



# MINIMUM LEARNING COMPETENCIES



STATE INSTITUTE OF EDUCATION  
KASHMIR

# Foreword

Whereas, education stands on top priority with the government, the department is enduring to fulfil this cherished goal of the government by focusing on various aspects of the school Education system including curriculum and class room practices to take forward this policy decision of the government.

Since the significant number of children in Schools face reading writing and other multiple learning problems resulting in the low levels of achievement in children, the department is adopting a perspective that demands competency development of children at the initial level of learning.

Since the curriculum expectations are long term goals and cannot be achieved in short duration. There are some minimum levels of learning which teachers need to ensure before transacting the prescribed course. Keeping this in mind the SIE with the help of some practicing teachers identified the required basic competencies in children in the shape of this document titled, MINIMUM LEARNING COMPETECIES to develop firm foundation for a strong base. Hope the teachers and other stake holder shall move forward in this direction to tackle the quality challenge.

# VISION

*The state of Jammu and Kashmir is making substantial efforts towards improving quality schooling to the children. Substantial efforts have been made to strengthen school infrastructure, teacher capacities and teaching-learning methods and materials. But, these efforts need to be improved further to address the learning needs of the students. Therefore, it requires a balanced and result oriented approach that after completing certain level of education children have developed a minimum standard of skills and competencies required to become productive and constructive individuals.*

*The learning outcomes that are required vary according to the context but at the end of basic education cycle the children must have reached a level where from they can construct knowledge meaningfully. Infact the learning objectives are the milestones that children should follow with full understanding independently at their own pace where there is no pressure of syllabus completion or fear or anxiety. The children have interest, enthusiasm and confidence. The guiding principle evolved in the document need to be pursued and achieved before proceeding further. It is based on the vision.....*

- 1. That this year the focus will be on the development of competencies from class 1<sup>st</sup> to 7<sup>th</sup>.*
- 2. Month of March shall be especially devoted to the development of minimum levels of learning among the students.*
- 3. Evaluation from class 1<sup>st</sup> to 7<sup>th</sup> shall be on competency based but children having achieved prescribed learning level for the standard the teachers shall continue with the teaching of given syllabus.*
- 4. The model evaluation tool for assessing the required competencies at particular level shall be prepared by the SJE.*
- 5. That DIET Principals and cluster heads shall pursue the teaching learning programme effectively for achieving the desired learning objectives.*

**JD Trainings/ Principal  
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## ***Minimum learning competencies in English language***

Children can learn more than one language at a time. This fact applies to the second language learning as well. But, the second language learning needs to be flexible in such a way that children use their first language along with the second language, which is of course English, in Jammu and Kashmir. As a matter of fact, language learning becomes meaningful when it is connected with the immediate environment of the children. However, it is not necessary that all the activities taking place in English class room must be based on English text book. The activities can also be linked to life outside the school.

No doubt books are must so far as the reading and writing is considered, but any language learning for that matter starts with listening and speaking. The teacher needs to build confidence among learners which cannot be done without using language in a situation where they feel free to commit mistakes freely and encourage asking questions.

Since, the target group has a very little understanding of English, mother tongue of child finds place in the classroom processes as it helps them grasp the concepts easily and quickly. Only the rich inputs and its usage in classroom are important.

Since the curriculum expectations are long term goals and cannot be achieved in short duration there are some minimum levels of learning which teacher needs to ensure before proceeding further in this direction.

The English language teachers need not to be held up in between different theories of teaching and learning. They need to adopt their pedagogical strategies as per need of the hour best appropriate to the situation and to the levels of the students.

## Pedagogical treatment

While teaching English the prime thrust has to be on the teaching of English as language for communication and not as a content subject to be remembered for the purpose of examination and later on forgotten. It demands a natural order of learning where speaking and listening stand at number first. The teacher needs to take several steps to build confidence in children. Singing of rhymes, action songs, puzzles, games, discussions, dramatization, role playing etc. are some useful strategies recommended to be adopted by the teachers.

## Class wise minimum competencies in progression

### Level 1st (Indicators)

#### Listening

- Listen to simple instructions (Stand up/ Sit down /Come here/Open the book etc. -(Responding to teachers commands and gesture.,
- Enjoy rhymes and action songs.

#### Speaking

- The teacher to introduce vocabulary items through flash cards and ask students to repeat after him as many times as possible so that every child gets a chance to speak.
- Recite simple rhymes and action songs with the teacher.
- Answer yes/no type questions.

#### Reading

- Can recognize capital letters (refer to text)
- Can read simple words with the help of pictures.

#### Writing'

- Can draw shapes and pictures
- Can write alphabet,
- Can write on 4 line note book.

#### Learning objectives

Vocabulary Learning	Naming words; Food items- fruit, salad, vegetables, Body parts , clothes, colours, people and professions, (The teacher to teach with the help of relevant pictures).
Language elements	The structures like This is.../That is... / These are.../ Those are... (To be practiced situationally ) is, am, are, He, she has, have, had(simple use of these items like, I have-she has----(teacher to teach situationally )

## LEVEL 2<sup>nd</sup>

### a) Listening

- Can follow simple instructions and directions
- Can understand greetings and polite expressions
- Enjoy listening rhymes (refer to text)
- Understand simple vocabulary items with the help of pictures.(can also refer to text)

### b) Speaking

- Can recite songs in groups and separately.
- Can respond to instructions and commands
- Read vocabulary items and understand its meaning.

### c) Reading

- Read capital and small letters
- Read the given words
- Read with the help of pictures

### d) Writing

#### e)

- Can write capital and small letters
- Can write simple words properly.

Vocabulary learnings	Animals and insects, trees and plants, health and hygiene, time period and seasons, good habits
Language elements	<ul style="list-style-type: none"><li>• Word used in place of noun, I, we, she, you, it, they. (Through situation)</li><li>• who, which –(through demonstration)</li><li>• at, on, in, under (teach situationally)</li><li>• can, cannot----- (through substitution table)</li><li>• Do ,don't ----- (through substitution table )</li></ul>



Level 3<sup>rd</sup>(Indicators)

a) Listing

- Understand instructions and requests.
- Listening with comprehension
- Understand picture based stories.  
(teacher can refer to the text also)

b) Speaking

- Can recite poems with actions and gestures
- Can make requests, commands and offer greetings
- Answers simple questions.  
(Not necessarily complete sentences)

c) Reading

- Can read with the help of pictures  
(teacher can refer to the text also)
- Can read simple sentences
- Can read/describe pictures.

d) Writing

- Can write capital and small letters.
- Can write words properly.
- Draw pictures

Learning Objectives

Vocabulary Learning	Holidays and festivals, family and relations, means of transport, means of communication, good habits (teach through verbal context) pictures also
Language elements	eat, drink, walk, sleep etc., as many action words as possible------(teach through actions) a, an, the .------(teach through situations) big; small; tall, short fat etc, ------( teach through pictures/demonstration )

## Level 4<sup>th</sup>(Indicators)

### Listening:

- Follow commands/requests /questions
- Follow simple words and sentences.
- Enjoy listening poems and songs/ jokes and stories
- Understand simple conversation in a familiar situation.

### Speaking:

- Speak simple sentences naturally.
- Recite poems properly. (teacher can refer to the text)
- Describe familiar things (4 to 5 sentences).
- Talk about likes and dislikes.

### Reading:

- Read the text with proper pronunciation.
- Read title of text/ headlines /sign boards

### Writing:

- Write neat and clean words/sentences
- Write simple answers to questions.
- Take dictation of simple words and sentences.

### Learning Objectives

Vocabulary Learning	<ul style="list-style-type: none"><li>• Months of the year,</li><li>• days of the week</li><li>• states and the capitals</li><li>• People and the languages.</li></ul> (teach through verbal context )
Language elements	<ul style="list-style-type: none"><li>• (Simple) Past- present- future</li></ul> (teach through time line) Refer to activity bank.  The other tenses could also be taught through language games)

## Level 5<sup>th</sup>(Indicators)

### Listening:

- Can understand simple conversations/instructions/dialogue
- Can follow different kinds of commands/instructions.
- Can listen with understanding.  
(may refer to some simple story in the text also)
- Can respond to textual questions.

### Speaking:

- Speak simple sentences
- Take part in plays/discussions.
- Recite poems/songs.
- Can raise questions.

### Reading:

- Can read simple sentences
- Is able to read charts/maps/signboards/headlines and notices.
- Can read with proper pronunciation marks.

### Writing:

- Can write properly (Words/Sentences)
- Can write answer to textual questions
- Can use simple punctuations

### Learning Objectives

Vocabulary Learning	Mountains and hills , forests and rivers, seas , oceans & continents,------(through pictures in verbal context )
Language element	Clauses, conditional-if, punctuation marks, link words. ----- (through substitution table)

## Level 6<sup>th</sup>(Indicators)

### Listening:

- Can listen sentences with comprehension.
- Enjoy listening poems/ songs / jokes and stories
- Follow different kinds of instructions. (Agree/Disagree, Likes/dislikes)

### Speaking:

- Can speak simple sentences
- Hold simple conversation.
- Ask simple questions based on text.(refer to text)
- Take part in different events (Drama/ Debate)
- Recite rhymes and poems with proper rhythm.

### Reading:

- Read charts/maps/sign boards/headlines etc.
- Read text normally (Average speed)
- Read text with understanding (for scanning information)

### Writing;

- Write guided composition (60 words)
- Write answers to textual questions.
- Use punctuation marks.
- Sentence organization.

### Learning Objectives

Vocabulary Learning	One word substitution , word formation like: farm, farmer, farming, farmhouse word categories like: book, pen, pencil=stationery distance & diameter, movement & speed, binomials (Through TLM)
Language element	modals: shall, should; will, would etc. etc ------( to be taught situationally and in context)

## Level 7<sup>th</sup>(Indicators)

### Listening:

- Comprehend textual passage.
- Respond to telephone communications
- Respond to direction and instructions.
- Respond to textual questions

### Speaking:

- Can speak sentences on given topics.
- Hold guided conversation with friends and teachers
- Speaking in the morning assembly
- Recite poems with proper rhythm (may refer to text)
- Act in textual plays

### Reading:

- Enjoy reading
- Practice reading
- Read with comprehension

### Writing:

- Know letter Writing format
- Guided composition writing
- Write answer to textual questions
- Know the use of punctuation marks.

### Learning Objectives

Vocabulary learning	famous places ( to be taught through verbal context with relevant pictures and photographs)
Language Elements	who ,which whose (through demonstration) Letter and application writing, Character ketch , letter and paragraph writing (through guided writing)

## ACTIVITY BANK

The given activities are suggestive icebreakers to break the monotony of the class besides developing communicative skill and mental alertness among the children. Although, there is great fun in these activities but the success lies in the presentation and skill of teacher.

### Beginning

In the beginning children are usually quiet and withdrawn. Teacher needs develop rapport with the them. To begin with he needs to encourage the children and relate home language to the School language for the greater participation of the students.

### Activity No 1

#### (Teaching vocabulary)

Chooke Mein Lug GayeeAag Re----- SareBartanNikaleBhag.

#### Process:

Tell the children to sit in a circle.

Introduce the above action song with participants and tell them that **Chook** means kitchen and **Bartan** means Utensils. Tell them that a fire broke out in kitchen and participants have to move all utensils from kitchen one by one.

The song will go in circle and each participant will name one utensil only to move it from kitchen.

Once the name of one utensil is taken out it cannot be repeated by other person. Every time child has to take the name of a new utensil.

Once the entire round is completed and everyone got the chance, stop the song. Next day game can be repeated to recall the naming words.

Ask following questions to participants:

How did you like it?

What happened during singing the song?

Did you enjoy it?

Was there a mental exercise?

Did everyone participate?

What was the leaning point?

## Activity No 02

Before the activity starts, ask participants to tell how many of them know each other? Wait for response and proceed doing an activity which will help them to know each other.

Ask participants to be in a circle.

Keep a number of picture cards in the Centre of the circle.

(Picture shall be formed by joining two cards)

Tell the participant to choose one card each. In order to make a complete picture ask children to search the other part of the picture from everyone else in the circle. This will help children get involved in conversation. Once the card is matched with the other part of the picture, the child holding that part will become the partner. Now they will introduce each other and also talk about the picture. Once the talk is over, the children shall sit in circle again to repeat the activity again.

### Objective:

To help children develop communicative skill.

To help children know each other in order to be friends.

### **Activity No 3):** Name Relay

The children will sit in circle; first child will tell her/his name (no surname). The next person sitting beside shall repeat his name and will add his own. The Third child will tell his name and will also add early two names. The process will go on till the last child gives his name and adds other names told till then. There can be adjectives also staged with the names also in another activity.

Once the above exercise is over the teacher shall try to know the response of the students by asking following questions:

How did you like the activity?

What happened during the process of the activity?

What were the learning points?

**OBJECTIVE: INCREASING MEMORY POWER.**

### **Activity No 4)**

Divide the class into smaller groups. Ask the groups to discuss on a given theme. Seek response from the groups. List the emerging responses on the chart paper. Each group will give different opinion about the topic. Conduct a discussion on the key emerging points.

Tell the right handed students to write with left hand and the left handed with the right hand. There will be a great fun and children shall enjoy.

Stop writing the activity and ask each participant to read the writing of the participant next to them. Ask them to compare it to the sentences spoken earlier.

#### **Note for teachers:**

*It is difficult to write with the left hand because the finer motor muscles are not well developed and this affects the ability of writing. It is essential that child at this age is given activities to strengthen their finer muscles through activities like: clay work, threading beads, finger movements. Children should be allowed to freely practice on various activities as much as possible before introducing formal writing.*

**OBJECTIVE: (FUN IN LEARNING)**



## Activity No 5

Malti Kay BachayKoSardi Ho Gayee,

UsayGaram Tel Se MalishKarengay.

M..M..M..M..M...Malti, AurBachaaTandrust Ho Gaya.

### Process:

Tell participants to stand in a circle.

Introduce the above action song with participants.

The teacher will sing the song with action and the children will follow it. The action for each word is important and the details of the same are mentioned below. While singing **Malti Kay BachayKo.....**Teacher has to show body gesture for each word:

While saying **Malti**keep your finger at nose. This will indicate nose ring which will indicate "**MALTI**"

While saying "**Bachay**" show the symbol of how a child is kept on both hand. This will indicate "**BACHHE**"

While saying "**Sardi**" trainer has to show the symbol of running nose.

While saying **M..M..M..M..M...Malti**, to indicate it again teacher has to keep finger at nose.

While saying "**AurBachayTandrust Ho Gaya**" teacher has to show the symbol of healthy child.

### NOTE FOR TRAINER:

*This action song will be sung for five times. Each time one word will be kept silent but the action for that particular word will continue. For example, after round one of the song, the word "**MALTI**" will not be pronounce but action for **Malti** i.e. keeping finger at nose will continue. In next round both words i.e. "**MaltikeBachheko**" will not be said/pronounced but action will continue. This way during the last round, the entire song will be sung in silent mode but action will continue.*

Once the action song is over the teacher will ask following questions to students.

How did you like it?

What happened during singing of the song?

Did you enjoy it?

Was there a mental exercise?

Did everyone participate?

What were the leaning points?

After listening to children, reinforce all four components of activity i.e. Fun, Total Participation, Mental Exercise and Learning Points.

## Activity No 6

Make sentence from CHAIR.

### Process:

Tell participants to sit in a circle.

Place one chair in the middle of the circle.

Ask participants to make sentence using chair.

Any sentence once told by participants will not be repeated by others.

This will continue till everyone gets the opportunity to make sentence.

Depending on participants' interest, this activity can go for second round also. Once the activity is over the teacher will ask the following questions.

How did you like it?

What happened during making sentence?

Did you enjoy it?

Did everyone participate?

What were the leaning points?

OBJECTIVE: icebreaker and language learning

## Activity No 7

**BolBhaiKitn y ----- AapChahoJitne**

### Process:

This is an outdoor activity.

Tell participants to stand in a circle.

The teacher will stand in the middle of the circle and will instruct all the children to move around the circle.

While group is moving in the circle, the trainer will say **“BolBhaiKitnay”** and the children will reply **“AapChahoJitnay”**. The teacher may say any number. Every child shall try for finding place in any of the groups within the same number or he/she shall be out of the game.

If the teacher says five, the participants will have to form a small group of five. The person who does not find place in any groups goes out of the game. This game if carried for some time gives a great joy to the students . It is a brain storming activity.

## Activity No 8

Eik Doo Tin Char-----Sar Par Rakh Hath

**Process:**

Tell participants to stand in a circle.

The activity will start with counting number like one, two, three, four and so on. But the number divisible by five (5, 10, 15, 20, 25 ..... ) will not be said. In place of these numbers children have to keep their hand on their head. The next person to him/her shall continue the number such as six, seven, eight shall carry on. But when the number divisible by five will again come child have to keep their hand on head or go out from the game if committed error.

Suppose the counting is moving clockwise and the person whose number comes 5, 10, 15, 20..... puts his/her hand on head indicating anti clock sign, the next person standing beside him will have to start counting from one. But if the person whose number comes 5, 10, 15, 20..... puts his/her hand on head indicating clock wise sign (means passing the number), then the next person has to continue the number as six, seven, eight ....and so on.

The game is carried on for some time till most of the participants are declared out .

Once the game is over, ask from the children:

How did you like it?

Did you enjoy it?

Did everyone participate?

What was the leaning point?

The answer will be- we loved it.

we would like to do this activity again and again.

The objective of this activity will be to develop mental alert ness

## Activity No 9

### Understanding sorting, (classification and seriation)

Here are names of five animals. Arrange them in a row in different ways but there has to be a logic for the arrangement.

Dog, deer, cat, cow, horse, lion, camel

Give around 2 minutes to the children.

Ask children one by one, the way they have sequenced the animals.

Expected Response: arrangement according to – height, size, weight, speed.

Question: Now quickly ask them different ways in which they would categorize the animals?

Expected response: domestic and wild, herbivorous and carnivorous,

Sum up: the first activity of sequencing things on a given quality is called seriation:

The second activity of making groups is called ‘classification’ or sorting: making groups is basis of almost a lot of learning or building of concepts.

### In mathematics:

Seriation (or sequencing) is a foundational to learning ranking – 1st, 2nd, 3rd.... as teachers we understand it as ‘ordinal’ numbers.

On other hand – when you are classifying, you are making small groups of things (animals, shapes, size) it is about quantity in other words they are cardinal numbers.

Similarly concepts of addition, subtraction, multiplication, division, geometry, volume, weight are based on the mental operations of – classification, sorting, seriation and conservation.

## HOME TASK

The home task has still relevance and students can be asked to get the additional language work done on regular basis ,for instances 02 to 03 phrases a day.

- Compound nouns

Alarm +clock = alarm clock

Credit + card=credit card

( Or)adjective +noun

Strong +wind =strong wind

Heavy+ rains=heavy rains

- Compound adjectives

Well +dressed= well dressed

Good +known =good known

- verb+ preposition(fixed)

Listen +to = listen to

Agree +with = agree with

- adjective +preposition

Afraid +of = afraid of

Similar +to= similar to

- Phrasal verbs ,

Pick +up=pick up

Find +out =find out

- Prepositional phrases

By +mistake =by mistake

By +hand= by hand

## Activity no 10

For teaching tenses give a time line like

Say            5am    5.30 am 6 am   8am

Ask children what do you do at a particular time every day

The expected answer will be

I get up at 5 am

I take bath at 5.30

I go for walk at 6 am. ----- and so on

This way children will be learning present simple.



## Mathematics

Before actually transecting the prescribed syllabi, some basic competencies are to be ensured initially from the students at all levels. In this direction the document is prepared in consideration of the minimum levels of learning class 1<sup>st</sup> to 7

Class	Suggestive for baseline correction
1 <sup>st</sup>	To begin normally with mathematical language (Spatial relationships)
2 <sup>nd</sup>	a) To have the Conceptual understanding of numerals/numbers from 1-50 b) To be able to add without carry
3 <sup>rd</sup>	a) To have the conceptual understanding of numerals/numbers from 1-100 b) To be able to write numbers in words (one - twenty) c) To be able to add and subtract two digit numbers. (without carry) d) To have the understanding of spatial relationships (Top/bottom, above/below)
4 <sup>th</sup>	a) To have the conceptual understanding of numbers/numerals from 1-1000 b) To be able to write numbers in words (One - Fifty) c) To be able to add and subtract numbers. (with carry) d) To be able to multiply two digit numbers by a single digit number (Without carry) e) To have the understanding of spatial relationships (Top/bottom, Inside/outside, above/below, Near/far, thin/thick, before/after) f) To have the knowledge of 2-D shapes (Square, Rectangle, Triangle)
5 <sup>th</sup>	a) To have the conceptual understanding of numbers/numerals from 1-1000 b) To be able to write the numbers in words (One - Hundred)

	<p>c) To be able to add, subtract numbers (with carry)</p> <p>d) To be able to multiply numbers by a two digit numbers</p> <p>e) To be able to divide a two-digit number by a single digit number (Simple Situations)</p> <p>f) To have the understanding of spatial relationships (Top/bottom, Inside/outside, above/below, Near/far, thin/thick, before/after)</p> <p>g) To be able to identify 2-D and 3-D shapes/objects (square, rectangle, triangle, parallelogram, pentagon, hexagon, Cube, cuboid, cylinder, cone and sphere)</p>
6 <sup>th</sup>	<p>a) To have the conceptual understanding of numbers/numerals from 1-10000</p> <p>b) To be able to match numerals with their number names (up to four digit numbers)</p> <p>c) To have the concept of fractional numbers and decimals (simple cases)</p> <p>d) To have the concept of place value and face value</p> <p>e) To be able to add, subtract and multiply (with carry).</p> <p>f) To be able to divide (Simple Situations)</p> <p>g) To have the understanding of spatial relationships (Top/bottom, Inside/outside, above/below, Near/far, thin/thick, before/after)</p> <p>h) To be able to identify 2-D and 3-D shapes/objects (square, rectangle, triangle, parallelogram, pentagon, hexagon, Cube, cuboid, cylinder, cone and sphere)</p> <p>i) To have the knowledge of edges and faces.</p>
7 <sup>th</sup>	<p>a) To have the conceptual understanding of numbers/numerals from 1-10000</p> <p>b) To have the understanding of prime and composite numbers.</p> <p>c) To be able to match numerals with number names. (up to five digit numbers)</p> <p>d) To have the concept of fractional numbers and decimals</p>

	<p>e) To have the concept of place value (Decimal cases also)</p> <p>f) To be able to add, subtract, multiply and divide. (Decimal cases also)</p> <p>g) To have the understanding of spatial relationships (Top/bottom, Inside/outside, above/below, Near/far, thin/thick, before/after)</p> <p>h) To be able to identify 2-D and 3-D shapes/objects (square, rectangle, triangle, parallelogram, pentagon, hexagon, Cube, cuboid, cylinder, cone and sphere)</p> <p>i) To have the knowledge of edges and faces. To have the concept of area of 2-D shapes (Rectangle/Square/Triangle)</p>
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To inculcate these competencies, the following activities/ strategies can be helpful for a teacher.

❖ **To understand numbers/numerals;**

- Involving children in reading numbers written on a number chart and other places in and outside the classroom.
- Organising activities and games aimed at associating a spoken or written number with appropriate number of objects, drawn from a collection, may be organised in groups of tens and ones.
- Organising group activities to compare number of objects in two collections by one-to-one correspondence. Children should be encouraged to find their own ways of comparing two numbers, e.g. using the sequential order of numbers, number of tens and ones in them, etc.
- Engaging the children in activities of counting large number of objects from their surroundings. Encourage them to make equal groups while counting. After building an adequate understanding of grouping objects in tens and ones, involve them in writing the number.

- Engaging the children in activities of counting large number of objects from their surroundings. Encourage them to make equal groups while counting. After building an adequate understanding of grouping objects in tens and ones, involve them in writing the number.
- Using abacus may also help the teacher to make understand the concept of numbers.

### ❖ **Addition and subtraction**

- Engaging children in exploring the situations where addition and subtraction of numbers is required like, combining two groups, enlarging a given group by adding some more items, etc.
- There are a lot of situations in children's daily life where addition of numbers happens. Involve them in problem solving activities on addition and subtraction of numbers.
- Conducting discussions with children so that they explore their own ways of addition and subtraction and should be able to develop their algorithms. Avoid unnecessary emphasis on mechanical application of standard algorithms for these operations.
- Creating situations where children can use alternative algorithms to find sum and difference.
- Engaging child in adding and/or subtracting two numbers written vertically or horizontally. Let the children devise their own ways of addition by using their understanding of addition on 2-digit numbers.
- Organising selling-buying situation in classroom where lot of addition and subtraction of money is involved using play currency notes up to Rs. 1000.

❖ **Multiplication and division.**

- Creating situations and context where a number is to be added repeatedly like there are five rows and in each row six children are sitting; 2 cookies to be given to each of 7 friends, etc.
- Encouraging children to discover some other his/her method of writing repeated addition.
- Providing small hints to reach to the situation where child says  $2+2+2+2$  can also be called as 4 times 2.
- Activities to write multiplication facts (times tables) by repeated addition and later on by observing patterns.
- Creating situations of equal sharing/grouping of objects and exploring ways of describing it in mathematical way.
- Engaging students in this activity also: Write numerals 0-20 on the ground. Ask one student to stand at zero and jump at 2 then at 4 and so on and on. The students be asked to note the numbers where he jumped. Ask another student to stand at zero and jump at 3 then at 6 and so on and record the numbers. Continue the process till each student gets involved. Then explain as; the first jump at 2 means  $2 \times 1 = 2$ , then second jump at 4 means  $2 \times 2 = 4$  and so on. Similarly, the other student's activity may also be expressed in mathematical terms. This whole process results the multiplication table.
- Creating situations of equal sharing/grouping of objects and exploring ways of describing them mathematically.
- Conducting activities to explore division facts in different ways like repeated subtraction, inverse of multiplication, pattern recognition, etc.

- Involving children in discovering their own ways to solve a problem related to division of two-digit numbers.
- Conducting practice activities to help children master algorithms and appreciate the standard algorithms given in books.

### ❖ 2-D and 3-D shapes

- Conducting activities with individual child and group of 3-4 children for folding paper of more than two types. Let the children discuss and identify the figures that are formed by the crease on opening the paper.
- Discussing various shapes (2-D and 3-D) available in the surroundings of the children and their characteristics by involving them in identification of the specific characteristics of every shape.
- Drawing children's attention towards various similarities and differences in 2-D and 3-D shapes while they are sorting and classifying them. This will help them in associating various shapes with names like square, rectangle, triangle, cube, cuboid, cone, cylinder, sphere, etc.
- Giving idea of straightness and curvedness from the objects like edge of a tumbler, edge of a book/notebook, table, etc. involving children in exploring the other/his properties of shapes like edges, corners, etc.
- Conducting activities involving children in drawing straight and non-straight lines by tracing the edge of a 3-D shape on paper.
- Engaging children in making scenery, pictures and drawings, focusing on shapes made up of straight and curved lines.
- Conducting activities with children to draw various shapes using a dot grid.

❖ **Fractional numbers**

- Involving children in activities related to dividing a whole in equal parts by using paper folding, dividing a given shape like square, rectangle, circle, etc.
- Providing opportunities to represent a given fraction by shading/colouring parts of whole.
- Conducting activities targeting to counting the shaded parts corresponding to given fractions to add them and to recognize and generalise a pattern.

❖ **Number naming**

- Giving a drill to children of number names.
- Engage students in reading the charts where the counting is written in both numeral form as well as word form.
- Making the small cards on which numeral and the corresponding number name is written. Distribute these cards among students and ask them to observe their card. Then each student will show and read aloud what is written on his card.
- Making cards of two categories viz. numeral cards and number name cards. Ask students to pair the numeral cards with their corresponding number name cards.

## Science

### Class 6<sup>th</sup>

*Time line is suggestive and not hard and fast*

**Living Things and Non Living Things: Their Difference:** Examples of Living & Non Living Things; **Activity:** Classification of Different objects into Living and Non Living.

1. **Water The Basic Need of Living Things:** Sources of Water, Potable water; Characteristics of Drinking water:  
**Activity/Project:** Make a list of Rivers and famous Lakes in J&K State.
2. Importance of Saving Water, Rain harvesting, recycling of water.  
Activity: Related to saving water;
3. How water gets polluted; Different pollutants, Purification of Water-Methods; Removal of suspended or insoluble impurities; Destroying of harmful germs and bacteria present in water.

#### 5/6. **Our Food :**

Plants give us food: we eat vegetables, fruits, cereals and pulses. Among the vegetables, we eat different parts of vegetables viz; Root, Stem, Leaves, Fruits, Flowers (At least 3 examples of each); Tea, Coffee, Spices.

#### 7/8. **Food Group:** Energy –giving food, Body –building food, Protective

Foods (Atleast 4 examples

each) Emphasis should be given on presence of nutrients like **proteins, carbohydrates, fats, vitamins** and **minerals** in one’s diet.

Good habits lead to be a super kid. (The Teacher should at least tell the students 7 good habits).

#### 9/19. **Cooking:** Methods of Cooking: - Roasting, Boiling, Frying, Baking,

Sources of Fuel/Heat, Kerosene oil, Electricity, Gas, Wood, Sunlight, Cow dung cakes. Safety measures at home/kitchen.



11. Rotation of the earth; and day and night formation.

12. Revolution of the earth and formation of seasons.

13. The Sun and the Shadows: Eclipses-Solar and Lunar

Activity: - The teacher must teach these concepts with the availability of TLM.

14. **The Earth Structure:**

Earth as a special planet; Organization of Earth-Crust, Mantle and Core.

15. Basic knowledge about the formation of Volcano, Earth quakes, Tsunami.

16/17. **Rocks and Minerals:** - Types of Rocks-Igneous, Sedimentary and

Metamorphic: Petroleum and some important byproducts.

18. **Developmental stages of plant/seed.**

Seed-germination-plant body, buds, flowers, pollination, fruits and seeds. Parts of a flower.

19. Five Senses; some super senses in animals,

20/21. **Air:** The properties of air-1) occupies space 2) has weight 3) exerts pressure. Constituents of Air, Air Pollution, Air Pollutants, Cause and effects, Prevention/Control of Air Pollution.

22. **Our Health:** Preparation of ORS, First aid box, Vaccination, Immunization, Blood banks

23. **Some Common Diseases (Brief Idea) Symptoms and causes**

Whooping, cough, Diptheria, Tetanus, Malaria, Dengue, Typhoid.

24. Do's and Don'ts related to **burns**, **heart stroke**, bleeding nose, insect bite, wounds, sprain.

25. Our space, Facts about space, Some Famous Astronauts.

Class 7<sup>th</sup>      Subject Science

Day 1

Living and non-living things: their difference, characteristics of living things, plant and animal life

Day 2

Water-the basic need: Different sources of water-Potable water, its characteristics, Importance of saving water

Day 3

Conservation of water: Rain harvesting, any activity related to water conservation; transpiration, evaporation

Day 4

How water gets polluted; Different pollutants, purification of water-methods; Removal of suspended and insoluble impurities; destroying of harmful germs and bacteria present in water.

Day 5/6

Plants give us food: we eat vegetables, fruits, cereals and pulses. Among the vegetables, we eat different parts of vegetables viz; root, stem, leaves, fruits, flowers (at least three examples of each); Tea, Coffee, spices

Day 7/8

Food Groups and components of food: Energy-giving food, body-building food, protective-foods(at least four examples in each case), components of food, basic information about various nutrients present in our food viz, carbohydrates, proteins, fats, vitamins, mineral salts.

### Day 9

Balanced Diet, deficiency diseases; Beri-beri, scurvy, rickets, goiter, anemia- their symptoms, cause and cure. Obesity and its concern

### Day 10

Methods of cooking; roasting, boiling, frying, baking, safety measures at home

### Day 11

Rotation and revolution of the earth

### Day 12/13

Shadows, solar and lunar eclipses. **Activities** with related TLM (teaching-learning material), transparent, opaque and translucent objects, mirrors and reflection.

**Activity** Reflection of light through plane mirror

### Day 14

Structure of earth, features that make earth as a special planet, different layers. (crust, mantle, core)

### Day 15

Formation of volcanoes, earthquakes, tsunami etc. (Basic concept)

### Day 16/17

Seed germination, different stages of germination, plant body, flower, pollination, parts of flower, herbs, shrubs and trees

### Day 18

Air pollution (Causes, effects and control). Different pollutants of air.

## Day 19

Our health: Preparation of ORS, 1<sup>st</sup> Aid Box, vaccination, immunization, blood banks

## Day 20

Some common diseases (Brief idea) symptoms and causes: Whooping cough, diphtheria, tetanus, malaria, dengue, typhoid

## Day 21

Basic knowledge about space, famous astronauts

## Day 22

**Fibre to Fabric**, concept of fibre, yarn and fabrics, sources of fibres, (animal and plant fibres with examples), natural and synthetic fibres

## Day 23

**Changes around us**: Physical and chemical changes, reversible and irreversible changes with examples

## Day 24

Electricity and circuits, electric cell, torch, bulb and functions of switch

## Day 25: Different methods of separating mixtures, handpicking,

threshing, winnowing, sieving, sedimentation, filtration, evaporation and condensation, saturated and unsaturated solutions, solute, solvent, solution

## Day 26

Concept of magnets-Activity making an electromagnet with the help of electricity

## Day 27**Our body**-fixed joints, movable joints, ball and socket joints,

pivotal joints, hinge joint-at least one example