate, specially of south India, through spices, like Cinnamon etc. specifically found there. And, there can be numerous such examples.

Similarly, in a kitchen you learn the practical application of the concept of *pressure* used to prepare 'chapattis'; concept of *matter* by observing change of states from liquid to solid converting milk into curd; *process* of fermentation while preparing batter for crispy dosas, learning *vocabulary* through the dal glossary.

Take a look at the following real-life example:

THE *DAL* GLOSSARY



Recently, the Twitter has been quite amused by the 'dal' glossary prepared by a mother for her son during the lockdown; indeed an innovative use of kitchen for languages.

This particular example has actually made us realize once again that it all depends upon the perspective; perspective brings about the change, positive or negative. The mother in this particular case has made use of real-life readily available resources, a resource that is found in every house: the kitchen.

Kitchen can actually be used in learning multiple subjects. Take a look at the following suggestive list of scholastic and co-scholastic areas that you can learn through your kitchens:

7. https://www.academia.edu/31635366/Cooking_as_Pedagogy_Engaging_the_Senses_through_Experiential_Learning accessed on 28 July 2020

- Management, Economics, Safety, Mathematics, Physics, Chemistry, Geography, Biology, Life Skills, Values, Co-scholastic Areas (Discipline, Health and Fitness, Art, General Studies etc.), History, Accountancy etc.

6.4. Using Kitchen for Learning:

- Teachers can plan such learning experiences that enable students to use kitchen for perceiving, understanding, planning and acting.
- These learning experiences can be in the form of activities for the practical understanding of the concepts given in their books.
- This can also be embedded with the Arts-Integrated project to be done in the classes 1st to 10th.

6.4.1 Common Objectives for Using Kitchen for Learning :

- To make learning joyful and experiential
- To bring stress-free environment to learning
- To promote the well-being of individuals, families and societies through food and other components and constituents of a kitchen
- To provide students with opportunities to understand basic human necessities
- To enable students to understand scientific facts and principles involved in various forms of work.

6.4.2 Principles to be followed by teachers while devising activities for using Kitchen for Learning:

- Remember that curiosity and observation is the natural characteristic of learners.
- Through this type of active and engaged learning, students must be inspired to achieve in-depth learning of the subjects they are studying.
- Activities must enable students to develop their inquisitiveness, creativity, innovation, critical thinking, analysis, collaboration and other 21st century skills, empowering them with the competencies to understand, analyse, evaluate, interpret and innovate solutions for various real life situations.
- The activity done or planned must be a purposeful activity for the learner.
- It must not be a stand-alone activity, rather an integrated part of learning.
- It must assist in reflection and extended learning of the concepts being covered in the curriculum of a subject,
- It must aid in the acquisition of competencies in the subject concerned.
- It must offer experience in home activities.
- Perceiving, understanding, planning and action: all these processes must be covered through the activities planned.
- Learning experience must provide joy, and must notbe forced upon.
- ***Learners' safety must be completely taken care of while devising the activities. Parents or elders must accompany a learner when h/she is in kitchen doing activities.***

6.4.3 Role of the Teacher:

- Conceptualize ideas that connect activities in the Kitchen with the concepts and topics of the subject.

- Provide examples of real-world issues that engage students' interest and encourage deep thinking among them.
- Plan activities to give opportunity for students to do things independently.
- Must act as the initiator, guiding students on the side and co-creating the new learning in the process.
- Include learning through kitchen activities in the annual pedagogical plans of the school.

6.5 Some Exemplar Activities:

Working with Kitchen can be a joyful experience during the times beyond school spaces. A few exemplar activities are given as suggestions.

6.5.1. Homemade Meal Integrated with Economics, Health and Environment:

- Through Homemade meal, students can learn :
  - ✓ Nutrition: nutritional value of various vegetable and spices used in their food,
  - ✓ Economics: saving food costs by selecting low cost nutritious ingredients for cooking, opting for homemade food, saving energy etc.
  - ✓ Sustainable Development: minimizing fuel consumption by using smart techniques for cooking, use of more locally available food ingredients; choose items with minimum ecological impacts etc.

6.5.2 Integration of Food and History:

- The topic of Industrialization can be taken with focus on eating habits. As people are not able to go home to take food, they bring their lunch with them. Due to various constraints, proper and balanced food may not be taken.
- Students can compare this kind of food with the examples of a balanced lunch such as vegetables, pulses, rice, whole grains etc.
- Students can also study the change of food habits in India over years. Food and eating habits came to India due to the interaction with people from different parts of the world.

6.5.3. Learning Science through Kitchen:

Grade	Activity	Physics/Science	Suggestion
VI-VII	Use of spoon or bowls as convex mirror	Light, Reflection	Do it as an activity record video & explain the physics behind it
VII	Use of Knife, Choppers	Pressure, Newton's IIIrd Law of Motion	
VIII	Use of utensils with plastic hands	Conduction, Metal/ non-metals	
IX-XI	Making of chapati	Friction, pressure, heat and Thermodynamics	
X, XII	Use of Lighter or match stick to generate flame	Friction, Electrical spark, Relative velocity Heat	

XI	Washing utensils with soap	Such solution has less surface tension which helps in removing oils and dust out of the utensils	
XI	Pressure cooker	Ist law of Thermodynamics, Isochoric Process, Sound	
XI	Use of oil	Heat, Surface Tension	

6.5.4. Integrating Storytelling with Food:

- Ask students to find out food-pyramid from internet.
- Give all components names as characters; for example Protein can be the 'shaker', Carbohydrates can be the 'Quicker' and so on…
- Make Junk Food the villain of the story, bringing out the harmful effects of junk food on health.
- Make Healthy Food the Hero of the story.

6.5.5. Integrating Local Cuisine, Agro-practices with Kitchen[8] :

- Assign students to identify local cuisine and agro-products, observe and analyze knowledge, skills and practices that may be fading away.
- Arrange meeting of students with local farmers so that they know about agriculture practices and challenges.
- Plan and execute a project of reaching out to restaurants serving local cuisine.
- You can include studying original cuisine of the vicinity and adaptation of other cuisine to local tastes.

A number of such activities connected to your subject can be devised by using this readily available resource to make every learner to explore experiential learning.

8 https://www.academia.edu/10956304/The_Future_of_Food_Studies_2015_?email_work_card=thumbnail accessed on 9th August 2020

CHAPTER 7

The Final Takeaways

So, my dears! What are the final takeaway from this Handbook?

THE FINAL TAKEAWAYS:

1. Ways to Joyful Learning can be many; ranging from integrating sports in educational activities to integrating story-telling in classroom transactions
2. Joy comes when a child feels a sense of achievement as if she/he has created something new, all on own.
3. It could occur after completion of a lesson on realising that she has understood the concept clearly and can see how it links to real life; it could occur when the given task is done independently by the students; it could occur while doing an activity in or outside the classroom.
4. To help students to attain the 'AHAA! moment, activity-based and joyful learning must be practiced in all classrooms.

We Shall Be Back Soon!!!
ENJOY LEARNING!!!

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