



HEM *harmonize*

Maths
Grade IV

Integration of Values

Teacher's Manual



Teacher Manual for Integration of Values in Teaching Academic subjects

By

HEMA Foundation, Mumbai

Teacher Manual for Integration of Values in Academic subjects

Maths

Grade IV

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Preface



It gives immense pleasure to all of us at HEMA Foundation in presenting the “Teacher Manual for Value Integration” from Grade I to Grade X to our beloved teaching fraternity in school education. Teachers are the corner stones in building the huge edifice for the student community and they are the driving force and guiding spirit to the society. Little will change in the society, if the teachers do



not make any efforts. We are all living in a scenario where value systems need to be integrated and enhanced through essential school subjects so that the students assimilate values into their regular habits effortlessly. There may have been innumerable reasons why values from the society are disappearing, but there cannot be two opinions about the significance of educational institutions in restoring the culture and values of the society. When they say, ‘values are to be caught’, it is leaving a high degree of moral responsibility on the part of our teachers and this manual is our humble effort to lessen that burden for them. This manual is not a substitute to the academic teaching lesson plan, but is a supplementary assistance to the academic text. Nevertheless, the teachers are at perfect liberty to choose and aptly use the learning materials/activities wherever they find it relevant. This manual would be of great use to the teachers as they are written by practicing teachers in the school system and after thorough research and therefore, the general difficulties of teachers such as completion of portions in the given time to teach the subjects etc are taken care of. In fact, some of the lessons have been written after seeing their practical applications in actual classrooms.

We all have a responsibility of creating a society that is driven by values and our younger generation is the key change makers in the society. They all must be inspired by our educational institutions and their teachers so that their intellectual development is supported and augmented by the value systems and culture. HEMA Foundation takes it as a commitment to the society in participating in this huge endeavor. Inviting all the stakeholders to this venture of spreading and integrating values into the learning environment of schools, with all humility, we remain always your well wishers

Thank You,

Mahendra

Mahendra Kabra
Managing Trustee

Anita

Anita Maheshwari
Trustee & Creative Director

Acknowledgement

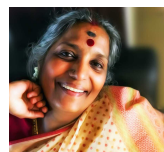
Welcome to HEMA Foundation's "Teacher Manual for Value Integration". I take this opportunity to thank each one of those who participated in it. At the outset I thank the Management of HEMA Foundation, its Managing Trustee Shri Mahendra Kabra and the Trustee and Creative Director, Smt. Anita Maheswari, for their unstinted support and cooperation in making this happen. Our humble pranams to the Senior most Member of HEMA Foundation Padmashree Shri Rameshwarlal ji Kabra, for his abundant blessings. The Associate Director Hetal Desai, the IT department Head, Shri Arvind Pandey, Shri Akash Shah and all other team mates from HEMA Foundation have contributed immensely toward realizing this manual.

There are several people outside the system who have supported this cause by giving their valuable comments and suggestions and my thanks are due to them as well. My sincere appreciations to the authors of this book who have been esteemed Principals, Section heads and Department heads and educators from reputed institutes of the country and they deserve the highest appreciation in envisaging the concept so well. My sincere appreciation to Dr. Shobana Nandakumar Nair, Mrs. Shobha Rajkumar, Mrs. Priya Cibi, Mrs. Sopna T. R and Rashmi Menon, for authoring the manual for Math, EVS, English and Science respectively. It was their untiring work and willingness to modify the documents as and when changes were required or further researches were needed, that this book was made possible.

As the Academic Director of HEMA Foundation and the person who has conceived this idea of value integration, I have gone through this document several times before presenting it to you and am fully aware of the significance of each word used in this document. I am sure the faculty who uses this manual would strictly adhere to the norms of the school Boards and the suggestions given over here. The Central staff of HEMA Foundation is more than willing to take your valuable suggestions and I promise that we shall be able to incorporate them if found suitable in our next publications.

I thank you for all your incredible commitment. All the credits if you find this document useful, would go invariably to all those who wrote the book and those who helped in the realization of the book and all those demerits if any, are purely due to my oversight. Believing that you would find it very useful in reaching out to the students and become inspiring teachers for our younger generations

I remain your sincere



Vijayam Ravi, PhD

Introduction

(must read before the teacher proceeds)

It's 'a Friday evening'. Everyone looks forward to a joyful weekend with family. After a weeklong work, it is a much-needed break. The school campus that was brimming with noises and screams of children, is silent and calm- The evening twilight has set in on the tall buildings, creating beautiful silhouettes. All have shut their tables; cupboards and the office of the school is closed. Principal and staff were slowly proceeding to the gate. They all wished each other a happy weekend. The peon is stepping out. Suddenly it happened. None expected the normal events that take place every day would take a turn so unexpectedly. School watchman came rushing to them to announce that there has been a riot in the city and he said he could see few students along with some other miscreants sabotaging public and private properties and hurting people on streets, hooting and howling. He added that it is not safe now to walk out. That the rioting group included their students as well. The miscreants included some of their old students too. And they were all those 'good' students when they were inside the school campus.

That left the teaching staff and the leaders stunned for a while. For a moment many of them looked at the school building just like that, which is their Almamater, and it stood so tall and elevated with a pride of creating thousands of glorious citizens in the past. Each one had a question mark in their eyes. None spoke. There was a dumb silence. Each one silently started replaying what they have been doing in the classrooms all along. There was an unbelief, inexplicable feeling reflected in their eyes. Did we make any difference to our students today? Did we teach our children to live or did we teach only Math, Science and language?

This is a serious question that all teaching faculty must ask themselves-

Did we teach subjects? Or did we teach children?

Professional standards for teaching academic subjects and transferring the right knowledge to the students have been the main objective of teaching all along, across the universe. All the latest teaching and learning revolutions that are happening in the classrooms and the students are evaluated for their skill development. Education is the vehicle for development of human being. Situations turned out to be grim when the pandemic engulfed the world with its outstretched arms. Every nook and corner of the world reeled under pressure with the pain and uncertainty that was caused by this pandemic. The ambiguity around, the uncertainty, complexity and insecurity around the schools was huge that none could fathom a way to come out of it. Teachers started looking toward blended learning in a hybrid classroom situation as a solution to reach students. All the more a reason for us, to do introspection about what we were doing till yesterday in the classrooms.

Yes, we taught our students Math, English, Languages, Social sciences, Sports, Music, Art and Craft and everything else-but values. We boasted ourselves as the top schools

with more students falling into the distinction list in terms of marks. Every year we sent out to the world, thousands of students with less skills and values but more of academics and marks. We were happy. Schools were happy. But we realize today that only some of those schools have been teaching students and not teaching subjects alone. Teaching subjects has a goal post and that is the academic credentials in terms of marks, but teaching students per say has another purpose altogether and that is -Touching their lives. We were confused and placing our balls in the wrong goal' posts. Result? The riots on the street, misbehavior, calamities, destruction, suicide and a valueless society in the making! Yes, certainly we imparted knowledge of academic subjects, however while this intellectual development is transmitted, there was room for us -the teachers for integration of values into these subjects. Few schools include moral science or value education in the curriculum and the teachers do teach the kids values like an academic subject and most of the schools assess the moral science in a written examination. It is very doubtful whether the students have really gained anything out of this process. Chances are bright that they end up considering the value education as just another subject. Teaching values through books was not a mistake, but assessing the children on marks was the issue. So, students when they completed their moral science examination, and received their 'pass marks', they quietly 'passed on' the values to the dustbins.

They say that the society's growth and degradation depend to a large extent the way the students are produced by the schools. The economic prosperity of a Nation depends to a large extent on living style and value systems of the society and there is every reason to believe that when the crime rate in a country goes high, the economic prosperity has declined in the society. The thinking, the culture of coexistence, working as teams and maintaining the art of tolerance, if these are removed from the society, it is very difficult to revive the Nation. India has been such a rich country with its values and it is a very painful scenario to watch how our younger generation is missing out on values. To a large extent the responsibilities can be passed on to the Macaulay's education system, parents and schools. If the schools make deliberate attempts to impart academic subjects and create excellence in that, the student's generation that gets molded out of the schools would certainly prove to be an asset in creating wealth and prosperity for the nation. However, if the schools do not impart values to the students, the nation will end up in a huge disaster after some time in terms of its moral fibre.. Wealth and success alone do not bring happiness to the society or an individual. Yes, it may bring some kind of satisfaction and one can always get a pleasure out of it. But very soon, this feeling becomes very transient and the mind would look for something else. This is human nature and it happens because the purpose of human life is not imparted to the students in schools. And when the assessment is done, that subject is also done.

Is this the purpose of education? Swami Vivekananda conceives education as the process where the innate potential of the human being is revealed. The innate nature of a human being is peace and joy. The riots on the street shows totally opposite virtues. Then where did the schools go wrong?

The riot on the street by students is not the debate here. It may be right or it may be wrong. The question is of larger dimension. It is of citizenry, safety, security and morality of a Nation, of the Globe! But why does such a behavior happen? Why do our students or our citizens behave in such an unruly manner that is a pain to others? When did our children or our citizens who passed out of the portals of our school, become so very intolerant? What is the fundamental cause for such an unrest in the minds of students, or generally speaking mankind as a whole? The intellectual quotient is very much in place. But when the spiritual quotient and emotional quotient are misplaced, the human beings sometimes behave weirdly. They lose cool, the power to think and act. Most often human beings react.

Did we, at schools, teach our students to act, or react?

Did we, at schools, teach the students values? Or imbue values in them?

Did we teach the students only subjects? Or did we touch their lives?

The Context to Value integration with subjects:

It is in this context of these questions, that the thought of integrating values with academic subject teaching dawned. Education and values are no two different subjects. They are mutually interwoven. As a teacher, the biggest role is to prepare their students behave like human beings with all values intact. All academic subjects may give them an opportunity to excel in life, but the values learnt help them to live as human being. Since the teacher is an integral part of education and the inspiration in the life of the children, they have to turn toward integrating values while they teach subjects. Value integration does not mean quoting a value and discussing it, rather it is an effort to lead the students to see a personal meaning in whatever the teacher teaches in all subjects. It depends to a large extent on the creativity of the teacher to highlight the value that is hidden in all subjects, including the languages. Value means a person's personal principles or standards of behavior the judgement of how important that value is to him in his life. In nut shell we can say, "Value is a preferential behavior". What the teacher needs to do in class is to help the kids choose 'his/her preferential behaviour'

The fundamental shift that needs to happen here is this.

At the centre, is the value and all subjects are contributing to the stabilization of the value. Therefore, the teaching has to be intertwined with those values from the subjects and the teachers reach to the students in a very subtle way. Each Subject-be it Science, Math Or languages, or social science, or Non-academic subjects, have got something very fundamental to convey to the people who spend time to learn those subjects. And if we look at those subjects from a very objective perspective, we can clearly see what they are all dying to convey to the children. Math talks about precision, value of time, sharing caring, multiplying happiness and joy and several likes. Science talks about hard work and resilience and the will power to fail and still work hard to achieve. Languages give the

feelings of expression, love, compassion and what not. So, when a student goes out of the school portals, he would have assimilated within him values like precision, punctuality, rationality, truth, compassion, love, caring, sharing, determination, courage to fail, spirit of enquiry et etc. Along with similar such values, the content gets learnt by the kids.

What benefits do Value integration bring to the students?

1. The students acquire several time honoured personal and collective values for life
2. Along with the cognitive development assured by modern education, integrating values in academic subjects prepares the children to develop their social and emotional lives
3. The approach of integration of values in teaching subjects, help the students enrich students' intellectually, physically, socially, morally, spiritually and artistically.
4. Schools can witness more of academic diligence with students showing increased attentiveness in the classroom and show capacity to do independent work
5. The school ambience also will see less of conflicting situations as the students start demonstrating greater empathy and responsibility
6. The student teacher relationships drastically improve and it becomes more trusting
7. Students feel a sense connectivity with others and belongingness

The argument

Teachers are the crucial ingredients in getting the values incorporated into the system and there is no two way about it. At present teachers are focused on completing their lessons on time amid all challenges and they do not have the extra time for doing any research for incorporating the lessons with values. Education and imparting values are no two different subjects. They are one. Additionally, thrusting a subject of value addition always attracts criticisms, primarily from the teaching community since they believe that it is an additional work and have to prepare more.

This argument is in place and cannot be ruled out and that is why HEMA foundation pitches in for help.

What does HEMA foundation offer to teachers?

This particular attempt from HEMA Foundation is to address this conflicting issue in education. HF is striving to reach out to teachers with ways and means to incorporate or integrate values while they teach academic subjects so that additional burden is not on them, while they address a major concern of education.

Values can never be taught, values can only be caught

Every subject has material knowledge that is needed for existence. What goes unnoticed more often is the subtle knowledge that the subjects try to convey. Any subject-Language, Math or science-all stand there for spreading virtues and values alongside the material knowledge. It is an integral part of learning the subject.

How and why are the values integrated by HF?

There is a very sound reason for HF to adopt the project of value integration into academic subjects and it is justified when any one reads the deliberations made in the NEP-2020 -NEP talks passionately about the integration of values, skills, and essential subjects to make the learning holistic. Let us refer to the clause 4.28, and it reads as follows: “Students will be taught at a young age the importance of “doing what’s right” and will be given a logical framework for making ethical decisions. In later years, this would then be expanded along themes of cheating, violence, plagiarism, littering, tolerance, equality, empathy, etc., with a view to enabling children to embrace moral/ethical values in conducting one’s life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. As consequences of such basic ethical reasoning, traditional Indian values and all basic human and Constitutional values (such as seva, ahimsa, swachchhata, satya, nishkam karma, shanti, sacrifice, tolerance, diversity, pluralism, righteous conduct, gender sensitivity, respect for elders, respect for all people and their inherent capabilities regardless of background, respect for environment, helpfulness, courtesy, patience, forgiveness, empathy, compassion, patriotism, democratic outlook, integrity, responsibility, justice, liberty, equality, and fraternity) will be developed in all students.”

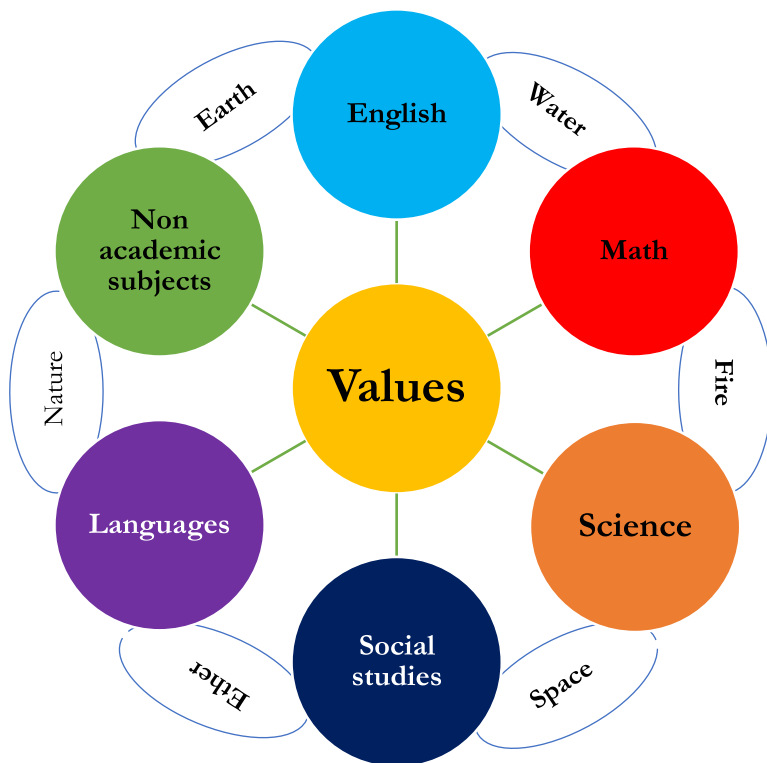
The new NEP and therein the NCERT insist on integration of values with essential subjects. Nature is the mother of all knowledge- Every learning that takes place with human beings is connected through the mind and intellect. While giving food for thought at the intellectual level, teachers have to supplement the emotional aspect through developing the mind. Mind develops by seeing, observations and hearing from sources that make sense to it. Human brain and human mind need to go hand in hand to make rational decisions and emotional attachments. If there are no emotions to any material knowledge learnt, it will remain a subject only. The love for the subject comes, when one extrapolates it to the application of it both at the material and emotional level. The emotional intelligence that gets originated while an academic subject is being taught is as powerful as the academic learning. Because it signals imagination and creativity and these are faculties associated with the mind. The rational brain which is provided with intellectual information about the academic subjects processes the knowledge with the help of the emotional brain-which is the mind. When no food is given to the emotional brain, it gets impoverished. Therefore, a balancing act needs to be done by teachers while imparting knowledge on academic subjects to incorporate the value or virtue that the subject is trying to convey to the reader or learner.

While the teacher teaches a topic ‘Patterns’ in Math, remember that the teacher has to touch the value of precision, discipline and punctuality. The whole universe gives us innumerable patterns and they all follow a certain order. That order brings discipline and it helps you see things in the right perspective. Similarly, the teacher, while discussing about geography, and earth in particular, what can be brought out is the virtue of evolution and the stability given by the earth. Earth is an evolved planet. The innate stability, the order, the growth and silence involved in this process are all virtues that can

be imparted to the students. On similar lines, the ecosystem, the biology, atmosphere, the plants, animals, air, water, aesthetics, and beauty-all talk about values and virtues of truth, tolerance and love, coexistence, interdependence, compassion and honesty.

Integration of values with academic subject teaching is an effort of HEMA Foundation to reach to the teachers with the varied ways of dealing with academic subjects and making it very interesting for the students to learn.

Whom does this manual serve?



The next thing that HF is trying to incorporate is Skills along with values. Skills are also considered to be an integral part of learning and hence while a value is highlighted the skills are also touched upon.

The additional advantage that teachers who use this manual of HF is that, the chart of the flow of lessons can be as such adopted in real teaching sessions without the need for doing a lesson plan again. The pattern of a school lesson plan used for imparting academic session is given incorporating the values integrated in it.

The perfect way of starting an academic lesson in a normal classroom situation so that the students get glued to the teacher's skills of teaching, is assured in the manual

through a context text-either by way of a story or an activity or discussion that rouses the interest of children

The description of the lesson ends with assignments for doing individually, at home or in class and this comes as a huge relief for the teachers

There is also a descriptive summary in the beginning of the text manual where in the topic, the core values, the skills and the activities that can be done and also the materials required for the same are all given so that the teacher gets a quick idea about how to go about the same.

HF, thus, is trying to travel that path of imbibing values to children along with the teachers!

Organization of the manual-How to read the manual?

The teacher will have to read and understand the manual as follows:

This teacher manual follows a certain structure that is not replacing the academic journal of the teacher. On the contrary, serves as an additional support as to how the teacher can link those values that are very relevant for a human life with the teaching of the subjects.

It has two parts:

A descriptive summary: this is a sheet in the beginning of each manual, showing what are the core values, sub values and skills that are linked with the topics and describes what activities can be undertaken to teach the values through subject integration and also shows what all education materials are required. Teacher has to glance through this to get a fair idea about how many values are integrated in total and understand this part first

The second part is the actual manual where the method of integration is dealt with the main academic concept.

The structure of the manual goes as follows: Start reading from introduction

1. **Introduction:** This gives what the lesson is about and what values, skills can be integrated here and the significance of it
2. **Learning objectives:** This plan talks about what are the academic and value driven objectives of learning the lesson
3. **Process and Action:** Here the way how the lesson has to be undertaken and it is shown in the form of a flow chart for quick understanding mentioning the activities at each stage. It starts with the context which actually serves as the introduction of the class to the new topic.
4. **Activities and related discussion:** Here the activities are dealt with in detail with discussion questions that lead to both academic and value driven integration. It is through these the teacher is able to deliver the total lesson effortlessly.
5. **Assignments:** Gives assignments that can be done individually, at home, or as group in the class.

The activities given can be chosen by the teacher as and when needed or as per the time available. It is not mandatory that the teacher does all activities.

Conclusion:

It is a proven fact that any particular value learnt becomes a habit when one practices it consistently. The purpose of integration of values with academic subjects is to learn the values along with the academic concepts and so whenever the academic concepts are tested, the value learnt is reiterated. The creativity and imagination of teacher make the lessons interesting to the students and HEMA Foundation presents this Value Integration Teacher Manual for the benefit of the teaching and student community.

Jai Hind

Conceived and presented by

Vijayam Ravi, PhD

Academic Director

HEMA Foundation

"वसुधैव कुटुंबकम्"

Vasudhaiva Kutumbakam ("vasudha", the earth; "iva", is ; and "kutumbakam", family). This Sanskrit phrase literally translates to mean that the whole world is one single family. The Sages have said that the entire world is truly just one family connected with thoughts, emotions, humanity and humility.



सर्वे भवन्तु सुखिनः सर्वे सन्तु निरामया ।
सर्वे भद्राणि पश्यन्तु मा कश्चित् दुःखभाग् भवेत् ॥

May all be prosperous and happy. May all be free from illness.
May all see what is spiritually uplifting. May no one suffer in anyway.
Om peace, peace, peace.



Vision

We aim to cultivate a conscious understanding of human values in individuals in order to help them coexist peacefully and harmoniously.



Mission

Our mission is to awaken the spirit of value based living in all individuals at school, organizational and community levels through well researched and structured programs resulting in a responsible, effective and harmonious existence for all



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Topic	Values / Life skills integrated & imbibed	Activities
Building with Bricks	<p>Core Values considered : Confidence, Curiosity and Harmony</p> <p>Other Sub-Values: peace, discipline, sense of order</p> <p>Life skills: computing, observation, recognition</p>	<p>Value integration Activities:-</p> <p>1 Warm up activity of making pattern as a fun activity, Making patterns using different shapes& by Paper folding activity to revise the previous knowledge of students.</p> <p>2 Combination activity of Pattern Designing a fun learning involves a sense of challenge and curiosity,</p> <p>3.Confidence building activity will build students' confidence,</p> <p>4.Pattern puzzles & brain teasers in the classroom encourages critical thinking in students, This will lead curiosity and confidence among students in a fun way</p> <p>5. Assignment: 1.Prepare pattern puzzle which will help to develop their curiosity and creative skill.</p>

Materials / Resources needed

Value Integration:-

1. Cut outs of different shapes of different colors. Color papers for paper folding activity. Puzzle work sheets
2. Facilities and Equipment to show videos and space for conducting activities
3. BB, Pen, Duster
4. Ncert Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Description (of the points of discussion)

Value Integration:-

In this chapter the activities, stories and games are incorporated in such a manner that children experience harmony of patterns in every structure and how the different types of arrangement of shapes make a pattern and that make a concrete strong structure. This creates a curiosity in them to try and know more about patterns. Through this lesson teacher shall relate pattern to harmony, confidence and curiosity.

The key discussions are:

1. By doing a warm up activity of making pattern as a fun activity, Making patterns using different shapes & by Paper folding activity teacher shall revise the previous knowledge of students.
2. By doing the combination activity of Pattern Designing (Tessellation) a fun learning involves a sense of challenge and curiosity, which will also lit spark in their creativity skills
3. By doing the confidence building activity will build students' confidence, and encourage them to be generous with each other as well and may lead to students increasing each other's confidence more in the future.
4. Pattern puzzles & brain teasers in the classroom encourages critical thinking in students, effective visual brain teasers that will encourage logical thinking and develop problem solving skills. This will lead curiosity and confidence among students in a fun way
5. Assignment:
 1. Prepare pattern puzzle which will help to develop their curiosity and creative skill.

Unit I

Building with Bricks

Harmony, Confidence & Curiosity

I. Introduction

This lesson teaches different types of patterns made of 2 dimensional and 3 dimensional objects. Students identify and draw different wall and brick patterns, floor patterns, jaali patterns etc. It is interesting to learn about geometrical shapes and recognize them in real life. One such geometrical 3D shape is the cuboid. The most common example of a cuboid is a 'Brick'. We see many beautiful designs and patterns made of bricks around us. Planning activities around patterns in which children are able to formulate a rule and verify it for the extension.

Students experience harmony of patterns in every structure and how the different types of arrangement of shapes make a pattern and that make a concrete strong structure. This creates a curiosity in them to try and know more about patterns. Through this lesson teacher shall relate pattern to **harmony, confidence and curiosity**.

II. Learning Objectives / Outcome

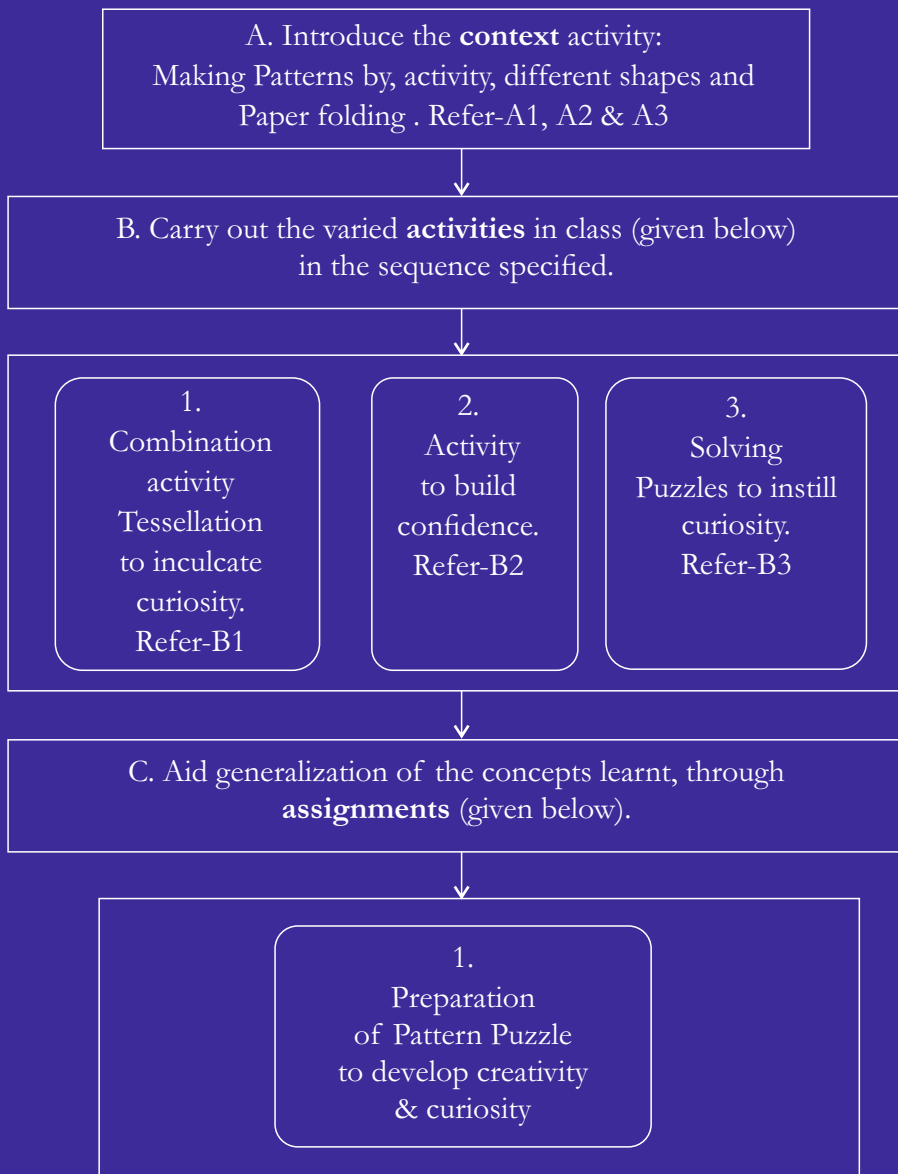
Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Identify the difference between 2D and 3D shapes like square & rectangle, cube & cuboid
- Identify different patterns of wall, floor, jaalies and jharoka and the concept of arch.
- Observe and identify patterns with more than one characteristic, like growing and reducing patterns; Create a rule based on observations for extending the pattern in shapes and numbers.
- Able to understand the relation between Price and Quantity of an object & able to solve simple problems.
- Write number names and numerals. Understands Indian and International place value chart
- Recognise harmony of patterns in every structure which creates curiosity to learn more and this give confidence.

III. Process & Action Plan

Patterns is the first lesson that children get to see around them in Nature, in different shapes and sizes. The structural establishments that they see in the form of apartments, flats, concrete buildings and other residential places also are examples for the students to get to learn about patterns. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:



While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the *core approach* – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The *core values* being considered are *Harmony, confidence & curiosity* along with other sub-values like *generosity, teamwork*

The unit also provides the scope to develop the following life skills in the students: *Observation skill, critical thinking, presentation skill, problem solving skill, computing skill*

IV. Activities & Related Discussion

A. Context Activity for the teacher to start

A1: To introduce patterns, the following can be done as a warm-up classroom activity:

- Make all the students in the class to stand in a line.
- One student should face the class and the next student should face the board.
- Students could also be made to stand in a boy-girl-boy-girl order or any other simple pattern
- Ask students to recognize the patterns and discuss what might come next.
- Students may then be asked to get into groups and come up with patterns of their own.

A2. Pattern-Making using Shapes:

Divide students into groups and distribute the shapes to each group. Ask students to make different patterns using the given shapes. This will make students to think creatively.

A3. Paper-Folding Activity: Show video and instruct students to make shapes. Video

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

<https://www.youtube.com/watch?v=Zg081nhLKPg>

<https://www.youtube.com/watch?v=0KoYa7ZrLhE>

Take a A4-sized paper and fold it as given in the picture and try to make the pattern as shown.

Discussion Questions: -

- Ask the students to observe and find the patterns in the paper

- b) Why are such patterns formed?
- c) Ask them to create similar patterns on their own
- d) Highlight the patterns as student make and continue discussion based on the patterns.

<https://www.azimpremjiifoundationpuducherry.org/resource-catalogues/building-bricks>

B. Value Based Activities

B1. Combination Activity:

Pattern Designing: (Tessellation)

A Tessellation (or Tiling) is when we cover a surface with a pattern of flat shapes so that there are no overlaps or gaps.

Procedure:

Ask students to paste coloured pieces of shapes and form patterns of their choice. From this activity we can understand student's view/creativity skill in generating patterns. Teacher can give children worksheets to create colour patterns. The worksheet could contain square dot sheet on one side and isometric dot sheet on another side.

This activity allows children to explore their creativity and encourages students to be curious in understanding how shapes and patterns are formed.

Download link (square and isometric dot sheets):

https://lrt.ednet.ns.ca/PD/BLM/pdf_files/dot_paper/sq_dot_1cm.pdf

<https://www.mathsisfun.com/geometry/tessellation-artist.html>

(Content Courtesy: Mrs. Gomathy, GGPS Savarayalu naicker.)

B2: Confidence building activity

Students at this age need constant encouragement. There are many ways teacher can help students boost their confidence through activities. Rather than building confidence, classmates can sometimes be damaging to confidence because of the way they may pick on one another. By completing confidence-building activities at school and having students interact with other kids, this dynamic can be reversed. Here are a few ideas for confidence-building activities appropriate for kids.

There are many types of positive affirmation activities that can have huge benefits for confidence. Teacher shall start the process by having students complete a writing prompt answering several questions. Here are a few examples of questions you can use:

- What are five things you like about yourself?
- What are your strengths?
- What nice things have you done for your parents or friends recently?
- What activities would improve your skills?
- What are you proudest of in your life so far?

After completing this kind of reflection, teacher shall encourage students to build each other's confidence. Have them arrange themselves into a ring. Going around the room, each student should say one positive thing about themselves, and then follow it with one positive thing about the person opposite them in the ring.

This can continue until every student has completed the activity, or it can be extended by having students say something nice about the person to the right of them the last time it was their turn. Not only will this build students' confidence, but it will encourage them to be generous with each other as well and may lead to students increasing each other's confidence more in the future.

<https://study.com/academy/lesson/confidence-building-activities-for-kids.html>

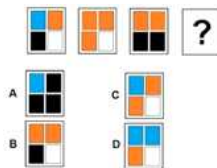
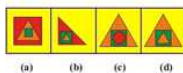
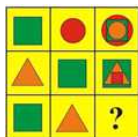
B3: Pattern Puzzles

Solving the puzzles & brain teasers in the classroom encourages critical thinking in students, effective visual brain teasers that will encourage logical thinking and develop problem solving skills. This will lead to increase in student's curiosity to identify patterns in real world situations and shall also help in building a student's confidence in a fun way

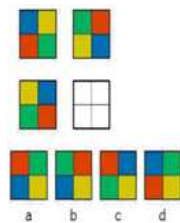
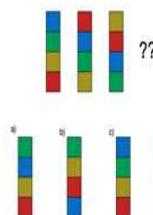
1. Find the Missing number

- a. 9, 7, 26, 36, ?
 b. ? 16, 64, 256, 1024
 c. 2, 3, 5, 17
 d. 15, 30, 45,

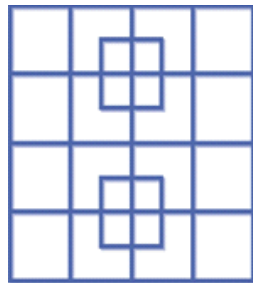
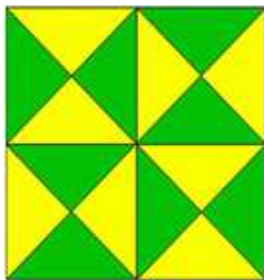
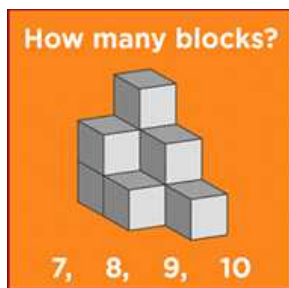
2. Find the extended pattern in the blank place



Can you replace the question mark with valid picture?



3. Find the number of Blocks, Triangles, and squares respectively in the following figure below



<https://www.teachstarter.com/us/blog/10-visual-brainteasers-kids-will-love/>

https://www.coe.int/t/dg4/education/pestalozzi/Source/Documentation/Pestalozzi_4_EN.pdf

<https://www.mashupmath.com/freemathpuzzles>

<https://www.sanfordharmony.org/>

V.C Assignments

C1.prepare pattern puzzle

Resources

References:

1.<https://www.azimpremjiifoundationpuducherry.org/resource-catalogues/building-bricks>

Resources for Teachers:

1.<https://www.azimpremjiifoundationpuducherry.org/resource-catalogues/building-bricks>

2.<https://www.mathsisfun.com/geometry/tessellation-artist.html>

3.https://lrt.ednet.ns.ca/PD/BLM/pdf_files/dot_paper/iso_dot_1cm.pdf

4.Ncert Textbook, Reference books,(R.D Sharma , R.S.Aggarwal)

Topic	Values / Life skills integrated & imbibed	Activities
Long and Short	<p>Core Values considered : Integrity, Interconnectedness, Interdependence</p> <p>Other Sub-Values: Interpersonal relationships, Honesty, consistency and cooperation</p> <p>Life skills: Problem solving, critical thinking, analytical thinking, communication</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1. Cass room hands on activity and by solving worksheets teacher shall revise the previous knowledge of students 2. Story Narration & Discussion on the story of integrity students learn the importance of integrity 3. Discussion & preparation of integrity quotes and teaching songs of integrity to inculcate the value of integrity in students 4. Circle time activity and discussion to realize the importance of interdependence and interconnectedness by sharing what interdependence means to them and how it makes them think about their connection to other people and the world,. 5. Assignment: <ol style="list-style-type: none"> 1. Write a song /Story of Integrity by their own words 2. Preparation of interdependent family tree which will be reminder for them to follow what is written.

Materials / Resources needed

Value Integration:-

1. Long & Short work sheets
- Poster papers and sketch pens/colors to prepare class room integrity posters
2. Facilities and Equipment to show videos and for conducting activities
3. BB, Pen
4. Ncert Text Book, Reference books, (R.D Sharma , R.S. Aggarwal)

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated in such a manner that students learn to be very honest, consistent and uncompromising. Therefore they learn the value of integrity. Integrity means following your moral or ethical convictions and doing the right thing in all circumstances, even if no one is watching you. Another quality students learn from this chapter is interconnectedness and interdependence. The measurements of length (Kilometer, meter, centimeter and millimeter) are interconnected and interdependent. Interdependence provides support to individuals allowing them the strength to support others and to focus on their own personal growth. Individuals who are interdependent will reap the rewards immediately.

The key discussions are:

1. By doing class room hands on activity and by solving worksheets teacher shall revise the previous knowledge of students

2. Story Narration & Discussion on the story of integrity students learn the importance of integrity

3. By discussion & preparation of integrity quotes and teaching songs of integrity teacher shall the value of integrity in students

5. By circle time activity and discussion teacher shall explain and students realize the importance of interdependence and interconnectedness by sharing what interdependence means to them and how it makes them think about their connection to other people and the world. By doing the We all are connected work sheet will reiterate the concept. And instill in them

5. Assignment:

1. Write a song /Story of Integrity by their own words

2. Preparation of interdependent family tree

which will be reminder for them to follow what is written.

Unit II

Long and Short

Integrity, Interconnectedness, Interdependence

I. Introduction

The lesson '**Long and short**' discusses about measurements. Guessing and estimating, comparing and analysing distances and heights. The name long and short seem very simple but for this std IV children it is difficult to understand, it is abstract words, the concept of long depends on what else is around it. So, a pencil is long if you compare it to an eraser, but short if you compare it to a cricket bat

While learning this lesson and doing hands on activities students' learn to be very honest, consistent and uncompromising. Therefore they learn the value of integrity, you are honest and firm in your moral principles. Integrity means following your moral or ethical convictions and doing the right thing in all circumstances, even if no one is watching you. Another quality students learn from this chapter is interconnectedness and interdependence. The measurements of length (Kilometre, meter, centimetre and millimetre) are interconnected and interdependent. Interdependence provides support to individuals allowing them the strength to support others and to focus on their own personal growth. Individuals who are interdependent will reap rewards immediately. One will achieve more success and happiness when one is connected to those around you.

II. Learning Objectives / Outcome

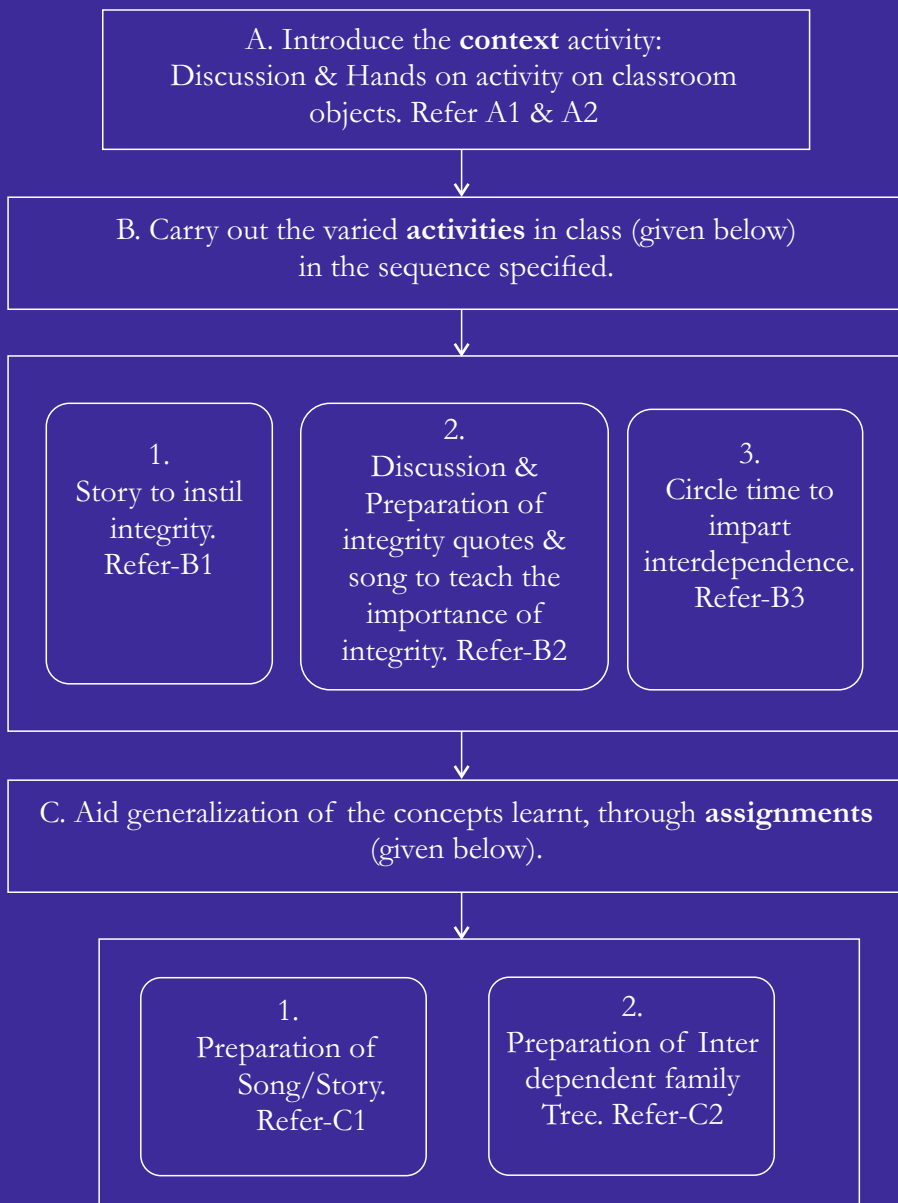
Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Understand the basic concept of measuring length.
- Estimation and comparisons of length of various figures and things
- Ability to compute the distance (horizontally & vertically) guessing the approx. Length & height.
- Analysing and differentiating things as long or short.
- Conversion of units from km into m, m into cm.
- Develop the quality of integrity, interconnectedness and interdependence

III. Process & Action Plan

Long and short is a visual experience for the children and at this age they look for concrete examples to verify what they see. Anything around them in Nature and their own home has very clear dimensions of height and length and making them familiar with that is the beginning. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:



While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the *core approach* – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The *core values* being considered are *Integrity, Interconnectedness, Interdependence* along with other sub-values like *Interpersonal relationships, Honesty, consistency and cooperation*

The unit also provides the scope to develop the following life skills in the students: *Problem solving, critical thinking, analytical thinking, communication*

IV. Activities & Related Discussion

A.Context based activity for the teacher to start

A1: Teacher shall divide class into groups depends upon the strength and instruct students measure things that are available around the classroom using their arms and feet. Each object will measured by 5 students. After they completed the activity, they were asked to share about the objects they measured and the length of the measurement. Teacher shall make a table on the board and discuss with them

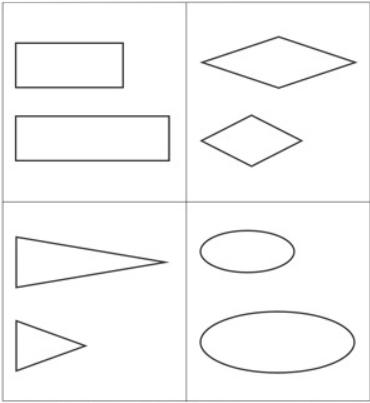
Group	Name of the Object	A	B	C	D	E
Group1	Blackboard					
Group2	Floor					
Group3	Chair					
Group4	Table					
Group5	Door					
Group6	Bag					
Group7	Book					

The length of the blackboard according to them will be different. Teacher shall discuss on why there was a difference in the measurement (same black board by different students) and elicit the answer from students

- Some had big hands and some had small hands.
- some had used the distance between their thumb and the pointer finger as a scale
- some had used the distance using their thumb and the middle finger as the scale

Teacher shall explain why the difference and the introduce the need of standard unit Kilometer, meter, centimeter and millimeter.

A2: Long & Short worksheets; Colour the long shape red and small shape blue



This activity helps them to revise the concept of long and short. Teacher shall instruct them and teach them to measure the length of the sides of the rectangle, triangle and rhombus using scale.

A3. Long and Short worksheets

Teacher shall use for students to estimate length of class room objects and make them to use scale and measure actual length.

Measuring Length

Measure the objects which can be found in your classroom and estimate the length of each object before you measure.

S.No	Objects Name	Estimate	Actual Length
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

B.Value Based Activities

B1:Story on Integrity

There lived a poor but worthy farmer in a village. With the small income of his few acres of land he used to support himself, his wife and seven children. Oneday while walking through the fields. He was thinking of his condition. His children were growing up. As they needed more and more things the family expenses was increasing. He was thinking how could earn some more money. Suddenly, he came across a purse on the way. He thought someone might have lost it. However; he took up it and opened. He saw that there was a good sum of money in the purse .He went hurriedly and gave the purse to his wife. His wife was greedy .He told him to take the money and spend for their family. But the farmer was disagreed with her. He told his wife that the money did not belong to them and he must find out the owner of the purse and gave him his purse .

The owner of the purse was very rich and seeing the honesty of the poor farmer he became very happy .The rich man made the farmer his caretaker. The farmer took the job and became very happy soon.

Discussion: The teacher can conduct a discussion based on the story narrated above

1. Why was the farmer unhappy
2. What did he want that would make him and his family happy?
3. What did the farmer find?
4. What did the farmer do when he found it?
5. was the farmer correct to have given the purse back to the owner?
6. How did the owner of the purse react?

Through the above story, the teacher should emphasize on an important trait of maintaining one's integrity. Even in difficult situations one must always do the right thing and be honest.

<https://completingstory.blogspot.com/p/the-honest-man.html>

B2: Discussion & Preparation of integrity Quotes& Integrity Song

Teacher shall discuss and elicit the meaning of integrity and their understanding of integrity from the students. Teacher shall ask the questions in such a way to get the following answers

1. Integrity means sticking to your values
2. Integrity is showing empathy to someone you care
3. Integrity means sticking to what you think is right when the world doubts you

Then teacher can explain the meaning by using different quotes of famous personalities

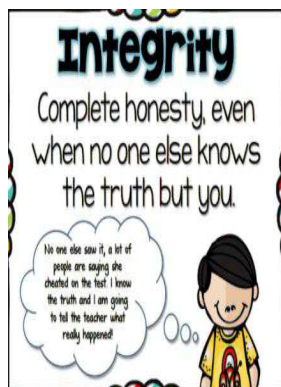
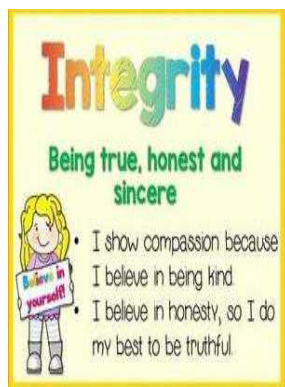
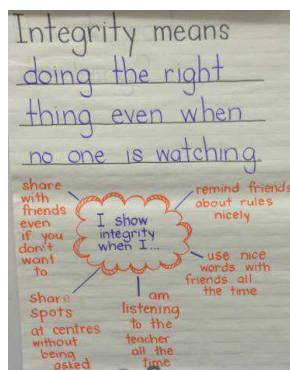
“Integrity is doing the right thing even when no one is watching” C.S Lewis

“Integrity is not something you show others, it is how you behave behind their back”

“Integrity is telling myself the truth, and honesty is telling the truth to other people”

Spencer Johnson

“Integrity is choosing your thoughts and actions based on values rather than personal gains”.



Picture Source: <https://in.pinterest.com/pin/631418810239944178/>

B2:Teacher shall make students to write the lyrics of the song and train them to sing the song of integrity with the help of Music teacher

<https://www.youtube.com/watch?v=2RUWnfEFSK0> Integrity song

<https://www.youtube.com/watch?v=xOQXby3olfQ>

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

B3: Activity on Interdependence: Circle Time

Teacher shall discuss about the meaning of interdependence as in this lesson measurements of lengths are interdependent like we know 100 cm makes 1metre and 1000 meters makes 1 kilometre. All measures of length if we take we can see a relation between them. Similarly we, each one of us also are connected or dependent on some other thing. Let's explore how we are all connected and part of a web of life

Introduction (5 minutes)

1. Gather students into a circle, either seated in chairs or on the floor depends upon the space available
2. Remind students about the circle guidelines they created: the raised hand attention signal and talking piece (every week each student rotates and brings in a talking piece that means something to them).
3. Have the student introduce the talking piece for the week. Welcome each student into the circle using the talking piece (each student welcomes another student in the circle).
4. Share that today during circle time they will be learning about how we are all connected to the web of life.

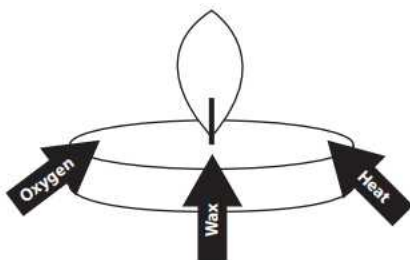
Explicit Instruction/Teacher modelling (15 minutes)

1. Ask students if they ever heard of the term "interdependence" before.
2. Have students share their answers, and depending on what they say, offer this definition: "Interdependence is mutual dependence between things. If you study biology, you'll discover that there is a great deal of interdependence between plants and animals. 'Inter-' means 'between,' so interdependence is dependence between things
3. Provide an example how a giraffe and oxpecker depend on each other: Ticks and flies can hurt giraffes, but the oxpecker eats them off the giraffe
4. In pairs, students give examples of interdependence. Then students share in the circle some of the examples they and their partner discussed.
5. Invite students to think about water, air (oxygen), soil, sun, and food (especially if this didn't come up in student sharing) and reflect on how they depend on these things to survive and interdependent relationships.

Guided Practice (15 minutes)

1. Teacher shall explain the interdependence of clouds-water-trees-paper by taking the Quote of the Nobel Peace Prize Nominee Thich Nhat Hanh: “If you are a poet, you will see clearly that there is a cloud floating in this paper. Without a cloud there will be no water, without water, the trees cannot grow, and without trees, you cannot make paper. So the cloud is in here. The existence of this page is dependent on the existence of a cloud.”
2. Give students some time to think and realize the concept by discussing with their partner
3. Guide students to think about how they depend on each other in their class room community and what interdependence can mean in their class. Allow some students to speak about interdependence in class or school
4. Teacher shall give **we all are connected worksheet** to complete in the class circle time. Pair of students discuss and answer the following

Eg. The interdependence of a candle flame



The flame is not separate from the wax, oxygen, and heat.

1. What does interdependence mean?

Ans:

2. Draw a picture that represents interdependence:

Ans with the help of Picture

3. How does interdependence show up in your life?

Ans.

5. Guide & help students if they need support. By giving clues and encouragement
6. Let students share what interdependence means to them and how it makes them think about their connection to other people and the world

Reference: <https://www.education.com/lesson-plan/learn-about-interdependence/>

V. Assignments

Assignment

1. Write a song /Story of Integrity by their own words
2. Preparation of interdependence family tree

Resources

References

1. <https://www.education.com/lesson-plan/learn-about-interdependence/>
2. <https://completingstory.blogspot.com/p/the-honest-man.html>
3. Ncert Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Resources for Teachers:

1. <https://www.youtube.com/watch?v=2RUWnfEFSK0> Integrity song
2. <https://www.youtube.com/watch?v=xOQXby3olfQ>
3. <https://www.youtube.com/watch?v=iYKMLPVeRkU>

Unit 3

Topic	Values / Life skills integrated & imbibed	Activities
A Trip To Bhopal	<p>Core Values considered : Cooperation, Sharing, Caring & Love</p> <p>Other Sub-Values: self-dependency, happiness</p> <p>Life skills: Logical thinking & reasoning, problem solving, decision making, accuracy, estimation, & observation</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1. Crossword puzzle solving to revise the previous knowledge of students. 2. Story Narration & Discussion of the Story of Potatoes to teach students for giving others 3. Demonstration activity to love every one irrespective of differences 4. Discussion to express the love and care to others 5. Assignment: Preparation of posters with the theme of love, share, care and cooperation

Materials / Resources needed

Value Integration:-

1. Crossword puzzle printouts
2. Facilities and Equipment to show videos & conducting games
3. BB, Pen
4. Ncert Text Book, Reference books, (R.D Sharma , R.S. Aggarwal)

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated in such a manner that children learn to create and solve simple real-life situations / problems including money, length, mass and capacity by using the four basic arithmetic operations. Teacher shall train students to add happiness by cooperating each other, Subtract hatred by extending care for needy, multiply love for happy life and divide impartially by sharing love happiness and joy to everyone around. True cooperation is a give and take between people that ends up with something they both agree on. Cooperation is a skill that must be learned. Teaching kids to appreciate all that they have and to help others along the way. These are the life lessons of humanity we need to teach younger ones.

The key discussions are:

1. Cross word puzzle to solve for the whole class which inclusive of addition, subtraction, multiplication and division to revise previous knowledge of students regarding all operations by using puzzles
2. Story Narration & Discussion of the Story of Potatoes teaches students forgiving others is the best attitude to take and throw away any hatred for anyone from your heart so that you will not carry burden for a lifetime.
3. Demonstration activity:- This activity teaches students to love every one irrespective of differences and use kind & cheerful words & activities help every one to feel good.
4. Discussion: This activity teaches them to express the love and care to others so that students learn from each other
5. Assignment: Preparation of posters with the theme of love, share, care and cooperation which will help them to practice the quality they have learned

Unit III**A Trip to Bhopal****Cooperation, Sharing, Caring & Love****I. Introduction**

The lesson 'A Trip to Bhopal' teaches to solve small number mathematical problems by estimation and verification, This helps to solves real life problems based on time, distance and measurement,. This guides students to create and solve simple real-life situations / problems including money, length, mass and capacity by using the four basic arithmetic operations.

Through this lesson teacher shall trains students to add happiness by cooperating each other, Subtract hatred by extending care for needy, multiply love for happy life and divide impartially by sharing love happiness and joy to everyone around. True cooperation is a give and take between people that ends up with something they both agree on. Cooperation is a skill that must be learned. Teaching kids to appreciate all that they have and to help others along the way. These are the life lessons of humanity we need to teach younger ones.

II. Learning Objectives / Outcome

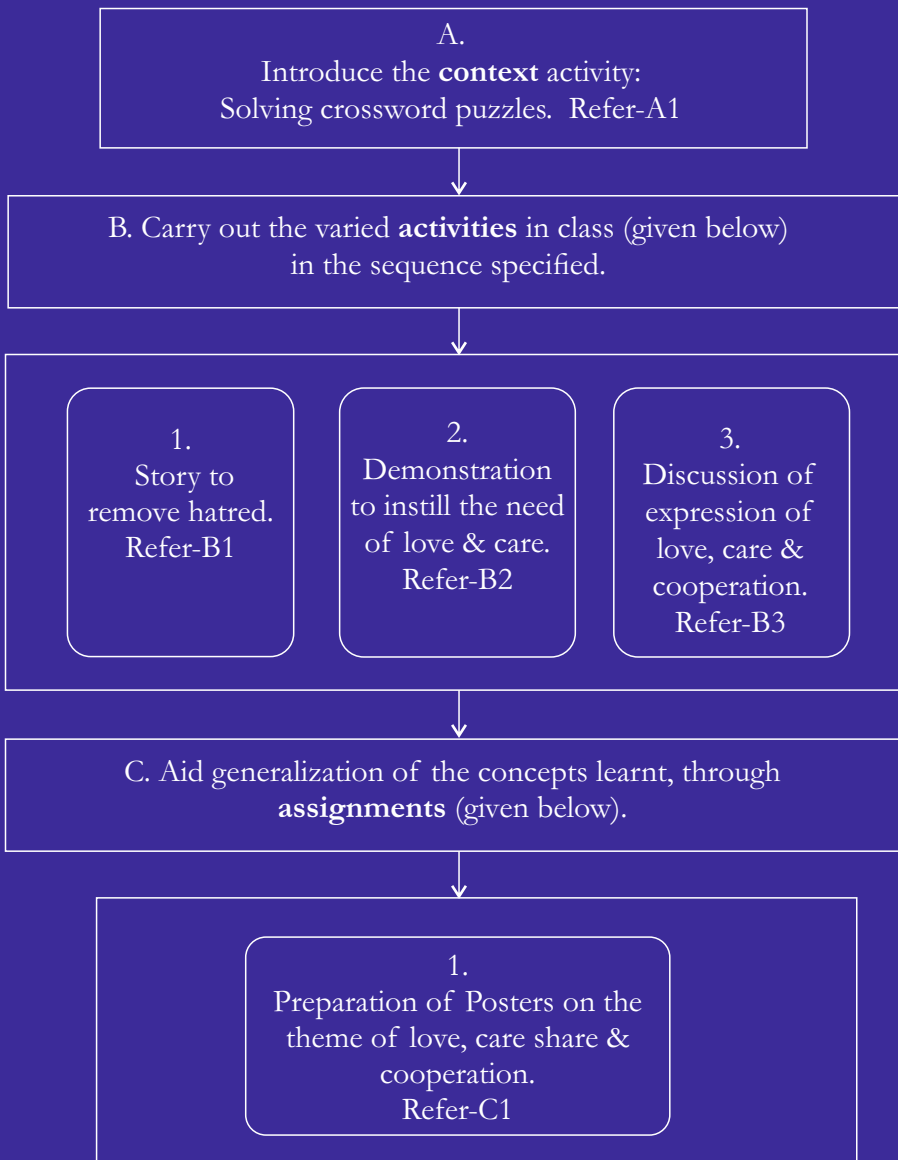
Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Understands the properties of addition, subtraction, multiplication, division.
- Identifies greatest and smallest number from the given numbers.
- To compare the numbers. and Solve addition/subtraction/multiplication sums mentally involving multiples of 10 & 100
- Creates and solves simple real-life situations / problems including money, length, mass and capacity by using the four basic arithmetic operations
- Learn to add happiness, subtract hatred, multiply love for happy life, share happiness by inculcating cooperation, sharing, caring and love

III. Process & Action Plan

This chapter gives an exposure for the children to experience the concept of planning a trip, the time and the distance and also the great opportunity of meeting people. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart below:ay follow the following process and action plan, as depicted in the flow chart on next page:



While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the core approach – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

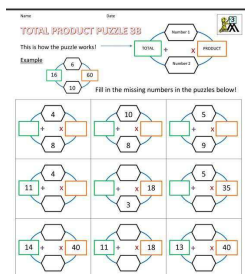
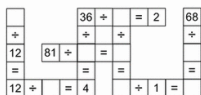
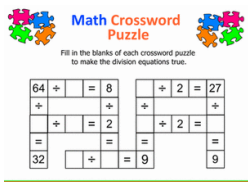
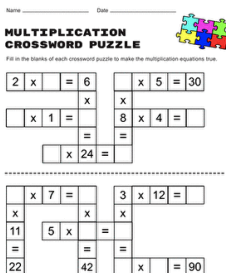
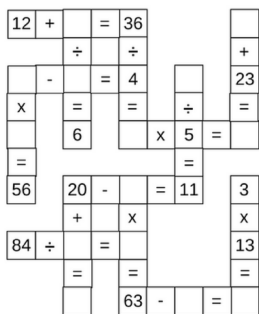
The core values being considered are Cooperation, Sharing, and Caring & Love along with other sub-values like self-dependency, happiness

The unit also provides the scope to develop the following life skills in the students: Logical thinking & reasoning, problem solving, decision making, accuracy, estimation, & observation

IV. Activities & Related Discussion

A. The context activity for the teacher to start:

Teacher shall give a cross word puzzle to solve for the whole class which inclusive of addition, subtraction, multiplication and division. Teacher shall revise previous knowledge of students regarding all operations by using puzzles



<https://www.apost.com/en/blog/only-a-math-whiz-can-complete-this-math-crossword-puzzle-in-less-than-5-minutes/5435/>
<https://www.education.com/worksheet/article/multiplication-crossword/>
<https://www.education.com/worksheet/article/division-crossword/>
<https://in.pinterest.com/pin/402790760401823445/>

B. Value Based Activities:

B1: Story of Potatoes

A kindergarten teacher had decided to let her class play a game. The teacher told each child in the class to bring along a plastic bag containing a few potatoes. Each potato will be given a name of a person that the child hates. So the number of potatoes that a child will put in his/her plastic bag will depend on the number of people he/she hates.

So when the day came, every child brought some potatoes with the name of the people he/she hated. Some had 2 potatoes; some 3 while some up to 5 potatoes. The teacher then told the children to carry the potatoes in the plastic bag with them wherever they go for 1 week. Days after days passed, and the children started to complain due to the unpleasant smell let out by the rotten potatoes. Besides, those having 5 potatoes also had to carry heavier bags. After 1 week, the children were relieved because the game had finally ended.

The teacher asked: “How did you feel while carrying the potatoes with you for 1 week?” The children let out their frustrations and started complaining of the trouble that they had to go through having to carry the heavy and smelly potatoes wherever they go.

Then the teacher told them the hidden meaning behind the game. The teacher said: “This is exactly the situation when you carry your hatred for somebody inside your heart. The stench of hatred will contaminate your heart and you will carry it with you wherever you go. If you cannot tolerate the smell of rotten potatoes for just 1 week, can you imagine what is it like to have the stench of hatred in your heart for your lifetime?”

Teacher shall discuss and tell students the moral of the story

Moral: Throw away any hatred for anyone from your heart so that you will not carry burden for a lifetime. Forgiving others is the best attitude to take. Negativity about someone will keep peace of your mind away from you. Remember the good things about him/her, and let go of the hatred.

<https://www.moralstories.org/long-can-keep-hatred-heart/>

B2: Teaching the value of helping, caring and loving people by demonstration :

Teacher shall bring two apples in the class (before the class, teacher repeatedly drops one of the apples on the floor, but both apples looked perfect for students).



Teacher picks up the apple & drops on the floor and tell the children how she dislikes this apple it has a horrible color and the stem is just too short. Teacher tells students that because” I didn’t like it, I didn’t want you all to like it either, so they should call it names too.”

Teacher shall observe the reaction of students , Then teacher shall pass the apple around the circle calling it names, ‘you’re a smelly apple’, ‘I don’t even know why you exist’, ‘you’ve probably got worms inside you’ etc.

With the help of children teacher shall pull the poor apple apart with so many unkind words.

Then teacher shall pass another apple around and say kind words to it, ‘You’re a lovely apple’, ‘your skin is beautiful’, ‘What a beautiful color you are’ etc. Then teacher shall hold up both apples, and again and talk about the similarities and differences, there was no change, both apples still looks the same.

Now teacher shall cut the apples open. The apple to which everyone is been kind to is clear, fresh and juicy inside. The apple to which everyone is unkind to is bruised and all mushy inside.

This will be/should be a light bulb moment for the children immediately. With this demonstration students will really get it, what we saw inside that apple, the bruises, the mush and the broken bits is what is happening inside every one of us when someone mistreats us with their words or actions.

Discussion:

When people are bullied, especially children, they feel horrible inside and sometimes don’t show or tell others how they are feeling. If we hadn’t have cut that apple open, we would never have known how much pain we had caused it.

Teacher shall share her own experience of suffering someone’s unkind words. On the outside everyone looks OK, although on the inside they may be hurting because of what someone said to them.

Unlike an apple, we have the ability to stop this from happening. We can teach children that it’s not ok to say. do unkind things to each other and discuss how it makes others feel. We can teach our children to stand up for each other and to stop any form of bullying, just as did today ,refuse to say unkind words to the apple.

More and more hurt and damage happens inside if nobody does anything to stop the bullying. Let's create a generation of kind, caring children.

The tongue has no bones, but is strong enough to break a heart. So be careful with your words.

It's a lesson that makes it easy for kids to understand how words can hurt, and one that will stick with kids as well.

https://forevermom.com/family-parenting/teach-kids-how-to-treat-others/?utm_medium=social&utm_source=pinterest&utm_campaign=tailwind_smartloop&utm_content=smartloop&utm_term=6895412

B3: Discussion with students how will we express love and care to others. Elicit answers from them

- Tell your parents you love them
- Write a positive note to some one
- Write a letter to your grand parents
- Donate food or clothes to orphanages/Old age homes with the help of parents or teachers
- Encourage /compliment some one
- Write a nice thank you note to teacher
- Visit a sick friend
- Write a nice letter to your friend
- Make a list of your friend's 3 best qualities and give it to him/her!
- Offer to help someone who is struggling with something

Teacher shall instruct students to prepare a poster as per their understanding of love, care, share & cooperation as assignment / class work. Teacher shall show some examples





Picture Source::<https://in.pinterest.com/pin/852517404454354280/>

V. C: Assignments

CI: Preparation of posters with the theme of love, share, care and cooperation

Resources

References:

- 1.<https://www.apost.com/en/blog/only-a-math-whiz-can-complete-this-math-crossword-puzzle-in-less-than-5-minutes/5435/>
- 2.<https://www.education.com/worksheet/article/multiplication-crossword/>
- 3.<https://www.education.com/worksheet/article/division-crossword/>
- 4.<https://in.pinterest.com/pin/402790760401823445/>
- 5.<https://www.moralstories.org/long-can-keep-hatred-heart/>
- 6.<https://foreverymom.com/family-parenting/teach-kids-how-to-treat-others/>
7. <https://in.pinterest.com/pin/852517404454354280/>
8. Ncert Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Unit 4

Topic	Values / Life skills integrated & imbibed	Activities
Tick-Tick-Tick	<p>Core Values considered : Punctuality, Self-Discipline & Time Management</p> <p>Other Sub-Values: Accuracy, responsibility, self-awareness</p> <p>Life skills: Listening, Observation, problem solving, thinking, comparison,</p>	<p>Value integration Activities:-</p> <p>1 Discussion and worksheets to revise their knowledge regarding time and routine activities they do regularly to inculcate the significance of time and teaches to do things as per priority.</p> <p>3. Discussion on punctuality lessons for classroom to instill in students the importance of punctuality in their life</p> <p>4. Activities by making in groups for the class room teaches them to work as a team and register the importance of time management</p> <p>5. Assignment: 1. write 10 lines about the importance of punctuality/Time management 2. Preparation wall clock for Home schedule</p>

Materials / Resources needed

Value Integration:-

1. Real Clock, Calendar videos, Chart Paper, sketch Pens, colors to prepare clock & calendar
2. Facilities and Equipment to show videos.
3. NCERT Text books, reference books (R.D.Sharma, R.S Agarwal)
4. Pen, board, Duster.

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated to encourage students to learn the value of time. Students learn, if we take care of time, other things will take care of themselves automatically. We all grow in time, live in the time and die in time. “Time and tide wait for none” and that “time once lost can never be recovered” Knowing how to manage time is important to the future success of children. They should be taught to do activities in a well-planned manner so as to save time. There is no room for laziness and uncertainties.

The key discussions are:

1.By discussion and worksheets teacher shall revise their knowledge regarding time and routine activities they do regularly

2.By demonstration & story activity teacher inculcate the significance of time and teaches to do things as per priority.

3.Discussion on punctuality lessons for classroom instill in students the importance of punctuality in their life

4.Activities by making in groups for the class room teaches them to work as a team and register the importance of time management

5.Assignment:

1.write 10 lines about the importance of punctuality/Time management

2.Preparation wall clock for Home schedule

This activities help students practice the values learned through the lesson and make it a habit to lead a successful life.

Unit 4Tick-Tick-Tick**Punctuality, Time Management & Self Discipline****I. Introduction**

In this lesson 'Tick-Tick-Tick' teach children the importance of time. Children will enjoy doing activities to see all the things they can do in one minute. Observing activities at home will give them a sense of time and also help them value the effort of others. This is a good opportunity for children to find out about the life spans and growth patterns of human beings and different animals. The idea is to compare and discuss without having to memorise any such information. Children will be able to recognize 'manufacturing' or 'expiry' dates of different products. Students will be able to read and write time in am-pm format and relate it with daily life activities also will be able to writes time in 12-hour format and 24-hour format.

Through this lesson teacher can inculcate the value of **punctuality and time management skills** among children. If we take care of time, other things will take care of themselves automatically. We all grow in time, live in the time and die in time. “Time and tide wait for none” and that “time once lost can never be recovered” Every person should know the value of time and so make maximum use of it. What is important is the present. It is foolishness to postpone work for tomorrow. It is equally stupid to repent for the lost past. There is no tomorrow nor yesterday. It is always “today”. “Today” means hard work, labor, sweat, and toil. It means the best use of time and opportunity.

Knowing how to manage time is important to the future success of children. They should be taught to do activities in a well-planned manner so as to save time. There is no room for laziness and uncertainties. How important are small moments of life is explained so well in the following lines,

Little drops of water,
Little grains of sand,
Make the Mighty Ocean,
And the beauteous land
And The Little Moments
Humble though they are,
Make the Mighty age of eternity

II. Learning Objectives / Outcome

Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Importance of time, knowledge about different ways to measure time
- Learners would appreciate the use of calendar and different format of date.
- Estimate the duration of an event and the approximate time elapsed
- Reads clock time in hour and minutes and expresses the time in a.m. and p.m. and relate it with daily life activities
- Calculates time intervals / duration of familiar daily life events by using forward or backward counting / addition and subtraction
- Relates to 24 hr. clock with respect to 12 hr. clock. Writes time in 12 hour format and 24 hour format
- Learn punctuality , time management skills and inculcate self-discipline

III. Process & Action Plan

Knowledge about managing time and utilizing the time properly and effectively is a skill that all kids must be taught from the beginning. Time lost can never be made up in life and hence they must be introduced to how well time is used . Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:

A. Introduce the **context** activity:
Discussion & work sheets.
Refer-A1



B. Carry out the varied **activities** in class (given below)
in the sequence specified.



1.
Story to
demonstrate
the time
management skill.
Refer-B1

2.
Discussion:
Punctuality
to register
significance.
Refer-B2

3.
Activity to instil
time management
& punctuality.
Refer-B3



C. Aid generalization of the concepts learnt, through
assignments (given below).



1.
10 lines on Punctuality
followed by student

2.
Preparation of Home
schedule clock.
Refer-C2

While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the *core approach* – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The *core values* being considered are *Punctuality, Time Management, Self-awareness* along with other sub-values like *Accuracy, responsibility, self-awareness*

The unit also provides the scope to develop the following life skills in the students: *Problem solving, thinking, comparison,*

IV. Activities & Related Discussion

A.Context Activity for the teacher to start

A1.Teacher shall discuss with students regarding their daily routine and give the work sheets for revising their previous knowledge.

Name: _____

Daily Routines: Time to the Hour

Directions: Read the sentences and look at the clock. Write the time for each daily routine.

I make my bed at _____	I eat breakfast at _____
I go to school at _____	I eat a snack at _____
I eat lunch at _____	I eat dinner at _____
I take a bath at _____	I read a book at _____
I go to sleep at _____	What time do you wake up? _____
	What time do you go to _____

Daily Routines
Telling The Time

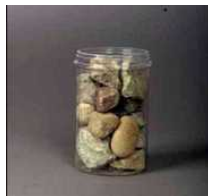
Complete the blanks with the right time indicated by the clock in the pictures:

1. I wake up at _____	2. I wash my face and brush my teeth at _____	3. I get dressed at _____
4. I have breakfast at _____	5. I go to school at _____	6. Classes start at _____
7. I go home at _____	8. I have lunch at _____	9. I watch TV from _____ to _____
10. I do my homework from _____ to _____	11. I play computer games from _____ to _____	12. I play soccer from _____ to _____
13. I have dinner at _____	14. I take a bath at _____	15. I go to bed at _____

Source: <https://in.pinterest.com/pin/11259067798743676/>

B: Value Based Activities

B1. Focus on the Rocks, stop wasting time; Demonstration shall be done by teacher in classroom



A philosophy professor, once, decided to teach the students some valuable lesson about Time Management, This is one of such Moral Stories on time management to teach the value of time. so, he stood before his class with some items on the table.

When the class began, wordlessly he picked up a big and empty jar

and proceeded to fill it with rocks, about 2 inches in size. He then looked towards the class and asked the students if the jar was full. They all agreed to it that it was full.



So the professor then moved to pick up a box of pebbles and poured them into the jar. He shook the jar gently. The pebbles, of course, rolled through the gaps between the rocks. He then again looked up to the students and asked if the jar was full. They all again shook their heads in agreement.



For the last time, he turned towards a jar, and this time, picked up a box of sand and poured it into the jar and shook it lightly. Of course, the sand moved into the gaps and filled up everything else.

He then asked one last time if the jar was full or not. The students were surprised but responded with a unanimous “Yes.”



For the last time he picked up a pitcher of water and began to pour it in. He got something like a quart of water in that jar. Then he said, “Well, what's the point?”

Moral of the Story:

The same goes for your life. “If you put the sand or the pebbles into the jar first, there is no room for the rocks. “So, the point is – “Put the Big Rocks in First”.

If we keep on filling the jar with the sand means if we keep on spending all your time and energy on the unimportant things. We will never have room for the things that are crucial for us.

Pay attention to the things that are valuable to your happiness. Spend some time with your parents & family. Play with your friends, study regularly. You will never be out of time to go to work, offer a dinner party, help your spouse in cleaning the house, and fix the disposal.

First and foremost, focus on the rocks – the things that really matter. Set your priorities. The rest is just sand.”

Reference: <https://quitpit.com/moral-stories-on-time-management/>

B2: Discussion on Punctuality lessons for classroom

Teacher shall discuss with students the meaning of punctuality and their understanding about punctuality and elicit different answer and compile the meaningful sentences on board

Teacher shall ask the following questions

1. What will happen when doctors go late to the operation theatre?
2. What will happen when students delay going to the examination hall?
3. What will happen when reach airport to catch a flight of 5:30 pm late by 10 minutes?

(Teacher can add many more questions....)

Then teacher shall explain the importance of punctuality and tell them the word punctual means “on time”. Then discuss and elicit 10 -12 good lines of punctuality.

Examples.

- A person who reaches on time, works on time is called punctual.
- Punctuality is another means of completing a task on time.
- Punctuality helps complete our work at a certain time without any panic
- A person with Punctuality performs his tasks at the right time or ahead of time.
- Punctuality is the quality of a disciplined person
- Timeliness is a very important feature that all individuals must possess in order to succeed.
- It is very important for students to be punctual in order to achieve the goals in their life.
- It is one of the best qualities, which makes students more civilized and cultured.
- Students should develop this quality as a habit to do things at the right time
- Punctuality is the secret of the life of all successful people in this world.

B3: Punctuality/Time Management activities:

Teacher shall form groups and assign work to keep punctuality in class room

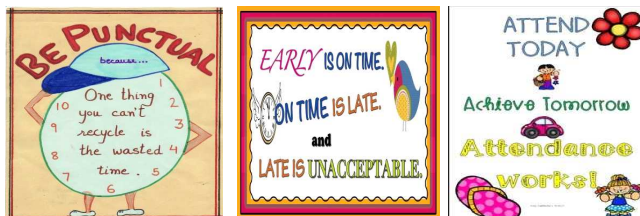
Group I- Preparation of Punctuality Quotes (Teacher shall display in the class room)

Group II-Preparation of Punctuality Posters (Teacher shall display in the class room)

Group III-Preparation punctuality rules for class (Teacher shall display in the class room)

Group IV-Punctuality Awards preparation (Instruct students to prepare certificate for students who are punctual in all activities in the classroom)

Group V-Preparation wall clock –Classroom schedule





Punctuality Rules for the class room

1. Attend school regularly
2. Come to school on time
3. Come to classroom after recess/break
4. Come to classroom after P.E/Music class

Source

1. <https://in.pinterest.com/pin/313985405276742466/>
2. <https://in.pinterest.com/pin/284641638935158477/>
3. <https://in.pinterest.com/pin/541276448945120817/>

V.C: Assignments

- C1.write 10 lines about the importance of punctuality/Time management
- C2. Preparation wall clock for Home schedule

Resources

References:

1. <https://in.pinterest.com/pin/313985405276742466/>
2. <https://in.pinterest.com/pin/284641638935158477/>
3. <https://in.pinterest.com/pin/541276448945120817/>
4. <https://in.pinterest.com/pin/11259067798743676/>
5. <https://quitpit.com/moral-stories-on-time-management/>
6. Ncert Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Unit 5

Topic	Values / Life skills integrated & imbibed	Activities
The Way The World Looks	<p>Core Values considered : Respect of diversity, Perspective taking</p> <p>Other Sub Values: Tolerance, curiosity</p> <p>Life skills: Creative thinking, observation, drawing, imagination, spatial skills, listening, and communication</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1. Drawing, pattern as per the view & discussion and worksheets, to revise the previous knowledge of students 2. Playing perspective game to explain how individuals perceive and intercept words and ideas differently. 3. Story activity to inculcate the different views of same situation by different persons 4. Activity based on different culture to respect different cultures.: 5. Assignment: <ol style="list-style-type: none"> 1: Prepare 10 lines (Perspective) what comes to their mind regarding their school 2: Prepare an album of pictures of Food Items & Clothing styles of different countries

Materials / Resources needed

Value Integration:-

1. Perspective taking exercise handout, worksheets, blocks, 3D objects, cubes, perception cards, scrap paper, scissor, pencils.

Facilities and Equipment to show videos

BB, Pen

Ncert Text Book, Reference books, (R.D Sharma , R.S. Aggarwal)

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated in such a manner that helps students to understand that when we observe an object from different positions or directions the appearance changes. Therefore this lesson teaches them the perspective taking and diversity. Most of us have experienced a wide range of ability like all types of dynamic thinking, the process of appreciating and analyzing multiple and diverse perspectives is a developed skill that must be reinforced over time. Perspective-taking is the act of perceiving a situation or understanding a concept from an alternative point of view- a critical skill for all aspects of life. Incorporating perspective-taking and the analysis of differing viewpoints into the curriculum will provide students with situational context for learning the new skill. It is also a critical component for promoting a strong classroom community and establishing an empathetic learning environment.

The key discussions are:

1. By drawing, pattern as per the view & discussion and worksheets, teacher shall revise the previous knowledge of students
2. Playing perspective game to explain how individuals perceive and interpret words and ideas differently.
3. By doing a story activity teacher shall inculcate the different views of same situation by different persons
4. Activity based on different culture teaches students to respect different cultures.: Perspective taking skills are especially important during cross-cultural interactions, as people likely have very different perceptions of the world
5. Assignment:
 - 1: Prepare 10 lines (Perspective) what comes to their mind regarding their school
 - 2: Prepare an album of pictures of Food Items & Clothing styles of different countrieswhich will help them the application of what students learned from this lesson,

Unit 5**The Way The World Looks****Respect of Diversity & Perspective taking****I. Introduction**

The lesson “**The Way The World Looks**” discusses the way the objects & materials from surroundings look when we observe from different positions and different angles. This also teaches to locate an area or position in the map by using four directions. Here students understand that when we observe an object from different positions or directions the appearance changes. Therefore this lesson teaches them the perspective taking and diversity. Most of us have experienced a wide range of ability in our students when it comes to perspective. Like all types of dynamic thinking, the process of appreciating and analyzing multiple and diverse perspectives is a developed skill that must be reinforced over time.

Mastering the skill of perspective-taking will help students to develop a stronger sense of empathy. Perspective-taking is the act of perceiving a situation or understanding a concept from an alternative point of view- a critical skill for all aspects of life. Incorporating perspective-taking and the analysis of differing viewpoints into the curriculum will provide students with situational context for learning the new skill. It is also a critical component for promoting a strong classroom community and establishing an empathetic learning environment.

Taken a step further, it is important to provide students with opportunities to learn from the diverse and varied experiences of each other. Considering the globally connected world we live in, it is extremely advantageous for students to have a deep understanding of compassion and tolerance. A flexible mindset takes into account the possibility of complex situations with multiple correct answers. Students who show creativity and flexibility in their thinking are able to solve problems and become more confident. The ability to understand another person's perspective is beneficial for all forms of social interactions and relationships, including helping students have a meaningful interaction with their partner classroom.

II. Learning Objectives / Outcome

Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Observes and draws objects from different heights. Acquires understanding about

shapes around her /him, Identifies the center, radius and diameter of the circle, Finds out shapes that can be used for Tiling, Makes cube / cuboids using the given nets

- The concept of symmetry by reflection, Shows through paper folding / paper cutting, ink blots, etc.
- Draws top view, front view and side view of simple objects, Observes and draws objects from different sides. Draws objects from different angles
- Develop positive perspective taking & respect to diversity.

III. Process & Action Plan

This chapter is giving an opportunity for the students indirectly to approach an issue from different angles and understand the perceptions of others in different ways. It also applies to the material objects as to how they look like from different views/options of looking. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:

A. Introduce the **context** activity:
Classroom activity of drawing of different view of
objects& Puzzle solving. Refer-A1 & A2



B. Carry out the varied **activities** in class (given below)
in the sequence specified.



1.
Game to
demonstrate
perception of
different people.
Refer-B1

2.
Story activity to
understand others
perspective.
Refer-B2

3.
Activity to
inculcate
respect to
diversity.
Refer-B3



C. Aid generalization of the concepts learnt, through **assignments**
(given below).



1.
Preparation of
views regarding
school.
Refer-C1

2.
Preparation of
Album on diversity
culture.
Refer-C2

While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the *core approach* – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The *core values* being considered are *Respect of Diversity and Perspective taking* along with other sub-values like *tolerance, curiosity*

The unit also provides the scope to develop the following life skills in the students: Creative thinking, observation, drawing, imagination, spatial skills, listening, and communication

IV. Activities & Related Discussion

A.Context for the teacher to start

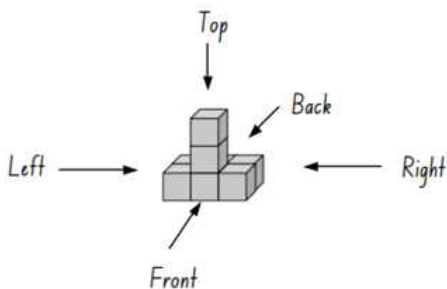
A1: Classroom Activity

Teacher shall change the seating arrangement of students in square/rectangular way.

Keep an object made of cubes in the center of the table.

Instruct students to draw the object as per their view

Teacher shall discuss with students how the same object but different views as per their position & direction



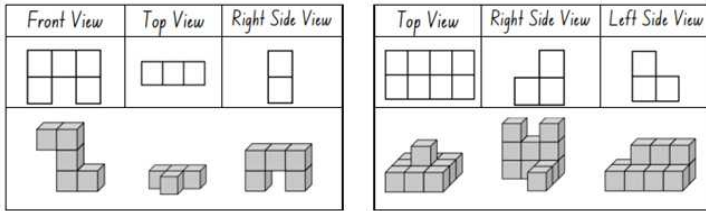
Answer:

Front View	Top View	Right Side View	Left Side View	Back View

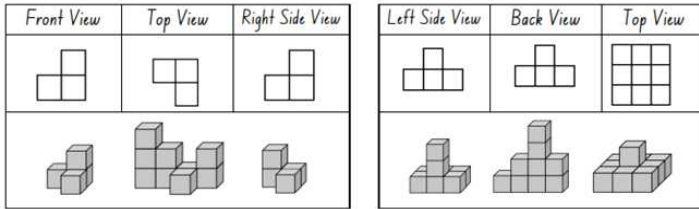
Now teacher shall give them worksheet to solve similar sums

Look at the front, right side, left side, top and back view drawings. Match each one with a 3D object. Circle the matching 3D Object

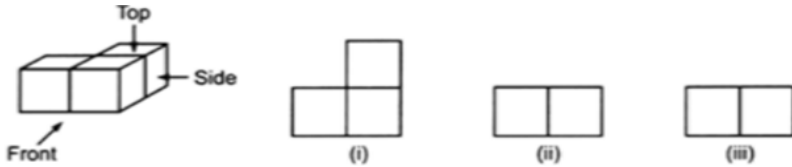
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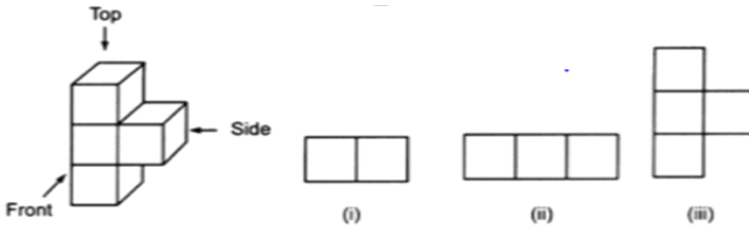
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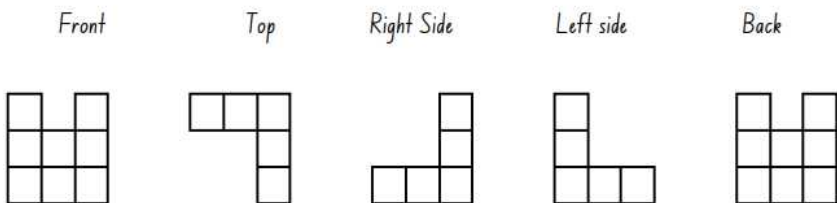
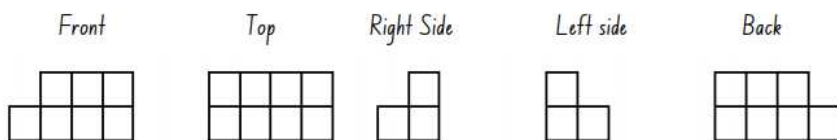


4.



A2: Classroom Activity

Look at these 2D viewpoints from the front, right side, left side, top and back. Collect some blocks and build a 3D object that matches the complete set of viewpoints.



Source: 1. <http://www.mathsmentality.com>.

2. <https://www.zigya.com>

B. Value Based activities:

B1. We each See the World Differently

Students will play a perception game that reveals how individuals perceive and interpret words and ideas differently.

- Teacher shall require the following materials:
- Perception cards, Scissors, Scrap paper, pencils
- Divide students into groups of five depends upon the strength of the class. Each student will need a pencil and a sheet of scrap paper, Make enough copies of Perception Cards so that each group of five students receive five or six cards
- Explain that groups will select a card and students will write down what the word on the card mean to them .Then each student in the group will read their definitions in a go- round without interruption. Remind students that the purpose is to see how perceptions vary, not to determine a correct definition. This is also an opportunity to monitor for active listening skills. Each group will choose three words to use in the exercise.
- Teacher shall write the word 'Family'. Ask students to close their eyes for a minute and let their senses take over to their family. Then ask students to share their thoughts and jot down a few words and phrases which means to them of Family

- When everyone is finished writing down their ideas ,the group does a “Go Round”, each student taking turns sharing what they wrote(Teacher should encourage that everyone is correct in their perspective)Teacher shall also encourage students to interact each other to explore the meanings each one shared

Perception Cards

Love	Tolerance	Happiness
Bonding	Peace	comforts
sharing	caring	support
Trust	togetherness	relations
community	belongingness	faith

B2: Perspective taking activity through Tom’s Story

Tom is 9 years old, and he lives in a small town surrounded by beautiful mountains. He has brown curly hair with dark brown eyes the color of chocolate, and always has a bright warm smile. Tom loves to play football in the field near his house, but sometimes it’s too sunny and hot to play there. If he is too overheated and sweaty, Tom becomes frustrated and angry, so it’s not fun to play. On those hot days, Tom and his friends decide to play at another field on the far side of town, which is in the shade of the mountain. Tom likes this field because it’s near the cow pasture, and he likes to watch the animals graze. Animals are very important to Tom’s culture and are never eaten as food. In fact, his family only eats vegetables and fruits that they grow on their farm. Tom loves all the food they grow, except blueberries and blackberries, which taste really bad to him.

When Tom grows up, he wants to be a doctor. He still remembers the day he decided this: Two years ago, his sister was coming home from school and a vicious dog attacked her. She was badly hurt and rushed to the hospital. Tom was there too, and remembers everything the doctor did to help his sister. Since then, he has always wanted to become a doctor and appreciates every opportunity he gets to talk to new doctors.

- Give instructions: Explain to students that first you will read through the handout together and they will fill in the left-hand column about their own feelings (“ME”). Next, they will listen to a story about a kid their age named Tom, and then fill in the right-hand column about Tom’s feelings (“Tom”).
- Hand-out – My feelings (“ME” column): Display the hand-out on a projector and read it aloud with the class. After reading each situation, pause and ask students to imagine how they would feel if that were happening to them, and write down their feeling (“I feel ____”) and reason (“because...”). You might want to ask students to fold the paper in half vertically, so they can only see the “ME” column.

3. Read “Tom’s Story”: Remind students to listen carefully to the story for details about Tom’s life that might influence how he feels about the situations described on the hand-out. Then, read the story aloud.
4. Hand-out - Tom’s feelings (“Tom” column): Read through the hand-out again. You might want to ask students to fold the paper in half vertically, so they can only see the “Tom” column. Pause after reading each situation to:
5. Ask students how Tom might feel about that situation and why. Refer back to the story if needed, and discuss as a class.
6. Then ask students to look on their hand-outs to see if they had different feelings than Tom about each situation, and if so, raise their hands. Call on students to explain why they think Tom feels differently than they do. Guide them toward understanding that people can have different feelings about the same situation because of different past experiences, preferences/interests, immediate circumstances, or cultural influences (see answer suggestions below).

NOTE: After discussing Situation 5, ask students: “How do you think Tom would feel if it was cooler outside and he was feeling energetic? Would he still be frustrated that his friends wanted to play with him?” Demonstrate how someone’s feelings about a situation can change from one day to the next depending on immediate circumstances.

Suggested answers:

Situation 1: Tom feels scared/worried/angry because of HIS PAST EXPERIENCE when a dog attacked his sister.

Situation 2: Tom feels sad/uncomfortable/guilty/resentful because HIS CULTURE does not eat meat.

Situation 3: Tom feels excited/curious/happy because of HIS INTEREST in becoming a doctor when he’s older.

Situation 4: Tom feels disgusted/disappointed/mad because of HIS PREFERENCE for avoiding blueberries.

Situation 5: Tom feels frustrated/annoyed because the IMMEDIATE CIRCUMSTANCES of being hot make him frustrated; he’s too tired and hot to play, so he’s annoyed that his friends are trying to make him run around.

5. Conclude with a discussion on perspective-taking: Explain to students that the only part of a situation we can actually see is the person’s reaction, but there is usually a lot going on under the surface that influences on how this person perceives the situation, as we saw with Tom

What we see	Reaction to the situation
What we don't see Influence on feelings and behaviour	Immediate circumstances Beliefs Preferences Past experiences Cultural values, customs, traditions

To better understand another person's perspective, we need to think about all these hidden influences of the iceberg and ask ourselves: "What is life like for that person? What might be influencing how they perceive this situation that we can't see? How can I relate to their experience to understand how they feel?" For example, although a student might feel happy about blueberry cake while Tom feels disappointed, the student can still relate to Tom's experience by recalling how she felt when she was given food she didn't like in the past

Perspective taking Exercise Hand out

Name:-----

Situation 1: Your Family gets a dog as a pet

Me	Tom
I feel -----	Tom feels -----
Because-----	Because-----
-----	-----

Situation 2: You are at your friends house for dinner and his mother cooks a delicious chicken stew

Me	Tom
I feel -----	Tom feels -----
Because-----	Because-----
-----	-----

Situation 3: You are going to the doctor's office to get your medicine

Me	Tom
I feel -----	Tom feels -----
Because-----	Because-----
-----	-----

Situation 4: You get a blueberry double chocolate cake for your birthday

Me	Tom
I feel -----	Tom feels -----
Because-----	Because-----
-----	-----

Reference: <https://empatico.org/activity-plan/perspective-taking>

B3: Activity based on different culture

Teacher shall take an activity that they should respect the diversity of culture. Teacher shall divide class into 5 groups and ask the groups of students to collect information regarding different food habits and different dressing style of 5 countries and present in the class.

Teacher shall discuss and reinforce that when meeting people from different backgrounds: Perspective taking skills are especially important during cross-cultural interactions, as people likely have very different perceptions of the world (which makes these experiences so interesting!). Be sure to encourage perspective taking when students are learning about other cultures or ways of life, for example, when they are preparing to interact with their partner classroom.

V. C: Assignments

C1: Prepare 10 lines (Perspective) what comes to their mind regarding their school (Teacher shall discuss each ones perspective after their submission)

C2: Prepare an album of pictures of Food Items & Clothing styles of different countries

Resources

References:

1. <http://www.mathsmentality.com>
2. <https://www.zigya.com>
3. <https://empatico.org/activity-plan/perspective-taking>
4. NCERT Text books, reference books (R.D.Sharma, R.S Agarwal)

Resources for Teachers:

A1: Ans

1.

Front View	Top View	Right Side View

Top View	Right Side View	Left Side View

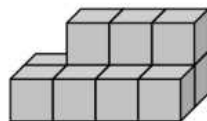
2.

Front View	Top View	Right Side View

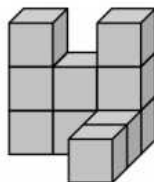
Left Side View	Back View	Top View

A2: Ans

Front	Top	Right Side	Left side	Back



Front	Top	Right Side	Left side	Back



Topic	Values / Life skills integrated & imbibed	Activities
The Junk Seller	<p>Core Values considered : Hope, Determination, Kindness & dignity of Labor</p> <p>Other Sub-Values: self-awareness, courage, will power, hard work</p> <p>Life skills: logical thinking, responsibility, reasoning, money management, risk taking,</p>	<p>Value integration Activities:</p> <p>1.Story narration of Kiran from text book&By playing Sudoku puzzle& by interactions and demonstrations teacher shall revise the previous knowledge of students.</p> <p>3. Playing Video & discussion - instill in students that if they have a dream and if they work hard they will be able to achieve the dream</p> <p>2.Story Narration & Discussion of the Story of Wilma Rudolph teaches that irrespective of all odds with determination, hard work and will power achieve success</p> <p>4.Celebration of Kindness Day in School to encourages everyone to look beyond the boundaries of race, religion, and politics and appreciate the humanity in all of us. World Kindness Day is the perfect time to practice kindness, whether its toward family members, friends or strangers.</p> <p>5. Assignment: Read & Write review Autobiography of Famous personalities: Dr.Abdul Kalam & Dr.Mashelkar</p>

Materials / Resources needed

Value Integration:-

- 1.Crossword puzzle work sheet printouts
- 2.Facilities and Equipment to show videos & conducting games
- 3.BB, Pen
- 4.Ncert Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated in such a manner that students learn the value of Dream/Hope among students, which will lead hard work, determination and courage will catapult any impossible task to possible. Students develop a habit of helping others whenever there is a need.

The key discussions are:

1. Story narration of Kiran from text book & By playing Sudoku puzzle & by interactions and demonstrations teacher shall revise the previous knowledge of students.

3. By playing Video & discussion - instill in students that if they have a dream and if they work hard they will be able to achieve the dream

2. Story Narration & Discussion of the Story of Wilma Rudolph teaches that irrespective of all odds with determination, hard work and will power achieve success

4. Celebration of Kindness Day in School :- This activity encourages everyone to look beyond the boundaries of race, religion, and politics and appreciate the humanity in all of us. World Kindness Day is the perfect time to practice kindness, whether its toward family members, friends or strangers.

5. Assignment:

Read & Write review Autobiography of Famous personalities: Dr. Abdul Kalam & Dr. Mashelkar

Unit 6**The Junk Seller****Hope, Determination, Kindness & dignity of Labour****I. Introduction**

The lesson “**The Junk Seller**” teaches the application of operations of numbers in daily life. Multiplies 2- and 3-digit numbers, divides a number by another number using different methods like – pictorially (by drawing dots), equal grouping or repeated subtraction and by using inter-relationship between division and multiplication. Creates and solves simple real-life situations / problems including money, length, mass and capacity by using the four operations.

Teacher shall discuss that while adding & multiplying we give to the other number i.e. carry forwarding numbers on to the next number. This is a very important value which can be related to life. We need to be helpful and kind to the people who are less fortunate than us always.

Study of “**The Junk Seller**” can inculcate the value of Dream/Hope among students, which will give an impression that hard work, determination and courage will catapult any impossible task to possible. Along with students develop a habit of helping others whenever there is a need. The concept of loan will register in them if there is finance problem; it is a solution which will never stop them pursuing their dream/hope. Students also understand how the knowledge of math will help them to proceed in life.

This lesson teaches values such as hope/aspiration, kindness & dignity of labour. Will power, determination & hard work will always take one to be successful and achieve their goals success. At the same time the operations addition and multiplication teach them the quality of giving & helping.

II. Learning Objectives / Outcome

Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Addition and subtraction of money. Multiplication of two and three digit numbers using lattice algorithm and standard algorithm. Understands basic operations on money.
- Awareness of the concept of loan, profit and loss. Daily life problems.

- Solves problems related to money transactions. Can purchase things from the market and compare their prices. Knows the value of different currency notes and coins. Conversion of rupees into paise and vice versa & Makes the bill.
- Learn the dignity of labour
- Develop the value of Hope and be aware that hard work & will power will always leads to success
- Realize that the value of helping others or act kindness towards the less fortunate
- Learn to add happiness, subtract hatred, multiply love for happy life, share happiness by inculcating cooperation, sharing, caring and love

III. Process & Action Plan

It is very important that the children be engaged with the values of determination, hope and they must respect whatever work they are doing. The humility and the habit of valuing all work is an outcome of teaching this lesson. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:

A. Introduce the **context** activity:
Story of Kiran From Textbook & Crossword puzzle.
Refer-A1



B. Carry out the varied **activities** in class (given below)
in the sequence specified.



1.
Short film &
Discussion to instil
hope.Refer-B1

2.
Story of Wilma
Rudolf to
demonstrate the
effect of
determination.Refer-
B2

3.
Kindness day
celebration to
instill helping
others,
Refer-B3



C. Aid generalization of the concepts learnt, through **assignments**
(given below).



1.
Read & write review
of Inspiring
personalities.
Refer-C1

While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the *core approach* – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

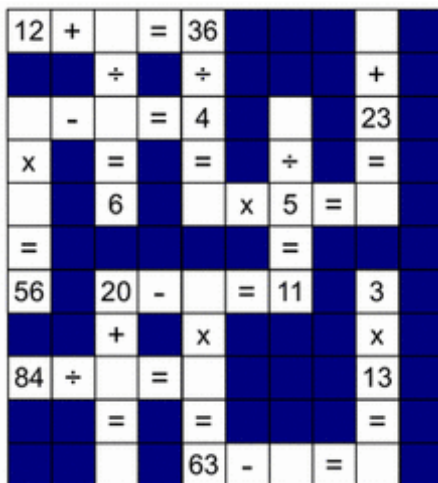
The *core values* being considered are *hope, determination, kindness & dignity of labour* along with other sub-values like *self-awareness, courage, will power, hard work*

The unit also provides the scope to develop the following life skills in the students: *logical thinking, responsibility, reasoning, money management, risk taking,*

IV. Activities & Related Discussion

A: The context activity for the teacher to start

- A1: Teacher can introduce the topic by telling the story of kiran the junk seller from text book or any other similar story. Teacher can interact with the students and register importance of math in real life and how it helps them to become successful
- A2: Teacher shall give cross word puzzles to solve for the whole class Fill in the blanks of the crossword puzzle to make the mathematical equations true. By using this puzzle challenge teacher shall revise addition, subtraction, multiplication and division by boosting pre-algebra skills.



Reference: <https://www.education.com/worksheet/article/math-crossword/>

B: Value Based Activities:

B1: Dream /Hope: Believe in yourself :

<https://www.youtube.com/watch?v=IWLZ2b158HI>

Discussion:

Teacher shall ask students what did you learnt from this short film. Teacher shall elicit all the qualities from students which is illustrated in the video

1. Have a Dream
2. Don't give up
3. Don't let anything stop you
4. Dreams are possible
5. You are unbreakable
6. You can do it
7. Believe in yourself
8. Don't stop when you are tired
9. Stop when you are done
10. Take challenging work otherwise you will not change
11. What are the different inspiring quotes (Ask students to recollect or teacher shall pause video and make students to write in their notebooks)
12. If you work towards your dreamone day is going to be your day....There is nothing powerful than a human being with a dream.

B2: The Wilma Rudolph Story: Wilma Rudolph overcame long odds to become one of the world's best-known athletes. How and why she did what she did are as amazing as her accomplishments.



Wilma Rudolph was born into a poor home in Tennessee. At the age of four, she had double pneumonia with scarlet fever, a deadly combination which left her paralysed with polio. She had to wear a brace and the doctor said she would never be able to put her foot on the ground. But her mother encouraged her: she told Wilma that with God given ability, persistence and faith she could do anything she wanted, Wilma said, "I want to be the fastest woman on the track on this earth" At the age of nine, against the advice of the doctors, she removed the brace and took the first step the doctors said she never would. At the age of thirteen, she entered her first race and came way, way last. And then she entered her second, and third and fourth and came way, way last until a day came when she came in first

At the age of fifteen she went to Tennessee State University where she met a coach by the name of Ed Temple. She told him, "I want to be the fastest woman on the track on this earth." Temple said, "With your spirit nobody can stop you and besides, I will help you."

The day came when she was at the Olympics and at the Olympics you are you are matched with the best of the best. Wilma was matched against a woman named Jutta Heine who had never been beaten. The first event was 100-meter race. Wilma beat Jutta Heine and won her first gold medal. The second event was the 200 –meter race and Wilma beat Jutta a second time and won her second gold medal. The third event was the 400 –meter relay and she was racing against Jutta one more time. In the relay, the fastest person always runs the last lap and they both anchored their teams, the first three people ran and changed the baton easily. When it came to Wilma's turn, she dropped the baton. Wilma saw Jutta shoot up at the other end: she picked the baton, ran like a machine, beat Jutta a third time and won her third gold medal. It became history: That a paralytic woman became the fastest woman on this earth at the 1960 Olympics

Discussion:

1. What are the lessons learnt from Wilma's story?
2. What happened to her at the age of four?
3. What did the doctor say about her health?
4. Who did encourage her& how?
5. What was Wilma's wish?
6. What did she do at the age of nine?
7. Did she win in the first match she participated?
8. What did she say to coach Mr.Ed Temple?
9. What did Mr.Temple reply?
10. With whom did Wilma match in first Olympics Game?
11. How many times did Wilma win gold medal? Name the races.

Teacher shall tell students that how irrespective of all odds with her determination, hard work and will power she achieved success

B3: Celebration of Kindness Day in school

Teacher shall discuss with students about **World Kindness Day**.

Teacher shall tell them It is an international day of kindness recognised by countries around the world that encourages everyone to look beyond the boundaries of race, religion, and politics and appreciate the humanity in all of us. World Kindness Day is the perfect time to practice kindness, whether its toward family members, friends or strangers.

Teacher shall discuss with students what all kindness activities as students they can do and list them on board.

1. Write 'thank you 'note to someone you respect in your school/home (Teachers, parents, grant parents, friends...)
2. Pick up litter in the class room or in a park or you neighbourhood and put it in the trash can.
3. Help someone who has dropped their books or papers
4. Help old people to cross the road or help them to carry their bags
5. Place uplifting notes in library books, on restrooms walls, corridors...
6. Send flowers to a friends/relatives/
7. Create a bulletin board in your school/class and provide fun shapes or designs on which people can write about random act of kindness they have received
8. Donate the clothes you've out grown to your school's clothes bank.
9. Bring an extra lunch dessert from home & share it with someone.
10. Write letters and put-up signs showing their appreciation for the people who keep the school clean and tidy.(Encourage students to make special effort to keep the classroom clean to reduce the work of housekeeping)

Teacher shall elicit many such acts from students and make it a practice in the classroom and shall celebrate kindness day monthly or half yearly

- Encourage /compliment some one
- Write a nice thank you note to teacher
- Visit a sick friend
- Write a nice letter to your friend

Reference: <https://positivepsychology.com/kindness-activities-empathy-worksheets/>

V.C: Assignment

C1: Read & Write review Autobiography of Famous personalities:

Dr. Abdul Kalam & Dr. Mashelkar

Resources

References:

1. <https://positivepsychology.com/kindness-activities-empathy-worksheets/>
2. <https://www.youtube.com/watch?v=IWLZ2b158HI>
3. <https://www.education.com/worksheet/article/math-crossword/>
4. Ncert Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Topic	Values / Life skills integrated & imbibed	Activities
Jugs& Mugs	<p>Core Values considered : Accuracy/Precision, Curiosity, Responsibility</p> <p>Other Sub-Values: confidence, self- acceptance, team work, respect</p> <p>Life skills: Estimation, critical thinking, scientific temperament, decision making, problem solving</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1.Discuss and give worksheet to revise the previous knowledge of units to measure the capacity of liquid. 2.Solving riddles by using the video link to instill curiosity& confidence among students. 2.Discuss and debate the importance of accuracy and precision required in daily life 4.Narration of story "The Four Smart Students "to inculcate the value of responsibility, One shouldn't run away from their responsibility 5.Assignment: <ol style="list-style-type: none"> 1. Case study for the importance of accuracy & precision and presentation in the class

Materials / Resources needed

Value Integration:-

- 1.Different types of vessels like Jugs, Mugs, Buckets, Glass, Cups etc.
- 2.Worksheets
- 3.Facilities and Equipment to show videos
- 4.NCERT Text Book, Reference books,(R.D Sharma , R.S.Aggarwal) P

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated in such a manner that While learning the lesson students acquire the importance of accuracy, realize the responsibility of being responsible and develop curiosity. For any measurement, accuracy and precision are the qualities which are to be applied/used in daily to balance our life. The virtue of respect is another important trait that a child should learn to lead a great life. An individual with a highly developed sense of personal responsibility is more likely to succeed in school, and in society at large, which will lay the foundation for him/her to become a better human being.

The key discussions are:

1. Discuss and give worksheet to revise the previous knowledge of units to measure the capacity of liquid.
2. Solving riddles by using the video link to instill curiosity & confidence among students.
2. Discuss and debate the importance of accuracy and precision required in daily life
4. Narration of story "The Four Smart Students" to inculcate the value of responsibility, One shouldn't run away from their responsibility
5. Assignment:
 1. Case study for the importance of accuracy & precision and presentation in the class

Unit 7**Jugs and Mugs****Accuracy/Precision, Curiosity, Responsibility****I. Introduction**

The lesson '**Jugs and Mugs**' teaches to estimates and measures the volume of liquids in liters and millilitres, compares volume of different and verifies them by actual measurement liquids. It helps to solve real life problems based on volume of liquids. While learning the lesson students acquire the importance of accuracy, realise the responsibility of being responsible and develop curiosity.

For any measurement, accuracy and precision are the qualities which are to be applied/used in daily to balance our life. The virtue of respect is another important trait that a child should learn to lead a great life. An individual with a highly developed sense of personal responsibility is more likely to succeed in school, and in society at large, which will lay the foundation for him/her to become a better human being. Instilling such values start at a very early stage. Curiosity is critical for success because it signals a hungry mind. If students are inquisitive, then they are open to new experiences. This will result to generate more original ideas and produce simple solutions to complex problems. Instilling above qualities will lead children a better successful human being.

II. Learning Objectives / Outcome

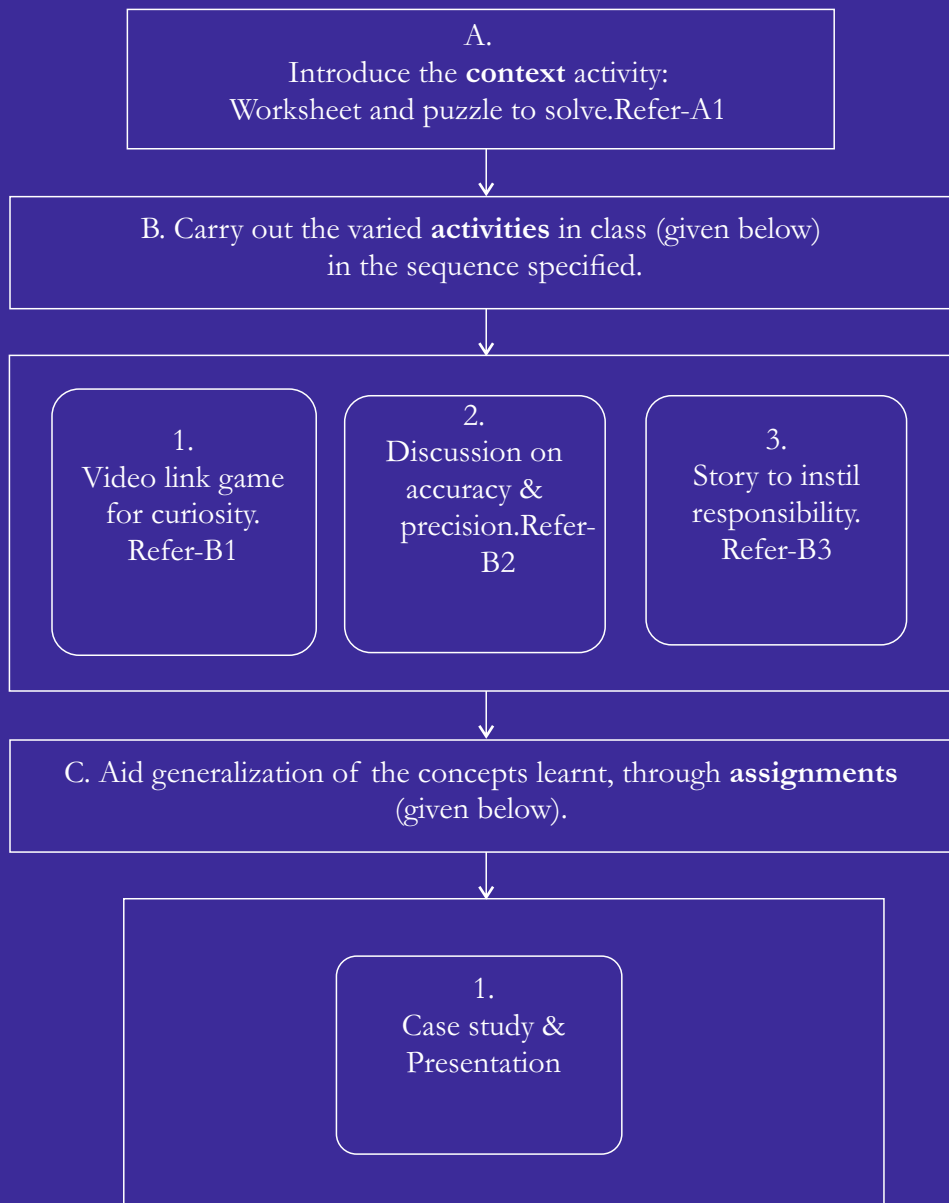
Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Understanding and measuring the capacity of a given liquid using containers marked with standard units. Determining sums and differences of capacity. Solving Puzzles related to capacity.
- Estimating the capacity of a liquid containing in a vessel and verifying by measuring.
- Understanding the units of capacity in litres and millilitres (Knows which items are measured in litres and millilitres)
- Solves real life problems based on volume of liquids.

III. Process & Action Plan

Measuring something-be it size or volume purely works on the relative perception. Each object has a volume, has a measure and any comparison must be done with due respect to the object. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:



While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the core approach – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The core values being considered are Accuracy/Precision, Curiosity, and Responsibility along with other sub-values like confidence, self- acceptance, team work, respect

The unit also provides the scope to develop the following life skills in the students: Estimation, critical thinking, scientific temperament, decision making, problem solving

IV. Activities & Related Discussion

A. Context activity for the teacher to start

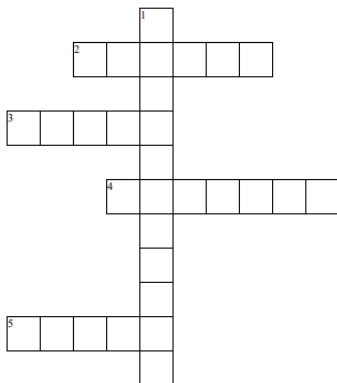
A1: Teacher shall give a worksheet to whole class to revise the previous knowledge

Which unit of capacity will you use (milliliters or liters) to measure the liquid in the following containers (write in the next column)

			
A Juice can		A bucket	
			
Perfume bottle		A mud pot	
			
A watering Can		A mug	

A2: Find Measuring Units (Liters or Milliliters)

Source: <https://www.azimpremjifoundationpuducherry.org/resource-catalogues/jugs-and-mugs>



	Across		Down
2.	500ML + 500ML	1.	Cough or fever syrup is measured in litres or millilitres
3.	Half of one litre		
4	500ML+ 1000ML + 500ML		
5	Standard measuring unit for liquids		

B. Value Based Activities: Curiosity

B1: <https://ed.ted.com/lessons/can-you-solve-the-cheating-royal-riddle-dan-katz>

<https://ed.ted.com/lessons/can-you-solve-the-honeybee-riddle-dan-finkel>

Discussion;

Teacher shall discuss regarding the game and inculcate curiosity among the students

Why should educators nurture curiosity?

Curious kids keep you on your toes: Teachers need to go beyond a lesson plan, deviate from it and no idea where the students are taking the teacher. That's the joy of teaching. Students get to play, banter, and debate things. Teachers need to look for this but focus on standardized syllabus and tests are also important.

B2: Accuracy / Precision: Discussion

Teacher shall discuss with students the importance of accuracy by giving different cases and elicit answers from them.

1. If one taking medicines less than or more than the doctor's prescription
2. If reach railway station late by 1 minute
3. If the tyre of any vehicle is not uniform / as per norms
4. If the ingredients of food items (cakes, Ice creams, pasteries) are not in accurate measurement.
5. If the dresses / clothes is smaller / bigger to you

Teacher shall give an example for precision and accuracy

A good correlation for understanding accuracy and precision is to imagine a basketball player shooting baskets. If the player shoots with accuracy, his aim will always take the ball close to or into the basket. If the player shoots with precision, his aim will always take the ball to the same location which may or may not be close to the basket. A good player will be both accurate and precise by shooting the ball the same way each time and each time making it in the basket.

Now let the students find out different cases and present in the class group wise.

B3: Story on responsibility: The Four Smart Students

One night four college students were out partying late night and didn't study for the test which was scheduled for the next day. In the morning, they thought of a plan. They made themselves look dirty with grease and dirt. Then they went to the Dean and said they had gone out to a wedding last night and on their way back the tire of their car burst and they had to push the car all the way back. So they were in no condition to take the test. The Dean thought for a minute and said they can have the re-test after 3 days. They thanked him and said they will be ready by that time.

On the third day, they appeared before the Dean. The Dean said that as this was a Special Condition Test, all four were required to sit in separate classrooms for the test. They all agreed as they had prepared well in the last 3 days.

The Test consisted of only 2 questions with the total of 100 Points.

- 1) Your Name _____ (1 Point)
- 2) Which tire burst? _____ (99 Points)

Options – (a) Front Left (b) Front Right (c) Back Left (d) Back Right Discussion:

1. Why did the students make plan?

2. What was the condition made by the dean and why?

3. What is the moral of the story?

Teacher shall make them aware that they shouldn't run away from their responsibilities Be Responsible else you too will learn your lesson!

<https://www.moralstories.org/four-smart-students/>

V. C: Assignments

C1. Case study for accuracy & precision and presentation in the class

Resources

References:

1. <https://www.moralstories.org/four-smart-students/>

2. <https://www.azimpremjifoundationpuducherry.org/resource-catalogues/jugs-and-mugs>

3. NCERT Text Book, Reference books, (R.D Sharma, R.S. Aggarwal) P

Resources for Teachers:

1. <https://ed.ted.com/lessons/can-you-solve-the-cheating-royal-riddle-dan-katz>

2 <https://ed.ted.com/lessons/can-you-solve-the-honeybee-riddle-dan-finkel>

Topic	Values / Life skills integrated & imbibed	Activities
Carts & Wheels	<p>Core Values considered : Equality, Optimism & self realization</p> <p>Other Sub-Values: Team-spirit, team-work, leadership</p> <p>Life skills: Drawing, creativity, imagination</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1. Sudoku puzzle, riddles & worksheets and by interactions and demonstrations to revise the previous knowledge of students. 2. Combination activity of game based learning and discussions to inculcate creativity & team spirit among students 3. Story writing activity & Discussion to throw light on creativity & the importance of equality among students. 4. The story of Lakshman Rekha teaches them self awareness and the need to carry their own boundaries always 5. Assignment <ol style="list-style-type: none"> a positive and negative effects of sun. Prepare the role of circular shapes in everyday life.

Materials / Resources needed

Value Integration:-

1. Work sheet of puzzles, A4 size paper
Materials required.
 - a) 20+ circular objects whose radius, diameter, circumference could be found. b) Classroom stationeries.
 - c) Winner: the team which completes the table with all stars is the winner
2. Facilities and Equipment to show videos
3. BB, Pen, Duster
4. Ncert Text Book, Reference books, (R.D Sharma , R.S. Aggarwal)

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated in such a manner that children learn to work as a team. From this teacher shall instill the value of equality among the students. Equality demands everyone should be treated the same regardless of differences. Equality is about ensuring that every individual has an equal opportunity to make the most of their lives and talents. It is also the belief that no one should have poorer life chances because of the way they born, where they of have come from, what they believe, or whether they have a disability. Equality is unwavering and effortless respect for people regardless of their place in the world. Whether man, woman or child, equality is when any and all physical, mental, social, religious, political, educational professional differences are embraced

The key discussions are:

- 1.By using sudoku puzzle, riddles& worksheets and by interactions and demonstrations teacher shall revise the previous knowledge of students.
- 2..By using combination activity of game based learning and discussion teacher shall inculcate creativity & team spirit among students
- 3.Story writing activity & Discussion throw light on creativity & the importance of equality among students.
- 4.The story of Lakshman Rekha teaches them self awareness and the need to carry their own boundaries always
5. Assignment
 - a. Prepare a positive and negative effects of sun.
 - b. Prepare the role of circular shapes in everyday life.This will give students an insight about equality, optimism and self realization.

Unit 8
Carts& Wheels
Equality, Optimism& self-realisation

I. Introduction

The lesson is related to the shapes and spatial understanding. It gives opportunities to the students to draw freehand circles with different objects and identify the center, radius and diameter of the circle.

Students learn the property of circle that from a fixed point (centre) to the circumference the distance is always equal. From this teacher shall instill the value of equality among the students. Equality demands everyone should be treated the same regardless of differences. Equality is about ensuring that every individual has an equal opportunity to make the most of their lives and talents. It is also the belief that no one should have poorer life chances because of the way they born, where they of have come from, what they believe, or whether they have a disability. Equality is unwavering and effortless respect for people regardless of their place in the world. Whether man, woman or child, equality is when any and all physical, mental, social, religious, political, educational professional differences are embraced

The equality effect can appear magical. In more equal countries, human beings are generally happier and healthier, there is less crime, more creativity, more productivity and overall –higher real educational attainment astounding.

II. Learning Objectives / Outcome

Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- To familiarize in identification of circle and drawing circles (rough handed, tracing and using compass)
- To make students understand the components of the circle: centre, radius, circumference and diameter
- Able to name and identify the geometrical instruments. Able to find the center and radius of a circle
- Able to make a spin top. Able to make designs in a circle using compass

- Able to solve simple problems related to Centre, radius and diameter of a circle.
- Able to assimilate the value of equality, love & completeness

III. Process & Action Plan

Students apart from knowing the spiral motions of the carts also need to understand that movement or change is a permanent phenomenon. Nothing remains the same as is seen in the movement of the cart or wheel. The wheel also shows a movement ahead and it is hope. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:

A.
Introduce the **context** activity: By Puzzles, Riddles & Worksheets.Refer-A1, A2 & A3

B. Carry out the varied **activities** in class (given below) in the sequence specified.

1.
Combination activity
Game: to instil
team spirit.Refer-B1

2.
Story writing activity
helps to be creative
and demonstrate

3.
Lakshman Rekha
activity to instil
self-awareness.
Refer-B3

C. Aid generalization of the concepts learnt, through **assignments** (given below).

1.
Positive& negative
effects of Sun.
Refer-C1

2.
Role of circular
shapes in everyday
life. Refer-C2

While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the core approach – Knowing, Understanding, Valuing and Acting the values embedded in the topic. Equality, Optimism & self-realisation

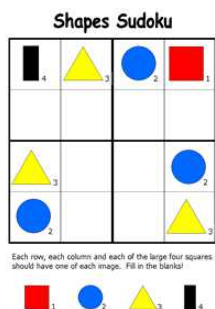
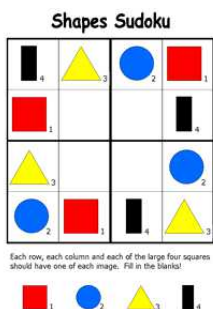
The core values being considered are Equality, optimism & self-realisation along with other sub-values like Team-spirit, team-work, leadership

The unit also provides the scope to develop the following life skills in the students: Drawing, creativity, imagination.

IV. Activities & Related Discussion

A Context activity for the teacher to start

A1: Sudoku Puzzles on different shapes:

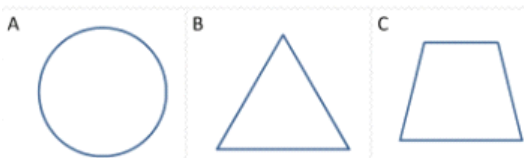


A2: 3D Shapes Riddles

Choose the correct answer from the shapes below

1.

- I am not a triangle
- All my sides are straight
- My sides are not all the same length
- **Who am I? Ans:**



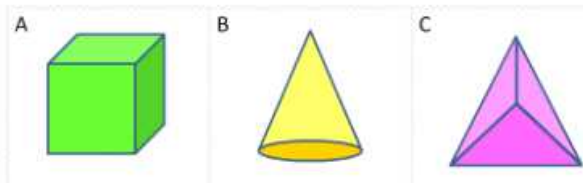
2.

- I am not a quadrilateral
- 2.I have no right angles
- I am not a triangle
- I have a circumference
- **Who am I? Ans:**



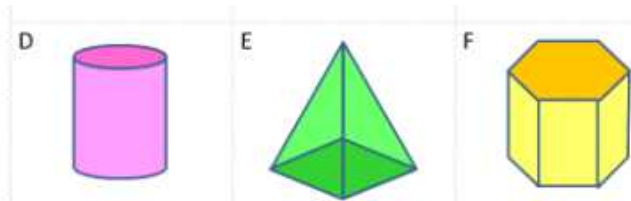
3.

- I have more than two faces
- None of my faces are circles
- I have at least 1 square face
- Some of my faces are triangles
- **Who am I? Ans:**



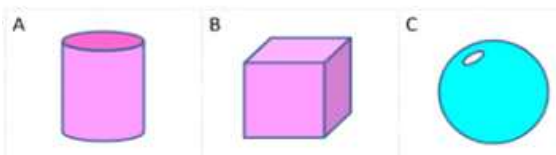
4.

- I have more than 2 vertices(Corners)
- Some of my faces are not rectangular
- I have no triangular face
- I have 8 faces in total
- **Who am I? Ans:**



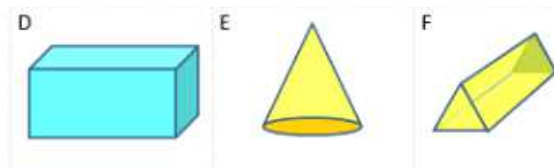
5.

- I have some circular faces
- I have two curved edges
- I have no vertices(Corners)
- **Who am I? Ans:**



6.

- I have 6 faces
- My faces are all squares or rectangles
- My faces are not all the same shape
- **Who am I? Ans**



<https://dltk-teach.com/shapes/msudoku.htm>

<https://www.2nd-grade-math-salamanders.com/>

B: Value based Activities:

B1.Combination activity to instill team spirit

Game Based Learning: The students are divided into teams. Each team can have maximum four students.

Process of the game:

- 1) Given a below table. Make sure the students are familiar of what is radius, diameter and circumference (if not the previous activity could be tried)
- 2) Each team has to pick circular objects and find its radius, diameter and circumference of the object. To increase the enthusiasm and game spirit team, teacher could give stars on the paper, if a team had done right.
- 3) The team would go to measure the next, when they receive the star from teacher. The

teacher observes the strategy used by the students to find the radius diameter and circumference.

Instruction for teachers;

The students could use any of the strategies:

- Trace the objects and measure
- Literally measure on the object
- Use thread, etc

. It is good that students find their own strategy, without teacher's support.

Discussion:

This activity leads students to think creatively and develop team spirit. A special property of the circle is that it is complete .We need to try to be like circle strong and complete in ourselves.

B2:Story writing activity

Teacher shall discuss daily activities where the shape of circle used.(Coins,Tyres of all vehicles, bangles, tawa, plates....).and list the things on the board. Tell them how circle has become an important part of our life. Teacher shall instruct them for a silent sitting for visualization

Silent sitting: visualizing the sunshine (Opportunity for values education: The sun is a circle, so it fits the theme of the lesson. The sun also represents strength, purity and wisdom. If we allow ourselves to be filled up with the light from the sun we will be strong, pure and wise and dark thoughts or actions will not be able to exist in us).After discussing the importance of the role of circles in every one's life

Teacher shall divide the students into teams. Each team can have maximum four students. Teacher shall tell them to write story on the theme **“Life without circles”**

What will happen “If wheels become square in shape”.

What will happen “If cricket ball becomes triangle in shape”.

Teacher instructs students think creatively and reflect the difficulties faced in real life in the absence of circle. The story writing work can be done in groups of 4 each. Students can brainstorm and write the story.

Discussion

Teacher shall discuss the value equality with the example of sun. We know that the sun is very important to us but the main question is why? If the sun didn't exist several things wouldn't occur. Elicit the answers from students (Conduct a debate in Class)

Expected answers from students

- Sun supplies Earth with never ending energy that we use in multiple ways.

- The energy comes in as heat and light and we transform the energy in different ways to create electricity.
- The process of photosynthesis would not take place, oxygen cannot be created, therefore, life cannot be present.
- The sun and its sunlight give us access to many resources.
- Sunlight helps the plants produce oxygen and overtime create fossil fuels.
- The suns positive effects help us find and progress ways to gain renewable resources, such as creating wind power, dams and solar energy.
- The sun effects earth in many ways to carry on life and that's why it is very important.
- The sun plays the most essential role for all living species on Earth, without the sun there would be no existence of life on Earth. Then teacher shall explain the quality of sun.

The sun gives away all its resources equally to all living things on earth. This is another important quality we learn from sun

B3: Self Awareness activity: Lakshman Rekha

Circle is a complete figure and has boundaries. It is significant that each student need to carry their own boundaries. Teacher shall discuss the story of Lakshmana Rekha with students



Reference: <https://www.speakingtree.in/blog/lakshman-rekha-according-to-the-ramayana>

Lakshmana Rekha is actually a line (border) drawn by Lakshmana to protect Sita. When Sita sees a golden deer wandering around the forest, she insists Ram to catch it. Ram chases it into the forest. Meanwhile, Lakshmana hears scream of Ram, which was actually trap by Marich, who was disguised as golden deer

Sita insists Lakshmana to go and watch his brother. Lakshmana refuses at first, but then agrees on one condition. He draws a line around the cottage and requests Sita not to cross that line in any situation.

Ravan comes disguised as a sage, and tricks Sita to come out of that line, since he himself can't cross. And then he abducts her.

Discussion:

1. What is the shape of lakshman Rekha?
2. What happened when Sita crossed the lakshman Rekha?
3. What is the moral of the story?

Then teacher shall explain the importance of self-awareness

Social-emotional self-awareness means having the ability to understand own thoughts, emotions, and values, as well as knowing how those factors influence one's behavior.

Teaching students to look at themselves honestly can help them respond to compliments, feedback, and criticism openly and earnestly. This sense of self will teach them to see and acknowledge both the positive and negative things in their nature

Students need to be able to identify their feelings. Learning the difference between frustration and anger will help students navigate their emotions. By recognizing the link between their feelings, thoughts, and actions, they can then address these feelings and react to them appropriately.

Students' ability to see themselves, acknowledge their shortcomings/weakness, and embrace their strengths is a great confidence booster. Knowing that it's okay to admit they're wrong or don't understand something sets them up for growth. Acknowledging aptitude also builds confidence.

All of these skills lead students to self-efficacy. They understand that self-work and growth is positive activities that result in healthy, happy people with a drive to achieve

<https://www.positiveaction.net/blog/teaching-self-awareness-to-students>

V.C Assignments

C1: Prepare a positive and negative effects of sun

C2: Prepare the role of circular shapes in everyday life

Resources

References:

1. <https://www.positiveaction.net/blog/teaching-self-awareness-to-students>
2. <https://dltk-teach.com/shapes/msudoku.htm>
3. <https://www.2nd-grade-math-salamanders.com/>
4. NCERT Text books, reference books (R.D.Sharma, R.S Agarwal)

Topic	Values / Life skills integrated & imbibed	Activities
Halves & Quarters	<p>Core Values considered : Sharing & Kindness</p> <p>Other Sub-Values: kindness, helping others, team work, Joy, happiness</p> <p>Life skills: listening, reading, and thinking</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1. Worksheets and by interactions and demonstrations to revise the previous knowledge of students. 2. Story of two friends in a forest to instill the value of sharing and thereby happiness. 3. Games to demonstrate the significance of being happy and spread the happiness to others by giving. Taking turns and share the success and failures equally is also an important quality students learn from sports & games 4. The project of giving students learn the habit of sharing & respecting elders at a younger age, which makes world a happy place 5. Assignment: Reading Autobiography of Mother Teresa This activity will help them to register the value of sharing and caring

Materials / Resources needed

Value Integration:-

1. BB, Pen, Duster,
2. Facilities and Equipment to show videos.
3. NCERT Text books, reference books (R.D. Sharma, R.S Agarwal)
4. Worksheet of puzzles

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated to teach students the important quality of sharing and caring. Sharing is a vital skill of life and is one of the most significant quality children learn while they grow up. Sharing teaches children about compromise and cooperation. A child who knows how to share is well loved by other people around him/ her. It can help in making and developing better relationships with friends and those that come into their life.

The key discussions are:

1.By using worksheets and by interactions and demonstrations teacher shall revise the previous knowledge of students.

2.Through the story of two friends in a forest teacher shall instill the value of sharing and thereby happiness.

3.2.Through games teacher shall demonstrate the significance of being happy and spread the happiness to others by giving. Taking turns and share the success and failures equally is also an important quality students learn from sports & games

4.Through the project of giving students learn the habit of sharing & respecting elders at a younger age, which makes world a happy place

5.Assignment:

Reading Autobiography of Mother Teresa

This activity will help them to register the value of sharing and caring

Unit 9**Halves & Quarters****Sharing And Caring****I. Introduction**

The lesson '**Halves and Quarters**' teaches Knowledge of the fractional numbers and introduce the new terms like half and quarter. Students will be able to draw the half part of the given picture, make half of given objects and understands the part or a fraction of the whole. This lesson teaches students to divide things among friends equally. They learn to solve problems on real life like equal distribution as per the availability of the things, calculations in daily life activities, develop ability of problem solving.

Through this lesson students learn the important quality of sharing and caring. Sharing is a vital skill of life and is one of the most significant quality children learn while they grow up. Sharing teaches children about compromise and cooperation. A child who knows how to share is well loved by other people around him/ her. It can help in making and developing better relationships with friends and those that come into their life.

II. Learning Objectives / Outcome

Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Identifies half, one-fourth, three-fourths of a whole in a given picture by paper folding and also in a collection of objects.
- Represents the fractions as half, one-fourth and three fourths by using numbers / numerals
- Shows the equivalence of a fraction with other fractions
- To be able to solve word problems involving fraction
- Develop the habit of sharing and caring

III. Process & Action Plan

"Love only grows by sharing. You can only have more for yourself by giving it away to others."— Brian Tracy



Fractions are usually a tough area for the children to understand. So teacher can take better life examples to show how fractions work and what importance it has on human life. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:



A.
Introduce the **context** activity:
Discussion on classroom objects& solving
worksheet.ReferA1& A2



B. Carry out the varied **activities** in class (given below)
in the sequence specified.



1.
Story to instil the
importance of
sharing & Caring.
Refer-B1

2.
Game to instil
teamwork & caring
& Sharing.
Refer-B2

3.
The giving
project to
inculcate the
habit of
caring.Refer-B3



C. Aid generalization of the concepts learnt, through **assignments**
(given below).



1.
Autobiography
reading of Mother
Teresa.Refer-C1



While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the core approach – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

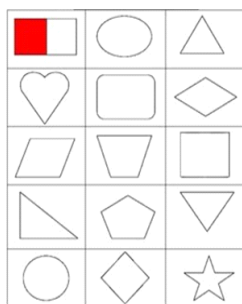
The core values being considered are Sharing & Caring along with other sub-values like kindness, helping others, team work

The unit also provides the scope to develop the following life skills in the students: listening, reading, and thinking

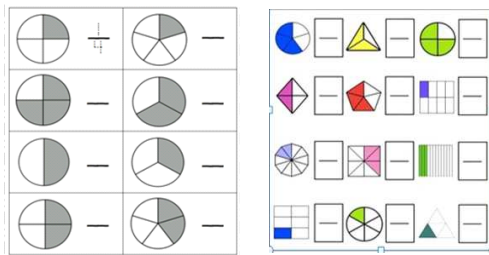
IV. Activities & Related Discussion

A. Context Activity for the teacher to Start:

A1. Teacher shall give print out of the worksheet and instruct students to colour the half of the shapes given in the work sheet.



A2. Teacher shall instruct students to see the figure and write the fractions.



<https://in.pinterest.com/pin/138907969733091068/>

<https://in.pinterest.com/pin/637751997208591386/>

<https://in.pinterest.com/pin/62346776072570514/>

B. Value based Activities

B1: Story on Sharing & Caring

There were two friends in a forest, a mango tree and a banyan tree. They talked to each other all day long. Every night lions and tigers came and slept under them. The mango tree did not like the animals. "I will drive them away." He said, "They roar loudly and smell bad." The banyan tree said, "Don't do that. We need each other. We must live together." But the mango tree did not listen to him. That night the mango tree shook its branches and made loud noises. The animals thought it was a demon and they ran away. The mango tree was happy. The next evening two wood cutters came to the forest. They saw the big mango tree. One of them said, "There is no wild animal here. So let's cut down this tree." They began to cut the mango tree. "I told you we need the animals and they need us. If we do not help each other we can get hurt." Said the banyan tree.

Discussion:

This story teaches students to live in harmony with everybody. Students should care for the wellbeing of each other, by doing so they create a happy and positive environment that will help in development of everybody.

<https://bestkstories.blogspot.com/2017/02/sharing-and-caring.html>

B2: Activity:

When children participate in games that involve team winning, they learn to share the success and failures equally with others. In this way, they can cultivate the habit of sharing in a subtle but effective way. During play, set a schedule for taking turns. For instance, it is the turn to pass on the toy or ball to the other player when the timer rings. This process can teach the child that learning to give things to others is not only a part of the game, but life as well.

B3: The giving Project

Teacher shall organize a Joy of giving day with the discussion of children

Show the video of an old age home visit

(https://www.youtube.com/watch?v=AbeQAB0n_WY.)

Collect from students the materials as per the requirement.

Prepare songs, dance, good speeches etc. to entertain the inmates of old age homes.

Make students realize that we can give/share many ways



- A hug, some help, sharing books, notes, good words of praise
- We give to friends, family & community
- We cheer up people who are feeling blue
- When we give our hearts grow
- The more we give the more blessings we get.

Decide a day for the visit of an old age home, this activity will help them the habit of sharing and caring for the people who are less fortunate.

V. C: Assignments

C1.: Read the autobiography of Mother Teresa

Resources

References:

1. <https://in.pinterest.com/pin/138907969733091068/>
2. <https://in.pinterest.com/pin/637751997208591386/>
3. <https://in.pinterest.com/pin/62346776072570514/>
4. https://www.youtube.com/watch?v=AbeQAB0n_WY
5. <https://bestkstories.blogspot.com/2017/02/sharing-and-caring.html>
6. NCERT Text books, reference books (R.D.Sharma, R.S Agarwal)



Topic	Values / Life skills integrated & imbibed	Activities
Play with Patterns	<p>Core Values considered : Confidence, Curiosity and Harmony</p> <p>Other Sub-Values: discipline, positive attitude, helping nature</p> <p>Life skills: problem solving, critical thinking, analyzing, creativity</p>	<p>Value integration Activities:- Interactions, story and discussions ,games and activities to register values harmony, confidence and curiosity among students</p> <ol style="list-style-type: none"> 1. Puzzles worksheet is used for revision and introduction of new concept. 2. Combination activity " makers & breakers inculcate creativity & curiosity along with the concept of patterns 3. Nature tour helps to create curiosity among students and understand the harmony in nature 4. Mathematics Scavenger Hunt (Combination Activity): This activity will inculcate curiosity, creativity, and looking at things in a different perspective <p>When students seek patterns in the world around them, they see order instead of chaos, which builds confidence in their understanding of how the world works and gives them a feeling of control.</p> <p>5. Assignment: Prepare a journal of Fibonacci pattern of leaves and seeds with names and numbers This assignments are to practice and understand the values learned .</p>

Materials / Resources needed

Value Integration:-

1. BB, Pen, board, Duster.
2. Worksheet of puzzles
3. Papers, colour pencil
4. Facilities and Equipment to show videos.
5. NCERT Text books, reference books (R.D.Sharma, R.S Agarwal)

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated to help children in learning to observe and understand the patterns in our surrounding and realize the rule of creativity in a pattern. . Understanding patterns nurtures the kind of mathematical thinking that helps children become problem-solvers and thinkers Patterns are also an important element of spatial thinking and geometry; once children begin to spot patterns they see them everywhere, not only in the environment, but also in daily routines and all kinds of regular behavior. Most important of all, children find pattern activities engaging and so they can help to develop positive attitudes and access to mathematics for all children.. It is used as a problem-solving tool. Through the lesson children learn coding and decoding

The key discussions are:

By interactions, story and discussions ,games and activities teacher shall register values harmony, confidence and curiosity among students

- 1.Puzzles worksheet is used for revision and introduction of new concept.
- 2.Combination activity " makers & breakers inculcate creativity & curiosity along with the concept of patterns
- 3.Nature tour helps to create curiosity among students and understand the harmony in nature
- 4.Mathematics Scavenger Hunt (Combination Activity) :This activity will inculcate curiosity, creativity, and looking at things in a different perspective
When students seek patterns in the world around them, they see order instead of chaos, which builds confidence in their understanding of how the world works and gives them a feeling of control.

5.Assignment:

Prepare a journal of Fibonacci pattern of leaves and seeds with names and numbers
This assignments are to practice and understand the values learned .

Unit 10**Play with Patterns****Confidence, Curiosity and Harmony****I. Introduction**

The lesson “**Play with Patterns**” aimed to make students aware of and practice how to find patterns, extend them and express in various ways thereby enabling them to start the process of thinking towards generalisations which is termed as algebra in higher classes. This lesson helps children in learning to observe and understand the patterns in our surrounding and realize the rule of creativity in a pattern. . Understanding patterns nurtures the kind of mathematical thinking that helps children become problem-solvers and thinkers.

Patterns are also an important element of spatial thinking and geometry; once children begin to spot patterns, they see them everywhere, not only in the environment, but also in daily routines and all kinds of regular behavior. Most important of all, children find pattern activities engaging and so they can help to develop positive attitudes and access to mathematics for all children. It is used as a problem-solving tool. Through the lesson children learn coding and uncoding.

Through the topic Patterns the teacher can inculcate the value of curiosity, confidence & harmony. The knowledge of patterns helps us organize thoughts and establish order to our lives. As we begin to connect patterns in nature and life, they bring a sense of harmony to our minds.

II. Learning Objectives / Outcome

Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Observe and understand the patterns in our surrounding and realize the rule of creativity in a pattern, Identifies and extends the patterns using blocks and geometrical shapes.
- Able to know about symmetrical and non- symmetrical shapes, letters, alphabet and numbers, Identifies and extends the patterns using numbers and letters, Completes

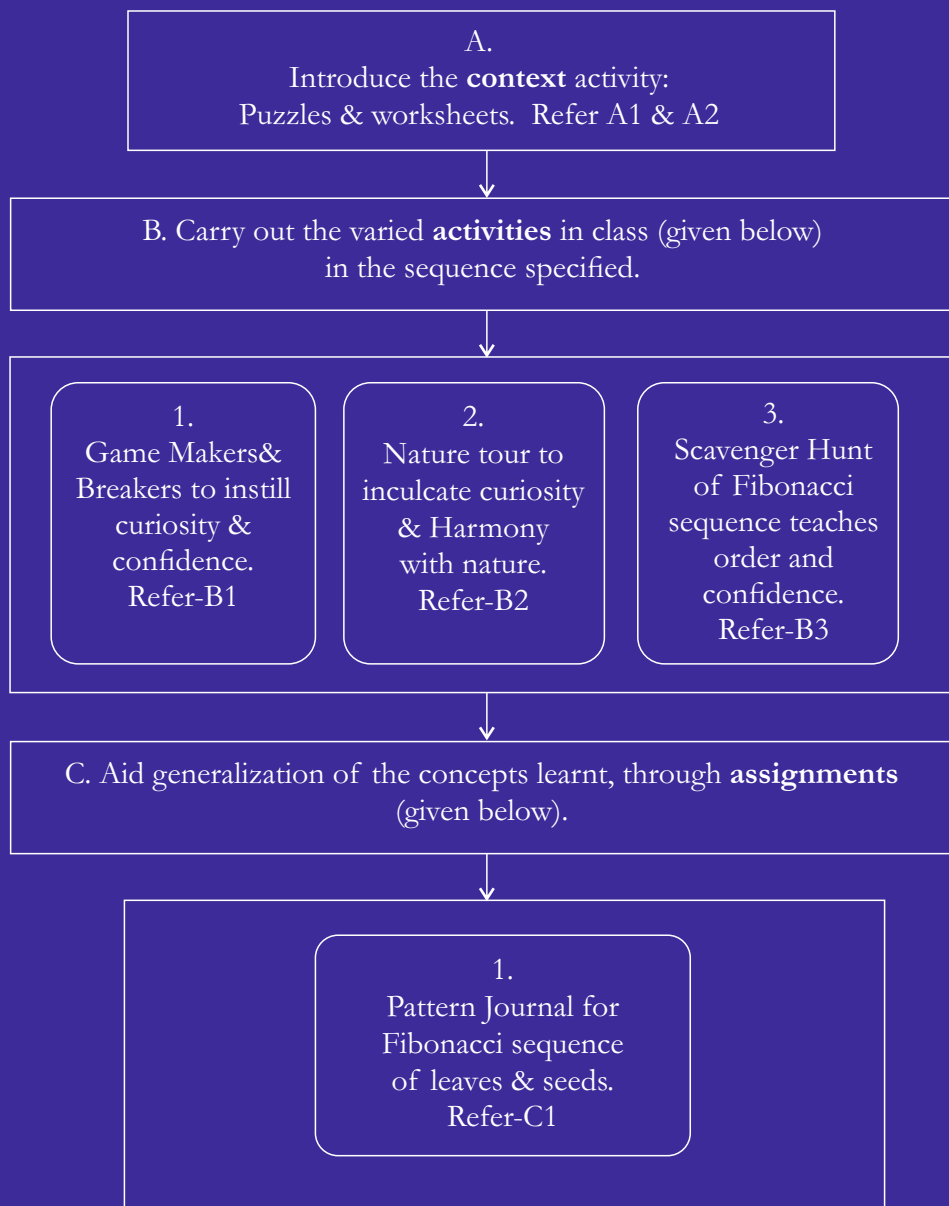
the given tiling patterns

- Able to know patterns involving basic operation and to compute the number pattern using addition/subtraction/Multiplication/ division, Solves magic squares and magic triangles.
- Understands and applies the rules and knowledge to form different pattern.
- To recognize the rules for coding/ decoding and the rule used in puzzles and games.
- Gaining curiosity to find more usefulness of patterns
- Maintain order and thereby gain confidence & Learn harmony with the surroundings.

III. Process & Action Plan

Patterns actually unfolds the beauty of Nature around the children and slowly take them to the world of imagination and creation of new things. The values that this chapter can hold for them are unlimited. The aesthetic sense of appreciation needs to be kindled for the children with this chapter. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process



While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the core approach – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The core values being considered are Confidence, Curiosity and Harmony along with other sub-values like discipline, positive attitude, helping nature

The unit also provides the scope to develop the following life skills in the students: problem solving, critical thinking, analysing, creativity

IV. Activities & Related Discussion

A: Context activity for the teacher to start:

Teacher shall use the following puzzles to revise the previous knowledge of the students

A1: Solve the following Puzzles.

1.

$$\begin{array}{rclcl}
 \text{Building} & + & \text{Building} & + & \text{Building} & = & 12 \\
 \text{Building} & + & \text{Building} & + & \text{House} & = & 18 \\
 \text{Factory} & + & \text{House} & + & \text{House} & = & 26 \\
 \text{House} & + & \text{Factory} & \times & \text{Building} & = & ?
 \end{array}$$

2.

$$\begin{array}{rclcl}
 \text{Pear} & + & \text{Pear} & + & \text{Pear} & = & 21 \\
 \text{Lemon} & \times & \text{Pear} & + & \text{Lemon} & = & 40 \\
 \text{Lemon} & \times & \text{Strawberry} & + & \text{Strawberry} & = & 60 \\
 \text{Strawberry} & + & \text{Lemon} & \times & \text{Pear} & = & ?
 \end{array}$$

<https://www.solveemoji.com/>

A2: Identify if each of the following is a geometric pattern or not

1.		<table border="1"><tr><td>YES</td></tr><tr><td>NO</td></tr></table>	YES	NO
YES				
NO				
2.		<table border="1"><tr><td>YES</td></tr><tr><td>NO</td></tr></table>	YES	NO
YES				
NO				
3.		<table border="1"><tr><td>YES</td></tr><tr><td>NO</td></tr></table>	YES	NO
YES				
NO				
4.		<table border="1"><tr><td>YES</td></tr><tr><td>NO</td></tr></table>	YES	NO
YES				
NO				
5.		<table border="1"><tr><td>YES</td></tr><tr><td>NO</td></tr></table>	YES	NO
YES				
NO				
6.		<table border="1"><tr><td>YES</td></tr><tr><td>NO</td></tr></table>	YES	NO
YES				
NO				

<https://in.pinterest.com/pin/470485492313011681/>

B. Value Based activities:

B1: Combination activity Game: Makers and Breakers

Teacher shall reinforce the strategy of pattern recognition through an active problem-solving game and inculcate curiosity, confidence & creativity among students.

Instruction to Teacher

The Makers and Breakers game improves students' pattern-recognition skills. A small group of students, designated Makers, creates a pattern. A second group, Breakers, breaks the pattern. The Makers' pattern must incorporate a common feature that students can see. For example, all Makers could wear glasses or hold their hands in the same position. The more subtle the pattern, the harder it becomes to break.

For example, students can make patterns using a simple '+' symbol, the maker is free to make complex patterns out of this one symbol, the breaker must identify the root symbol that is the source of the pattern, in the context of the example the breaker identifies the pattern root/ source as '+'.

Steps:

- Divide the class into groups of three to five students. Each group forms a team. Pair two teams together. Designate one team Makers and the other Breakers. (Each team will take a turn as Makers and Breakers.)
- Makers design a pattern "code." Allow the Makers 10–15 minutes of privacy to create a pattern or two. While Makers are busy, the Breakers spend their time inventing

patterns for their turn as Makers.

- The game starts when the Breakers try to break the other group's pattern. Breakers observe and ask questions. Makers answer only yes or no.
- Record the time it takes to break each pattern. Set a stopping time—for example, five minutes—if the pattern cannot be broken.
- Change roles and repeat the game. The Makers whose patterns took the most time to break are the winners.
- Discuss how the game went. What made a pattern hard or easy to break? What methods did the teams use to devise and break the patterns?

This game takes about an hour: 15 minutes to introduce, 30 minutes to play, and 15 minutes to process. While groups are brainstorming, walk around the room and offer advice—but be careful not to intervene in groups that are doing fine on their own. As students repeat this activity, they become more creative and curious. In time, challenge them to make and break patterns that are exceptions to the rule.

Through this lesson, we intend to engage a student's critical thinking capacity and encourage the same by conducted activities.

B2: Naturalist Patterns-Nature Tour

Teacher shall inspire student inquiry by recognizing patterns in nature and learn harmony. It is great exercise for everyone as well as a natural teaching platform for patterns and makes them understand the harmony in nature.

Instruction to Teacher:

Teacher shall take students for a nature tour. Students spend time in a rich, natural environment, developing a list of 10 questions inspired by individual curiosity. Students share and begin to investigate their most burning questions. (If not possible for a nature tour physically, teacher shall show videos in the classroom like Discovery or National geographic channel)

Steps:

- Bring students to an environment you know to be rich in physical and biological patterns, such as a meadow or forest.
- Ask students to isolate themselves from others for about 30 minutes and write 10 questions that they have about the environment around them. The questions can range from matters of fact (What is this plant?) to higher-order musings about the significance of observations (Why are trees so tall?).
- Regroup students. Ask them to verbally share from their lists one or two "burning" questions that, in the words of a 4th grade youngster, they "really, really, really want

know."

- Encourage students to think about a burning question by asking what inspired it. Was the question motivated by an interest to learn about facts alone or probe a deeper significance? Deeper questions can spark a student project.

With real patterns to observe, students will be inspired to ask both low- and higher-order questions. An ecosystem such as a wetland or forest can be a rich and complex setting for student observations. However, a single tree or even a leaf can reveal interesting patterns. Questions raised by students observing a single tree or leaf will of course be narrower and easier to manage than those raised by observations of an ecosystem.

Because it is common to look at something without really seeing, students are often surprised at the questions they generate. The 10 Questions activity encourages students to see patterns in nature that they would ordinarily overlook. Students will benefit from the activity and learn that nature has some interesting life lessons to teach them through patterns.

Note: Here's a partial list of questions expected from students

1. What is the name of the plant?
2. Do all trees have broad leaves?
3. Why are trees so tall? How do trees grow?
4. Are all leaves green? Why there are different patterns on a leaf?
5. How do leaves change color?
6. Where do seeds come from?
7. Why there is brick pattern on a building or home?
8. What is the pattern on the sidewalk or driveway?
9. Why do the tree has rings?
10. Why there is different number of petals on flowers
13. What are the colors, shape, and size of neighborhood houses?
11. Why the length of Shadows of people, trees, and buildings changes as per time of a day?







<http://www.ascd.org/publications/classroom-leadership/nov2000/Patterns,-the->

B3: Math – Pattern Scavenger Hunt Ideas-Fibonacci Sequence

Teacher shall revise Fibonacci sequence (0,1,1,2,3,5,8,13, and so on with the next number in the sequence being the sum of the two previous numbers)

Instructions;

- Teacher shall explain the existence of Fibonacci numbers presence in nature by taking examples of the sequence in pinecones, shells, branches of trees, petals of flowers, seeds.
- Teacher shall show the video of the beauty, harmony and pattern of Fibonacci numbers in nature

Name of the plant	No. Of Petals	Image of flower
Calla Lily	1	
Euphorbia	2	
Blue Iris	3	
Primrose	5	
Poppy	8	
Marigold	13	

- Ask students (in groups) to find out the name and picture of plants which has Fibonacci patterns of petals by virtual hunt or physical hunt.

- Teacher shall give some examples

Picture source: <https://www.google.com/>

Patterns are observations organized into meaningful categories by the observer. When students seek patterns in the world around them, they see order instead of chaos, which builds confidence in their understanding of how the world works and gives them a feeling of control.

V. C: Assignments

C1.Prepare a journal of Fibonacci pattern of leaves and seeds with names and numbers

Resources

References:

1. <https://www.solvemoji.com/>
2. <https://in.pinterest.com/pin/470485492313011681/>
3. <http://www.ascd.org/publications/classroom-leadership/nov2000/Patterns,-the-Brain,-and-Learning.aspx>
4. <https://nrich.maths.org/7218>
5. <https://www.google.com/>
6. .NCERT Text books, reference books (R.D.Sharma, R.S Agarwal)

Topic	Values / Life skills integrated & imbibed	Activities
Tables & Shares	<p>Core Values considered : Sharing, Happiness & Kindness</p> <p>Other Sub-Values: confidence, Self-awareness, Self dependency, responsibility</p> <p>Life skills: problem solving, calculation, decision making</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1. Number maze target 50 puzzle in class for revising addition, multiplication, subtraction and division which studied in previous classes 2. Conduct the combination activity of drawing Walldorf flower and .Preparation of multiplication table sheet for home to instill communication ,cooperation & teamwork. 4. Discussion : Case study of the topic Happiness . The activity helps students relate to one another, and it teaches them the multiple effect of giving happiness, sharing and gratitude among students. 5. Story narration to teacher students that kindness and generosity can change someone's life. 6. Assignment: Hang up multiplication table for home Preparation of Gratitude journal

Materials / Resources needed

Value Integration:-

1. Worksheets to conduct context activity
2. Card paper and poster paper to conduct activities
3. BB, Pen, scissor, colour pencils
4. Facilities and Equipment to show videos.
5. NCERT Text books, reference books (R.D.Sharma, R.S Agarwal) pen, board, Duster.

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated to inculcate the habit of sharing ideas, working together, applying individual creativity for the success of the team which gives an opportunity to grow from each other. As children handle money, share items between friends and cut food into portions they are beginning to build up their division and multiplication skills as part of their everyday life. Being introduced to these ideas at an early age will mean that as well as gaining confidence in the subject, they will be able to utilize these skills in the wider world "When you work together with teammates, you can do remarkable things, if you work alone; you leave a lot of victories on the table Collaboration has a multiplying effect on everything you do because it releases and harnesses not only your skills but also those of everyone on the team"- John Maxwell

The key discussions are:

- 1.By solving number maze target 50 puzzle in class for revising addition, multiplication, subtraction and division which studied in previous classes
- 2.Conduct the combination activity of drawing Waldorf flower to instill communication, cooperation & teamwork. This activity demonstrates how cooperation and effective communication help them to work together as a team.
- 3..Preparation of multiplication table sheet for home teaches cooperation and sharing among students. Teacher should emphasize on the importance of teamwork, cooperation and the importance to get along with each other to overcome challenges
- 4.Discussion : Case study of the topic Happiness . The activity helps students relate to one another, and it teaches them the multiple effect of giving happiness, sharing and gratitude among students.
- 5.Story narration to teacher students that kindness and generosity can change someone's life.
- 6.Assignment:
Hang up multiplication table for home
Preparation of Gratitude journal

Unit 11**Tables and Shares****Sharing, Happiness & Kindness****I. Introduction**

The lesson “**Tables and Shares**” teaches to make multiplication tables in an easy and organised way which students can remember easily. They learn to multiply and divide using different ways. Students realise that multiplication as repeated addition and division as repeated subtraction and able to divide into equal groups. They learn to do daily life calculations based on multiplication and division and arrange the things in different groups in different ways. Familiarity and proficiency with the basic times tables are an essential building block in math. It opens the door to multi-digit multiplication and demystifies processes like long division and simplifying fractions. It lays the foundation for algebra.

Team work is dividing the task and multiplies the success. “When you work together with teammates, you can do remarkable things, if you work alone; you leave a lot of victories on the table. Collaboration has a multiplying effect on everything you do because it releases and harnesses not only your skills but also those of everyone on the team”- John Maxwell

As children handle money, share items between friends and cut food into portions they are beginning to build up their division and multiplication skills as part of their everyday life. Being introduced to these ideas at an early age will mean that as well as gaining confidence in the subject, they will be able to utilize these skills in the wider world

II. Learning Objectives / Outcome

Through this unit, the students will achieve the following grade appropriate academic and value based goals:

1. Understand the properties of multiplication multiply and solve problems.
2. Divide one, two, three digits numbers by 1 digit numeral; solve word problems involving division and multiplication.

3. Understand multiplication is repeated addition and use of symbol of multiplication and division is repeated subtraction and uses symbol of division.
4. Multiply a 3 digit number by 2 digit number and divides 3 digit numbers with 2 digit number and 1 digit number.
5. Learn sharing, work as team, optimism, self-dependency, self-awareness

III. Process & Action Plan

Multiplication tables is a lessons that must be seriously learnt by the kids as this lesson proves fundamental to their career and personal life. All future learning depends on this fundamental aspects of Math and the success that the children would reap in future in terms of career and personal life depends on the strength of this learning. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character

A. Introduce the **context** activity:
Puzzles of addition, subtraction, multiplication
& division. Refer A1 & A2



B. Carry out the varied **activities** in class (given below)
in the sequence specified.



1.
Combination activity
waldorf flower
multiplication table to
teach teamwork &
sharing. Refer-B1 & B2

2.
Case study (1, 2, 3)
to teach the multiple
effects of happiness
sharing and gratitude.
Refer-B3



C. Aid generalization of the concepts learnt, through **assignments**
(given below).



1.
Preparation of
Hang up
multiplication table
Refer-C1

2.
Preparation of
gratitude journal.
Refer-C2

While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the core approach – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The core values being considered are sharing, teamwork, self-awareness and self-dependency along with other sub-values confidence, Self-awareness, Self dependency, responsibility

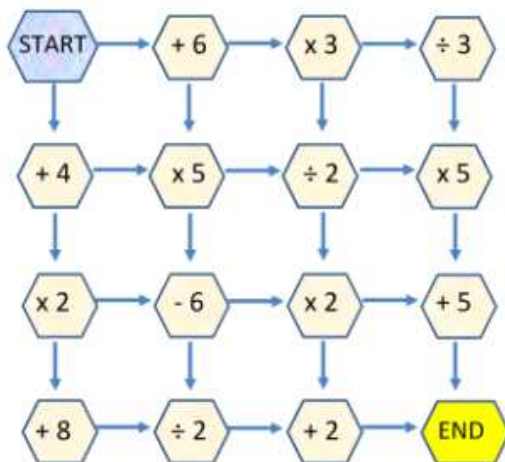
The unit also provides the scope to develop the following life skills in the students: problem solving, calculation, decision making

IV. Activities & Related Discussion

A.Context Activity for the teacher to start:

A1: Number Maze Target 50 Puzzle: The aim of this puzzle is for you to finish the maze with a total of 50. Choose your path carefully. The maze involves adding, subtracting, multiplying and simple division.

- Start the maze with Zero
- You have to finish the maze with a total of 50
- You must follow one of the arrows each time.
- There are two possible routes. Can you find them?



Extra Challenge:

1. Find the route with the highest total.
2. Find the route with the lowest total.

Reference:<https://www.math-salamanders.com/>

A2:

TOTAL PRODUCT PUZZLE 38

This is how the puzzle works! →

Example

Fill in the missing numbers in the puzzles below!

Find the missing numbers in the puzzle given below

<https://www.math-salamanders.com/>

B: Value Based activity:

B1: Combination activity: Drawing Waldorf Multiplication flower

Teacher shall divide the class into groups. Give poster paper for each group. Instruct them to make waldorf multiplication flower. Ask the students to build table on their own. Use their own strategies as for example,



ask the students to repeat the same activity for the tables of 4-20. Teacher shall allot tables group wise depends upon the number of students in the class.

Students start this activity by drawing the centre of the flower, in which they write a number between 2 and 12. They then draw 12 petals around the centre, with each petal containing the numbers 1 through 12. The last step is to draw another set of 12 petals which contain the centre number multiplied by each petal in the inner circle.

Students work as a team and by sharing ideas they will make waldorf multiplication flower for all numbers from 3-20 which can be displayed in the classroom bulletin board.

B2: Preparation of Multiplication Table Sheet for home

Teacher shall give poster paper and colour pencils GroupWise. Instruct students to make multiplication table sheet for their home to revise every day. Along with table preparation students learn team work, communication skill, patience and sharing

X	2	3	4	5	6	7	8	9	10	11	12
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

B3: Discussion on the topic Happiness

Teacher shall discuss and elicit situations when students feel happy. Explain them how happiness have multiple effects when it is shared. Through this discussion teacher shall inculcate happiness, sharing and gratitude among students.

Situations of happiness:

Case:1 Giving a sincere compliment is a quick, easy way to brighten someone's day while giving your own happiness a boost.

Teacher shall discuss that everyone likes compliments so ask them to complement each other in the class room. Teach them different ways of complimenting others

Examples & Tips

- Catch the person's eye and say it with a smile so they know you mean it. You might be surprised by how good it makes you feel.

Case:2 Being grateful can give your mood a big boost, practicing gratitude can have a significant impact on feelings of hope and happiness.

Teacher shall discuss that one need to be grateful for whatever they are blessed with. Guide them that try to keep an eye out for pleasant things in their life.

- Parents & Teachers who love you or getting gifts from someone.
- A friend who offered you notes or the neighbor who waved to you.
- Maybe even just the warmth of the sun on your skin.
- The food & water you get every day

Teacher shall elicit more situations from students. Train students to acknowledge one thing they are grateful for, which can be done any time of the day. With a little practice, Students may even become more aware of all the positive things around them which will give happiness to them and the people around them.

Case: 3 giving back or helping others will always give happiness to the giver and the receiver

Teacher shall discuss that kindness or helping others is not only good for them and a good thing to do, but it also makes us happier and healthier. Doing things for others whether small, or big is a powerful way to boost our happiness as well of those around us

Teacher shall narrate a story: A Shoe Seller Walks in the Shoes of Kindness—by febrihana,

There once was a merchant who had suffered huge losses in his business. He was felling terrible and depressed. He dint know what to do and how to lead his life. He felt miserable. The rich merchant had to sell off his car to repay his debts. One day on his

way back from work, he was waiting at the bust stop when he saw the most extraordinary thing. He saw an old man sitting a few meters away. He was a cobbler who also sold second hand shoes. He seemed very old and tired and nobody was buying his shoes. Then, a little girl came toward him and said, "may I polish your shoes?" That old man took pity on her, smiled and he gave her shoe to polish. The girl said, "I polish the shoe because I need money to buy my brother a new school uniform." The merchant was very moved by that scene and tears swelled up in eyes. The old man answered, "Oh, little girl. Just stop doing this. Come with me and I will buy you a uniform." Then they walked to a market, the merchant followed behind, and he saw the old man buying her a uniform. The girl was so happy. She said, "Thank you so much for doing this. May God bless you." Then she left, leaving the old man smiling. The merchant was blown away by the kindness he had just seen. Someone who had so little himself was able to show such incredible generosity! Amazing! His own sadness completely disappeared; chased away by the light of this kind act. He began realizing that he had a lot to be thankful for.

Moral: Kindness is godliness

The teacher can narrate the above story to the class and discuss about the underprivileged section of the society that needs help in kind. We all have more than what we need.

Sharing is another value that can be taught with the help of this story. Ask students some questions to find out the effect of discussion.

1. Do you feel donating your old books and clothes to the needy are a good way of sharing?
2. When there are natural calamities like floods, and we help them out by giving the daily essentials, is that a form of kindness?
3. Do you need to be rich to share and care?

V.C Assignments

C1: Preparation of Hang up multiplication table for home

C2: Preparation of Gratitude journal

Resources

References:

1. <https://www.math-salamanders.com/>
2. <https://www.whizz.com/blog/fun-ways-to-teach-times-tables/>
3. NCERT Text books, reference books (R.D.Sharma, R.S Agarwal)

Topic	Values / Life skills integrated & imbibed	Activities
How Heavy? How Light?	<p>Core Values considered: Respect of diversity, Self Belief & Fairness</p> <p>Other Sub-Values: Self-acceptance, responsibility, self-respect</p> <p>Life skills: Computation, estimation, problem solving, comparison, decision making</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1.Classroom hands on activity individually and group wise& by using worksheets to revise their previous knowledge and introduce the lesson. 2.Discussion method on the topic Respect of Diversity to inculcate the value of respecting the differences and similarities in the classroom. 3.Discussion with students guide them to talk openly and ask students treat every one fairly and equally without bias 4.Discussion on self -belief to make each student feel important irrespective of their background. 5Assignments Preparation of Charts of Respect Diversity & Fairness Quotes for displaying in Class room

Materials / Resources needed

Value Integration:-

1. Real weighing balance, Worksheets, Chart papers of different colors
2. Facilities and Equipment to show videos
3. Pen,Board,Duster
4. NCERT Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated in such a manner that children develop the value of respect for diversity, self-belief & Fairness among students. This lesson elaborate children weight is what makes things heavy or light. The heavier it gets the harder to carry and the lighter it gets the easier to carry. As there are objects of different types exist, teacher shall inculcate respect of diversity among students. While balancing weights of object teacher shall instill the significance of honesty and self-belief

The key discussions are:

- 1.By doing classroom hands on activity individually and group wise & by using worksheets teacher shall revise their previous knowledge and introduce the lesson.
- 2.By discussion method on the topic Respect of Diversity teacher can inculcate the value of respecting the differences and similarities in the classroom.
- 3.By discussion with students guide them to talk openly and ask students treat every one fairly and equally without bias
- 4.By discussion on self -belief teacher shall make each student feel important irrespective of their background.

5Assignments

Preparation of Charts of Respect Diversity & Fairness Quotes for displaying in Class room

Unit 12**How Heavy? How Light?****Respect of diversity, Self-Belief & Fairness****I. Introduction**

The lesson **“How Heavy? How Light?”** discusses regarding the estimation, measurement and comparison of the weight of objects in grams and kilograms. It also throws light on alternative methods to measure heavy & light objects. Uses a variety of weights to weigh using a weighing balance. Helps to solve real life problems involving weights.

This lesson teaches children weight is what makes things heavy or light. The heavier it gets the harder to carry and the lighter it gets the easier to carry. As there are objects of different types exist, teacher shall inculcate respect of diversity among students. While balancing weights of object teacher shall instil the significance of honesty and self-belief.

II. Learning Objectives / Outcomes

Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Able to read the weights written packed items, able to compare the weights of two objects (heavier/lighter)
- Able to convert grams into kilograms and vice-versa, able to add weights of two or more objects. Able to add/subtract orally.
- Learn correct use of units and weigh objects of different weights
- Familiar with rates of various postal items and get knowledge about stamps and their use.
- Solves problem involving daily life situations related to length, distance, weight,

volume and time involving four basic arithmetic operations.

- Develop the habit of respecting diversity, being fair and believing in self.

III. Process & Action Plan

This chapter is emphasising on the measures of the objects and it is extremely important for the children at young age itself to know the difference between heavy and light objects. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

A. Introduce the **context** activity:
Discussion, Demonstration & Worksheet on
classroom objects. Refer-A1



B. Carry out the varied **activities** in class (given below)
in the sequence specified.



1.
Discussion to
instill respect for
diversity.
Refer-B1

2.
Discussion to
instill Fairness
among students.
Refer-B2

3.
Discussion to
instil Self Belief
among students.



C. Aid generalization of the concepts learnt, through **assignments**
(given below).



1.
Preparation of
chart & Quotes
on Diversity, fairness
& self-Belief.
Refer-C1

While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the core approach – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The core values being considered are Respect of diversity, Self-Belief & Honesty along with other sub-values like responsibility, self-respect

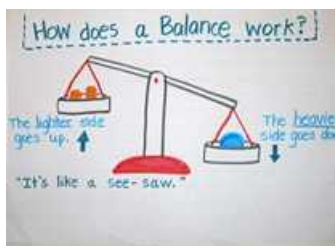
The unit also provides the scope to develop the following life skills in the students: Computation, estimation, problem solving, comparison, decision making

IV. Activities & Related Discussion

A. Context activity for the teacher to start.:

A1: Demonstrate of finding out weight of an object and instruct students to experience it
Provide worksheets

Demonstrate a weighing scale to students. (Teacher shall show different weighing scales by using video or presentation). Explain that scales are used to measure weights. Ask students if they've ever been weighed at the doctor's office before. Have them compare





the scales that they are weighed on with the one you have in the classroom.

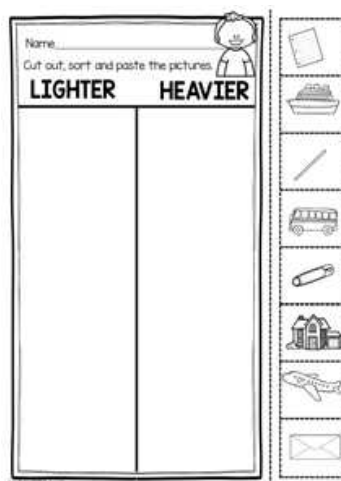
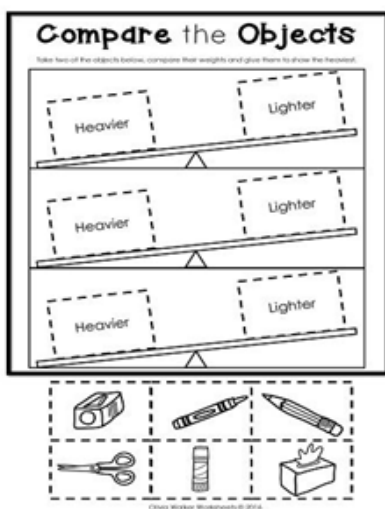
Demonstrate how to measure two objects using the balance scale. Tell students that the scale doesn't tell you the exact weight of the objects, but instead tells you which one is heavier.

Put two objects on the scale and show students that the heavier object drops towards the ground while

the lighter object lifts up.

Demonstrate how to use the scale with additional items.

As you explain how the scale works, provide visuals and/or explanation to students. Ask students to identify heavier objects & lighter objects. Ask students to turn and talk to



share their ideas with a partner.

<https://in.pinterest.com/pin/134545107598548028/>

Independent working time (10 minutes)

When students finish their worksheets, have them come up and take turns using the balance scale to measure objects. Hand out the Comparing Weight and Color & Compare Weights of Objects worksheets. Have students complete them as you circulate around the room, providing help as needed

B: Value Based Activities:

B1: Respect of diversity activities-Discussion

Teacher shall help children appreciate the similarities and differences between themselves and others—and reassure them that talking about differences is okay and encouraged. For a teacher it is a great starting point for helping all young learners appreciate other cultures, values, and beliefs.

1. Celebrate similarities and differences with charts and artwork-Respect of Diversity

During class discussions, point out how wonderful it is to have so many children in the class with similarities and differences, and how differences make each of us unique and special. Then, instruct students' to create a chart with all the children's favorite foods, festivals, languages family traditions. Reserve a bulletin board or shelf for displaying artwork or classroom charts that celebrate the many ways children are alike and different. Proudly displaying similarities and differences is an excellent way to teach students to value diversity.

Show genuine interest and enthusiasm whenever children share something about themselves, their values, or their culture. You might say things like, "Wow, that is so interesting!" "I am really glad to learn about that," "I really like that tradition," or "My family does things differently from yours, but isn't it great that there are so many different ways families can show that they love each other?"

2. Have open conversations about stereotypes and biases-Fairness

The roots of biased viewpoints take hold when children are young. To reduce bias and support children's development of compassion and understanding, explicitly tackle stereotypes and biases in your early childhood classroom. For example, as you paint class portraits, talk about how great it is to see so many similarities and differences—but also point out that sometimes people treat other people badly or differently because of their looks, the color of their skin, their cultural beliefs, or their gender. Share with children that this is unfair and is not how people should treat one another. In an increasingly diverse global society, it's important to have conversations

like these to reduce the likelihood that children will adopt biased, stereotypical viewpoints.

3. Help children verbally share the things that make them special- Self belief

Build children's cultural identity and boost self-esteem by giving them chances to share their strengths with the class. Begin by talking with your class about how important it is to help other people feel good about them. Emphasize how scary it can be to feel like you are different from other people, and how brave it is to share things that are unique about yourself or your family. Then provide your students with an opportunity to share interesting facts about themselves, their families, and their passions and talents. Teach kids words they can say to support one another and make each other feel valued during the share sessions: "That's cool! I never knew that before!" "I like the way you do that." "Can you tell me more about that?"

Regardless of their background or abilities, be sure to treat all children in your classroom as competent, capable learners. When children experience challenges such as communication difficulties or demonstrate behaviors such as temper tantrums, use empathy to show the child you understand where he's coming from. Use words that respect the child's perspective: "I know you wanted a turn. It's disappointing that we ran out of time." This will reassure your student and make his experience more understandable to the other children in the class.

Respect and empathize with all children Respect of diversity, self-belief & Fairness

Throughout the school day, children will often wonder how to respond to their classmates' differences and challenges. Stay mindful that they're looking to you as a model, and resolve to set a good example they can follow. Seeing you respond to diversity in a consistently supportive, empathetic way will teach children positive attitudes and effective strategies, and will assure them that they can look to you for support in the classroom

Each year, you'll encounter diversity of many different types in your classroom; your students will differ in their language, culture, abilities, socioeconomic status, and developmental levels. Start young children early on the path to respect and acceptance by modeling empathy and displaying enthusiasm for diversity every day. With support from you and the other adults in their lives, all young learners can help each other feel proud, accepted, and valued.

<https://blog.brookespublishing.com/8-ways-to-show-young-children-that-diversity-is-a-strength/>

V. C: Assignments

C1: Preparation of Charts of Respect Diversity & Fairness Quotes for displaying in Class room

Resources

References:

1. <https://in.pinterest.com/pin/134545107598548028/>
2. <https://blog.brookespublishing.com/8-ways-to-show-young-children-that-diversity-is-a-strength/>
3. .NCERT Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Topic	Values / Life skills integrated & imbibed	Activities
Fields& Fences	<p>Core Values considered : Self-discipline, Self-Control</p> <p>Other Sub-Values: Patience, Temptation, discipline</p> <p>Life skills: Observation, thinking, computing& calculation</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1.Hands on activity in the class room with the classroom objects and worksheets to revise the previous knowledge of students. 2.Case study discussions teacher put problems and elicit solutions from students to register the importance of self discipline. 3.Discussion & demonstration teacher make students experience how to practice self control from tempting situations 4. Game of Wait Five teacher inculcate self control among students 5. Assignment Prepare a chart for on self-discipline on their daily routine

Materials / Resources needed

Value Integration:-

- 1.Rulers,pencil,different objects which is available in classroom, worksheets
2. Chocolates with wrapper
- 3.Facilities and Equipment to show videos
- 4.Facilities to conduct games
- 5.BB, Pen
- 6.Ncert Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated in such a manner that children learn the concept of self discipline & self control along with boundary and area. Teaching children self-control is one of the most important things we can do for our kids. Some studies suggest that a child's level of self-discipline at a young age can predict how successful and happy he/she will be later in life, the facts remain the same: if you take the time to teach your child strategies for self-control now, you will be setting him up for long-term success at school, work, in his personal life, and beyond.

The key discussions are:

1.By hands on activity in the class room with the classroom objects and by using worksheets teacher shall revise the previous knowledge of students.

2.By case study discussions teacher put problems and elicit solutions from students to register the importance of self discipline.

3.By discussion & demonstration teacher make experience students how to practice self control from tempting situations

4. By using a game of Wait Five teacher inculcate self control among students

5. Assignment

Prepare a chart for on self-discipline on their daily routine

Unit 13**Fields and Fences****Self-discipline, Self-Control****I. Introduction**

The lesson “Fields and Fences” discusses about the concept of fences (boundary or perimeter). Perimeter is defined as the sum of all sides of a closed figure. It also discusses the concept of area. The space covered by the surface of the figure. Area of a figure is the number of square units that cover the surface of the closed figure. Perimeter and area are two math concepts that students often get confused. Perimeter is the distance around an object or surface. For instance, fences often go around the perimeter of a backyard, playground or garden. On the other hand, area is the amount of space inside of a given surface. Painting a house or installing carpet requires knowledge of the area.

Through this lesson the teacher shall inculcate in students that they should always set a boundary for them. Boundary means a control and discipline in every walks of their life.

Teaching children self-control is one of the most important things we can do for our kids. Some studies suggest that a child's level of self-discipline at a young age can predict how successful and happy he/she will be later in life, the facts remain the same: if you take the time to teach your child strategies for self-control now, you will be setting him up for long-term success at school, work, in his personal life, and beyond.

II. Learning Objectives / Outcome

Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Recognizes total length of boundary or the sum of the sides of given figure as the perimeter of a plane figure.
- Estimates and compares the perimeter of various figures
- Determine the size (area) of simple geometrical shapes and irregular figures given on a square grid

- Solves real life problems based on perimeter of simple shapes and plane figures
- Learn the importance of self-discipline, self-control and fairness

III. Process & Action Plan

Knowing one's boundary is the first lesson that kids have to learn when they enter school. In school they have to coexist with several other children who come from different families and learning to be with them in spite of all differences is important. This lessons teaches them all those values. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand. The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:

A. Introduce the **context** activity:
Hands on activity on classroom objects &
Worksheets. Refer-A1



B. Carry out the varied **activities** in class (given below)
in the sequence specified.



1.
Case study
discussions to
instill
self-discipline.
Refer B1

2.
Demonstration for
experiencing self-
control . Refer-B2

3.
Combination
Activity-Wait
Five to instill
self-control.



C. Aid generalization of the concepts learnt, through **assignments**
(given below).



1.
Prepare a chart for
on self-discipline
on their daily
routine.
Refer-C1

While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the core approach – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The core values being considered are Self-discipline, Self-Control along with other sub-values like Patience, Integrity, and Truthfulness.

The unit also provides the scope to develop the following life skills in the students: Recognition, observation, classification, analytical thinking, and data analytical ability presentation skill.

IV. Activities & Related Discussion

A.The context activity for the teacher to start

A1: Class room activity:

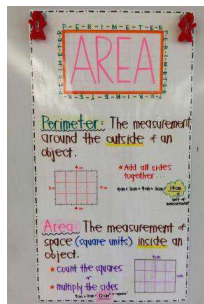
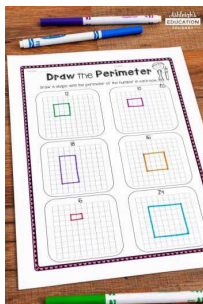
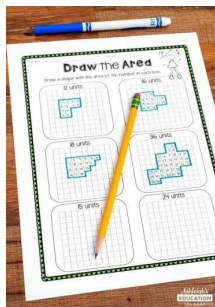
Teacher shall divide students' in different groups and instruct them to measure the total length of the edge of classroom objects like teachers table top, students desk top, math note book, math text book, eraser, different areas on the floor marked by using painters tape. Provide students with rulers and pencil. Teacher can shall take round and help/guide students

Name of the object	Length+ Length	Breadth+ Breadth	Total
Teachers 'Table			
Math Textbook			
Math Notebook			
Students Desk			
Eraser			
Marked areas on the floor			

After the activity teacher shall introduce perimeter is the distance around the edge.

Similarly by giving a square work sheet teacher shall introduce area by counting squares & perimeter of any shape.

Reference for teacher is given below



<https://www.ashleigh-educationjourney.com/teaching-area-and-perimeter/>
Once the concept get cleared teacher shall give more worksheets given below.

Piggy's House Hunting: Find the Perimeter
Piggy needs to find a house with the largest perimeter. Help Piggy by finding the perimeter of each house. Then color the largest one.

Diagram showing several houses with their dimensions labeled. The houses are:

- House 1: A rectangle with a triangular roof. The roof base is 13, the roof height is 9, the roof slope is 8.5, and the rectangle base is 13.
- House 2: A rectangle with a triangular roof. The roof base is 10, the roof height is 8, the roof slope is 6, and the rectangle base is 10.
- House 3: A rectangle with a triangular roof. The roof base is 16, the roof height is 5, the roof slope is 8, and the rectangle base is 9.
- House 4: A rectangle with a triangular roof. The roof base is 12, the roof height is 8, the roof slope is 8, and the rectangle base is 12.
- House 5: A rectangle with a triangular roof. The roof base is 12, the roof height is 8, the roof slope is 8, and the rectangle base is 12.
- House 6: A rectangle with a triangular roof. The roof base is 21, the roof height is 11, the roof slope is 11, and the rectangle base is 21.
- House 7: A rectangle with a triangular roof. The roof base is 9, the roof height is 5, the roof slope is 15, and the rectangle base is 9.
- House 8: A rectangle with a triangular roof. The roof base is 10, the roof height is 18, the roof slope is 18, and the rectangle base is 10.

GEOMETRY: PERIMETER
The perimeter of a polygon is equal to the distance around it.

Diagram showing a red rectangle with dimensions 4 feet by 2 feet. The perimeter is calculated as 4 + 4 + 2 + 2 = 12 feet.

Diagram showing a purple hexagon with dimensions 3 in by 3 in. The perimeter is 3 + 3 + 3 + 3 + 3 + 3 = 18 in.

Diagram showing a red square with dimensions 2 mm by 2 mm. The perimeter is 2 + 2 + 2 + 2 = 8 mm.

Diagram showing a yellow star with dimensions 5 cm by 5 cm. The perimeter is 5 + 5 + 5 + 5 + 5 + 5 = 30 cm.

Diagram showing a blue L-shaped polygon with dimensions 3 m by 2 m by 4 m by 1 m by 7 m by 3 m. The perimeter is 3 + 2 + 4 + 1 + 7 + 3 = 20 m.

Diagram showing a green right-angled triangle with dimensions 5 yards by 8 yards by 10 yards. The perimeter is 5 + 8 + 10 = 23 yards.

2) The football field at the park down the street is in the shape of a rectangle. Two sides measure 4 km, and the other two sides measure 2 km. What is the total perimeter of the football field? _____

3) The gazebo in Emily's backyard is in the shape of an octagon. Each side of the octagon measures 4 feet. What is the total perimeter of the gazebo? _____

<https://www.education.com/lesson-plans/perimeter/>

B: Value based activities

B1: Discussion

Teacher shall discuss with students regarding self-discipline and elicit from students some cases and get solution from students

Case	Lack of self-discipline	Self-Discipline
1	Eating junk food all the time	Eating healthy food for meals and eating junk food just as a small snack
2	Switching on the TV the minute mom leaves the room	Holding on to the parent's word
3	Answering papa's phone when it's ringing in front of you	Taking the phone to papa and telling him that he has a call
4	Throwing tantrums before waking up	Waking up on your own, without fuss
5	Making excuses for not doing home assignments	Doing assignments on regular basis

B2: Experiment/Demonstration

Self-discipline helps kids delay gratification, resist unhealthy temptations, and tolerate the discomfort needed to reach their long-term goals. From choosing to turn off the video game to work on homework, to resisting an extra cookie when Mom isn't looking, self-discipline is the key to helping kids become responsible adults.

Self-Control is the ability to stop and think before making a choice.

Activity: Demonstration self-discipline& self-control and delayed gratification

Individually wrapped chocolate candies, enough for two for each student (ex. chocolate "Kisses") Note: Be sure to have an alternative for students who have food allergies or limitations.

Instruction to teacher

- Before students enter the room, place one piece of chocolate candy on each desk. As soon as the students arrive, ask them to unwrap the candy. Tell them that they have a choice: they may eat the candy immediately, or they may leave the uneaten candy on their desks until the end of the class period, in which case they will receive a second piece of candy.
- If the candy on student desks might be a temptation to other students, instruct the class to rewrap and take their piece of candy with them when they form groups. "Resisting temptation" could also be included in the experiment discussion at the end of this lesson.
- Ask the students to take out a piece of paper and label two columns "discipline" [training to act according to rules] and "self-discipline" [restraint of oneself or one's actions, such as anger]. Then ask them to brainstorm and list all the words and phrases they can think of for each concept.

- After a few minutes, have the students form groups of 3 or 4 students to discuss their lists. Distribute two pieces of paper to each group -- the blank back of "scrap" paper is fine. Ask them to label one paper "Discipline" and the other "Self-Discipline," and to write their agreed-on words or phrases about each concept on the papers. (They should write clearly and large enough to be read when the papers are posted on the wall.)
- Have the students tape their notes about discipline on one classroom wall and about self-discipline on a opposite wall.
- Allow the learners to do a "walk-about" to read each group's notes. Leave these posted on the walls for the next lesson.
- Just before the end of the class period, give each student who still has his or her piece of chocolate a second piece and tell them it's now okay to eat the candy.

Discussion

Delayed gratification [to put off immediate reward to pursue a longer term goal]

Self-control [the ability to think before acting] in a display area.

Tell the students that they were participating in a variation of an experiment done the 1960's by a psychologist at Stanford University.

He offered students one marshmallow to eat immediately or two marshmallows if they could wait for him to return in 20 minutes. Then he left the children alone with some toys. He was testing their ability to delay gratification and control impulse (point to the phrases and their definitions) in an effort to test his theory that these are important traits for attaining wealth and being successful. Some of the children ate the one marshmallow and some waited to receive two later. The scientist tracked the children for the next 14 years and compared their ACT College Entrance Exam scores. He found that the children who chose to eat one marshmallow immediately scored an average 210 points lower than the children who delayed gratification to get two marshmallows.

Teacher shall tell students that self-discipline and self-control is an important quality students should acquire for successful in future.

<https://www.learningtogive.org/units/character-education-self-discipline-grade-7/experimenting-self-discipline>

<https://flintobox.com/blog/child-development/kids-master-self-discipline>

B2: Combination Activity: Wait Five.

This game because it can be played with any trivia, vocabulary, or academic content. This makes it a great review game, too.

Ask one question at a time but students must wait a full five seconds before shouting out the answer. This can be especially helpful for those students who love to shout out

the answer without being called on. Of course, you can play around with the rules, making the wait time longer or shorter, and even allowing only certain students to shout out at certain times. The whole idea is to build self-control by waiting just a little bit longer than we really want to.

Teacher shall conduct Quiz related to the topic or general knowledge.

<https://www.thepathway2success.com/12-games-to-practice-self-control/>

V.C Assignments

C1: Prepare a chart for on self-discipline on their daily routine

Resources

References:

- 1.<https://www.education.com/lesson-plans/perimeter/>
- 2.<https://www.learningtogive.org/units/character-education-self-discipline-grade-7/experimenting-self-discipline>
- 3.<https://flintobox.com/blog/child-development/kids-master-self-discipline>.
- 4.<https://www.ashleigh-educationjourney.com/teaching-area-and-perimeter/>
- 5.Ncert Text Book, Reference books,(R.D Sharma , R.S.Aggarwal)

Topic	Values / Life skills integrated & imbibed	Activities
Smart Charts	<p>Core Values considered : Honesty, Integrity & Responsibility</p> <p>Other Sub-Values: Patience, Integrity, truthfulness</p> <p>Life skills: Recognition, observation, classification, analytical thinking, and data analytical ability. presentation skill.</p>	<p>Value integration Activities:-</p> <ol style="list-style-type: none"> 1. Worksheet & conducting a survey to find out the favorite hobby of students to revise the previous knowledge and introduce the new lesson. 2. Creating situation based worksheet and discussion to instill honesty, integrity and responsibility among students. 3. Story Narration & Discussion of "The boy who cried wolf" to demonstrate the significance of honesty. 4. Role play & discussion to make students realise the importance of honesty ,truthfulness & responsibility even no one is watching you 5. Assignment Preparation of honesty posters & Slogans for class room

Materials / Resources needed

Value Integration:-

1. Facilities and Equipment to show videos
2. BB, Pen
3. Ncert Text Book, Reference books, (R.D Sharma , R.S. Aggarwal)
4. Work sheets for context activity & Value based activity.

Description (of the points of discussion)

Value Integration:-

In this chapter the activities and games are incorporated in such a manner that children learn honesty, responsibility and fairness while handling data to get accurate result. Being honest with others is essential for creating and maintaining a healthy relationship every one and leading a successful life

The key discussions are:

1.By solving worksheet conducting a survey to find out the favorite hobby of students teacher shall revise the previous knowledge and introduce the new lesson.

2.By creating situation based worksheet and discussion teacher shall instill honesty, integrity and responsibility among students.

3.Story Narration & Discussion of "The boy who cried wolf" teacher demonstrate the significance of honesty. This story not only encourages children to tell the truth but shows them why lying may backfire

4.By demonstrating with a role play & discussion teacher shall make students realize the importance of honesty ,truthfulness& responsibility even no one is watching you And by making them to do a polling teacher shall reiterate the value in them.

5.Assignment

Preparation of honesty posters & Slogans for class room

.This activity helps students to practice what they have learned.

Unit 14**Smart Charts****Honesty, Discipline & Responsibility****I. Introduction**

The lesson “**Smart Charts**” imparts collection of data and representation in different ways. Represent data graphically (bar graph, pie-charts) and through pictographs.

While collecting the information, it is very important that students' needs to be very honest and responsible to get accurate results. Through this lesson teacher shall instil Honesty discipline and responsibility among students.

II. Learning Objectives / Outcome

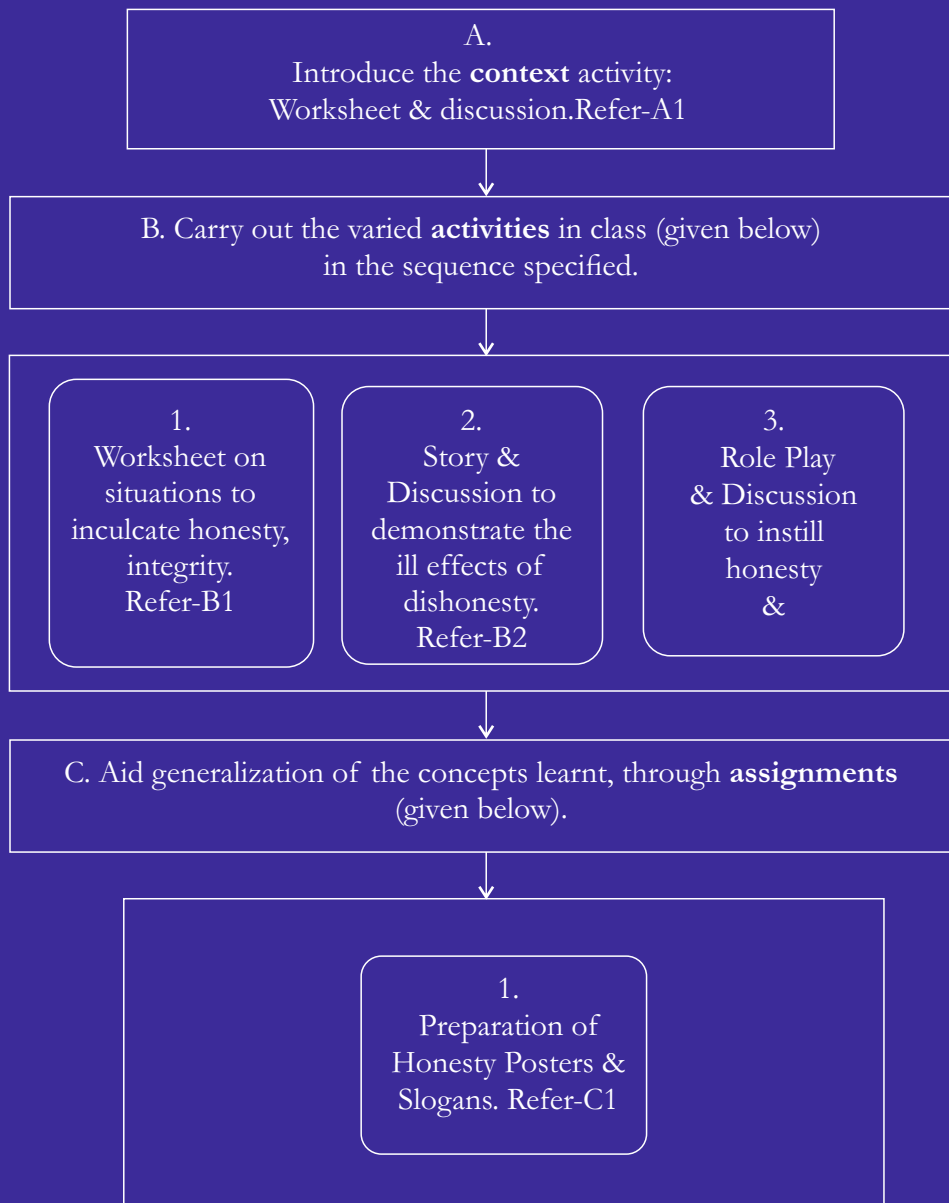
Through this unit, the students will achieve the following grade appropriate academic and value based goals:

- Collect and record data in raw form
- Make table for representing collected data and then represent it in the form of Chapati/Pie chart, bar graph and pictograph
- Interpretation of data from the graphical representation
- Be honest in their activities and follow discipline
- Do any work assigned to them with responsibility

III. Process & Action Plan

Representing an information in various forms and methods is fundamental to Mathematics and the knowledge to infer from the data is a real skill for children. This chapter gives an opportunity for the kids to do that. Your role as a teacher is significant, as you have the power and the means to shape the lives under your guidance. One of the most important goals you may have as a teacher, is the character education of the students using the academic content at hand.

The values and life skills integration within this unit may follow the following process and action plan, as depicted in the flow chart on next page:



While it would be ideal to expose the students to all the activities as given, and the discussion that would ensue, you may choose as per your convenience and availability of time, the activities that would be relevant to the content being taught and/or suited to the cognitive and emotional maturity of the students.

This topic incorporates the core approach – Knowing, Understanding, Valuing and Acting the values embedded in the topic.

The core values being considered are honesty, discipline& responsibility along with other sub-values like patience, integrity, truthfulness

The unit also provides the scope to develop the following life skills in the students Recognition, Observation, classification, analytical thinking, and data analytical ability. presentation skill.

IV. Activities & Related Discussion

A.Context activity for the teacher to start:

A1: Teacher use a work sheet to test their previous knowledge

I. Read and write the number for the given tally marks

a)



c)



e)



b)



d)



f)



2. Draw tally marks for the following numbers

a) 7

b) 13

c) 21

d) 19

e) 19

f) 25

A2: Teacher shall do a survey to find out the favorite hobby of the class by using a survey sheet & interpretation questions. Teacher shall make the students one student to ask questions to the class and one student to write on the board.

Name of the game	Tally marks	Total
Cycling		
Gardening		
Stamp Collection		
Reading		
Music		
Playing chess		
Craft		
Drawing		

After the survey -Questions for interpretation;

1. Which is the most popular game?
2. Which is the least popular game?
3. How many students like stamp collection?
4. How many students like craft than drawing?
5. What is the difference between the numbers of students who prefer reading than music?

B.Value Based Activity

B1: Worksheet on Honesty, Integrity& Responsibility and discussions

Teacher shall give a worksheet on certain situations and ask them which actions they would take and why. Then teacher shall explain the honest actions

1. You broke a table while playing at recess time. Your teacher asks who broke the table.

A.You tell the teacher you did it.

B.You say you don't know what happened

Explain your answer.....

Teacher's Explanation: Honesty means telling the truth, so admitting to breaking the table is the honest action

2. You really want to play with a friend's toy at your house

A. You slip the toy in your bag pack and figure you will put it back tomorrow. As long as he doesn't find out, you didn't lie

B. You ask friend to give you one day to play at home

Explain your answer.....

Teacher's Explanation: Taking something that is not yours is morally wrong and dishonest

Evenif you don't get caught, so you don't speak a lie about what you did ,doing it was still dishonest. Sneaking and hiding your actions usually means you are not making an honest choice

3. Your mother said you could play for 1 hour, set a timer afterwards complete your studies.

A. When time is almost up, you secretly add more time on the timer so that you can keep playing.

B. You stop playing when the timer rings and sit for studies.

Explain your answer.....

Teacher's Explanation: Adding more time to the timer is dishonest. It is deceitful meaning you hide what you do because you know you aren't supposed to do it.

4. You went to Amir's house to play, and then went to Vicky's house without asking. When your father asks, "Whose house did you play at today?"

A. You say, "I played at Amir's house"

B. You say, "I played and Amir's and Vicky's house"

Explain your answer.....

Teacher's Explanation: Being honest means telling the whole truth. Hiding part of truth is called a lie of omission—which means you leave out part of the truth because you know it was the wrong thing to do.

B2: Activity 2: The boy who cried wolf

Read a version of the story, 'The boy who cried wolf'. Discuss the moral of the story in terms of telling the truth. Lead discussion with students to draw out the following ideas.

- Telling lies may eventually destroy one's credibility.
- Individuals sometimes lie to cover up mistakes or an offence.

- Individuals may lie to protect the feelings of others.
- Individuals may lie out of fear.
- Lying might be necessary or good in some situations.

Have students work in small groups to identify and list which values are being addressed in this story.

Discovering Values:

B3: Activity 3: What do you do when no-one is watching?-Role play & discussion

Make students in different team and ask the each team of students to role-play or discuss the following scenario:

A child buys a drink and notices that the shopkeeper accidentally gives them too much change. Their parent is present, but is distracted.

Each group decides what is to happen, and acts out what the child does. Do they tell the shopkeeper and give the money back? Do they take the money and not tell anyone? Do they tell their parent?

Groups report back to the class on what they decided and on the reasons for their choices.

- What are the main values that are being tested here?
- Would it make a difference if they take the money to buy something they need?
- What if they take the money to give to someone who needs it?
- What does it mean to the shopkeeper if the money is taken?
- What would the child do if they got caught by the shopkeeper or the parent?
- What are the consequences of each action taken and how might it make each person feel?
- Does it make a difference to your behaviour if someone is watching?

Teacher shall explain to them that when you think of honesty, you might think “don’t lie”. But being honest also means only saying and doing things that are truthful. Here are a few good signs that an action is not honest:

- Saying something that is not true.
- Hiding the truth because you know it’s wrong or you’ll get in trouble.
- Doing it is considered morally wrong (like cheating or stealing)

Teacher can take polling at the last. How Honest Are You? Do you ever tell lies?

- a. All the time. I don't know what the truth is.
- b. Sometimes. To get out of trouble.
- c. Rarely. Little white lies on occasion.
- d. Never. I tell the truth, the whole truth, and nothing but the truth

Reference: <https://www.teacherplanet.com/pages/value-honesty>

V.C: Assignments

C1: Prepare poster or slogans on honesty theme

Resources

References:

1. <https://www.teacherplanet.com/pages/value-honesty>
2. Ncert Text Book, Reference books, (R.D Sharma , R.S.Aggarwal)

Maths
Grade IV

Integration of Values

Teacher's Manual

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