

NEW NORMAL CURRICULUM

Instructional Guide

Mathematics

Class: III

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Guide
Mathematics
Class: III



Royal Education Council
Royal Government of Bhutan

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Overall Advisor

Kinga Dakpa
Director General
Royal Education Council

Curriculum Advisor

Wangpo Tenzin
Dean, Curriculum Development Centre
Royal Education Council

Research and Writing

Geewanath Sharma, Curriculum Developer, REC
Tashi Dendup, Curriculum Developer, REC
Bhagirath Adhikari, Arekha MSS, Chhukha
Sonam Ratu, Arekha MSS, Chhukha
Tashi Phuntsho, Kamji CS, Chhukha
Pema Yangzom, Tsimalakha MSS, Chhukha
Kezang Choden, Aleykha PS, Chhukha
Tshering Peldon Gaupel LSS, Paro
Jigme, Shaba PS, Paro
Ngawang Choden, Gaupel LSS, Paro
Dorji, Tshapel LSS, Haa
Wangchuk Norbu, Lapsakha PS, Punakha
Norbu Zam, Khuruthang MSS, Punakha

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FOREWORD

COVID-19 has suddenly caused unforgiving disruptions in the public education all over the world, and brought about threats of fragmentation due to disparities in accessibility and connectivity in many systems. In Bhutan too, continuity of education and learning has been severely affected as a result of nationwide school closures and due to restrictions and health protocols. The disruptions have led to challenges in many existing patterns and trends in education resulting in a massive shift away from learning and teaching in traditional settings with physical interactions to the maximum in terms of relevancy and efficiency. This has caused a major problem for children living in poverty worldwide, who often rely on the physical settings of their schools for educational materials, guidance, and, sometimes, the only decent meal of the day.

In the new normal education, human interaction and well-being is a priority. Technology, particularly digital technology that enables communication, collaboration and learning across distance, is a formidable tool – not a panacea but a source of innovation and expanded potentials. As we embrace this exceptional opportunity to transform the world, and as we reimagine the organization of our educational institutions and learning environments, we will need to think about where we want to go.

In the post COVID 19 era, we must prioritize the development of the whole person not just academic knowledge. Inspiration for the change can be drawn from the 1996 Delors report, *Learning the treasure within*, in its specification of four pillars of learning as “learning to know”, “to do”, “to be”, and “to live together”. Therefore, curricula must be increasingly perceived as an integrated and based on themes and problems that allows learners to learn to live in peace with our common humanity and our common planet. This has the potential in the development of a strong base of knowledge about one’s self and about the world and find purpose and be better able to participate in social and political milieu.

The New Normal Curriculum is, not just a mere response to the pandemic, but also a culmination of the curriculum reform work for the last four years by the Royal Education Council. It is an attempt to transform education from the teaching of “what” to learning of “how” and “why” towards empowering learners with the transversal competencies and the 21st century skills, and preparing them to be lifelong learners. We are optimistic that this move orients our education process towards nurturing nationally rooted and globally competent citizens.

Wish all our learners and teachers a life enriching experiential teaching and learning.

(Kinga Dakpa)
DIRECTOR GENERAL

1. INTRODUCTION

The 21st Century Education framework stipulates the emphasis on the thematic based learning areas with a comprehensive support system. The theme-based approach broadens opportunities for experiential learning contextualized to the learner's physical, social, political, economic, spiritual and cultural setting. An approach, which mandates learning through active engagement of students. Roles of teachers are transformed from knowledge transmitter to facilitation, guide, evaluator, researcher and motivator.

The conventional education, which is predominantly knowledge based and examination centred teaching and learning has been the time old practices, and the stress of this model is on the learning of textual information perceived by educators important for the grade. On the other hand, with the advancement in ICT, the world is flooded with such information, which are widely read by all at their leisure. What students cannot acquire from the multiple sources are the skills, which are crucial in facilitating students to realise their potential to be socially responsible and productive individuals and contribute in the nation building processes: socio-economic and political development. In the contemporary world, the knowledge-based education compromises the development of psychomotor and affective domains of learning, which affects the holistic development of students.

Despite the devastating effect caused by COVID-19 pandemic, it presented scopes for creation, innovation, generally perceived more efficient and effective in work and social activities. The pandemic situation explicated that the old ways of working, teaching and learning, and lifestyle have limitations. Consequently, new normal ways of how we work and live, teach and learn are the contemporary traditions. In this context, an overhaul of how we think and do is an imperative, not a choice. The transformation of classroom instruction from teacher centred to learner centred teaching and learning, however calls for the following adjustment, or even the overhaul of a few practices.

- i) Reduction of learning content to facilitate deep learning as opposed to the width of the teaching through the active engagement of students.
- ii) Integration of ICT as tools and ends of learner's education. The use of multimedia and ICT software is commonly utilized in teaching and learning as innovation to introduce variation in stimuli and sustain learner's interest and zeal in learning.
- iii) Adoption of theme based learning content, which facilitates to broaden the horizon of learning beyond the four walls, and stimulates the transfer of learnt concepts to the learner's immediate environment. This arrangement makes students aware of the realities of the social, political, economic and cultural practices and ethos of the society. Being aware of the immediate environment of the scopes and challenges, students are sensitized of the opportunities and issues, which may need attention for a better future for the society.

- iv) Consideration to ground the curriculum design and instruction approaches the epistemological theories is imperative to facilitate deep learning as opposed to factual learning. However, the selection and use of them is subject to the nature of the respective subject. For instance, constructivism is more apt for science, while connectivism is relevant for languages and ICT curricula.
- v) Active engagement of students is imperative of competency-based education and learning. Inevitably, summative assessment has limitations in gauging the progressive development of the learner. This is achieved objectively by the use of the continuous formative assessment (CFA). However, if summative assessment evidence is used to provide feedback to help students in learning, it can serve as one of the techniques of CFA.

The curriculum adapted and grounded on the above wisdom, the principle of competency based learning, inspired by being aware of reality of the immediate environment, and the belief system of the society may be arbitrarily termed as the New Normal Curriculum. Learning is facilitated through the “Instructional Guide” with students taking responsibilities of their learning; teachers facilitate and guide students in the due course of their active engagement and assess their performance for improvement in their learning.

2. PURPOSE OF THE INSTRUCTIONAL GUIDE

In the New Normal Curriculum, deep learning synonymous to “less is more” is facilitated with the use of Instructional Guide for each subject and specific class. The content of the instruction in the guide for respective subjects are aligned with the subject’s curriculum framework with partial reference to the existing textbooks. Therefore, it is purported to achieve the following objectives:

- i) Facilitate learning anywhere, any time with the learner being responsible for the learning.
- ii) Facilitate deep learning with awareness and sensitivity of the realities of the world around.
- iii) Strengthen competency based learning and experiential learning to foster sensitivity of realities of the life and environment.
- iv) Strengthen blended learning and flip classroom with multimedia, digital pedagogies and ICT devices and websites as the tools and learning content.
- v) Guide parents in facilitating learning of their children.
- vi) Inspire teachers to assume the roles of facilitation, guide, motivator and evaluator.
- vii) Helps in the prioritization of learning content with emphasis to create time and space for active engagement of learners.

- viii) Facilitate the use of CFA for learning through objective observation and guidance.

The effective and efficient use of this guide is subject to the nature of the subject and the target class. The section on “How to Use the Guide” included in each subject provides tips on the efficient use of the guide.

3. GUIDING PRINCIPLES IN THE DEVELOPMENT OF THE GUIDE

The priority of education is to deliver learning that is relevant to the life of learners, challenge learners, foster the art of lifelong learning, serve as a source of inspiration and equip them with transversal skills. These principles form the basis for provision of learning experiences and engagement of learners in the developmental process of the curriculum, delivery, ways of achieving, and the context of measuring learner’s performance.

a. Competency based

Understanding that the contemporary world is flooded with information, which serve as the sources of knowledge and ideas, the education for the acquisition of knowledge is irrelevant and redundant. Consequently, the priority of education is shifting to empowering learners with transversal skills and life skills as means to help learners realize and develop their potential.

Therefore, this guide is to ensure that the teaching and learning emphasises on the development of skills and foster positive attitude for learning, as opposed to knowledge acquisition, through active engagement of learners in diverse learning experiences.

b. Experiential learning

Learner’s learning experiences are contextualised to the immediate environment – social, political, economic and physical, which provide opportunities for the development of competencies of creativity, critical thinking and problem solving, collaboration, communication, citizenship and cultural skills.

This is made possible through active engagement in diverse learning contexts and experiences. Such approach, thus speculates that the stress is on the understanding of fundamental concepts, principles, laws and ideas. This indicates that the peripheral ideas, examples and textual information are learnt as extended information. The integration of blended learning and flip classroom modes and place based education approach of instruction offer greater flexibility and opportunities to generate new knowledge by themselves along with the development of associated skills.

c. Gross National Happiness (GNH)

The principles of GNH should be deeply embedded in the curriculum for the holistic development of the learner. This will prepare the learner to participate and contribute to the culture, society, and economy of the country more meaningfully. The wisdom drawn from this principle is vital in the creation of “living school culture” and upholds the principle of emotional intelligence to foster gender sensitivity, equity and equality to education.

In this context, it is imperative of the guide that the elements of GNH are integrated as the learning content and are practiced as the inclusive pedagogical process in the classroom or at home.

d. Inclusiveness

It should value and include the knowledge, perspectives, and backgrounds and experiences of each learner to realise his or her full potential. Education is intended for all children in Bhutan, and due respect and acceptance is accorded to cohorts of learners from diverse backgrounds, and with cognitive and physical individual differences. It will mean deploying and accepting different starting points, a different pace of learning and ensuring that students are challenged to achieve high standards in ways that complement what they already know, what they can already do, and how they learn best.

This guide upholds the ideology of inclusiveness and education for all through the integration of diverse learning experiences and approaches, and assessment of the progress of their learning.

e. Learner-centered and developmentally appropriate

This implies that curricular contents, teaching techniques and assessment methods for each grade or level of school education are selected in accordance with children’s developmental stages and needs of individual learners. Each child is different and the rate at which an individual child grows and reaches various developmental stages varies, although the patterns and sequences for growth and development are usually the same for all. They should be able to progress at a rate, which matches their needs and aptitudes.

The curriculum should be relevant to the learners’ lives both current and future. It will be responsive to the social and technological changes and meet the needs of the students. It will thus be a balance between what is imperative for all the students, and be flexible for learning at the learner’s pace and time.

f. Approaches

According to John Dewey and other educators, progressive education must prepare learners for active participation in education. The focus of education must be creating

critical thinkers and inquirers who are active learners. Most progressive education programs have the following qualities in common:

- Integration of entrepreneurship into education
- Strong emphasis on problem solving and critical thinking
- Learning by understanding as the goals of learning as opposed to rote knowledge
- Collaborative and cooperative learning strategies to develop social skills
- Education for social responsibility and democracy
- Personalized learning and living school culture based on differentiated instruction accounting for each individual's personal needs and goals
- Integration of community service and service learning projects into the curriculum
- Emphasis on varied learning resources and de-emphasis on textbooks
- Integration of digital technologies and pedagogies
- Appropriate assessment techniques and tools deployed in the CFA

4. CURRICULUM CONTENT

This is the main part of the instructional guide. It contains suggested approaches to teaching to guide students to achieve the desired competency(ies) through the identified topic(s).

a. Broad theme /Strand/Chapter/Topic

Under this heading, the topic/topics under one strand or under different strands that can be addressed together is/are listed. The topics are taken from the framework and not from the textbooks.

b. Competency(ies)

Under this heading, the main competency(ies) associated with the topic(s) listed under 4.1 above is/are listed.

c. Pedagogy

Under this heading, pedagogy to provide direction to deliver a lesson when the teaching and learning happens through face to face (contact) or through a virtual mode (non-contact) if classes cannot be conducted due to school closures is recommended. The recommended pedagogies are linked to competencies. These pedagogical approaches are only recommendations and teachers have the leeway to design their own plans.

The pedagogies should focus on hands-on, experiential learning through problem-based or project-based approaches. In mathematics, students should be provided opportunities to connect, communicate and represent mathematical ideas. They should be provided with divergent thinking opportunities and reflect on their learning.

In case of non-contact approach, pedagogies should be supported through the:

- i) Use of relevant learning platform – Google Classroom, Sherig LMS, WeChat, WhatsApp, Telegram
- ii) Use of ICT Tools to deliver lessons – video conferencing tools (Zoom and Google Meet, etc.), MS power point, screen recording software, etc.)
- iii) Use of ICT tools for assessment (Google Forms, Google Docs, Google Sheet, etc)
- iv) Use of ICT Tools for recording and reporting the performance (Grading in Google Classroom, Google Sheet, etc. reporting – all assessment records to be transferred to progress report for promotion or detention)

d. Assessment

Under this heading, performance tasks focusing on assessing competencies and not content are recommended. For classes PP – III, teachers can align with the Continuous Formative Assessment (CFA) guide book.

Achievement of learning shall be recorded based on bands of achievement for all students in all classes. The evidence from assessment is to identify individual learning needs, design, and deliver appropriate interventions to support students falling in the beginning and approaching category.

Reporting for classes PP – III shall be on a quarterly basis as per CFA guide book. For other classes, it shall be based on existing policy till there is a change in policy. Marks obtained for each strand and ultimately for each subject from the formative assessment can be converted using appropriate conversions for summative purposes.

$$CA\ Marks = \frac{\text{sum of scores obtained for all competencies}}{\text{sum of highest score for all competencies}} \times CA\ for\ the\ term$$

e. Resources

All resources required for the suggested activities and tasks above are listed under this topic for both contact as well as non-contact teaching.

5. STRAND AND TOPIC-WISE INSTRUCTIONAL GUIDE

A. Competencies

- Read, write and represent 4-digit numbers (till 9999).

Objectives

- Read 4-digit numbers in different ways using a place value chart (e.g. 1542 is read as one thousand five hundred forty- two or fifteen hundred forty-two).
- Represent and describe groupings to 1000 using base ten blocks and place value charts. (E.g. one hundred = ten tens, one thousand = ten hundreds).
- Interpret and model numbers in different ways using place value chart including numbers with zero
- Identify the greater of two numbers.
- Compare numbers by placing them on a number line, place value chart etc...
- Order a set of numbers, by comparing concrete models like linking cubes, counters, and base ten blocks.
- Relate models to symbols for purposes of comparing.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment on reading 3-digit numbers.
- Demonstrate and explain representing 3-digit numbers with base ten blocks.
- Let children explore and do the activity on comparing 3-digit numbers using the link given below.
- <https://bit.ly/2Z5wm1k>
- Let children use the base ten blocks to represent the 3-digit numbers given by the teacher. Let them write the number that a set of base ten blocks represent. Allow them to read the numbers aloud.
- Introduce a 4-digit number using base ten blocks and set of sketches. Children will represent 4-digit numbers by using a set of sketches or by using the set of blocks.
- Show how to write numbers in expanded form.
- Let children write a standard number in expanded form and vice versa.
- Demonstrate the rounding numbers by using the rule of rounding to the nearest ten, hundred or thousand. Let children compare numbers by placing them on a number line and identify the greater of the two numbers.

Non-contact teaching and learning

- Use social media platform to deliver the lesson.
- Let children explore and do the activity using the link given below.
<https://bit.ly/2Z5wm1k> (This activity is on comparing 3-digit numbers for reassessing the students' knowledge).

- Prepare a note on 4-digit numbers and let children copy it.

C. Assessment

Contact

Performance task 1

- Let children sketch 4-digit numbers using the base ten blocks. The activity is in the textbook for class 3.

Performance task 2

- Let children write the standard form of a number in expanded form and vice versa.

Performance task 3

- Let children compare numbers by using number line, place value chart and relate models to symbols for comparison.

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let children sketch base ten blocks for the numbers given. The activity is in the textbook for class 3.

Performance task 2

- Let children write the standard form of a number in its extended form and vice versa.

Performance task 3

- Let children compare numbers by using number line, place value chart and relate models to symbols for comparison.

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- a) Manipulative and/or concrete objects
- b) Base ten blocks
- c) Student Mathematics Textbook
- d) Online resources
 - <https://bit.ly/2Z5wm1k>

Non-contact

- a) Manipulative and/or concrete objects
- b) Student Mathematics Textbook
- c) Phone and internet
- d) Online resources
 - <https://bit.ly/2Z5wm1k>

E. Annexure(s)

Template to record assessment

Strand(s): Numbers and Operations		Topic(s): Numbers to 4 digits		
Competency: Read, write and represent 4-digit numbers (till 9999).				
Name of the student	Level of achievement			
	Beginning	Approaching	Meeting	Exceeding

A. Competencies

- Relate representation of fractions in real world situations.

Objectives

- Relate simple fractions such as (as part of a whole / part of a set) to real world situations using pictures, sticks, stones and classroom materials.

B. Pedagogy

Contact teaching and learning

- Conduct pre-Assessment on fraction.
- Use this video link <https://bit.ly/3jHL8Vp> to introduce the concept of fraction.
- Demonstrate using the fraction chart (fraction stripes) to teach the concept of fraction as a part of a whole.
- Explain the concept of part of a whole and part of a set using snap cubes, pattern blocks, pictures, sticks, stones and classroom materials.
- Discuss and relate to real world situations (discuss where fractions are used in the real world).

Non-contact teaching and learning

- Prepare PowerPoint presentation and share them with students via (WeChat, telegram, Google classroom).
- Use this video link <https://bit.ly/3jHL8Vp> to introduce the concept of fraction.
- Let children relate fractions to real world situations.

C. Assessment

Contact

Performance task 1

- Provide students a list of fractions and let them write the fractional number.

Performance task 2

- Let students explore and connect to real world situations (classroom objects, things outside classroom).

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Provide students a list of fractions and let them write the fractional number.

Performance task 2

- Use this link to explore fractional numbers.
<https://www.liveworksheets.com/yt21210am>.

Design appropriate assessment tool and record the student learning based on the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Classroom objects/sticks and stones
- c) Online resources
 - <https://bit.ly/3jHL8V>

Non-contact

- a) Mathematics Textbook Class 3
- b) Online resources
 - <https://bit.ly/3jHL8Vp>
 - <https://www.liveworksheets.com/yt21210am>

E. Annexure(s)

Refer III-A1 for template to record assessment.

A. Competencies

- Represent decimal tenths orally, symbolically and pictorially, compare decimal tenths and relate it to tenth fraction.

Objectives

- Investigate the concept of tenths in place value system using a place value chart.
- Demonstrate understanding of tenths as part of a whole divided into 10 equal parts.
- Model tenths using concrete objects or by drawing pictures.
- Explore the relation of decimal tenth and a tenth fraction.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment (discuss and relate to real life situations).
- Explain the concept of tenths in place-value system using place value charts.
- Demonstrate the decimal fraction orally, symbolically and pictorially (decimal tenth fraction, decimal hundredth fraction).
- Use grid paper, pattern blocks and pictures to show the relationships between decimal tenths and a tenth fraction.
- Use this video link to teach the concept of decimal tenths
<https://www.youtube.com/watch?v=asOD7H6C8ig>
- Let students explore the live worksheet and carry out the task on fractions in the web link provided.
<https://www.liveworksheets.com/yt21210am>

Non-contact teaching and learning

- Prepare video on decimal tenths and share it to students via (WeChat, telegram, Google classroom).
- This video about how to teach the concept of decimal tenths
<https://www.youtube.com/watch?v=asOD7H6C8ig>
- Let students explore the live worksheet and carry out the task on fractions in the web link given. <https://www.liveworksheets.com/yt21210am>

C. Assessment

Contact

Performance task 1

- Let students write decimal tenth fraction in decimal form.

Performance task 2

- Let students to sketch diagrams to represent the decimals.

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students write decimal tenth fraction in decimal form.

Performance task 2

- Let students sketch diagrams to represent the decimals.

Design appropriate assessment tool and record the student learning based on the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Pattern blocks/or concrete objects
- c) Online resources
 - <https://www.youtube.com/watch?v=asOD7H6C8ig>
 - <https://www.liveworksheets.com/yt21210am>

Non-contact

- a) Mathematics Textbook Class 3
- b) Pattern blocks/or concrete objects
- c) Online resources
 - <https://www.liveworksheets.com/yt21210am>
 - <https://www.youtube.com/watch?v=asOD7H6C8ig>

E. Annexure(s)

Refer III-A1 for template to record assessment

A. Competencies

- Calculate change by investigating relation among currency notes till Nu 1000.

Objectives

- Examine the value of Bhutanese currency and the relation between currency notes by carrying out trading activities using dummy notes (5, 10, 20, 50, 100, 500, and 1000).

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment (students identify different notes)
- Discuss the value and importance of notes.
- Explain about saving, expenses of family income; its impact on the country's economy.
- Carry out role play on shopkeeper and customer (teacher and students).

Non-contact teaching and learning

- Let students prepare dummy notes at home. Provide a set of questions and ask to calculate change.

C. Assessment

Contact

Performance task 1

- Let students carry out the task from the text to calculate change (Refer Mathematics textbook class 3).

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students carry out the task from the text to calculate change (Refer Mathematics textbook class 3).

Design appropriate assessment tool and record the student learning based on the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Dummy notes

Non-contact

- a) Mathematics Textbook Class 3
- b) Dummy notes

E. Annexure(s)

Refer III-A1 for template to record assessment.

A. Competencies

- Estimate sum of 3-digit whole numbers to determine the reasonableness of sums obtained after presenting the addition in various ways (concretely, pictorially, and symbolically).

Objectives

- Estimate sums of 3-Digit whole numbers to determine the reasonableness of the answer obtained.
- Add 3-Digit whole numbers (with and without regrouping) concretely, pictorially and symbolically.
- Explain and use the alternative paper-and-pencil algorithm to solve problems related to addition.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment (compare 2-digit whole numbers orally and using symbols).
- Let students do the addition on two digit numbers with and without regrouping.
- Demonstrate how to add three digits numbers using base ten blocks.
- Sketch how to represent a three digits number.
- Demonstrate adding using place value tables.
- Demonstrate step by step to show the addition algorithm.
- Let students watch video on how to add 3-digit numbers (with and without regrouping). <https://binged.it/3cSGK4C>
- Let students explore and carry out the activity on addition using this link <https://www.liveworksheets.com/xs146706pb>

Non-contact teaching and learning

- Use social media platforms (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.
- Let students watch video on how to add 3-digit numbers (with and without regrouping). <https://binged.it/3cSGK4C>
- Let students explore and carry out the activity on addition using this link <https://www.liveworksheets.com/xs146706pb>

C. Assessment

Contact

Performance task 1

- Let students estimate the sum and show their work. Calculate the sum and show their work. (Set of questions to be given from the textbook).

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students estimate the sum and show their work. Calculate the sum and show their work. (Set of questions to be given from the textbook).

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- Mathematics textbook class 3
- Base ten blocks
- Online resources
 - <https://binged.it/3cSGK4C>
 - <https://www.liveworksheets.com/xs146706pb>

Non-contact

- Mathematics Textbook Class 3
- Online resources
 - <https://binged.it/3cSGK4C>
 - <https://www.liveworksheets.com/xs146706pb>

E. Annexure(s)

Refer III-A1 for template to record assessment.

A. Competencies

- Estimate difference of 3-digit numbers to determine the reasonableness of the answer obtained after presenting the subtraction in various ways (concretely, pictorially, and symbolically).

Objectives

- Estimate difference of 3-Digit whole numbers to determine the reasonableness of the answer obtained.
- Subtract 3-Digit whole numbers (with and without regrouping) concretely, pictorially and symbolically.
- Explain and use the alternative paper-and-pencil algorithm to solve problems related to subtraction.

B. Pedagogy

Contact teaching and learning

- Pre assessment (Compare 2-digit whole numbers orally and using symbols)
- Let students do the subtraction on two digit numbers with and without regrouping.
- Demonstrate how to subtract three digits number using base ten blocks.
- Sketch how to represent three digits number
- Demonstrate subtraction using place value tables.
- Demonstrate step by step to show the subtraction algorithm.
- Use the video link on how to subtract 3-digit numbers with grouping and without regrouping. <https://www.youtube.com/watch?v=BkzoUfyAXDU>
- Let students explore and carryout the activity on subtraction using this link <https://bit.ly/3tITjWb>.

Non-contact teaching and learning

- Use social media platform (We Chat/Telegram/Google classroom, etc.) to deliver the lesson.
- Share the video link on how to subtract 3-digit numbers (with and without regrouping). <https://www.youtube.com/watch?v=BkzoUfyAXDU>
- Let students explore and carryout the activity on subtraction using this link <https://bit.ly/3tITjWb>.

C. Assessment

Contact

Performance task 1

- Let students estimate the difference and show their working. Calculate the difference and show their working (set of questions to be given from the textbook/SIM).

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students estimate the difference and show their working. Calculate the difference and show their working (set of questions to be given from the textbook/SIM).

Design appropriate assessment tool and record the student learning based on the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Base ten blocks
- c) SIM Class III
- d) Online resources
 - <https://www.youtube.com/watch?v=BkzoUfyAXDU>
 - <https://bit.ly/3tITjWb>

Non-contact

- a) Mathematics Textbook Class 3
- b) SIM class III
- c) Online resources
 - <https://www.youtube.com/watch?v=BkzoUfyAXDU>
 - <https://bit.ly/3tITjWb>

E. Annexure(s)

Refer III-A1 for template to record assessment

A. Competencies

- Perform addition and subtraction of 3-digits numbers mentally.

Objectives

- Choose appropriate strategy based on situations for questions involving addition and subtraction problems.

B. Pedagogy

Contact teaching and learning

- Demonstrate each strategies such as;
 - use of double facts for 10
 - front-end (adding a number from left to right)
 - counting on, subtract and compensate
 - benchmark of 10
 - relating to a known fact, etc. to calculate sums mentally.
- Apply the strategies and demonstrate for subtraction too.
- Apply the Pedagogy and assessment similar to the one in 3-A5 and 3 –A6.

Non-contact teaching and learning

- Use social media platforms (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.
- Following are the video links on how to add and subtract three digit numbers with and without regrouping.

<https://www.youtube.com/watch?v=BkzoUfyAXDU> <https://binged.it/3cSGK4C>

C. Assessment

Contact

Performance task 1

- Let students estimate the difference and show their working. Calculate the difference and show their working (set of questions given from the textbook).

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students do the activity on addition using this link

<https://www.liveworksheets.com/vb131061Oyd>

Design appropriate assessment tool and record the student learning based on the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Base ten blocks

Non-contact

- a) Mathematics Textbook Class 3
- b) Online resources
 - <https://www.youtube.com/watch?v=BkzoUfyAXDU>
 - <https://binged.it/3cSGK4C>
 - <https://www.liveworksheets.com/vb1310610yd>

E. Annexure(s)

Refer III-A1 for template to record assessment

A. Competencies

- Represent repeated addition to multiplication, concretely, pictorially and symbolically.

Objectives

- Relate repeated addition problems to multiplication
- Identify and focus on idea of adding groups of equal size/ numbers concretely (using counters, base ten blocks), pictorially (number line and arrays) and symbolically (algorithm).

B. Pedagogy

Contact teaching and learning

- Re-assessment on addition and the various strategies used.
- Demonstrate repeated addition to show multiplication.
- Introduce the multiplication sentence by using the appropriate words. (Factors, product and multiplication sign).
- Demonstrate how a multiplication sentence is derived from repeated addition.
- Demonstrate multiplication strategies using classroom objects and manipulative.
- Let the students watch the video using the link provided.

<https://www.youtube.com/watch?v=vczu9agvF4g>

Non-contact teaching and learning

- Use social media platform (WeChat/Telegram/Google classroom, etc.).
- This video link explains about different strategies of teaching multiplication concepts <https://www.youtube.com/watch?v=vczu9agvF4g>. (Share the video via (WeChat/Telegram/Google classroom, etc.).

C. Assessment

Contact

Performance task 1

- Let students solve multiplication questions on:
 - Arrays
 - Equal sets
 - Number line
 - Repeated addition. (Refer Mathematics textbook class III)

Performance task 2

- Let students do the activity on multiplication using these links

<https://www.liveworksheets.com/gz283464ut>

<https://www.liveworksheets.com/zt1338741kv>

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students solve multiplication questions on:
 - Arrays
 - Equal sets
 - Number line
 - Repeated addition. (Refer Mathematics textbook class III).

Performance task 2

- Let students do the activity on multiplication using these links
<https://www.liveworksheets.com/gz283464ut>
<https://www.liveworksheets.com/zt1338741kv>

Design appropriate assessment tool and record the student learning based on the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Manipulative
- c) Online resources
 - <https://www.youtube.com/watch?v=vczu9agvF4g>
 - <https://www.liveworksheets.com/gz283464ut>
 - <https://www.liveworksheets.com/zt1338741kv>

Non-contact

- a) Mathematics Textbook Class 3
- b) Online resources
 - <https://www.youtube.com/watch?v=vczu9agvF4g>
 - <https://www.liveworksheets.com/gz283464ut>
 - <https://www.liveworksheets.com/zt1338741kv>

E. Annexure(s)

Refer III-A1 for template to record assessment

A. Competencies

- Identify the properties of multiplication and perform multiplication of single digit numbers.

Objectives

- Apply strategies for multiplication up to 9×9 .
- Change the order of multiplicand to achieve the same result.
- Recognize that: $(a \times b) \times c = a \times (b \times c)$, $a \times 1 = a$, $a \times 0 = 0$
- Apply multiplication facts such as double facts (e.g. $2 \times 7 = 14$, so $4 \times 7 = 2 \times (2 \times 7) = 2 \times 14 = 28$) to solve problems.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment (let students show examples of array, number line, equal sets and repeated addition)
- Demonstrate properties of multiplication and perform multiplication of single digit numbers (associative and commutative properties).

Non-contact teaching and learning

- Use social media platforms (WeChat/Telegram/Google classroom, etc.).
- Prepare PowerPoint presentations on properties of multiplication with examples and share it to students via any social media platform.

C. Assessment

Contact

Performance task 1

- Provide worksheet on associative and commutative properties of multiplication to students and ask them to solve.

Performance task 2

- Let students explore and carry out the activity on associative property using this link. <https://www.liveworksheets.com/nc1182962og>

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Provide worksheet on associative and commutative properties of multiplication to students and ask them to solve.

Performance task 2

- Let students explore and carry out the activity on associative property using this link. <https://www.liveworksheets.com/nc1182962og>

Design appropriate assessment tool and record the student learning based on the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Online resources
 - <https://www.liveworksheets.com/nc1182962og>

Non-contact

- a) Mathematics Textbook Class 3
- b) Phone and internet
- c) Online resources
 - <https://www.liveworksheets.com/nc1182962og>

E. Annexure(s)

Refer III-A1 for template to record assessment

A. Competencies

- Multiply 2-digit numbers by 1-digit numbers and represent in various ways.

Objectives

- Multiply 2-digit numbers by 1-digit concretely, pictorially and symbolically.
- Develop algorithms to multiply 2 digit numbers by 1 digit number.
- Solve multiplication problems related to 2 digit numbers by 1 digit.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment (provide few questions on array and repeated addition).
- Demonstrate how to multiply 2-digit numbers by 1-digit numbers using counters and manipulative (concretely). Then, represent it pictorially and symbolically.
- Demonstrate multiplication algorithm to multiply 2-digit number by 1-digit number.
- Discuss multiplication problems related to 2-digit numbers by 1-digit.
- Let students watch the video on multiplying 2-digit number by 1-digit number using this link https://www.youtube.com/watch?v=SfxULALs_u8

Non-contact teaching and learning

- Use social media platforms (WeChat/Telegram/Google classroom, etc.).
- Prepare a video on multiplying 2-digit numbers by 1-digit numbers concretely, pictorially and symbolically and share it to students via any social media platform.
- Let students watch the video on multiplying 2-digit number by 1-digit number using this link https://www.youtube.com/watch?v=SfxULALs_u8

C. Assessment

Contact

Performance task 1

- Prepare questions on multiplication problems and let students solve it.

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Prepare questions on multiplication problems and let students solve it.

Design appropriate assessment tool and record the student learning based on the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Manipulative
- c) Online resources
 - https://www.youtube.com/watch?v=SfxULALs_u8

Non-contact

- a) Mathematics Textbook Class 3
- b) Video on video on multiplying 2-digit numbers by 1-digit numbers.
- c) Phone and internet
- d) Online resources
 - https://www.youtube.com/watch?v=SfxULALs_u8

E. Annexure(s)

Refer III-A1 for template to record assessment

A. Competencies

- Show division as equal sharing, equal grouping and repeated subtraction.

Objectives

- Identify division as equal groups/sets, and as equal shares and repeated subtraction.
- Model division concretely, pictorially and symbolically.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment on any subtraction sentence.
- Demonstrate division as equal sharing (concretely, pictorially and symbolically).
- Demonstrate division as equal groups (concretely, pictorially and symbolically).
- Represent and relate division as repeated subtraction.
- Let students watch video using the following video links;
<https://www.youtube.com/watch?v=leN0kj5wb9I> (Division as equal grouping). https://www.youtube.com/watch?v=2V_V3WmdtnU (Division as equal sharing).
<https://www.youtube.com/watch?v=i8m5pXREAv0> (Division as repeated subtraction).

Non-contact teaching and learning

- Use social media platform (WeChat/Telegram/Google classroom, etc.).
- Let students watch video using the following video links;
<https://www.youtube.com/watch?v=leN0kj5wb9I> (Division as equal grouping). https://www.youtube.com/watch?v=2V_V3WmdtnU (Division as equal sharing).
<https://www.youtube.com/watch?v=i8m5pXREAv0> (Division as repeated subtraction).

C. Assessment

Contact

Performance task 1

- Let students solve questions related to division from the Mathematics textbook class III.

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students solve questions related to division from the Mathematics textbook class III.

Design appropriate assessment tool and record the student learning based on the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Manipulative
- c) Online resources
<https://www.youtube.com/watch?v=leN0kj5wb9I>
https://www.youtube.com/watch?v=2V_V3WmdtnU
- d) <https://www.youtube.com/watch?v=i8m5pXREAv0>

Non-contact

- a) Mathematics Textbook Class 3
- b) Phone and internet
- c) Online resources
<https://www.youtube.com/watch?v=leN0kj5wb9I>
https://www.youtube.com/watch?v=2V_V3WmdtnU
<https://www.youtube.com/watch?v=i8m5pXREAv0>

E. Annexure(s)

Refer III-A1 for template to record assessment

A. Competencies

- Solve multiplication and division problems by relating multiplication and division.

Objectives

- Demonstrate and understanding that Multiplication and Division are related.
- Identify the meaning of each factor.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment on multiplication and division (discuss some of the strategies).
- Show the multiplication- division fact family concretely and pictorially (use manipulative).
- Explain and discuss the meaning of each factor.
- Let students watch video about multiplication and division fact families using this link. <https://www.youtube.com/watch?v=wBPkUld8hRA>
- [Let students explore and carry out the activity on the fact family given in this link https://www.liveworksheets.com/gy1287135gm](https://www.liveworksheets.com/gy1287135gm)

Non-contact teaching and learning

- Use social media platforms (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.
- Let students watch video about multiplication and division fact families using this link. <https://www.youtube.com/watch?v=wBPkUld8hRA>
- [Let students explore and carry out the activity on the fact family given in this link https://www.liveworksheets.com/gy1287135gm](https://www.liveworksheets.com/gy1287135gm)

C. Assessment

Contact

Performance task 1

- Provide worksheet on multiplication and division fact family.

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Share the worksheet via social media on multiplication and division fact family.

Design appropriate assessment tool and record the student learning based on

the template in the Annexure

D. Resources

Contact

- a) Mathematics textbook class 3
- b) Manipulative
- c) Online resources

<https://www.youtube.com/watch?v=wBPkUld8hRA>

<https://www.liveworksheets.com/gy1287135gm>

Non-contact

- a) Mathematics Textbook Class 3
- b) Phone and internet
- c) Online resources

<https://www.youtube.com/watch?v=wBPkUld8hRA>

<https://www.liveworksheets.com/gy1287135gm>

E. Annexure(s)

Refer III-A1 for template to record assessment

Topic: III-B1 Multiplication as repeated Addition

A. Competency

- Recognize repeated addition pattern in multiplication.

Objectives

- Identify the repeating pattern formed in multiplication table and record repeated addition sentences as multiplication facts.

Note: The Pedagogy and Assessment for this topic has been included with III-A8 Multiplication

Topic: III-B2 Multiplication Table Pattern

A. Competency

- Investigate and explain patterns observed in multiplication tables.

Objectives

- Investigate and explain patterns observed in multiplication tables.

Note: The Pedagogy and Assessment for this topic has been included with III-A8 Multiplication

Topic: III-B3 Open Sentences

A. Competency

- Explore the patterns in multiplication and division through open sentence problems.

Objectives

- Discover missing factors or the missing products/quotient while exploring simple patterns in multiplication and division

Note: The Pedagogy and Assessment for this topic has been included with III-A12 Multiplication and Division

Topic: III-B4 Place Value Pattern: Base-Ten System to Thousands

A. Competency

- Explain the increase in place value in relation to the value of the place to its right.

Objectives

- Identify that hundreds are recorded to the left of tens.
- Identify that 10 of any unit = 1 of the unit to the left.

Note: The Pedagogy and Assessment for this topic has been included with III-A1 Numbers to 4 Digits.

A. Competency

- Compare angles directly and describe angles in relation to right angle.

Objectives

- Compare angles directly.
- Describe angles as less or more than a right angle.

B. Pedagogy

Contact teaching and learning

- Teacher show some examples of angles (physically and by pictorially) and discuss the definition of angle. (The names of angles such as *acute* or *obtuse* are not used at this level)
- Students compare angle directly (as greater or smaller angles)
- Teacher show right angle and describe it in relation to a quarter turn.
- Students compare angles to right angle and describe angles as greater/smaller than right angle.
- Students draw angles in comparison to right angle. (Angles greater than or smaller than right angles)
- Students perform the task related to angles in the textbook for class 3, under the topic Turns and angles.

Non-contact teaching and learning

- Teachers make/use a video introducing angles.
Suggested video: <https://youtu.be/xzAGoErwAyg> (Download and trim the video to extract only the required content)
- Students explore angles in their surroundings and compare angles directly (just by observing) as greater or smaller angles.
- Students explore representation of right angles at home or in their surrounding (E.g. Corners of tables, books, walls, etc.)
- Students compare angles to right angle and describe angles as greater/smaller than right angle.
- Students draw angles in comparison to right angle. (Angles greater than or smaller than right angles)
- Students perform the task related to angles in the textbook for class 3, under the topic Turns and angles.

C. Assessment

Contact and Non-Contact

Performance task 1

- Describe angles in comparison to right angle (as 'greater than', 'smaller than', or 'the same as' right angles) (Submit as video for Non-contact teaching and learning)

Performance task 2

- Draw right angles and angles greater/smaller than right angles. (Submit as photo for Non-contact teaching and learning).

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- e) Textbook (Class III Mathematics)
- f) Objects in the class

Non-contact

- e) Textbook (Class III Mathematics)
- f) Online resource : <https://youtu.be/xzAGoErwAyg> (This video is about Definition and types of angles)
- g) Technological gadgets for learning (mobile, desktop, laptop...)

E. Annexure(s)

Refer the template to record assessment given under III-A1

A. Competency

- Express the relationship among the four units of measuring length (km, m, cm, mm)

Objectives

- Estimate and measure length using centimetre (cm), millimetre, metre.
- Investigate the relation between cm and mm, cm and m, m and km.
- Choose the appropriate unit (km, m, cm, and mm) to measure length.
- Investigate distance around regular objects using different units.

B. Pedagogy

Contact teaching and learning

- Conduct a brief revision of using cm and m to measure length.
- Introduce mm using a ruler.
- Students measure length of tiny objects using mm and infer that mm is a very small unit of measuring length.
- Students examine the ruler, compare measurement of centimetre and mm and infer the relation between the two units ($1\text{ cm} = 10\text{ mm}$)
- Students examine the metre ruler, compare the measurement of centimetre and metre and infer the relation between the two units ($1\text{ m} = 100\text{ cm}$)
- Teacher could demonstrate how to measure length using combination of units. (E.g. 2cm 4mm, 2 m 5 cm, etc.)
- Students estimate lengths of objects, using a combination of units, then measure their lengths and evaluate their estimation.
- Introduce kilometre using example of distance and explain the relation of metre and kilometre ($1\text{ km} = 1000\text{ m}$)
- Students explore conversion of kilometre to metre.
- Teacher could demonstrate and explain to measure perimeter for irregular shapes and how to calculate perimeter for regular shapes
- Students choose appropriate units to measure perimeter, estimate and measure perimeter.
- Students perform the tasks related to measuring length using the 4 units in the textbook for class 3 mathematics , under the topics:
 - Measuring Lengths in Centimetre and Millimetre
 - Measuring Lengths in metre
 - Combining units to measure lengths
 - Comparing Lengths to a Kilometre
 - Measuring and Calculating Perimeter

Non-contact teaching and learning

- Teacher could make/use videos to introduce millimetre and kilometre, to explain the relation among the units cm, mm, m and km, to combine units for measuring length and to calculate perimeter.
 - Suggested video:
 - <https://youtu.be/XzhKc6jD0ws> (Trim the video to discuss the units one by one).
 - https://youtu.be/HZU_oCcTDck (Trim the video to extract only the information and measuring perimeter using standard unit).
- Students estimate lengths of objects at home using a combination of units, then measure their lengths and evaluate their estimation.
- Students also explore measuring the perimeter of objects at home (E.g. tables, TV screen, etc.)
- Students perform the tasks related to measuring length using the 4 units in the textbook for class 3 mathematics , under the topics:
 - Measuring Lengths in Centimetre and Millimetre
 - Measuring Lengths in metre
 - Combining units to measure lengths
 - Comparing Lengths to a Kilometre
- Students could explore the online worksheet <https://www.liveworksheets.com/fg1245569mf>

C. Assessment

Contact and Non-contact

Performance task 1

- Choose an appropriate unit to measure length and explain their choice of unit.

Performance task 2

- Measure length using combination of units (m, cm, mm)

Performance task 3

- Convert units to one another (km to m, m to cm, cm to mm, and vice versa) <https://www.liveworksheets.com/fg1245569mf> (for Non-Contact)

Performance task 4

- Measure and calculate perimeter using appropriate unit.

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- a) Textbook (Class III Mathematics)
- b) Pattern table
- c) Online resources:
 - <https://m.youtube.com/watch?v=PYd99ItLEc>
 - www.johncmcloskey.com/math-topics/scientific-notation-and-powers-of-ten/

Non-contact

- a) Textbook (Class III mathematics)
- b) Online resources:
 - <https://youtu.be/XzhKc6jD0ws> (This video is about units of measuring length)
 - https://youtu.be/HZU_oCcTDck (This video is about Area and Perimetre)
- c) Technological gadgets for learning (mobile, desktop, laptop...)

E. Annexure(s)

Refer the template to record assessment given under III-A1

Topic: III-C3 Capacity: Measuring capacity in litre

Measuring capacity in Millilitre

A. Competency

- Estimate and measure capacity in litre and millilitre and state the relation of the two units.

Objectives

- Estimate and measure capacity using litre and millilitre
- Investigate the relation of litre and millilitre ($1L = 1000\text{ ml}$) to infer that millilitre is an extremely small unit.
- Choose appropriate unit (L/ml) to measure capacity

B. Pedagogy

Contact teaching and learning

- Conduct a brief revision of using litre to measure capacity
- Introduce millilitre (ml) using a measuring cylinder.
- Students investigate the relation of litre (L) and millilitre (ml) using a measuring cylinder and infer that ml is an extremely small unit.
- Students discuss the containers whose capacity is measured in L and ml (E.g. bottle caps, small juice packets, water bottles, buckets, etc.), estimate their capacity, measure their capacity to evaluate their estimation.
- Students estimate the capacity of containers, then measure and record their capacity, using a combination of the two units.
- Students choose appropriate units (L/ml) to measure capacity of containers.
- Students explore converting Litre (L) to millilitre (ml) and vice-versa
- Students perform the tasks related to measuring capacity using the 2 units in the textbook for class 3 mathematics , under the topics:
 - Measuring Capacity in Litres
 - Measuring Capacity in Millilitres
 - Choosing an Appropriate Capacity Unit

Non-contact teaching and learning

- Teacher could make/use videos to introduce millilitre (ml), to explain the relation among the two units L and ml and to combine the two units for measuring capacity.
Suggested video: <https://youtu.be/b3rclj-geuY>
- Students examine the containers, found at home, whose capacity can be measured in ml (eg. bottle caps, small juice packets, etc.), estimate their capacity.
- Students estimate the capacity of containers, using a combination of units, then measure and record their capacity using appropriate units.

- Students explore combining units, L and ml to state the capacity of containers.
- Students could perform the tasks related to measuring capacity using the 2 units in the textbook for class 3 mathematics , under the topics:
 - Measuring Capacity in Litres
 - Measuring Capacity in Millilitres
 - Choosing an Appropriate Capacity Unit

C. Assessment

Contact and Non-contact

Performance task 1

- Choose an appropriate unit to measure capacity and explain their choice of the unit.
(Submit as video for Non-Contact)

Performance task 2

- State capacity of containers combining the units L and ml
(E.g. 2L 500ml)

<https://www.liveworksheets.com/np1247212ha> (for Non-Contact)

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- Textbook (Class III Mathematics)
- Containers of different sizes
- Measuring Cylinder

Non-contact

- Textbook (Class III mathematics)
- Online resources:
 - <https://youtu.be/b3rclj-geuY> (This video is about units of measuring capacity in litre and Millilitre)
 - <https://www.liveworksheets.com/np1247212ha> (This online worksheet provides students the practice to convert L to ml and vice-versa and to combine L and ml)
- Technological gadgets for learning (mobile, desktop, laptop...)

E. Annexure(s)

Refer the template to record assessment given under III-A1

A. Competency

- Estimate and measure mass in kilogram and gram, and state the relation of the two units.

Objectives

- Estimate and measure mass in kilogram and gram.
- Investigate the correlation of litre and millilitre (1kg = 1000 g) to infer that gram is used to measure very light objects.
- Choose appropriate unit (kg/g) to measure mass

B. Pedagogy

Contact teaching and learning

- Conduct a brief revision of using kilogram (kg) to measure mass
- Introduce gram (g) using small weights and pan balance, measuring mass of small objects.
- Students investigate the relation of kilogram (kg) and gram (g) using pan balance and infer that gram is used for measuring mass of smaller and fewer objects.
- Students examine the objects whose mass can be measured using gram and kilogram, estimate first and measure their mass to evaluate their estimation.
- Student estimate mass of objects, then measure and record their mass using the combination of the two units.
- Students choose appropriate units (kg/g) to measure mass of containers.
- Students explore converting kilogram (kg) to gram (g) and vice-versa.
- Students perform the tasks related to measuring mass using the 2 units in the textbook for class 3 mathematics , under the topics:
 - Measuring Mass in Kilogram
 - Measuring Mass in Gram
 - Choosing an Appropriate Mass Unit

Non-contact teaching and learning

- Teacher could make/use videos to introduce gram (g), to explain the relation among the two units kilogram (kg) and gram (g) and to combine the two units for measuring mass.

Suggested video: <https://youtu.be/GX8kvglatAc>
https://youtu.be/W81F_B1Kwhc

- Students examine the containers, found at home, whose mass is measured in g

(E.g. one potato, pencil etc.), estimate their mass.

- Students estimate mass of objects, using a combination of units, then measure and record their mass using appropriate units (kg/g).
- Students explore combining units, kg and g to state the mass of objects
- Students could perform the tasks related to measuring mass using the 2 units in the textbook for class 3 mathematics , under the topics:
 - Measuring Mass in Kilograms
 - Measuring Mass grams
 - Choosing an Appropriate Mass Unit

C. Assessment

Contact and Non-contact

Performance task 1

- Choose an appropriate unit to measure mass and explain their choice of the unit. (Submit as video for Non-Contact)

Performance task 2

- Convert kg and g to one another and State mass of containers combining the units L and ml (E.g.1 kg 500 g)
<https://www.liveworksheets.com/ee1374787jp> (for Non-Contact)

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- a) Textbook (Class III Mathematics)
- b) Objects of different sizes
- c) Pan Balance

Non-contact

- a) Textbook (Class III Mathematics)
- b) Online resources:
 - <https://youtu.be/GX8kvglatAc> (This video is about units of measuring mass in grams)
 - https://youtu.be/W81F_B1Kwhc (This video is about grams and kilograms)
 - <https://www.liveworksheets.com/ee1374787jp> (This online worksheet provides students the practice to convert kg to g and vice-versa and to combine kg and g)
- c) Technological gadgets for learning (mobile, desktop, laptop...)

E. Annexure(s)

Refer the template to record assessment given under III-A1

A. Competency

- Measure area using centimetre square grid and relate to the standard unit of measuring area (square centimetre).

Objectives

- Estimate and measure the amount of surface space of common objects using non-standard units and square centimetre.
- Utilize centimetre square grid to measure surface areas and relate it to area being measure in square centimetre (sq. cm)

B. Pedagogy

Contact teaching and learning

- Conduct a brief revision of measuring area using non-standard units.
- Students measure area of flat surfaces using appropriate non-standard units.
- Teacher introduces the standard unit of measuring area, square centimetre (sq. cm) by demonstrating how to measure area of regular and irregular shapes using square grids and relating it to the area of a square in the grid.
- Students estimate first and measure the area of different shapes using cut-outs of centimetre square and by tracing them on square grids, and record the area using the standard unit (sq.cm).
- Students perform the tasks related to measuring mass using the 2 units in the textbook for class 3 mathematics , under the topics:
 - Measuring Area in Non-Standard Unit
 - Measuring Mass in Square Centimetres

Non-contact teaching and learning

- Teacher could make/use videos to demonstrate measurement of area using non-standard units and to introduce the standard unit square centimetre (sq.cm). Suggested video: https://youtu.be/HZU_oCcTDck (Download and trim the video to extract the information related to area only)
- Students explore measuring area of flat surfaces using appropriate non –standard units
- Students estimate first and measure the area of different shapes using cut-outs of centimetre square and by tracing them on square grids, and record the area using the standard unit (sq.cm).
- Students perform the tasks related to measuring mass using the 2 units in the textbook for class 3 mathematics , under the topics:
 - Measuring Area in Non-Standard Unit
 - Measuring Mass in Square Centimetres

C. Assessment

Contact and Non-contact

Performance task 1

- Choose an appropriate non-standard unit to measure area and explain their choice of the unit. (Submit as video for Non-Contact)

Performance task 2

- Measure area of regular and irregular 2D shapes in sq.cm
<https://www.liveworksheets.com/ee1374787jp> (Submit as photo/video for Non-Contact)

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- a) Textbook (Class III Mathematics)
- b) Square grids

Non-contact

- a) Textbook (Class III Mathematics)
- b) Online resources:
 - https://youtu.be/HZU_oCcTDck (This video is about units of measuring mass in grams)
- c) Technological gadgets for learning (mobile, desktop, laptop...)

E. Annexure(s)

Refer the template to record assessment given under III-A1

Topic: III-C6 Measuring Time

Reading Analog and Digital clocks Relation among Different Units of Time

A. Competency

- Express correct measurement of time in relation to different units of time.

Objectives

- Relate digital and analog clocks.
- Read and write in different ways.
- Investigate the relation among different units of time, days of the week and months of the year.

B. Pedagogy

Contact teaching and learning

- Conduct a brief revision of reading time in hours, half hours and quarter hours in analog as well as digital clocks.
- Teacher could introduce reading of minutes and the relation of hour and minute using both analog and digital clock.
- Students explore reading time in both digital and analog clocks (including minute) in two different ways. (E.g. 15 minutes to 5 o'clock/ 45 minutes past 5 o'clock) and record time in digital format
- Students examine certain activities, then calculate durations and record it using hours and minutes.
- Students explore the clock and calendar to examine the relation among different units of time: 1 hour = 60 min, 1 day = 24 hours, 1 week = 7 days, 1 month = 4 weeks, 1 year = 12 months, etc.)
- Students perform the tasks related to measuring time in the textbook for class 3 mathematics , under the topics:
 - Using Analog and Digital Clocks
 - Relationship Among Different Units of Time
- Students explore activities in related to time in SIM for class III, volume 5

Non-contact teaching and learning

- Teacher could make/use videos to introduce minutes, to explain the relation between minute and hour and to demonstrate how to calculate duration.
- Suggested video: <https://youtu.be/DeRzeKp-9PE>
- Teacher could use SIM for class III, volume 5 carry out the above.
- Students examine analog and digital clocks and read time in two ways and record time in digital format

- Students examine certain activities, then calculate durations and record it using hours and minutes.
- Students explore clock and calendar to examine the relation among different units of time:
- Students perform the tasks related to measuring time in the textbook for class 3 mathematics , under the topics:
 - Using Analog and Digital Clocks
 - Relationship Among Different Units of Time
- Students explore activities in related to time in SIM for class III, volume 5

C. Assessment

Contact and Non-contact

Performance task 1

- Read time show in analog and digital clocks in two ways. (Submit as audio/video for Non- Contact)

Performance task 2

- Express units of time in different ways. (E.g. 2 hours = _____minutes, 2 weeks = _____days, etc.) (Submit as worksheet/photo/video for Non-Contact)

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- Textbook (Class III Mathematics)
- Analog and Digital clocks
- SIM for class III, volume 5

Non-contact

- Textbook (Class III Mathematics)
- Analog and Digital clocks
- SIM for class III, volume 5
- Online resources:
 - <https://youtu.be/DeRzeKp-9PE> (This video is about reading time)
- Technological gadgets for learning (mobile, desktop, laptop...)

E. Annexure(s)

Refer the template to record assessment given under III-A1

Topic: III-D1 Polygons
III-D2 Squares & Rectangles
III-D3 Parallelograms

A. Competencies

- Classify shapes as regular polygons and quadrilaterals.
- Explain why the square is a special rectangle.
- Demonstrate understanding of the concept of parallelogram by describing parallelogram in own words.

Objectives

- Classify and describe shapes as regular shapes or quadrilaterals, after examining the attributes of each shape.
- Examine the attributes of squares and rectangles to identify squares as a special rectangle.
- Generate one's own definition of parallelogram upon investigating the attributes of a parallelogram.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment (Show the polygons and let students name them).
- Explain what quadrilateral means. Then, discuss the properties of quadrilaterals (e.g. A polygon should be a closed shape).
- Let students identify the parts of polygons (side and vertex).
- Discuss about the types of polygons (classify polygons as concave, convex, regular, or irregular).
- Let students look at different polygons and sort it according to their sides (e.g. polygons having 3 sides together, polygons having 4 sides together etc.).
- Introduce the names of the polygons according to the number of sides (e.g. triangles, quadrilaterals etc.).
- Let students watch the video on polygons using this link <https://bit.ly/3jxiFL7>.
- Let students find the polygons in the classroom.
- Explain the differences between regular and irregular polygons.
- Introduce different types of quadrilaterals and discuss their properties. Explain why the square is a special rectangle. Also, discuss the properties of parallelogram and let students come up with their own definition of parallelogram.

- Let students watch the video on properties of quadrilaterals using this link <https://bit.ly/2N6LyIL>.

Non-contact teaching and learning

- Use social media platforms (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.
- Prepare/use videos about polygons and quadrilaterals.
- Download and trim the suggested videos to help students learn about following topics: <https://bit.ly/3jxiFL7> (Polygons) <https://bit.ly/2YX5j8v> (Regular and irregular polygons) <https://bit.ly/2N6LyIL> (Properties of different quadrilaterals)
(Note: The video used/made should ensure use of class level appropriate language).
- Let students look for different polygons at home. Let them also look for different quadrilaterals.

C. Assessment

Contact

Performance task 1

- Provide a worksheet and let students write the names for different polygons and quadrilaterals.

Performance task 2

- Provide questions on properties of quadrilaterals (refer questions from Students Mathematics Class III).

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Provide a worksheet and let students write the names for different polygons and quadrilaterals.

Performance task 2

- Provide questions on properties of quadrilaterals (refer questions from Students Mathematics Class III). *(Students take a picture of their task and send it for assessment).*

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- a) Student Mathematics Textbook for class 3
- b) Polygons/Cut out quadrilaterals
- c) Online resources
 - <https://bit.ly/3jxiFL7> (Polygons)
 - <https://bit.ly/2N6LyIL> (Properties of different quadrilaterals)

Non-contact

- a) Student Mathematics Textbook for class 3
- b) Online resources <https://bit.ly/3jxiFL7> (Polygons)
<https://bit.ly/2YX5j8v> (Regular and irregular polygons) <https://bit.ly/2N6LyIL> (Properties of different quadrilaterals)
- c) Phone and internet

E. Annexure(s)

Refer III-A1 for template to record assessment.

A. Competencies

- Distinguish prisms and pyramids by exploring the attributes of each 3D shape.

Objectives

- Recognize, name and describe prisms and pyramids.
- Discover that the shape of the base determines the name of the shape.
- Examine patterns in the attributes of prisms & pyramids (e.g. the number of vertices for all prisms is two times the number associated with its name – a triangular prism has 6 vertices).
- Locate prisms and pyramids around themselves, in the environment.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment (show 3-D shapes and let students name them).
- Discuss and sort the shapes into prisms and pyramids.
- Let students watch the video to help students learn about prisms and pyramids: <https://www.youtube.com/watch?v=OTJ8xakBcZM>
- Let students discover that the shape of the base determines the name of the shape. (E.g. if the pyramid has a triangle base, the name of the shape is a triangular pyramid.)
- Let the children count the number of sides, faces and vertices of each 3-D shape. Examine patterns in the attributes of prisms & pyramids (e.g. the number of vertices for all prisms is two times the number associated with its name – a triangular prism has 6 vertices, similarly the number of sides of pyramid is two times the number associated with its name-rectangular pyramid has 8 sides).
- Let students look for objects that resemble prisms and pyramids in the school.
- Let students explore MS PowerPoint and GeoGebra to make prisms and pyramids.

Non-contact teaching and learning

- Use social media platform (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.
- Teacher could make/use videos about prisms and pyramids.
- Download and trim the suggested video to help students learn about prisms and pyramids: <https://www.youtube.com/watch?v=OTJ8xakBcZM>
- *(Note: The video used/made should ensure use of class level appropriate language).*

- Let students discover that the shape of the base determines the name of the shape. (E.g. if the pyramid has a triangle base, the name of the shape is triangular pyramid.)
- Let the children count the number of sides, faces and vertices of each 3-D shape. Examine patterns in the attributes of prisms & pyramids (e.g. the number of vertices for all prisms is two times the number associated with its name – a triangular prism has 6 vertices, similarly the number of sides of pyramid is two times the number associated with its name-rectangular pyramid has 8 sides).
- Let students look for objects that resemble prisms and pyramids at home.
- Let students explore the lesson on prisms and pyramids in SIM for class 3, volume 4.

C. Assessment

Contact

Performance task 1

- Let students describe how many edges, faces and vertices each prism and pyramid has (Refer questions from the students Mathematics Textbook).

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students describe how many edges, faces and vertices each prism and pyramid has (Refer questions from the students Mathematics Textbook. *(Students take a picture of their task and send it for assessment).*)

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- Student Mathematics Textbook for class 3
- 3-D shapes
- ICT (PowerPoint, GeoGebra)
- Online resources
 - <https://www.youtube.com/watch?v=OTJ8xakBcZM>

Non-contact

- a) Student Mathematics Textbook for class 3
- b) Phone and internet
- c) Online resources

<https://www.youtube.com/watch?v=OTJ8xakBcZM>

E. Annexure(s)

Refer III-A1 for template to record assessment.

Topic: III-D5 Combining two or More Shapes

III-D7 Similar and Congruent Shapes

A. Competencies

- Construct polygons and new 2D shapes using combinations of shapes.
- Explain the difference between similar and congruent shapes.

Objectives

- Predict results for combining triangles & quadrilaterals by visualizing.
- Construct various polygons using combinations of triangles and quadrilaterals to validate their predictions.
- Infer that congruent polygons are a perfect match in terms of shape and size, while similar shapes match only in terms of how they look.

B. Pedagogy

Contact teaching and learning

- Let students visualize and predict what shape they will get if they combine
 - two triangles
 - a triangle and a rectangle
 - a triangle and a parallelogram etc.
- Provide pattern blocks and tangrams to combine shape and predict their prediction.
- Let them make various polygons using combinations of different shapes.
- Let the students watch how combining shapes are done using this link <https://bit.ly/3jzQxhs> (watch and trim video as per the lesson required).
- Explain the differences between similar and congruent with examples. Then, let students identify whether the given shapes are similar or congruent in each pair. (Draw the shapes on the board or prepare it beforehand).
- Let the students watch how combining shapes are done using this link <https://bit.ly/3a2D52s> (watch and trim video as per the lesson required).

Non-contact teaching and learning

- Use social media platform (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.
- Prepare/use videos about combining polygons and similar and congruent shapes.
- Download and trim the suggested videos on the following topics:
 - <https://bit.ly/3jzQxhs> (combing polygon)
 - <https://bit.ly/3a2D52s> (similar and congruent shapes)

(Note: The video used/made should ensure use of class level appropriate

language).

C. Assessment

Contact

Performance task 1

- Let students construct various 2-D shapes using triangles and quadrilaterals.

Performance task 2

- Let the student identify similar and congruent shapes (refer questions from the Mathematics textbook class III).

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students construct various 2-D shapes using triangles and quadrilaterals.

Performance task 2

- Let the student identify similar and congruent shapes (refer questions from the Mathematics textbook class III). (*Students take a picture of their task and send it for assessment*).

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- a) Student Mathematics Textbook for class 3
- b) Tangrams and pattern blocks
- c) Online resources
 - <https://bit.ly/3jzQxhs> (combining polygons)
 - <https://bit.ly/3a2D52s> (similar and congruent shapes)

Non-contact

- a) Student Mathematics Textbook for class 3
- b) Phone and internet
- c) Online resources
 - <https://bit.ly/3jzQxhs> (combining polygons)
 - <https://bit.ly/3a2D52s> (similar and congruent shapes)

E. Annexure(s)

Refer III-A1 for template to record assessment.

A. Competencies

- Investigate results of transforming 2D shapes (Turn, slide and flip) and further explore symmetry in relation to flips.

Objectives

- Perform transformation on 2D shapes by sliding, flipping and turning.
- Examine various lines of reflection in polygons.
- Construct personal definition for a line of symmetry and reflective symmetry.

B. Pedagogy

Contact teaching and learning

- Let students know that shape can be moved in 3 ways (sliding, flipping and turning).
- Explain how shapes are moved in three ways (sliding, flipping and turning) with examples.
- Discuss about the lines of symmetry in a shape. Let the students explain lines of symmetry and reflective symmetry in their own words.
- Let students watch sliding, flipping and turning are done using this video link
<https://www.youtube.com/watch?v=AH4VsH8mlgs>
- Show few transformed shapes and let students identify what transformation is used.

Non-contact teaching and learning

- Use social media platforms (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.
- Prepare/use videos about moving shapes.
- Download and trim the suggested videos on moving shapes:
<https://www.youtube.com/watch?v=AH4VsH8mlgs>

(Note: The video used/made should ensure use of class level appropriate language).

C. Assessment

Contact

Performance task 1

- Let students carry out activity on turning, flipping and sliding shapes (refer questions from the Mathematics textbook class III).

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students carry out activity on turning, flipping and sliding shapes (refer questions from the Mathematics textbook class III). (*Students take a picture of their task and send it for assessment*).

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- a) Student Mathematics Textbook for class 3
- b) Tangrams and pattern blocks
- c) Online resources
 - <https://www.youtube.com/watch?v=AH4VsH8mlgs>

Non-contact

- a) Student Mathematics Textbook for class 3
- b) Phone and internet
- c) Online resources
 - <https://www.youtube.com/watch?v=AH4VsH8mlgs>

E. Annexure(s)

Refer III-A1 for template to record assessment.

A. Competencies

- Select appropriate strategies for collecting and organizing data to help present an appropriate description of the collected data.

Objectives

- Select appropriate strategies for collecting and displaying data.
- Inspect considerations when collecting data: E.g. Where is a good source? Where should I conduct the survey? Does it matter when the survey is conducted? How should the questions be phrased?
- Describe collected data.

B. Pedagogy

Contact teaching and learning

- Collect data on any topics (e.g. ages of the students). The data on ages of the students was collected as shown below. Let the students answer the questions based on the data collected.

9, 8, 8, 7, 8, 8, 8, 9, 8, 8, 8, 8, 9, 8, 7, 8, 8, 9, 9, 8, 9

- What is the youngest age in the class? What is the oldest age?
- How many students are 7 years old? Which age is the most common?
- How many students are in the class?
- Explain that data is a collection of information. Data collection is done for many purposes, such as to understand particular situations, to predict future events, to confirm certain assumptions, and to help make decisions.
- Let the students know that if data is not organised it could be difficult to understand. But, if it was organised data, it helps you understand it better.
- Let students know that the above data is not organized and it takes longer time to answer the questions. One way to organise the data is to make a tally chart, as shown below).

Ages of students in the class

Age	How many students
7	
8	
9	

- Let students discuss and describe the difference they felt in answering the questions earlier and now.
- After organizing the data, students should describe or talk about the data that they have collected or that is presented to them.
- Discuss and let students describe the data above. For example;
 - The data shows the age of the students in the class.
 - There are 21 students in the class.
 - There are 13 students whose age is 8.

Non-contact teaching and learning

- Use social media platforms (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.
- Prepare a note on data collection and send it to the students.
- Prepare/use videos about data collection (collecting, organizing, and describing data). Download and trim the suggested videos: <https://www.youtube.com/watch?v=WoTdiUqEsXQ>
(Note: The video used/made should ensure use of class level appropriate language).

C. Assessment

Contact

Performance task 1

- Provide a topic for the students and let them collect, organize and describe data on the given topic. Let them carry out the activity in groups.

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Provide a topic for the students and let them collect, organize and describe data on the given topic. (Choose a topic that they can do at home). (*Students take a picture of their task and send it for assessment*).

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- a) Student Mathematics Textbook for class 3

Non-contact

- a) Student Mathematics Textbook for class 3
- b) Phone and internet
- c) Online resources
 - <https://www.youtube.com/watch?v=WoTdiUqEsXQ>

E. Annexure(s)

Refer III-A1 for template to record assessment.

Topic: III-E2 Pictograph

III-E3 Bar Graph

A. Competencies

- Interpret and create pictographs and bar graphs that have one symbol/picture representing more than 1 unit.

Objectives

- Investigate constructions where each symbol represents more than one item.
- Interpret pictographs.
- Create and interpret bar graphs for which each section represents a value greater than one using simple scales for larger numbers.
- Construct both horizontal and vertical graphs.

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment (steps involved in data collection).
- Model how to construct a pictograph using any data. Explain all the labels of the pictograph (a title, labels, a symbol, and a scale).
- Explain about choosing a convenient scale depending upon the numbers in the data.
- Let students know that pictographs can be either vertically and horizontally.
- After construction, help students to interpret the pictograph.
- Use this web link and let the students watch the video on pictograph <https://www.youtube.com/watch?v=fNpvOwM6K5c>. (Watch and trim video as per the requirement before letting students watch).
- Then, model and explain how to construct a bar graph using any data. Explain all the labels of the bar graph (a title, labels, and a scale).
- Explain about choosing a convenient scale depending upon the numbers in the data.
- Let students know that the bar graph can be either vertically and horizontally.
- After construction, help students to interpret the bar graph.
- Use this web link and let the students watch the video on bar graph <https://www.youtube.com/watch?v=YIb-JyLLxwQ&t=201s>. (Watch and trim video as per the requirement before letting students watch).

Non-contact teaching and learning

- Use social media platforms (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.

- Prepare/use videos about how to create and interpret pictograph and bar graph. Download and trim the suggested videos on pictograph and bar graph.
<https://www.youtube.com/watch?v=fNpvOwM6K5c>
<https://www.youtube.com/watch?v=YIb-JyLLxwQ&t=201s>
 (Note: The video used/made should ensure use of class level appropriate language).

C. Assessment

Contact

Performance task 1

- Provide data and let students create and interpret a pictograph.

Performance task 2

- Provide data and let students create and interpret a bar graph.

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Provide data and let students create and interpret a pictograph.

- Performance task 2

Provide data and let students create and interpret a bar graph. (*Students take a picture of their task and send it for assessment*).

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- Student Mathematics Textbook for class 3
- Online resources
 - <https://www.youtube.com/watch?v=fNpvOwM6K5c>
 - <https://www.youtube.com/watch?v=YIb-JyLLxwQ&t=201s>

Non-contact

- Student Mathematics Textbook for class 3
- Phone and internet
- Online resources
 - <https://www.youtube.com/watch?v=fNpvOwM6K5c>
 - <https://www.youtube.com/watch?v=YIb-JyLLxwQ&t=201s>

E. Annexure(s) Refer III-A1 for template to record assessment.

Topic: III-E4 Probability language

III-E5 Conducting Probability Experiments

A. Competencies

- Predict and describe probability outcomes of various mathematical and real-life events using probability language.
- Conduct experiment on probability of various mathematical and real life events and record outcome.

Objectives

- Predict and describe probability outcomes of various events using terms 'more likely' or 'less likely'
- Conduct experiments on probability of various mathematical and real-life events.
- Investigate every day & fictional events to realize that theoretical predictions may not prove true given a set of tries.
- Conduct experiments on probability of various mathematical and real-life events and record outcomes.
- Describe outcomes using probability language and in terms of simple fractions (E.g. '2 out of 5').

B. Pedagogy

Contact teaching and learning

- Conduct pre-assessment (let students use the probability words to describe each event). Example;
 - A tree will talk to me tomorrow.
 - Tomorrow will be a sunny day.
 - When you drop a nail in water, it will sink.
 - When you heat ice, it will melt.
- Familiarize and explain all the probability words (impossible, unlikely, possible, likely and certain).
- Let students describe probability of each event using probability words. (Refer examples in Mathematics Textbook class III).
- Use the probability devices such as die/coin/cubes/spinner to perform probability experiments.
- Refer Mathematics textbook Class III and conduct the experiments as described under "Conducting Probability Experiment" p. 155 (2019 edition). Help them to describe outcomes in terms of simple fractions.
- Students predict then conduct experiment on various mathematical and real-life events to describe future events as likely and unlikely events and

evaluate their predictions to realize that theoretical predictions may not prove true given a set of tries.

(E.g. There is 1 out of 6 chances of getting a 2 when a die is rolled, so the probability is unlikely but when given a 6 tries, there are chances of actually getting 2 more than once, even 6 out of 6 times maybe).

Non-contact teaching and learning

- Use social media platform (WeChat/Telegram/Google classroom, etc.) to deliver the lesson.
- Prepare/use videos about probability language and conducting probability experiments.
- Students explore the lesson on probability in SIM for class 3, volume 4.
- Let students carry out the activities related to probability in the Student Activity book for class 3.
- Students predict then conduct experiments on various mathematical and real-life events to recognize and describe future events as likely and unlikely events and evaluate their predictions to realize that theoretical predictions may not prove true given a set of tries, on their own.

C. Assessment

Contact

Performance task 1

- Let students describe the probability of each event using probability words (refer questions from Mathematics Textbook Class III).

Performance task 2

- Let students conduct experiment using a die and let them describe outcomes in terms of simple fractions.

Design appropriate assessment tool and record the student learning based on the template in the annexure

Non-contact

Performance task 1

- Let students describe probability of each event using probability words (refer questions from Mathematics Textbook Class III).

● Performance task 2

Let students describe outcomes of probability experiments in terms of simple fractions (refer questions from Mathematics Textbook Class III). (*Students*

take a picture of their task and send it for assessment).

Design appropriate assessment tool and record the student learning based on the template in the annexure

D. Resources

Contact

- a) Student Mathematics Textbook for class 3
- b) Die/coin/cubes/spinner

Non-contact

- a) Student Mathematics Textbook for class 3
- b) Phone and internet
- c) SIM Class III (Volume 4)

E. Annexure(s)

Refer III-A1 for template to record assessment.