



# Facilitators/teacher's handbook

## Grade 1 Mathematics



Learning Companions,  
Nagpur

## **Message for facilitators/teachers**

Dear facilitators/teachers,

We are happy to introduce you this book. This book is designed specifically keeping in mind the needs of learning spaces like Upay centres. The learning objectives and organization of the content is mostly based on already well-studied and well-established NCERT syllabus. There is only a few additional changes keeping in mind the challenges of out-of-the-school children and mixed age-group learning spaces.

It is emphasized that each day should be a combination of physical and literary activities. This way a same concept is shared through different modalities, so the learning consolidates much better. Also, it helps to break the monotony in the class, making the class more engaging, fun and easy for the children. So, it is recommended for the facilitators to execute each day as suggested in the book; or if the plan needs to be changed, make sure to plan a combination of activities using suggested additional activities at the end of each day's page.

At the beginning of every chapter, a brief test is suggested to assess the pre-existing knowledge of students regarding that topic. This is important in order to plan the class such that given activities are not 'too easy' or 'too difficult' for any student. Because, this is one of the reasons that the children feel disinterested or distracted and consequently become disruptive in the class. Also at the beginning of each day, activities are suggested for a brief, 10 minutes long, oral test, "What happened yesterday?" This will provide constant feedback on how each student is catching up with the concepts. This feedback can be used to judge which students need additional help, extra attention, or which concepts need to be spent more time with.

One more important thing considered during the design of this book is a set of basic 'learning and life skills', which are expected to prepare children for future learning and real life challenges. The selection of activities in this book and the accompanying language book has been done such that there is sufficient exposure to develop each of the basic learning and life-skill during the course of the year.

This book has been written in English considering that the many facilitators who work within Upay ecosystem are comfortable with English. However the book is intended for the Hindi medium students. This is necessary to be kept it in mind and use the Hindi numbers, letters and language while interacting with the student.

We hope that this book will help the facilitators in planning the class better and thinking how to introduce different concepts in the learning space. We are looking forward to improve on this book using more feedback from the ground. So, we request whoever uses this book to send your suggestions, comments to us when you use this book in your learning space.

Editorial team,  
Learning Companions, Nagpur

**Facilitators/Teachers' Handbook**  
**Grade 1, Mathematics**

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## Chapter 1– Counting 1–9



**Expected time to learn and consolidate lesson** : 8–10 classroom hours<sup>1</sup>

**What will student learn:**

**Subject matter** – Basics of counting; Recognizing and writing numbers till 9

**Basic learning and life skills**<sup>2</sup> – 1, 3, 4, 5, 7, 8, 10, 12, 13, 17

**Preferred tools of introducing concepts**<sup>3</sup> : Imitation and recital, manipulations with objects, coloring/drawing, poems and stories

**Notes for facilitators** : At this stage it is difficult for children to understand verbal instructions given in group. So, it is necessary to do one-on-one interaction with each child whenever necessary.

### Day 1 – Testing pre-possessed understanding and preparatory activities

#### Testing pre-possessed understanding<sup>4</sup>

- Give each student a group of 6–8 items separately from which some items are found in the class (chalk, pen, eraser, scale etc.) and which are not in class (like pebbles, comb, chocolate, Seeds etc.). Now ask the children to separate the things that are found in class and things that are from outside the class.
- Show a group of 2–3 chalk, pebbles, rubber or some other items in one hand and 5–6 in the other hand and ask each student which hand has more objects.
- Ask all students to bring 5 pebbles/stones from outside the class. Now ask each student to tell 'how many' by showing upto 5 pebbles.
- Show some fingers ask the kids to count.
- While doing the above activities, carefully observe to what extent different students are already aware of these concepts and make notes at the end of the class.

#### Counting poem 1 – group recital

Read the poem to students given as material 1, Appendix 2, while showing the counting with your fingers. Ask students to repeat it behind you. Repeat the same also on following days in a manner suggested for each day, until the end of this chapter.

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## Day 2 – Introduction to vocabulary – कम, ज्यादा, समान, जितने-उतने

### What happened yesterday?<sup>5</sup>

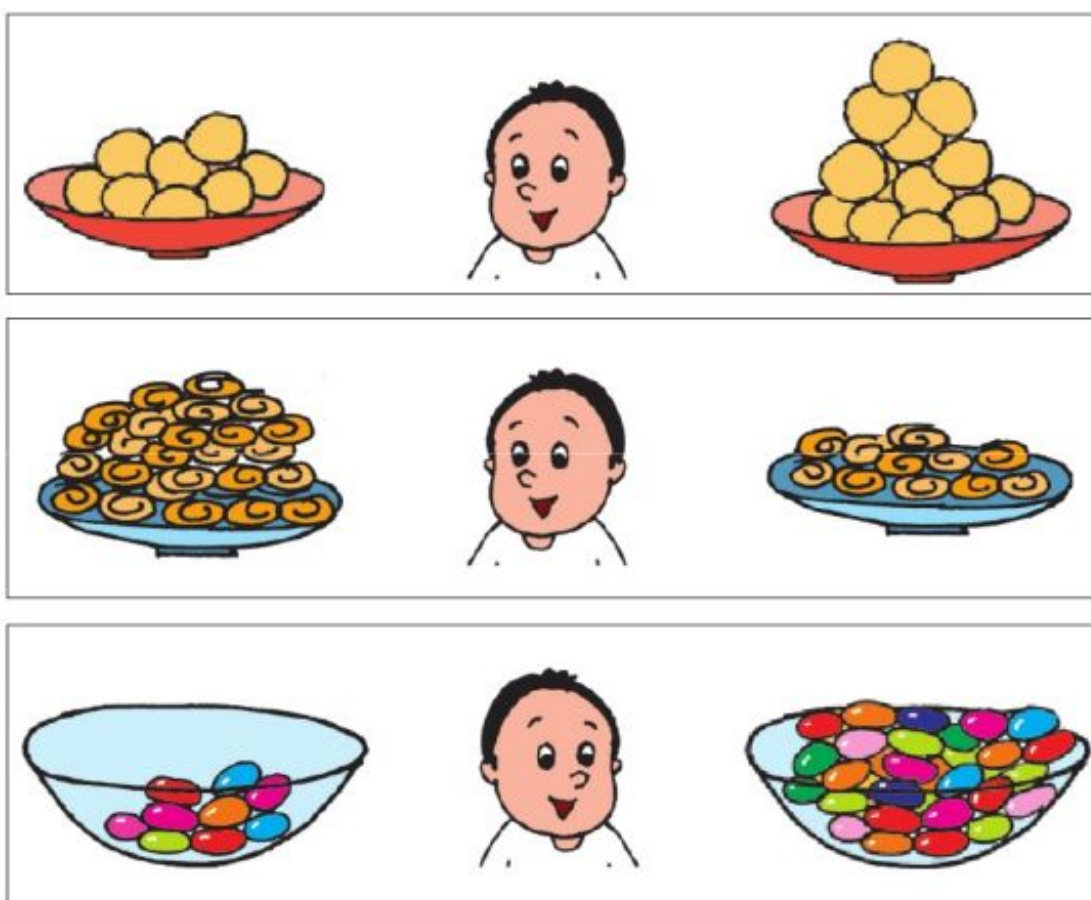
Ask the children, "बताओ, कल हमने कौनसी कविता सीखी?" Accept all answers and appreciate them. During this time, carefully observe which children are answering; which children remember less, which ones remember more; which children are hesitant to speak.

### Counting poem 1 – group recital

Recite the poem in class and ask the children to follow.

### Activity 1 – More, less, same, equal to

Check Appendix 3, activity #1 for how to conduct this activity.



**Image source : Balbharati Math(Hi.)Grade 1–pg. 6**

**Activity 2** – Provide students copy of NCERT, Math Magic 1, pg. 24, 25 and 26. Explain how to solve worksheets and talk while they solve.

### More similar activities

- Worksheet on Balbharati Math(Hi.)Grade 1–pg. 7
- Worksheet on NCERT, Math Magic 1, pg. 21

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## Day 3 – Oral counting exercise 1

### What happened yesterday?

- Make a separate group of boys and girls in the class and ask the children to tell if there are more boys or girls in the class today. After any response, make one boy-one girl pairs and ask to observe if the boys or the girls left without pairs and to answer if boys or girls are more.
- Similarly ask questions with couple of other items

### Counting poem – Group recital

Ask students to start the poem. Check if they can remember poem as group. If they cannot, help them by singing along.

### Activity 1 – Counting with objects

Check Appendix 3, activity #2 for how to conduct this activity.

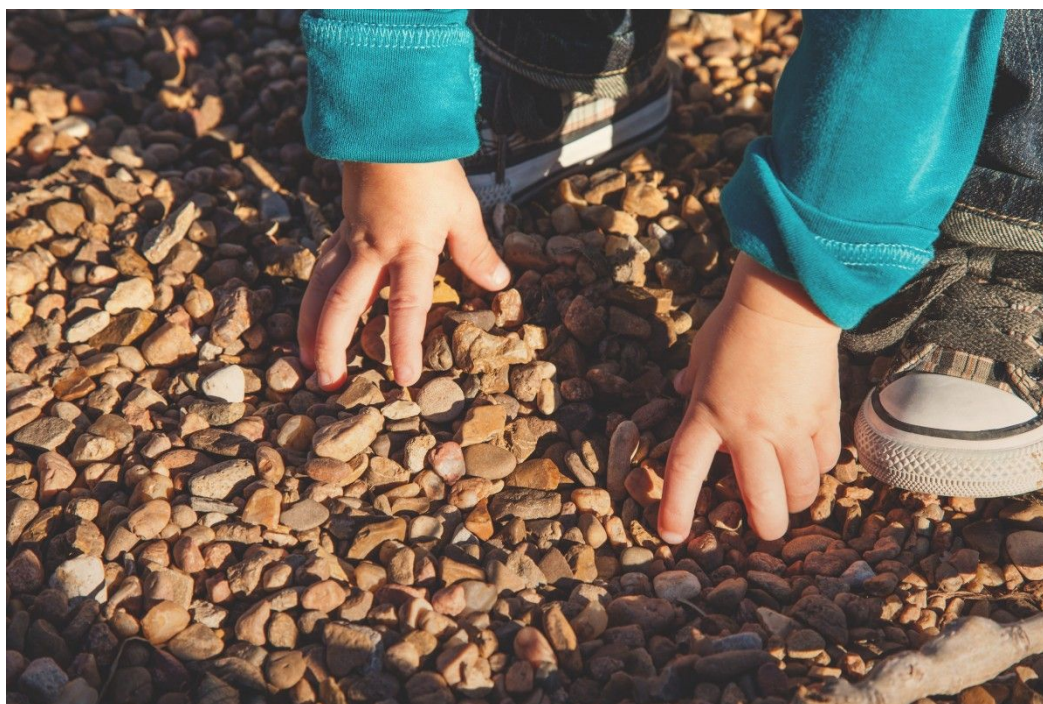


Image source – <https://pxhere.com/en/photo/1170077>

**Activity 2 – Count objects and make as many lines** – Provide students copy of worksheet on Balbharati Math (Hindi Medium), Grade 1, pg. 9, 10.

### Other similar activities

- Picture reading – Check activity #7, Appendix 3
- As many claps as fingers – Check activity #8, Appendix 3

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## Day 4 – Oral counting exercise 2

### What happened yesterday?

Make different shapes on the board (like 3 circles, 2 triangles, 4 stars etc.). Ask students to come in front one-by-one and count. If a student makes a mistake, help them to understand the count.

### Counting poem – Individual recital

Ask how many of them remember the poem. Those who say yes. Ask them to come in front and recite it. Those who couldn't, ask (but do not insist) them to remember it for next time.

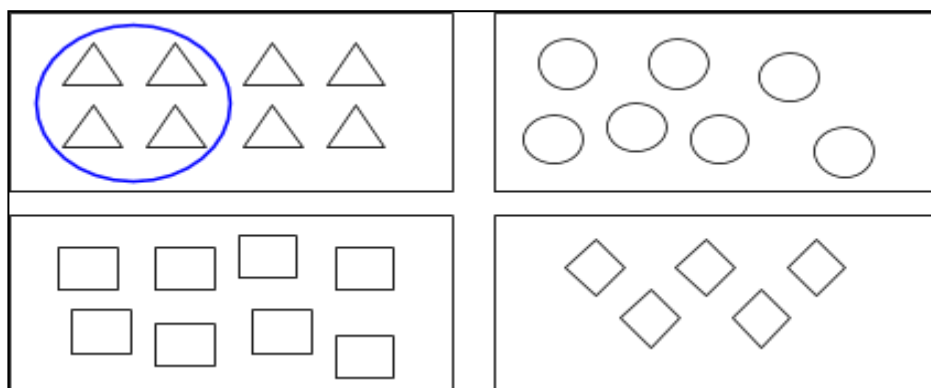
### Activity 1 – Members of family

Check Appendix 3, activity #3 for how to conduct this activity.



### Activity 2 – Make group of given number

Check Appendix 3, activity #4 for how to conduct this activity.



### Other similar activities

- Catch the mistake – Difficulty 11

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## Day 5 – Introduction to Numbers : 1–5

**Notes for facilitators:** It is necessary that the students should be very confident in counting up to nine before they attempt to read and write numerals 1 to 9.

### What happened yesterday?

Ask each student how many members are there in their family. Observe how many students can remember the answer. Help the students to count again those who can not remember the answer.

### Counting poem – Individual recital

Ask students to come in front and do individual recital of counting poem. First encourage the ones who had not done it before.

### Activity 1 – Preparatory activity – match the same objects

Balbharati, Math (Hi. Medium), grade 1, page 11. After completing the exercises on this page, similarly give students other shapes in their notebook or slate and do little more practice of matching the objects.

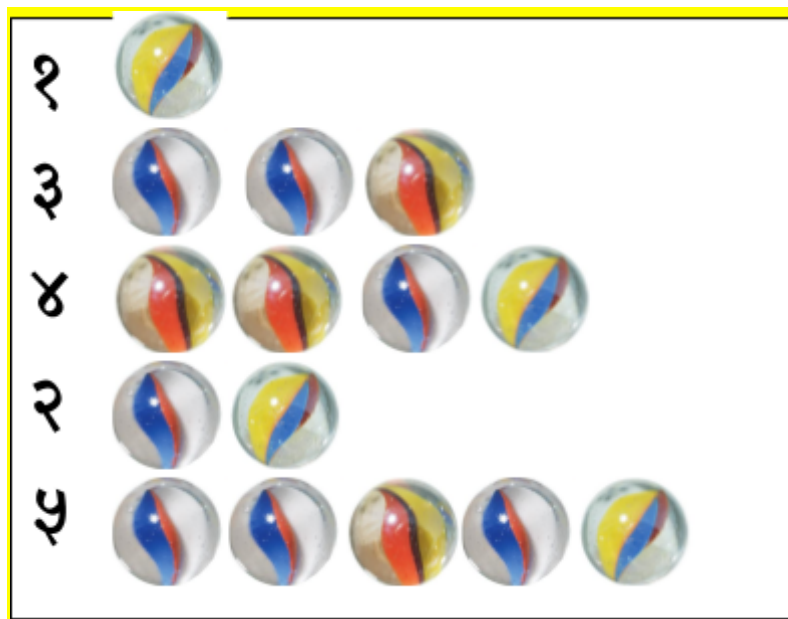
### Activity 2 – Number cards

Check Appendix 3, activity #5 for how to conduct this activity. These number cards can simply be made on paper from notebook using sketchpens.



### Activity 3 – As many objects as the number

Give number cards to each student and ask them to collect as many objects as in the card. Carry out this activity multiple times by switching the number cards.



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### Day 6 – Introduction to numbers : 1–9

#### What happened yesterday?

Show each student a number card from yesterday and ask to identify the number. If they cannot identify, show the other side and ask to count the dots and then ask what is the number.

#### Counting poem – Individual recital

Ask students to come in front and do individual recital of counting poem. First encourage the ones who had not done it before.

#### Introduction to numbers : 1–9

Repeat activity 2 and 3 from day 5 with including numbers till 9.

#### Other similar activities

- Count and circle – Check Appendix 3, activity #9
- Match numbers with objects – Balbharati Math(Hi.)Grade 1–pg. 22
- Worksheets on NCERT, Math Magic 1, pg. 32, 33, 34, 39 & 40

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## Day 7 – Writing numbers – 1-5

### What happened yesterday?

- Sit in a circle with kids and put a pile of numbers up to 9 (with 4-5 cards of each number).
- Go in round asking to find a specific number card. Continue for 3-4 rounds.

### Counting poem 2 – Group recital

Introduce students poem 2 given in Appendix 2. Ask students to follow.

### Activity 1 – Trace and write numbers

Provide students with worksheet on Balbharati, Maths (Hi. Medium), grade, page 23. First ask students to identify the numbers on the sheet. Ask students to pay attention to you while you show on a sheet how to trace the numbers and where to start. Then ask them to trace and write numbers while you are observing. This stage will need individual attention while each student learns to write numbers.



Image source : Balbharati Math(Hi.)Grade 1–pg. 6

### Activity 2 – Listen and trace

- Provide students with worksheet 1, Appendix 4.
- Ask students to complete task following instructions provided with the worksheet
- Carefully observe and help if students are not able to understand the right way of tracing and writing a number

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## Day 8 – Writing numbers 1–9

### What happened yesterday?

Ask student what they did yesterday. Then call students one by one in front and ask to write a given number on the board.

### Counting poem 2 – Group recital

Recite poem 2 and ask students to follow.

### Activity 1 – कितने भाई कितने

Check Appendix 3, activity #6 for how to conduct this activity.



scan to watch demo on  
youtube

**Activity 2** – Repeat activities 1 and 2 from day 7 using numbers till 9.

### More similar activities

- Count and write – Check activity #10, Appendix 3
- Worksheet on NCERT, Math Magic 1, pg. 43

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## Day 9 – Revisit the concept

**Note for teachers** – Use this whole session to observe if the kids have internalized the concept of counting till 9. Present all activities in this session as challenges. Continue same for another math session if kids do not seem to be there just yet.

**Counting poem** – Ask students to do a group recital of both the poems introduced in this chapter.

### Activity 1 – Count and match

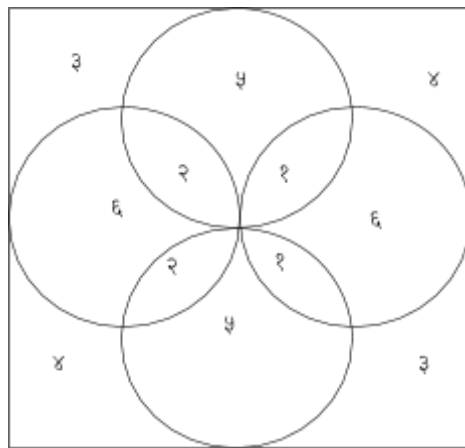
Provide students with worksheets on NCERT Math Magic 1, pg. 41. Explain what to do and talk while they solve these worksheets

### Activity 2 – Make collection equal

Provide students with worksheets on NCERT Math Magic 1, pg. 45. Explain what to do and talk while they solve these worksheets. This exercise will begin for introduction of the next concept in Math.

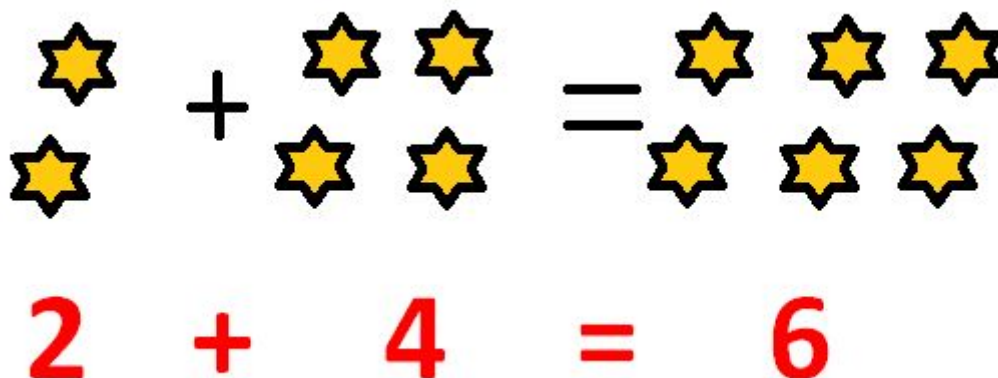
**Activity 3 – Color by number** – Give copy of following picture to children and ask them to color it by number.

१ – लाल, २ – हरा, ३ – निला (orange), ४ – बैंगनी (purple), ५ – पिला ६ – गुलाबी



\*\*\*

## Chapter 2 – Addition



**Expected time to learn and consolidate lesson** : 4–5 classroom hours<sup>1</sup>

### **What will student learn:**

**Subject matter** – Understanding the concept of addition; performing addition on objects and numbers till 9.

**Basic learning and life skills**<sup>2</sup> – 1, 2, 3, 4, 5, 7, 8, 12, 13, 15, 17

**Preferred tools of introducing concepts**<sup>3</sup> : manipulations with objects, worksheets, coloring/drawing, poems and stories.

**Notes for facilitators** : Before we take up the concept, let children get sufficient exposure and experience of combining collections. Children may be provided enough opportunities to handle a wide variety of concrete materials. 'One more' idea may be initially introduced and then often recalled.

### **Day 1 – Testing pre-possessed understanding and preparatory activities**

#### **Testing pre-possessed understanding**<sup>4</sup>

- Take 5 balls/pencils, start adding 2 balls/pencils and tell all the students to raise their hand if they know the right answer. Then ask them how many total pencils/balls are there?.
- Give chalk to one Student, ask him/her to draw 3 circle, call another student to draw 2 circle. Call the 3rd Student to tell how many circle are there on the board.
- Take two cards having pictures of different number of objects of the same kind (Ex. Tringle,apple etc) Tell them to add the objects in each picture and say 'Done' when they are ready with the answer after getting the answers give 1 point each to those who gave correct answer .

- Give some objects like pencil, eraser, sharpner in one hand of each student, and a book or a colour pencil in another hand and ask them to add objects and give answers one by one.
- Make note of comparative levels of each student in regards with understanding of the concept of addition. Use it during planning of the class.

### Activity 1 – Count and Add

Worksheets are available on NCERT, Math Magic 1,pg.52–54. Give each student worksheets as shown below, ask them to count the objects from 1st box and write the count below same with the next box then add both the numbers and write it down in the third box.

		
<input style="width: 40px; height: 20px; border: 1px solid black;" type="text"/> Flowers and	<input style="width: 40px; height: 20px; border: 1px solid black;" type="text"/> Flowers	= <input style="width: 40px; height: 20px; border: 1px solid black;" type="text"/> Flowers

		
<input style="width: 40px; height: 20px; border: 1px solid black;" type="text"/> Birds and	<input style="width: 40px; height: 20px; border: 1px solid black;" type="text"/> Birds	= <input style="width: 40px; height: 20px; border: 1px solid black;" type="text"/> Birds

**Image Source : NCERT Math magic, Grade 1–pg. 52**

While doing the above activities, carefully observe to what extent different students are already aware of these concepts and make notes at the end of the class.

### Addition Poem 1 – group recital

Read the poem to students as given in Appendix 2, Poem 3, and Ask students to follow you. Try to do it with some actions so it can work as a keyword for them to remember.

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## Day 2 – Introduction to vocabulary – और ,जोड़ना , मिलाना,

### What happened yesterday?<sup>5</sup>

Ask the students about Yesterday's Activity. Ask some questions like if we add 2 balls in 3 pencils, what will be the answer. From this exercise, observe how much they have understood the concept. Accordingly certain students can be provided more attention if necessary.

### Activity 1 – Roll the Dice

Check Appendix 3, activity #11 for how to conduct this activity.

### Activity 2 – War Of Cards

Check the Appendix 3 activity #12, for how to conduct this activity.



ImageSource:[https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTO\\_vpjEDvPbGfSK32pxYtzlhrZKnucAM4VPCKkG\\_61kiJBs2K-yg](https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTO_vpjEDvPbGfSK32pxYtzlhrZKnucAM4VPCKkG_61kiJBs2K-yg)

### Addition Poem 1 – group recital

Ask the students if they remember the poem, Do the actions and see if they are able to catch the words or else tell them to repeat behind you.

### Other similar activities –

- Provide students copy of worksheet on NCERT, Math Magic, Grade 1, pg. 52,59.
- worksheet on Marathi Ganit, Grade 1, pg 28-29
- Family Member's Activity, Check Appendix 3, activity #70 for how to conduct this activity.

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## Day 3 – Verbal Addition Exercise 1

### What happened yesterday?

- Roll the dice and ask the students to add the numbers, and check whether they are able to get the correct answers or not.
- Similarly ask questions with couple of other Objects (Ex. Pencil, book etc), Observe if they have understood the concept.

### Addition Poem – Group recital

Ask students to start the poem. Check if they can remember poem as group. If they cannot, help them by singing along.

### Activity 1 – Write the missing Numbers–

- Make such boxes on paper for each student. Start from easier problems (e.g.  $2 + 2 = \_$ ;  $3 + 1 = \_$  and move on to more difficult ( $\_ + 4 = 6$ ;  $2 + \_ = 3$ ) at right point.
- Conduct this activity where kids will fill up the missing numbers.

### *Missing Numbers*

$$\boxed{3} + \boxed{3} = \boxed{\phantom{00}}$$

$$\boxed{4} + \boxed{1} = \boxed{\phantom{00}}$$

$$\boxed{1} + \boxed{2} = \boxed{\phantom{00}}$$

### Activity 2 – Add the objects and match

Conduct this activity by drawing such examples on their copies.

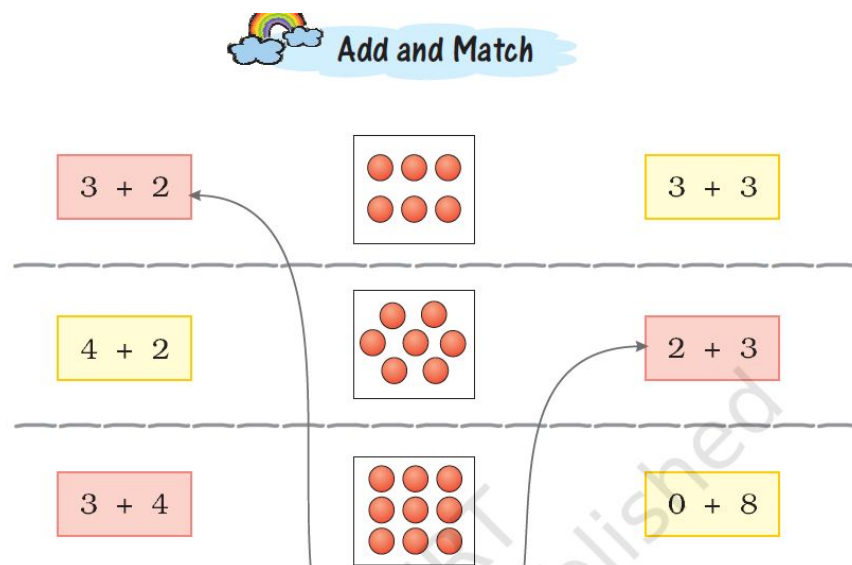


Image Source: Math Magic, Grade 1, pg. 59

### Activity 3 – Pair of 10

Check the Appendix 3 activity #13, for how to conduct this activity.



### Other similar activities –

- Provide students copy of worksheet on NCERT, Math Magic, Grade 1, pg. 60.
- Provide students copy of worksheet on NCERT, Math Magic, Grade 1, pg. 58.
- Make pairs activity, Check the Appendix 3 activity #71, for how to conduct this activity.

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## Day 4 –Revisit the Chapter

### What happened yesterday?

- Ask student what they did yesterday. Then call students one by one in front and ask to write addition of given number on the board.

### Activity 1 – Mental Maths

Check the Appendix 3 activity #14, A few examples are given there as sample. You may ask children to work out these problems mentally. Based on it, you need to create or develop many more problems so that you can use them for providing an opportunity to learn and to evaluate, as the need may be.



### Activity 2 – Zero in Addition

Check the Appendix 3 activity #15 to know how to conduct this activity.

$$\begin{array}{|c|c|} \hline \text{■} & \text{■} \\ \hline \text{■} & \text{■} \\ \hline \end{array} + \square = \begin{array}{|c|c|} \hline \text{■} & \text{■} \\ \hline \text{■} & \text{■} \\ \hline \end{array}$$

$$4 + 0 = 4$$

## Activity 2 – Let's go Fishing

Check the Appendix 3 activity #16 to know how to conduct this activity.



**Image Source:** <https://www.nps.gov/subjects/fishing/images/image4.png>

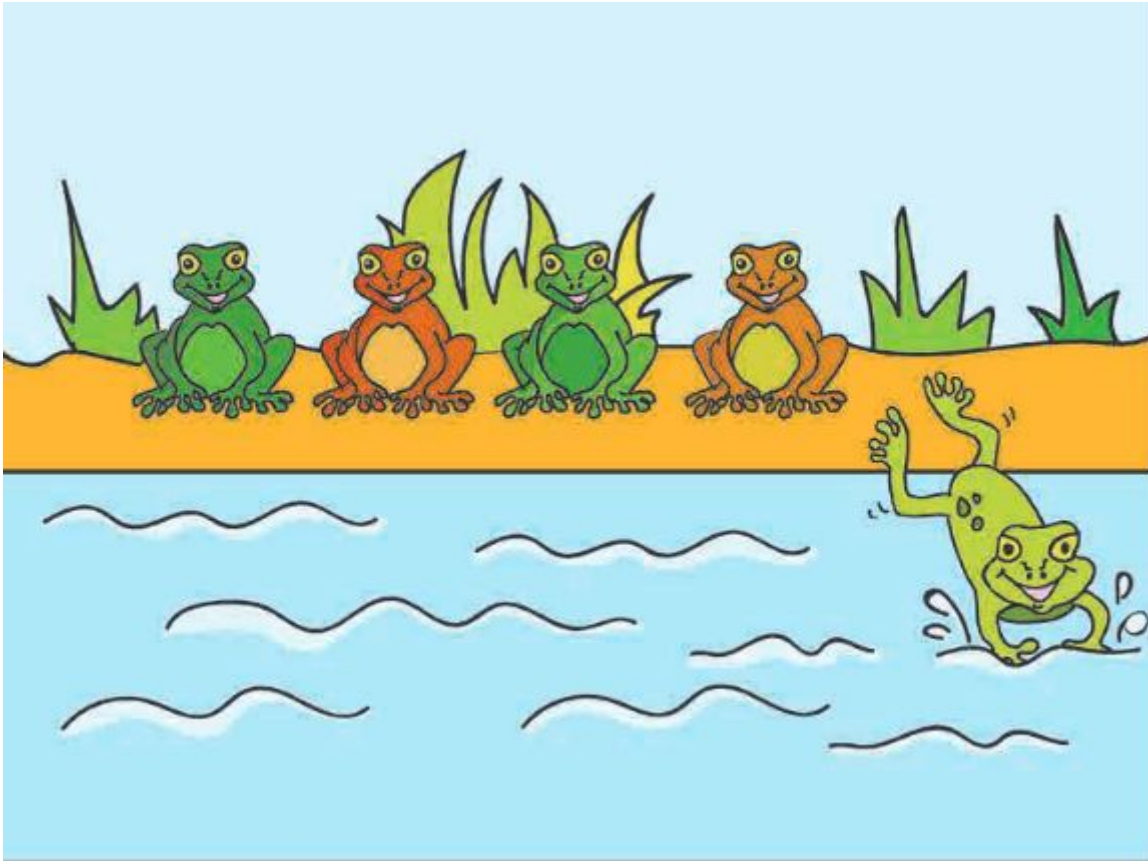
### Other similar activities

- Picture reading – Worksheet on NCERT, Math Magic, Grade 1, pg. 55.
- worksheet on NCERT, Math Magic, Grade 1, pg. 56-57.
- worksheet on Marathi Ganit, pahili-pg 30-31.
- Game of fingers, Check the Appendix 3 activity #76 to know how to conduct this activity.

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## Chapter 3 – Subtraction



**Image Source : Balbharti book , std 1–pg.32**

**Expected time to learn and consolidate lesson :4–5 classroom hours<sup>1</sup>**

**What will student learn:**

**Subject matter** –Understanding the concept of subtraction; perform subtraction on objects and numbers till 9.

**Basic learning and life skills<sup>2</sup>** – 1, 2, 3, 4, 5, 7, 8, 12, 13, 15, 17

**Preferred tools of introducing concepts<sup>3</sup>:** manipulations with objects, coloring/drawing, poems, stories and worksheets.

**Notes for facilitators** : Children don't understand instructions given in group, for example, sign of subtraction. So, it is necessary to interact with each and every student whenever necessary.

### **Day 1 – Testing pre-possessed understanding and preparatory activities**

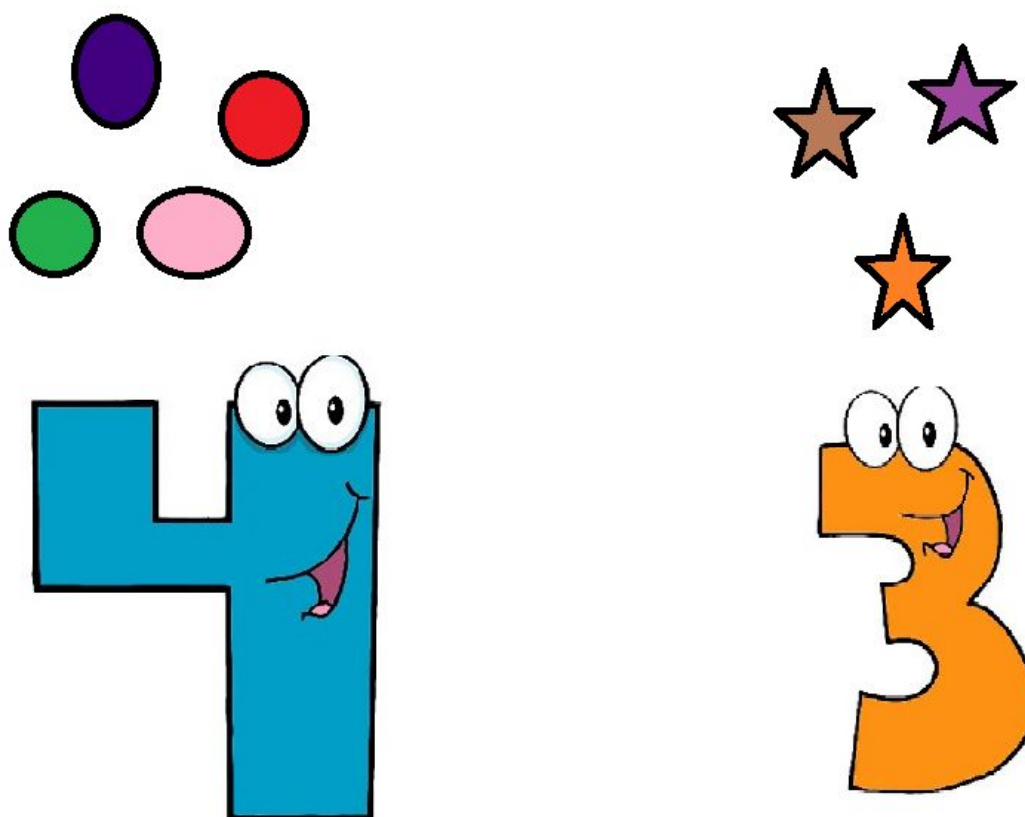
#### **Testing pre-possessed understanding<sup>4</sup>**

- Ask the students to write 1 to 10 numbers in their copy and ask to identify. Ask the students which number is greater or smaller.
- Collect some objects like pencils, pens, books, balls etc. Ask the students how many are there. Take out some of the objects from the collection and tell the students how many you took away. Now ask them how many are left.

- Use specific subtraction vocabulary like, 'अच्छा मैंने दो उंगलियां कम की, तो कितनी रह गई?' while conducting above activities
- Draw some pictures (like apples, balls etc.) on board. Ask the kids to count. After any response erase some pictures then ask how many are remaining?
- Make note of the comparative levels of each student in regards with understanding of the concept of subtraction. Use it during planning of the class.

### Activity 1- कौन छोटा और कौन बड़ा

Check Appendix 3, activity #17 for how to conduct this activity.



### Subtraction poem 1 - group recital

Read the poem to students given as material 1, Appendix 2, poem 4 with action of your fingers. Ask the students to follow you. Repeat it upto end of this chapter.

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## Day 2 – Introduction to vocabulary – निकाल दिये, घटाया, बच गया

### What happened yesterday?<sup>5</sup>

Ask the students, "कल की कविता कौन गायेगा?" after the response, start the poem and check whether they can remember or not. If they make mistakes, help them and correct it.

### Activity 1 – ज्यादा, बराबर और कम

Check Appendix 3, activity #18 for how to conduct this activity.

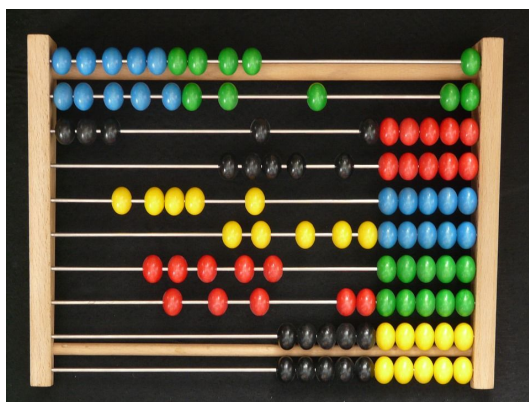


Image source : <https://pixabay.com/en/abcus-computational-aids-793>

### Activity 2 – Count and subtract

Check Appendix 3, activity #19 for how to conduct this activity.

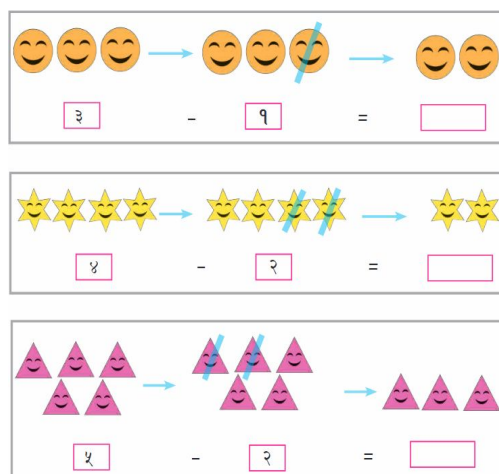


Image Source : Balbharti book , std 1–pg.34

### More similar activities

- Provide students copy of NCERT, Math Magic 1, pg. 61, 62. Explain how to solve worksheets and talk while they solve.
- Provide students copy of NCERT, Math Magic 1, pg 63,64. Explain how to solve worksheets and talk while they solve.
- Bingo – subtraction –Check activity #90, Appendix 3

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### Day 3 – Oral subtraction exercise 1

#### What happened yesterday?

- Make a half circle of the students. Draw some shapes (like circle, triangle, stars etc.) on board. Call one student at a time in front and ask him/her to count the shapes. After their response. Remove 2–3 shapes and ask him/her to count. Carry out this activity with all the students.

#### Activity 1 – सुनो कहानी

Ask students, "कहानी कौन कौन सुनेगा?" after the response, start the story. Check Appendix 3, activity #20 for how to conduct this activity.

#### Activity 2 – चिढ़ी में क्या है

Check Appendix 3, activity #21 for how to conduct this activity.



#### Other similar activities

- Subtraction using lines – Check activity #22, Appendix 3
- Worksheet on Balbharati Math(Hi.) Grade 1–pg.37

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## Day 4 – Oral subtracting exercise 2

### What happened yesterday?

Ask 5–6 students to make 5 boats, or 4 aeroplanes by using papers. If one or more boats/aeroplanes removed from collection and ask how many are remaining. If a student makes a mistake, help them to understand the count.

### Counting poem – Individual recital

Ask the students, “ who will come front and sing yesterday’s poem ?”, after their response, Call 2 students in front and ask others follow them. Observe each student who are unable to remember the poem, make a list of it and call them next day.

### Activity 1 – Subtract and match

Check Appendix 3, activity #23 for how to conduct this activity.



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### Other similar activities

- Provide students with worksheets on NCERT Math Magic 1, pg.66. Explain what to do and talk while they solve these worksheets
- कार्ड-पासे जोड़ी , Check activity #91, Appendix 3

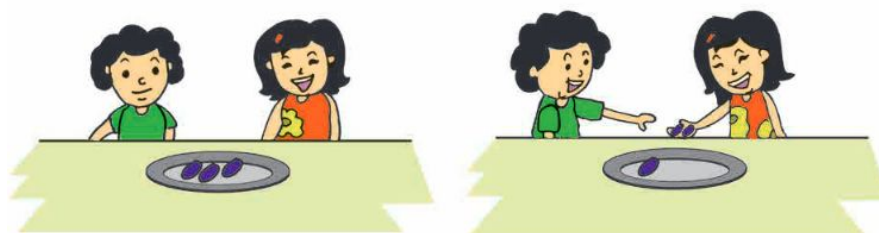
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## Day 5– Revisit the concept


**Subtracting poem** – Make a circle and ask students to do a group recital of the poem. While singing a poem add some action (like hand moves, dancing steps etc.)

### Activity 1 – Read and solve

Check Appendix 3, activity #24 for how to conduct this activity.

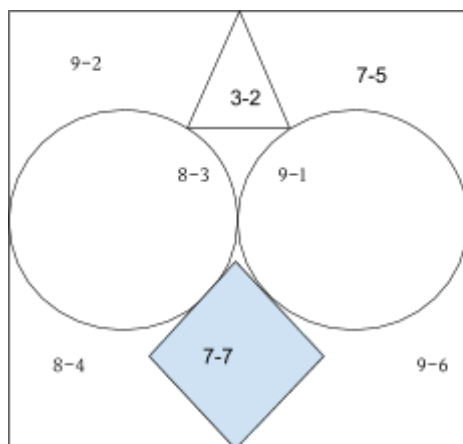


Yash had 3 *Jamuns*. He gave 2 *Jamuns* to Rama,  
how many *Jamuns* does he have now ?


$$3 - 2 = 1$$

**Activity 2 – Color by number** – Draw following picture on board and give instructions to student make picture on there copy and ask them to color it by number.

0-काळा , १ - लाल, २ - हरा, ३ - निला (blue), ४ - बैंगनी (purple), ५ - पिला, ६ - गुलाबी , ७-केशरी, ८-आकाशी



### Other similar activities

- Provide students copy of NCERT, Math Magic 1, pg. 67, 68. Explain how to solve worksheets and talk while they solve.
- कार्डों का युद्ध – घटना, Check activity #98, Appendix 3

\*\*\*

## Chapter 4– Numbers 10 to 20

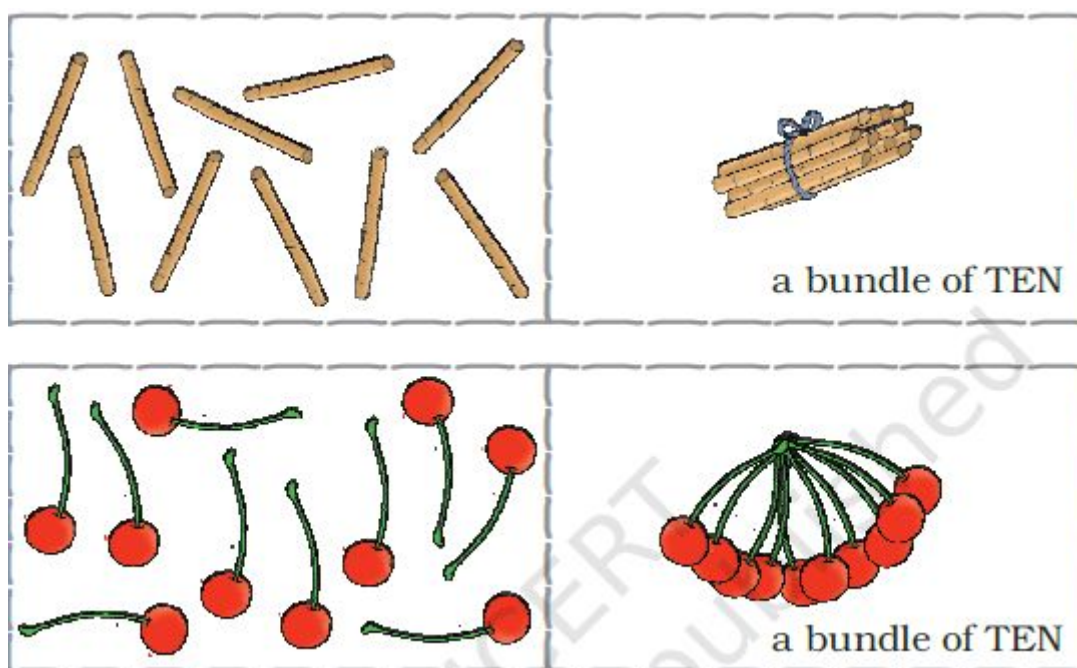


Image Source : NCERT Math magic, Grade 1–pg. 69

**Expected time to learn and consolidate lesson** : 6 classroom hours<sup>1</sup>

**What will student learn:**

**Subject matter** – Basics of counting of 10 to 20 numbers; Recognizing and writing numbers till 20

**Basic learning and life skills**<sup>2</sup> – 1, 2, 3, 4, 5, 7, 8, 10, 13, 17

**Preferred tools of introducing concepts**<sup>3</sup> : Imitation and recital, manipulations with objects, coloring/drawing

**Notes for facilitators** : It will be little difficult for students to understand the numbers just by looking at them. So, it is necessary to interact with each student whenever necessary.

**Day 1 – Testing pre-possessed understanding and preparatory activities**

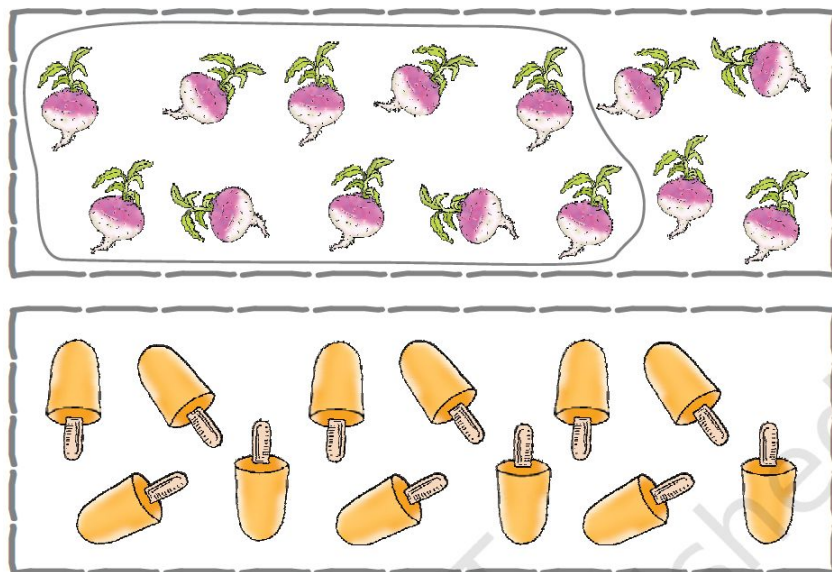
**Testing pre-possessed understanding**<sup>4</sup>

- Ask students to make groups of 10–10 students. Give each student 10–20 objects (pens, pencils, chalk, books) and ask them to make bundles of same objects and each bundle have 10 items.

- Give students bundles of colour pencils (70) and ask to student divide it in each maner every student have same number of pencils. Be actively present while students are doing this and help them to understand how to do it. After that make bundle of pencils .
- Let students sit in a circle, show 10 fingers to all the students, let them count first and then ask them to add 1 in 10 fingers. Likewise carry out the activity till 20.
- Make note of comparative levels of each student in regards with understanding of the concept of Number from 10 to 20. Use it during planning of the class.

### Activity 1 –दस कि जोड़िया बनाओ

Give following worksheet to the students and ask them to make group of 10 objects by circling around.



**Image Source : NCERT Math magic, Grade 1–pg. 70**

### Activity 2– Count and write

Check Appendix 3, activity #43, for how to conduct this activity.

### More similar activities

- Worksheet on NCERT, Math Magic 1, pg. 69,70
- Worksheet on Balbharati Math(Hi.)Grade 1–pg.38, 39
- Worksheet on NCERT, Math Magic 1, pg. 75 to 78.
- माला बनाओ – Check activity #94, Appendix 3

\*\*\*

## Day 2 – Oral counting exercise 1

### What happened yesterday?<sup>5</sup>

- Collect 10 objects (like pen, pencils, marbles, books etc.) which are found in class.
- Call one student at a time in front and ask her/him to count the objects and ask them to write in their notebook. Carry out this activity with all the students.

### Activity 1 – 20 तक के अंक कि सीढ़ी

Check Appendix 3, activity #44 for how to conduct this activity.

### Activity 2 – Count and match

Check Appendix 3, activity #45 for how to conduct this activity.



### More similar activities

- Worksheet on NCERT, Math Magic 1, pg. 71,72
- Letters in my full name – Check activity #93, Appendix 3
- Worksheet on Balbharati Math(Hi.)Grade 1–pg.40 to 45

\*\*\*



## Day 3 – Oral counting exercise 2

### What happened yesterday?<sup>5</sup>

Ask the students to make a circle. Make 5 bundles of 10 to 11 matchsticks and ask how many extra sticks are remaining? From this activity, carefully observe how much they have understood the concept. If students are not able to get the concept repeat the activity.

### Activity 1 – Make a group of 10 and write numbers.

Check Appendix 3, activity #46 for how to conduct this activity.

The first group shows 13 ice cream cones. 10 are grouped together in a dashed box, and 3 are outside. A yellow box next to the group contains the number 13. To the right is a table:

Ten	Ones
1	3

The second group shows 14 lanterns. 10 are grouped together in a dashed box, and 4 are outside. A yellow box next to the group is empty. To the right is a table:

Ten	Ones

Image Source : NCERT Math magic, Grade 1–pg. 73

### Activity 2 – अंक पहचनो

Check Appendix 3, activity #47, for how to conduct this activity.

### More similar activities

- Worksheet on NCERT, Math Magic 1, pg. 73,74
- Worksheet on NCERT, Math Magic 1, pg. 75 to 78
- Reach me fast, Check activity #96, Appendix 3

\*\*\*

### Day 4– Oral counting exercise 3

#### What happened yesterday?<sup>5</sup>

Provide copy of the following worksheet. Observe while they solve it and help them to complete the activity.

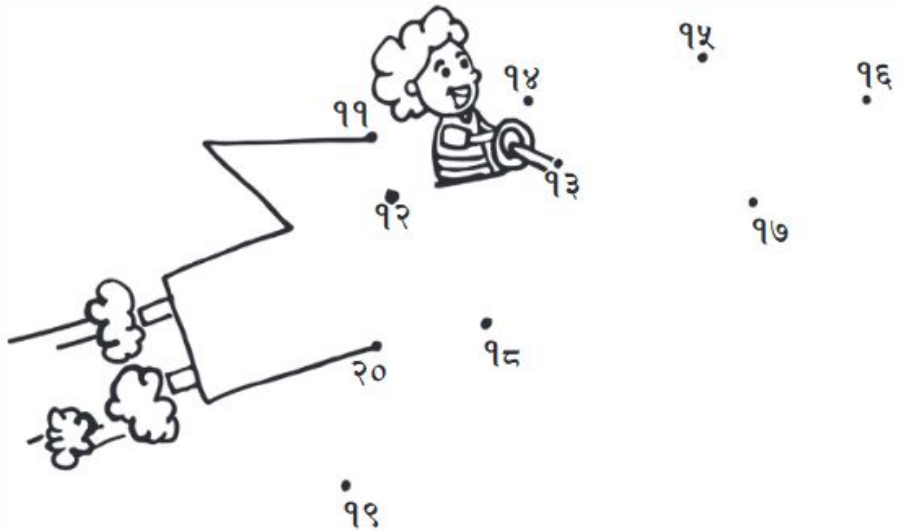


Image Source : Balbharati Math(Hi.)Grade 1–pg. 51

#### Activity 1 – bigger, smaller, biggest, smallest

Check Appendix 3, activity #48 for how to conduct this activity.

#### Activity 2– missing numbers

Check Appendix 3, activity #49 for how to conduct this activity.

#### More similar activities

- Worksheet on NCERT, Math Magic 1, pg. 79–80
- Count to 20 (courtesy of Marilyn Burns), Check activity #97, Appendix 3
- Worksheet on NCERT, Math Magic 1, pg. 82,83

\*\*\*

## Day 5 – Oral counting exercise 4

### What happened yesterday?<sup>5</sup>

Ask the students sit in circle, then teacher should write two numbers on board. Ask students “which number is bigger or smaller?” one by one and Carry out this activity with all the students with multiple numbers.

### Activity 1 – Rolling dice

Check Appendix 3, activity #50 for how to conduct this activity.



### Activity 2 – Count, add

Check Appendix 3, activity #51, for how to conduct this activity.

### More similar activities

- Worksheet on NCERT, Math Magic 1, pg. 81, 84,85
- Find the matches, Check activity #95, Appendix 3

\*\*\*

## Day 6 – Revisit the concept

### What happened yesterday?<sup>5</sup>

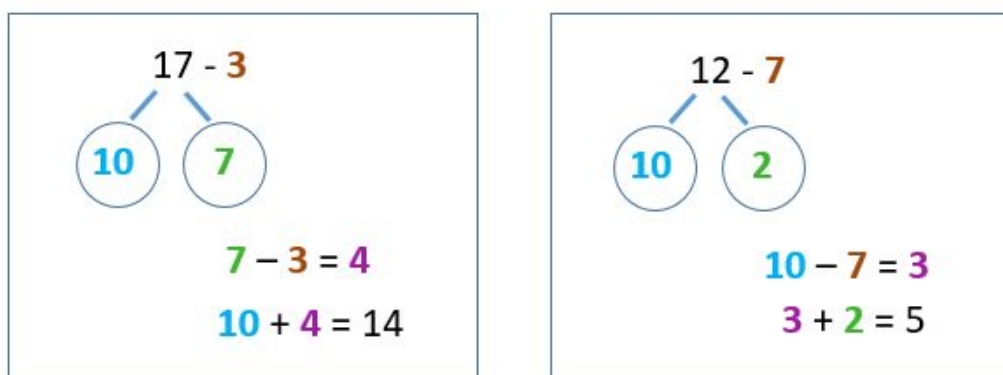
Write any number on board (e.g. 15). Now ask students what number comes before 15? After getting the answers ask what number will come after 15? Likewise continue the activity for multiple numbers.

### Activity 1 – Addition with cards

Check Appendix 3, activity #52, for how to conduct this activity.

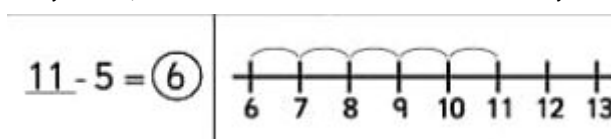
### Activity 2 – Count, subtract

Check Appendix 3, activity #53, for how to conduct this activity.



### Activity 3 – Addition and subtraction with a number line

Check Appendix 3, activity #54, for how to conduct this activity.



### More similar activities

- २० से घटाए, Check activity #99, Appendix 3
- Worksheet on NCERT, Math Magic 1, pg. 86,87,88
- Worksheet on Balbharati Math(Hi.)Grade 1–pg.60,61

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## Chapter 5– Time

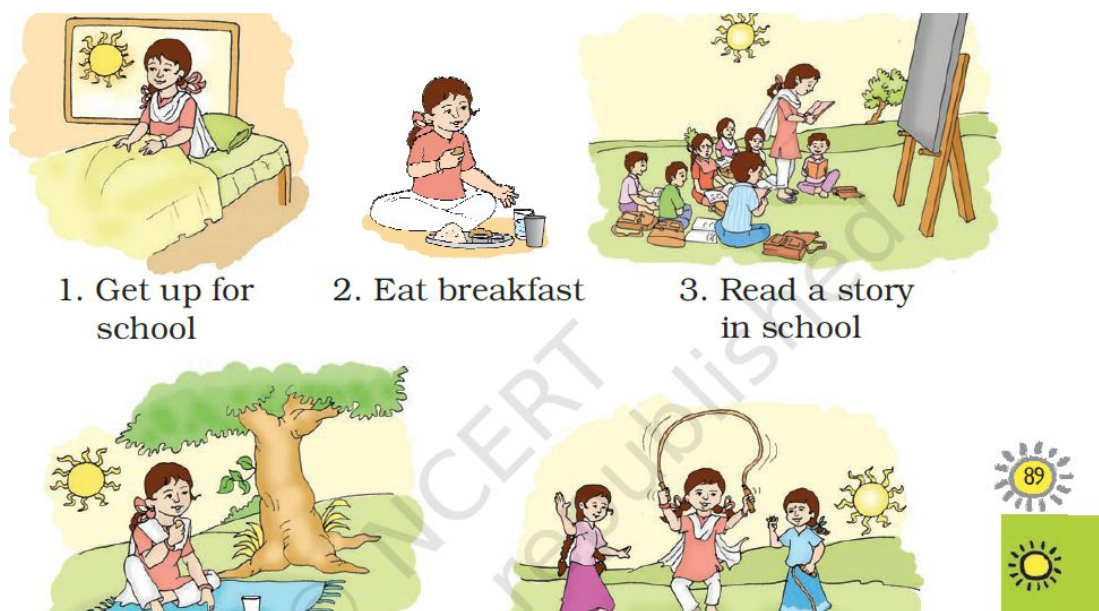


Image Source: Math Magic, Grade 1, pg. 89

**Expected time to learn and consolidate lesson** : 2–3 classroom hours<sup>1</sup>

**What will student learn:**

**Subject matter** – To make them aware of the sequence of the daily routine that they follow.

**Basic learning and life skills**<sup>2</sup> – 1, 3, 4, 5, 7, 8, 11, 12, 13

**Preferred tools of introducing concepts**<sup>3</sup> : Daily Activities, stories.

**Notes for facilitators** : Children are to be familiarised with certain time-based activities that help them to understand the meaning of terms like earlier-later. Ask children to narrate their sequence of events in a day and if possible write the events on a notebook before they go to bed.

### Day 1 – Testing pre-possessed understanding and preparatory activities

#### Testing pre-possessed understanding<sup>4</sup>

- The students should be able to see or hear the small intervals of time passing by. For this purpose you can make a simple time measuring device like a pendulum by tying a small stone or any other small stone-heavy object to the end of a string. Suspend it freely from the other end.
- Pendulum can be used to keep track of duration of activities. Let students sit in a circle. Ask one student to draw a house and another student to write numbers from 1 to 10. Call another student to observe carefully which activity takes longer



time. Repeat this activity with some more examples like ask one student to tie a shoelace and other to sharp a pencil, Or to make a paper boat and other a aeroplane etc.

- Ask the students what their daily routine is. How many activities they perform in a day.
- After talking about the daily routine, Ask them specifically about Morning activities. After getting all the answers, ask them about Evening and night activities respectively.
- Make note of comparative levels of each student in regards with understanding of the concept of Time. Use it during planning of the class.

### Activity 1: Mark the Activities

Provide all the students with worksheets given on NCERT, Math Magic 1,pg.90. Ask them to tick activities that they perform in the morning.



**Image Source: Math Magic, Grade 1, pg. 90**

### Time poem – group recital

Read the poem to students given as Appendix 2, poem 5 while showing some actions. Ask students to repeat it behind you with actions So that they can learn it quickly.

\*\*\*

## Day 2 – Introduction to vocabulary – कम-अधिक समय, किसके बाद क्या ?

### What happened yesterday?<sup>5</sup>

Ask the students one by one, what they did the whole day right from waking up. Observe if they are able to find difference between morning, evening, afternoon and night. Also try asking specific questions like ‘What they did in Afternoon?’.

### Time poem – group recital

Recite the poem in class, Check whether they are able to remember the poem or else ask students to follow.

### Activity 1 – Which will take longer?

Provide all the students with worksheets given on NCERT, Math Magic, Grade 1,pg.92. Explain them how to solve worksheets and try to talk while they solve. Have a one-on-one dialogue with each kid while solving this worksheet, help them to understand the logic behind right answer.

Tick(✓) the activity that will take longer.

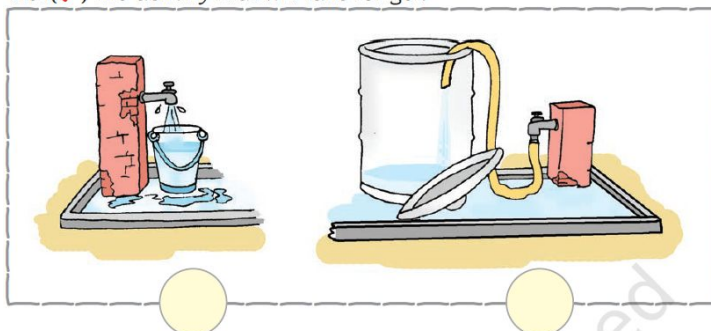


Image source : NCERT Math Magic, Grade 1–pg.92

### More similar activity-

- Worksheet on Hindi, Ganit Grade 1, pg. 72.
- Race of speed, Check Appendix 3, activity #81, to know how to conduct this activity.
- Walk on Watch, Check Appendix 3, activity #72, to know how to conduct this activity.

\*\*\*

## Day 3 – Revisit the Chapter

### What happened yesterday?

- Ask students Some questions on ‘Which activity will take longer time?’ for Ex. going to school by walk or by auto.

### Time poem – Group recital

Ask students to start the poem. Check if they can remember poem as group. If they cannot, help them by doing actions or sing along.

### Activity 1 – Sequence the Routine

Provide all the students with worksheets given on Hindi Ganit, grade 1 page 73. Explain them how to solve worksheets.



Image source – Hindi Ganit, Grade 1–pg 73

### Other similar activities

- Provide students copy of worksheet on NCERT, Math Magic, Grade 1, pg. 91.
- Provide students copy of worksheet on Hindi Ganit, Grade 1, pg. 73.
- Walk by activity, Check Appendix 3, activity #82, to know how to conduct this activity.

\*\*\*

## Chapter 6– Measurement

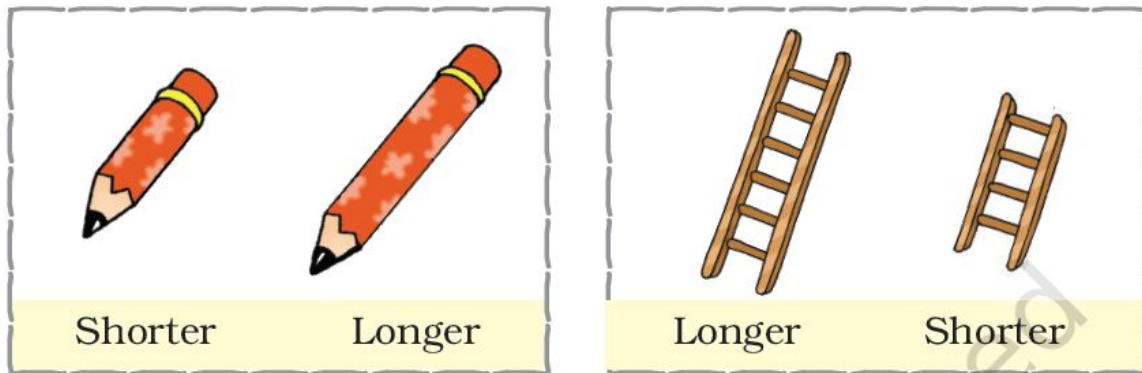


Image Source: Math Magic, Grade 1, pg. 93

**Expected time to learn and consolidate lesson** : 2–3 classroom hours<sup>1</sup>

**What will student learn:**

**Subject matter** –Concept of the measurements like Longer–shorter, Thicker–Thinner, Heaviest–Lightest.

**Basic learning and life skills**<sup>2</sup> – 1, 3, 4, 6, 7, 8, 13, 17

**Preferred tools of introducing concepts**<sup>3</sup> : Manipulations with objects/pictures, Imitation and recital.

**Notes for facilitators** : When three or more objects of varying weight are given, the same can be arranged in order of weight by direct handling (difference in weights must be very definite). At this stage, introduce the superlative forms – heaviest and lightest.

### Day 1 – Testing pre-possessed understanding and preparatory activities

#### Testing pre-possessed understanding<sup>4</sup>

- Take two pencils which are different in length. Pointing out to these pencils, ask questions such as which pencils is longer and which one is shorter.
- Ask students questions like
  - Find objects longer than this pen.
  - Find objects shorter than this stick.
  - In the class, who all are taller than you?
  - In the class, who all are shorter than you?
- Before children can start measuring weights of objects, they must have some idea of heavy, light, heavier, lighter and so on. In the beginning, take two objects,

where one is much heavier than the other. For example, Bottle and glass, book and pen.

- Make note of comparative levels of each student in regards with understanding of the concept of Measurement. Use it during planning of the class.

### Activity 1: Mark the Longer/Shorter

Provide all the students with worksheets given on NCERT, Math Magic 1,pg.93. Ask them to tick objects which are shorter. Talk with them while solving the worksheet.

Tick (✓) the **Shorter**.

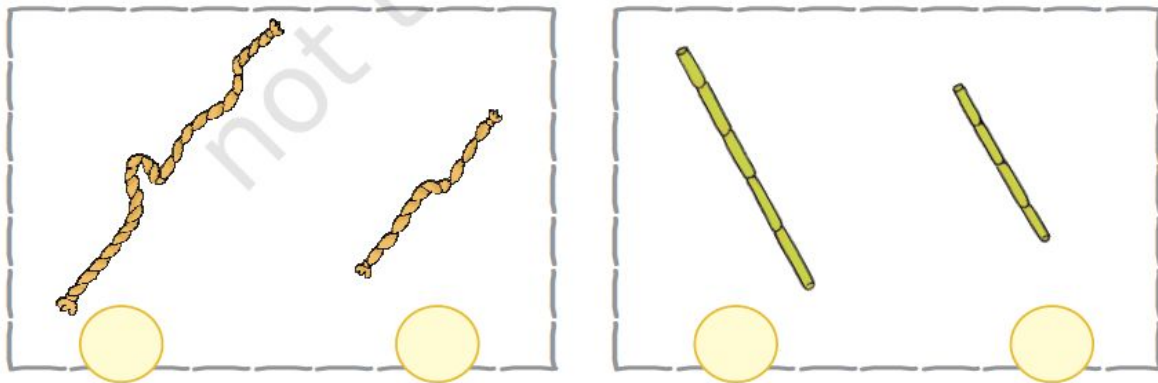


Image Source:Math Magic, Grade 1, pg. 93

### Activity 2: Mark the Longer/Shorter

Provide all the students with worksheets given on NCERT, Math Magic 1,pg.94. Ask them to tick the objects which they think is the longest and shortest among all.

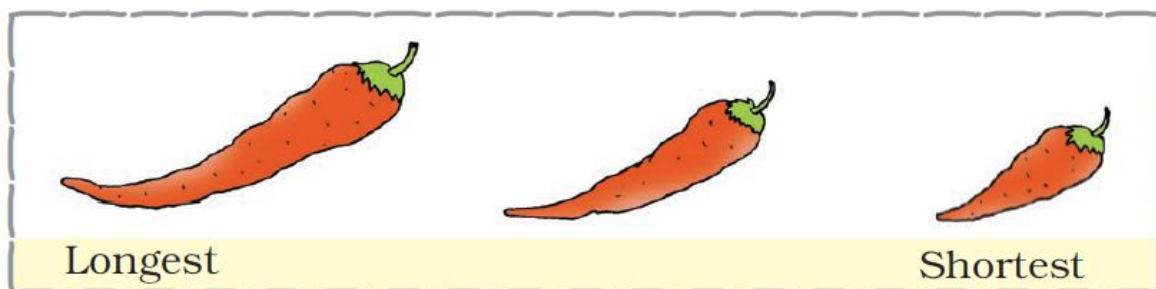


Image Source:Math Magic, Grade 1, pg. 94

### Activity 3 : Guess Me

Collect various objects from surrounding (For Ex. Pen, Pencil, Eraser, Book etc) and let them identify which object is shortest and which is Longest.



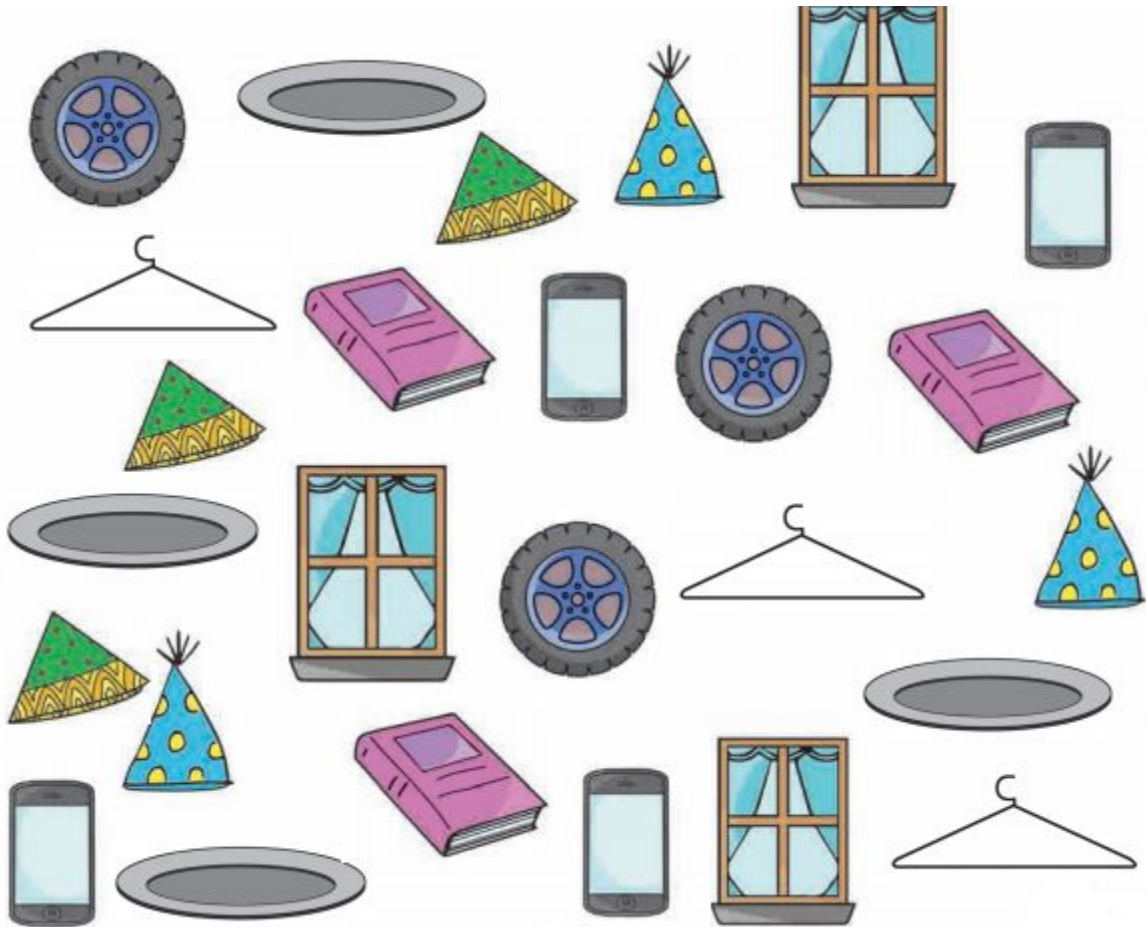


Image Source: Hindi Ganit, Grade 1, pg. 64

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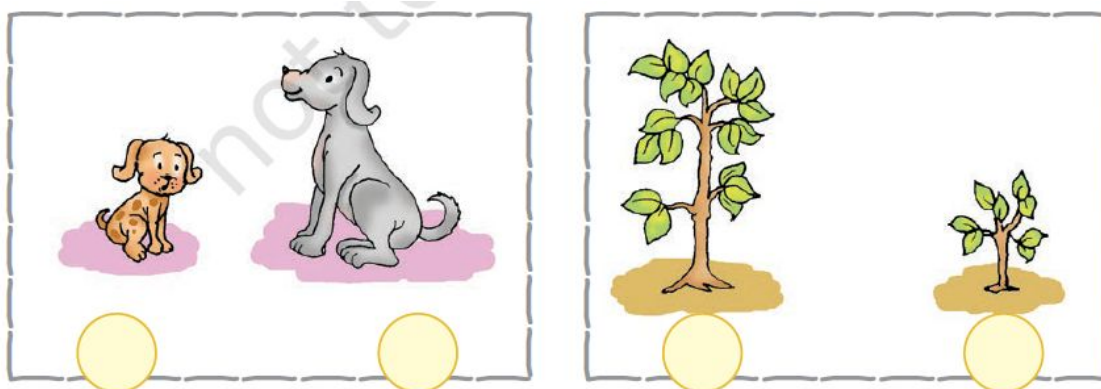
## Day 2 – Introduction to vocabulary – लंबा-छोटा, सबसे लंबा-सबसे छोटा

### What happened yesterday?<sup>5</sup>

Ask the students to pick the shortest thing from their bag, after getting their answer Observe if they have understood the concept, If not explain them with different objects. Then Repeat it for the longest thing as well.

### Activity 1 – Smaller Or Taller

Provide all the students with worksheets given on NCERT, Math Magic, Grade 1, pg.95. Explain them how to find difference between smaller and taller thing. Have a one-on-one dialogue with each kid while solving this worksheet.

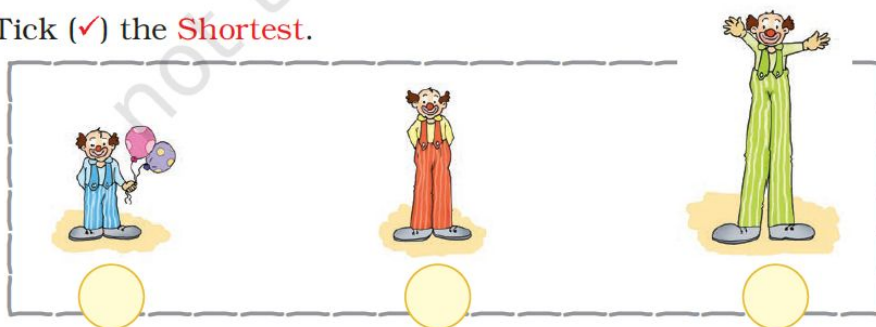


**Image source : NCERT Math Magic, Grade 1–pg.95**

### Activity 2 –Smallest And Tallest

Provide all the students with worksheets given on NCERT, Math Magic, Grade 1,pg.96. Explain them how to identify shortest thing and tallest thing. Have a conversation with students while solving the worksheet.

Tick (✓) the **Shortest**.

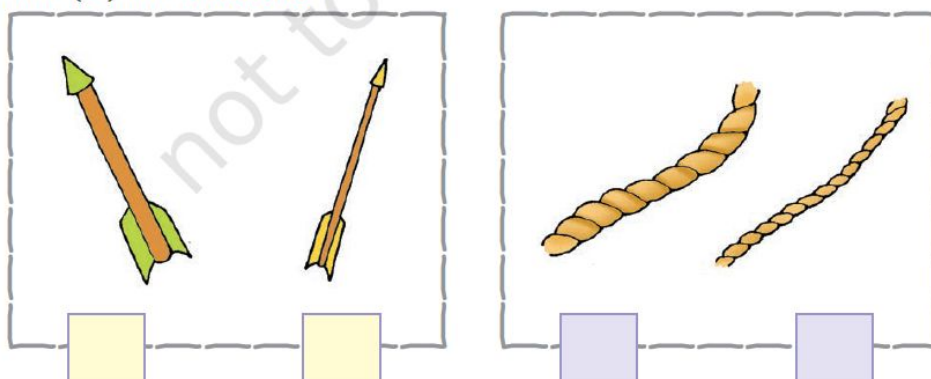


**Image source : NCERT Math Magic, Grade 1–pg.96**

### Activity 3 –Thicker Or Thinner

Show students few examples first For Ex. a small book and dictionary ask them which is thin and which is thick. If they find it difficult show them more examples like hanging watch and a wrist watch etc. and Show them the difference. Then provide worksheets given on NCERT, Math Magic, Grade 1,pg.96.

Tick (✓) the **Thinner**.



**Image source : NCERT Math Magic, Grade 1–pg.96**

#### Activity 4 –Thickest and Thinnest

Check the Appendix 3, activity #34, for how to conduct this activity.



Image source : Math Magic,Grade 1–pg.97

#### More similar activity–

- Worksheet on Hindi, Ganit Grade 1, pg. 68
- worksheets given on NCERT, Math Magic, Grade 1,pg.97.
- Mark the height, Check appendix 3, activity #83, to know how to conduct this activity.

\*\*\*

#### Day 3 –Introduction to vocabulary 2- भारी-हल्का , सबसे भारी-सबसे हल्का

#### What happened yesterday?

- Ask students to sit in a circle, keep 1 small pencil and one pen in front of one student, ask him which is the smallest thing. Do it with every student one by one with various things like Eraser–sharpner,Mobile–Charger Etc.

#### Activity 1 – Heavier Or Lighter

Keep a bag and a water bottle in front of all students. Ask them what is heavier, help them to identify the difference between both then provide worksheets given on Math Magic,grade 1 pg 98.Try to have a conversation while solving the sheets.

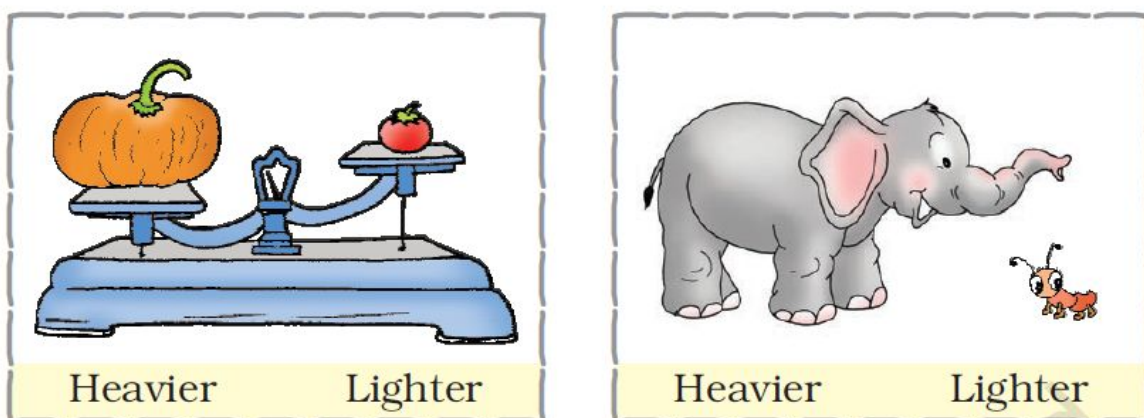


Image source : Math Magic,Grade 1–pg.98

### Activity 2 –Heaviest and Lightest

Provide all the students with worksheets given on NCERT, Math Magic, Grade 1,pg.99. Ask them to mark Heaviest and Lightest thing. Have a one to one conversation while they solve the worksheet.

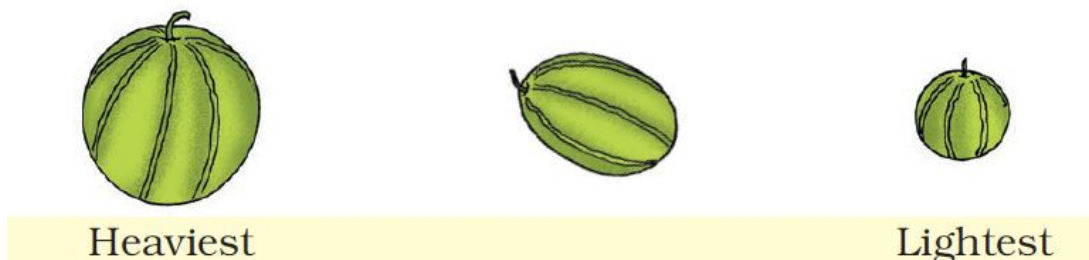


Image source : Math Magic,Grade 1–pg.99

### Activity 3 –Measure with Hand

Check the Appendix 3, activity #25,for how to conduct this activity.

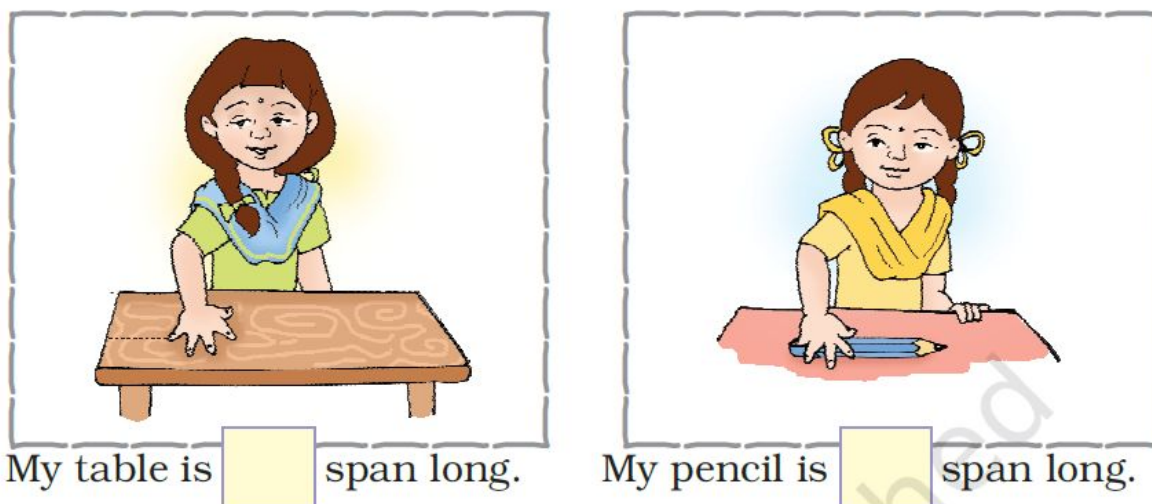


Image source : Math Magic,Grade 1–pg. 102

### Other similar activities

- Provide students copy of worksheet on NCERT, Math Magic,Grade 1, pg. 102–103.
- Provide students copy of worksheet on Hindi Ganit,Grade 1, pg.69–70.
- कितने कदम की दूरी?, Check the Appendix 3, activity #77, for how to conduct this activity.

\*\*\*

## Chapter 7– Numbers 21–50



Image source: NCERT Math Magic, Grade 1, pg. 104

**Expected time to learn and consolidate lesson** : 2 classroom hours<sup>1</sup>

**What will student learn:**

**Subject matter** – Basics of counting; recognizing and writing numbers till 40

**Basic learning and life skills**<sup>2</sup> – 1, 2, 3, 4, 5, 7, 8, 12, 13

**Preferred tools of introducing concepts**<sup>3</sup> : Imitation and recital, manipulations with objects, coloring/drawing

### Day 1 – Testing pre-possessed understanding and preparatory activities

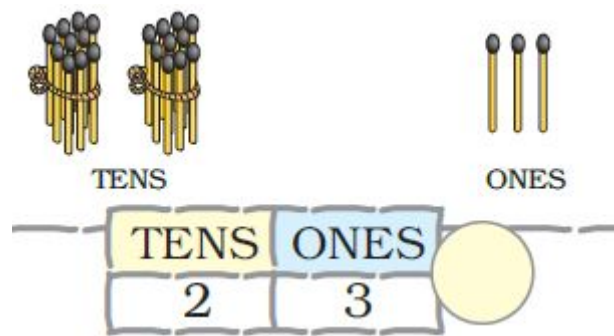
#### Testing pre-possessed understanding<sup>4</sup>

- Make 4 bundles of sticks, each bundle containing 10 sticks and keep 9 sticks open. Put 3 bundles and 7 sticks in front of the students. Call one student at a time and ask him/her to count the bundles and open sticks. After their response, ask them to write on board (in the form of number of bundles first and after the number of open sticks). Carry out this activity with all the students.
- Make chits of number like 0 to 9. Ask the students pick up two chits and arrange in the form of bigger number after the smaller number. Write it in their copy.
- Make a circle of 5 to 6 students. Take two dice and roll the dice. Ask students to identify the number and note down in their copies in the form of combination of 2 numbers. (like 2 and 3 numbers display and write in the form of 32 or 23)
- Make note of comparative levels of each student in regards with understanding of the concept of Number from 21 to 40. Use it during planning of the class.



### Activity 1: Write the numbers

Check the Appendix 3, activity #59, for how to conduct this activity.



### Activity 2: उछलते आंकड़े

Check the Appendix 3, activity #60, for how to conduct this activity.



### More similar activity-

- Worksheet on Math Magic, Grade 1, pg. 104-107.
- Worksheet on Hindi Ganit, Grade 1, pg. 49, 50.
- Make a number, Check activity #78, Appendix 3

\*\*\*

## Day 2 – Revisit the Chapter

### What happened yesterday?<sup>5</sup>

Make a circle of the students, then teacher should write any number upto 40 on board. Ask the students to identify the number one by one. Repeat this activity with all the students.

### Activity 1: देखों और पहचनो

Check the Appendix 3, activity #61, for how to conduct this activity.

### Activity 2: Numbers ki train

Check the Appendix 3, activity #62, for how to conduct this activity.

### Activity 3: Write missing numbers.

Check the Appendix 3, activity #63, for how to conduct this activity.

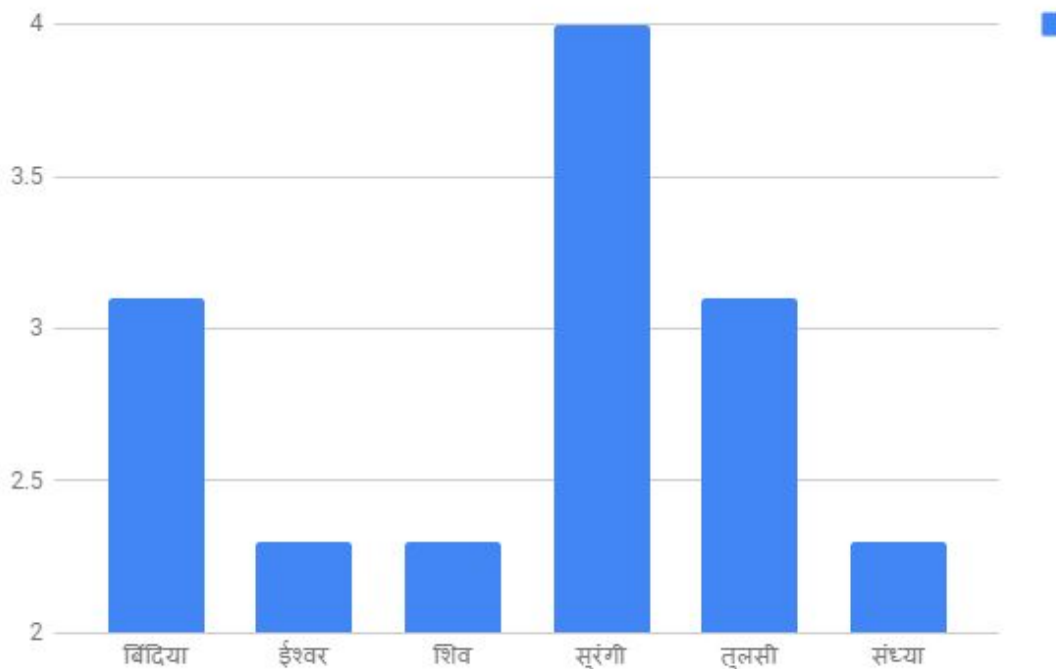


### More similar activity

- Worksheet on Math Magic, Grade 1, pg. 108.
- Worksheet on Hindi Ganit, Grade 1, pg. 49, 50, 51, 58.
- अंक बताओ, चॉकलेट टूंडो, Check activity #79, Appendix 3
- कार्डों का युद्ध – जोड़ना, Check activity #80, Appendix 3

\*\*\*

## Chapter 8– Data Handling



**Expected time to learn and consolidate lesson :** 1–2 classroom hours<sup>1</sup>

**What will student learn:**

**Subject matter** – To make all students understand to present Numerical data in pictorial form.

**Basic learning and life skills**<sup>2</sup> – 1, 3, 4, 5, 7, 8, 10, 12, 13

**Preferred tools of introducing concepts**<sup>3</sup> : Manipulations with pictures, Imitation and recital.

**Notes for facilitators** : Data handling is a tool to express or illustrate given information using picture or symbols (For example, As shown in above graph, using colored bars of different sizes makes it very easy to pictorial show the differences in the height of the children in the classroom).

### Day 1 – Preparatory Activities

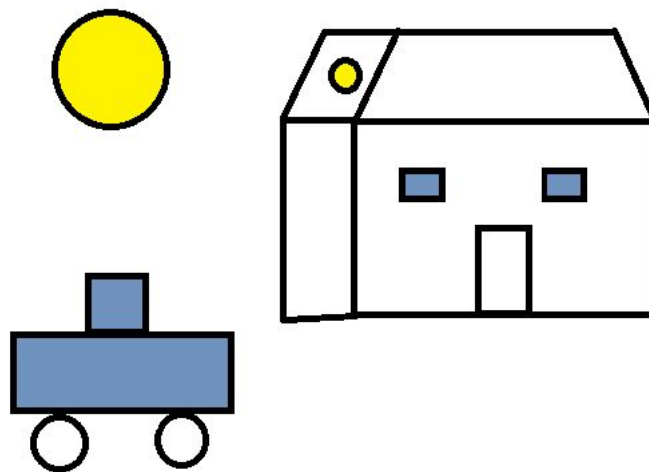
**Preparatory Activities:**

- Make sure they know basic shapes like Circle, Triangle, Rectangle and Square well. If they are not sure about this then Revise them again for all the shapes.

- Draw a picture on board containing some of the above mentioned shapes and ask students one by one to make sure they are able to find out difference between each shape.
- Also make sure if they know the counting till 20 properly. Write any random number from 1 to 20 and ask students one by one to identify given number.
- Make note of comparative levels of each student in regards with understanding of the concept of Data Handling. Use it during planning of the class.

### Activity 1: Identify the Shapes

Check the Appendix 3, activity #26, for how to conduct this activity.



### More similar activity-

- Worksheet on Math Magic, Grade 1, pg. 109.
- Worksheet on Hindi Ganit (2015), Grade 1, pg. 78-79.
- Take me out, Check appendix 3, activity #84, to know how to conduct this activity.

\*\*\*

## Day 2 – Revisit the Chapter

### What happened yesterday?<sup>5</sup>

Write all students name on board, and ask students one by one to count the letter in their name, Check whether they are able to give write answers or not.

### Activity 1 – Count and Write

Provide all the students with worksheets given on NCERT, Math Magic, Grade 1, pg. 101. Explain them to count all the letters of a word and write down in the box. Have a one-on-one dialogue with each kid while solving this worksheet.

Names	Number of letters
S A L M A	<input type="text"/>
J O S E P H	<input type="text"/>
A R U N	<input type="text"/>
C H I N T U	<input type="text"/>
G E E T A	<input type="text"/>
A S H A	<input type="text"/>

Image source : NCERT Math Magic, Grade 1–pg.110

### Activity 2 – Count the letters

Check the Appendix 3, activity #27, for how to conduct this activity.

January	July
February	August
March	September
April	October
May	November
June	December

### Activity 3 – Draw and Count

Draw a sketch which will contain some triangles, squares or rectangle in each student's copies and ask them to count and write the number of each shape. After this ask them to colour similar shapes with same colour.

\*\*\*

## Chapter 9– Patterns



Image Source: Math Magic, Grade 1, pg. 111

**Expected time to learn and consolidate lesson :** 2–3 classroom hours<sup>1</sup>

**What will student learn:**

**Subject matter** – Observe relationships to find connections and predictions.

**Basic learning and life skills**<sup>2</sup> – 1, 3, 4, 5, 8, 10, 12

**Preferred tools of introducing concepts**<sup>3</sup> : Manipulations with objects and pictures, Imitation and recital.

**Notes for facilitators** : At this stage, it is difficult for them to catch the pattern, So try to have one to one conversation with each student.

### Day 1 – Testing pre-possessed understanding and preparatory activities

#### Testing pre-possessed understanding<sup>4</sup>

- Start the activities by clapping in a pattern. For example:  
1 – 1 – 1 – -----  
2 – 2 – 1 – -----  
1 – 2 – 3 – 1 – 2 – 3 etc.
- Observe if they are able understand the pattern and they are properly following it or not. Give them some time to catch the pattern
- The teacher should bring a water colour in the class. Provide plane sheets to all the students and show them how to make impressions of a thumb on a paper. Ask



them to make different patterns using thumb impressions.

- Make note of comparative levels of each student in regards with understanding of the concept of Patterns. Use it during planning of the class.

### Activity 1: Objects and Patterns

Check the Appendix 3, activity #28, for how to conduct this activity.



### Activity 2: Fun Patterns

Check the Appendix 3, activity #29, for how to conduct this activity.



### Activity 3: Follow the Patterns

Provide students copy of NCERT, Math Magic 1, pg. 111-112. Explain how to solve worksheets and talk while they solve.

\*\*\*

## Day 2 – Introduction to vocabulary – आकृती, वस्तु -क्रम

### What happened yesterday?<sup>5</sup>

Draw a pattern on board For Ex. (M W M W-----) Ask students one by one what will be the next character. Try the same pattern with different shapes or letters. (For Ex. Triangle-Square).

### Activity 1 – Missing Places

Check the Appendix 3, activity #30, for how to conduct this activity.

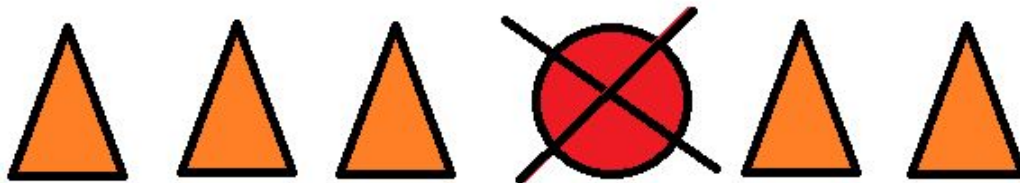


### Activity 2 – Odd One Out

Check the Appendix 3, activity #31, for how to conduct this activity.

### Activity 3 – Cross the Odd

Ask the students to sit in a circle. Draw following image on board. Cross the object which is Odd. Draw similar patterns with other objects like Flowers–leaf, Apple–Banana, Tree–Ice–Cream Etc.



\*\*\*

## Day 3 – Revisit the Chapter

### What happened yesterday?<sup>5</sup>

Ask students to sit in a circle. Draw a pattern on board For Ex. (A B A \_ A \_ A \_) Ask students one by one to tell what will come in blank spaces. Try the same pattern with different shapes or letters..

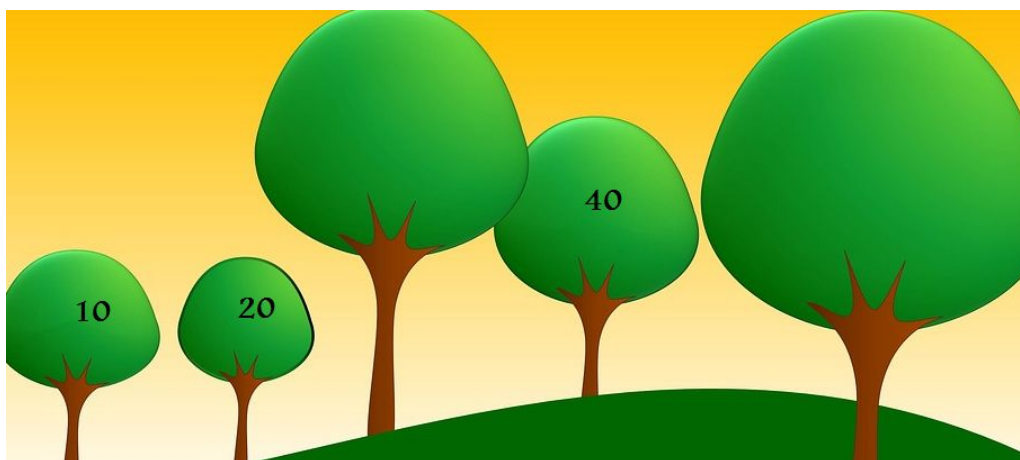
### Activity 1 –Alternate Numbers

Ask students to sit in a circle. Draw number 1 to 10 on board. Underline the alternate numbers For Ex. 1,3,5 Etc. Similarly do the same activity for numbers 11 to 20.

1 2 3 4 5 6 7 8 9

### Activity 2 –Numbers with Objects

Check the Appendix 3, activity #32, for how to conduct this activity.



**Image Source:**

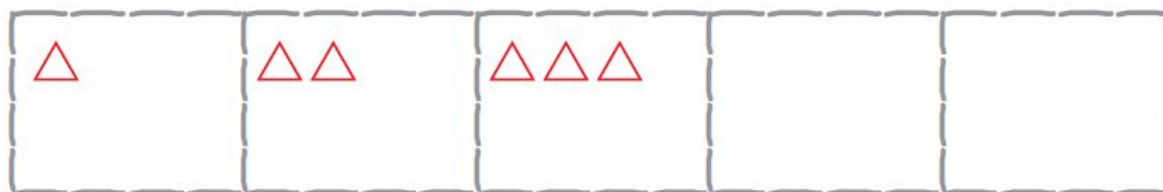
**<https://cdn.pixabay.com/photo/2017/08/14/13/49/cartoon-2640553-960-720.jpg>**

### **Activity 3 –Alternate Actions**

Check the Appendix 3, activity #33, for how to conduct this activity.

### **Activity 4- Increasing Numbers**

Let all students sit in a circle, and Draw following image on board. Let them observe it for 2 minutes. Then ask students one by one what will come in the next square. Similarly Do it with the descending order as well (For Ex. 5,4,3,2,1)



**Image Source: Math Magic, Grade 1, pg. 115**

### **More similar activity–**

- Worksheet on Math Magic, Grade 1, pg. 114–115.
- Worksheet on Math Magic, Grade 1, pg. 116.
- Kho-Kho, play kho-kho with all the kids as the games follows a pattern.

\*\*\*

## Chapter 10– Numbers

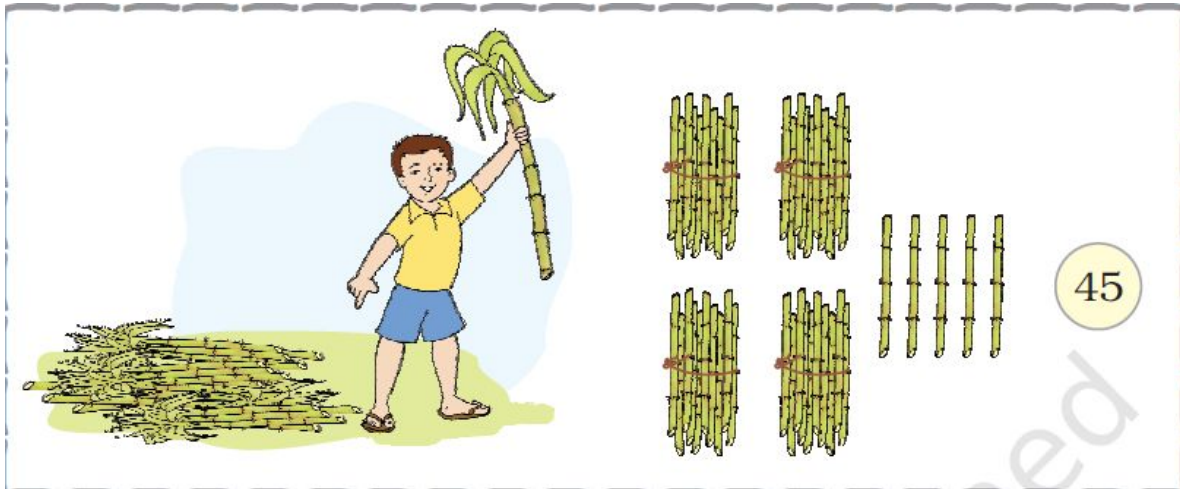


Image Source: Math Magic, Grade 1, pg. 117

**Expected time to learn and consolidate lesson :** 3–4 classroom hours<sup>1</sup>

**What will student learn:**

**Subject matter** – To Count larger number of Objects.

**Basic learning and life skills**<sup>2</sup> – 1, 3, 4, 7, 8, 10, 12, 17

**Preferred tools of introducing concepts**<sup>3</sup> : Manipulations with objects/pictures, Imitation and Recital.

**Notes for facilitators** : Try to explain the concept with the help of various objects, as Orally it will become little difficult to catch the concept.

### Day 1 – Testing pre-possessed understanding and preparatory activities

#### Testing pre-possessed understanding<sup>4</sup>

- Make 3 bundles of pencils, Each bundle having 10 pencils each and keep 4–5 pencils open. Ask each student to count the bundles and open pencils. Make variations while doing this like add/remove some pencils.
- Take a chalk and draw 5 to 7 square on floor write any numbers on it till 40. Let students to stand on any number. Then ask each student on what number they are standing. Repeat this with multiple numbers.
- Write few numbers on chits till 30. Sit in a circle with all students, ask them to pick a chit, and tell the number. Carry out this activity in 5 to 7 rounds.
- Write 11 to 30 numbers on cards, Make pairs of students having 2 students each. Give them number cards, Then Ask students to make a train of numbers in order.
- Make note of comparative levels of each student in regards with understanding of the concept of Numbers. Use it during planning of the class.

### Activity 1: Tens and Ones

Check the Appendix 3, activity #35, for how to conduct this activity.

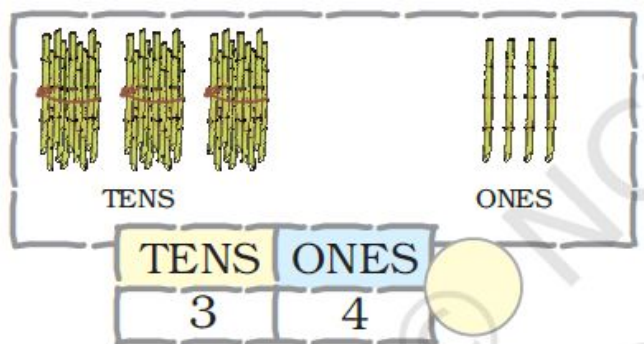
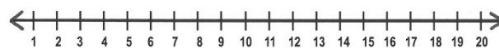
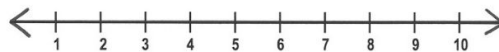


Image Source: Math Magic, Grade 1, pg. 117

### Activity 2: Number line

Check the Appendix 3, activity #36, for how to conduct this activity.



### More similar activity-

- Worksheet on Math Magic, Grade 1, pg. 117-118.
- Worksheet on Hindi Ganit, Grade 1, pg. 50-51.
- Counting by Calendar, Check the Appendix 3, activity #73, for how to conduct this activity.

\*\*\*

## Day 2 – Introduction to Numbers from 51–80

### What happened yesterday?<sup>5</sup>

Ask students to sit in a circle. Say any random number from 10 to 50, Ask students one by one how many tens and how many ones are there in a number.

### Activity 1: Marbles Count

Check the Appendix 3, activity #37, for how to conduct this activity.



Image Source: <https://cdn.pixabay.com/photo/2017/08/09/10/42/marbles-2614142-960-720.jpg>

### Activity 2 – Bundle of Lines

Check the Appendix 3, activity #38, for how to conduct this activity.

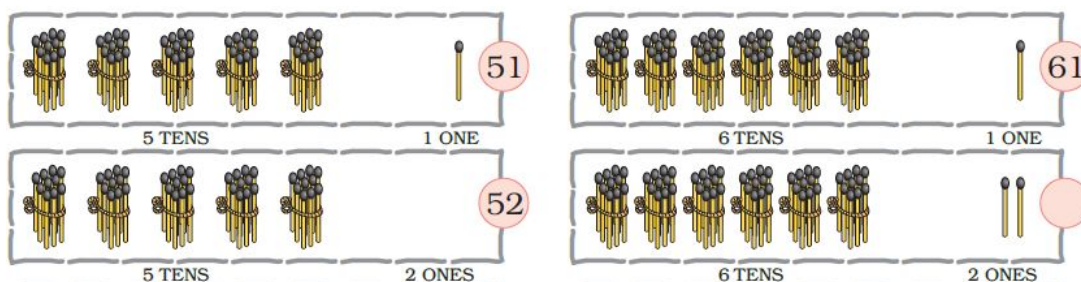


Image Source: Math Magic, Grade 1, pg. 119

### Activity 3 – Draw the numbers

Ask the students to sit in a circle. Write any number on board and let student draw the the required bundles of lines and open lines.

### More similar activity–

- Worksheet on Math Magic, Grade 1, pg. 119.
- Worksheet on Hindi Ganit, Grade 1, pg. 53–54.
- Count the boxes, Check the Appendix 3, activity #86, for how to conduct this activity.

\*\*\*



## Day 3 – Introduction to Numbers from 81–100

### What happened yesterday?<sup>5</sup>

Ask students to sit in a circle. Place 5 bundles of pencils and 4 open pencils, So what will be the number. Carry out this activity for multiple numbers.

### Activity 1 – Count with objects

Check the Appendix 3, activity #39, for how to conduct this activity.



Image Source:

[https://upload.wikimedia.org/wikipedia/commons/thumb/8/85/A\\_bundle\\_of\\_bamboo\\_skewers.jpg/800px-A\\_bundle\\_of\\_bamboo\\_skewers.jpg](https://upload.wikimedia.org/wikipedia/commons/thumb/8/85/A_bundle_of_bamboo_skewers.jpg/800px-A_bundle_of_bamboo_skewers.jpg)

### Activity 2 – Bundle of Lines 2

Check the Appendix 3, activity #40, for how to conduct this activity.

### More similar activity–

- Worksheet on Math Magic, Grade 1, pg. 120–121.
- Worksheet on Hindi Ganit, Grade 1, pg. 55–57.
- Subtract by 100, Check the Appendix 3, activity #75, for how to conduct this activity.

\*\*\*

## Day 4 – Revisit the Chapter

### What happened yesterday?<sup>5</sup>

Ask students to sit in a circle. Write any number on board, let students identify the number. If they are not able to identify, Explain them by drawing bundles of lines.

### Activity 1 – Missing Numbers

Check the Appendix 3, activity #41, for how to conduct this activity.

51	52	53	54	55	56	57	58	59	60
	62			65				69	
		73							80
			84				88		
		93		95				99	

Image Source: Math Magic, Grade 1, pg. 122

### Activity 2 – Snakes and Ladders

Check the Appendix 3, activity #42, for how to conduct this activity.

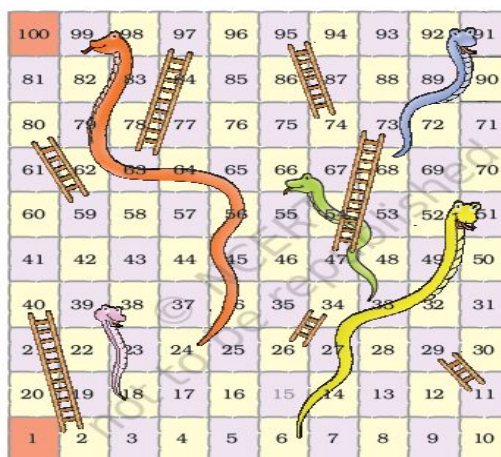


Image Source: Math Magic, Grade 1, pg. 123

### More similar activity-

- Worksheet on Math Magic, Grade 1, pg. 122.
- Worksheet on Hindi Ganit, Grade 1, pg. 58–59.
- Train of tens, Check appendix 3, activity #85, to know how to conduct this activity.

\*\*\*

## Chapter 11– Money



Image Source: Math Magic, Grade 1, pg. 124

**Expected time to learn and consolidate lesson** : 1–2 classroom hours<sup>1</sup>

**What will student learn:**

**Subject matter** – Introduce coins and currency notes used in india.

**Basic learning and life skills**<sup>2</sup> – 1, 3, 4, 5, 7, 8, 13

**Preferred tools of introducing concepts**<sup>3</sup> : Manipulation with Objects, Imitation and Recital.

**Notes for facilitators** : Try to show students actual coins and notes as It will be difficult to understand just by looking at a picture.

### Day 1 – Testing pre-possessed understanding and preparatory activities

#### Testing pre-possessed understanding<sup>4</sup>

- Give them some coins/notes of same/different denominations and ask them to find the total value of the collection.
- Give students some bunch of coins, and ask them to sort all the coins of say, 1 rupee from a given collection of coins and so on.
- Every students will get some coins ( you can get some printable version and cut it in shape). Now teacher says a number and student has to take out and give back as many coins to teacher as the said number.
- Take printouts or make cards where Picture of notes/coins in one side and the amount on the other side, Likewise ask students to make a train.

- Make note of comparative levels of each student in regards with understanding of the concept of Money. Use it during planning of the class.

### Activity 1: Watch And Learn

Check the Appendix 3, activity #55, for how to conduct this activity.



Image Source: Math Magic, Grade 1, pg. 124

### Activity 2: Make a Amount

Check the Appendix 3, activity #56, for how to conduct this activity.



Image Source: <https://cdn.pixabay.com/photo/2014/07/11/22/00/rupees-390525-960-720.jpg>

\*\*\*



## Day 2 – Introduction to Indian Currency

### What happened yesterday?<sup>5</sup>

Ask students to sit in a circle. Show them coins and one by one students to tell what amount of coin it is.

### Activity 1: Object's Amount

Check the Appendix 3, activity #57, for how to conduct this activity.



Image Source: Math Magic, Grade 1, pg. 129

### Activity 2 – Assign Price to Objects

Check the Appendix 3, activity #58, for how to conduct this activity.

### Activity 3– Coin War

Check the Appendix 3, activity #64, for how to conduct this activity.

### More similar activity–

- Worksheet on Math Magic, Grade 1, pg. 126–129.
- Worksheet on Hindi Ganit, Grade 1, pg. 47–48.
- Count and give, Check the Appendix 3, activity #87, for how to conduct this activity.
- Who am I, Check the Appendix 3, activity #88, for how to conduct this activity.

\*\*\*

## Chapter 12 – How Many

Give number name



Image Source: Math Magic, Grade 1, pg. 132

This chapter is designed to revise every concept covered so far. So that the teachers will understand, how much students have understood the concept. Also it will be a good practise for students to go through every concept again.

### Day 1 – Let's Revise Counting and Numbers

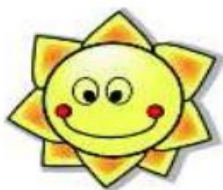
#### Activity 1: Beads and Numbers

Check the Appendix 3, activity #89, for how to conduct this activity.





**Activity 2 –Count and circle worksheet** –Give students counting worksheets and ask them to count the objects in picture and circle the corresponding numbers.

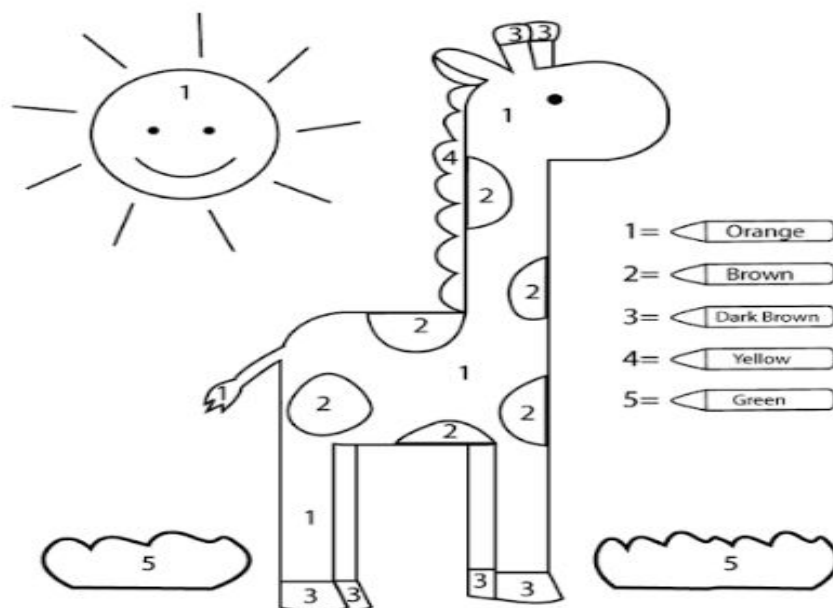


1    7    6



1    2    9

**Activity 3: Colour according to the instructions:** Give the students picture with colour code and ask to them to colour the picture according to the code. More sheets are provided in appendix 3, activity #100.



#### Activity 4- कितने भाई कितने

Check Appendix 3, activity #6 for how to conduct this activity.

\*\*\*

## Day 2 – Let's Revise Addition

### Activity 1 -1,2,3 Blast off

Check Appendix 3, activity #74, for how to conduct this activity.

### Activity 2: How many Beads

Check the Appendix 3, activity #66, for how to conduct this activity.



Image Source: Math Magic, Grade 1, pg. 131

### Activity 3 –War Of Cards

Check the Appendix 3 activity #12, for how to conduct this activity.



ImageSource:[https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTO\\_vpjEDvPbGfSK32pxYtzlhrZKnucAM4VPCKkG-61kiJBs2K-yg](https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTO_vpjEDvPbGfSK32pxYtzlhrZKnucAM4VPCKkG-61kiJBs2K-yg)

\*\*\*

## Day 3 – Let's Revise Subtraction

### Activity 1: Move Backward

Check the Appendix 3, activity #69, for how to conduct this activity.

#### NUMBER MAZE 2

Can you help this school bus get to school? Draw a path from the bus to the school by counting from 1 to 10.



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### Activity 2: Subtract

Check the Appendix 3, activity #68, for how to conduct this activity.

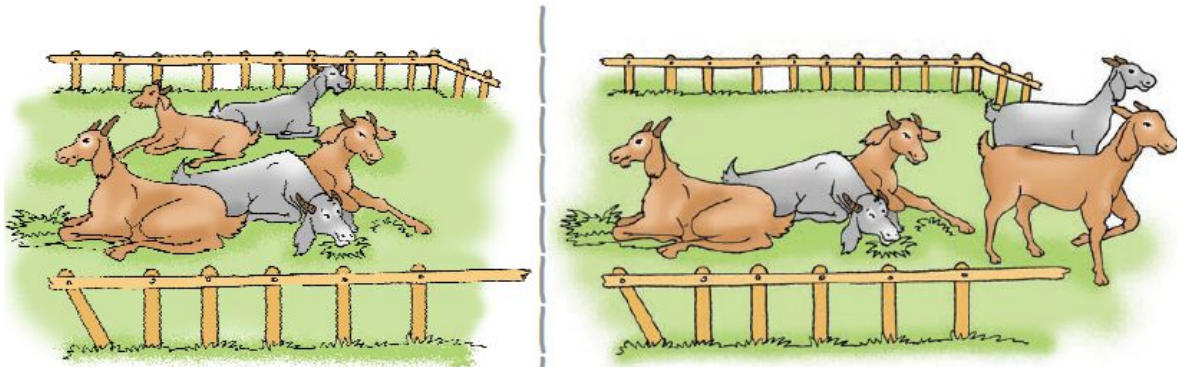


Image Source: Math Magic, Grade 1, pg. 133

### Activity 3: Add/Subtract

Provide all the students with worksheets given on NCERT, Math Magic, Grade 1, pg. 132-133. Ask them to count and write the objects shown in picture. Talk with them while solving the worksheet.

\*\*\*

## Day 4 – Let's Revise Numbers

### Activity 1: How many Tens

Check the Appendix 3, activity #67, for how to conduct this activity.



Image Source: Math Magic, Grade 1, pg. 132

### Activity 2: Object's Amount

Check the Appendix 3, activity #57, for how to conduct this activity.

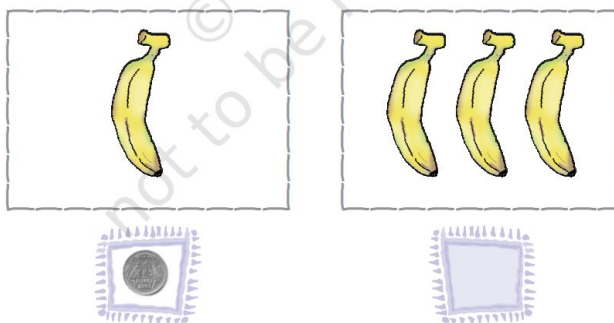


Image Source: Math Magic, Grade 1, pg. 131

### Activity 3 – Measure with Feet

Check the Appendix 3, activity #92, for how to conduct this activity.

### Activity 4–Alternate Actions

Check the Appendix 3, activity #33, for how to conduct this activity.

\*\*\*

## Appendix 1 – Annotation notes

1. Within Upay structure we assume that each subject math and language will get 2 classroom hours per week. With such spread, this chapter can be given 4–5 weeks.
2. Basic learning and life skills are : one, skills that will enable the learning of livelihood skills (for example., ‘reading’ enables to learn ‘how to use computers’ by reading books); and two the skills that enable us to live as social being. Specifically the ‘learning skills’ can be achieved till the age of eight which will reinforce the future learning. Mostly the kids do not get the exposure to this wide array of skills in school because the activities done in school mostly limit the skill of reading, listening, writing. Hence the activities in this book are selected such that they are creating space to make sure if (more or less) every kid is:
  - 2.1. Having to understand by listening? – **Listening**
  - 2.2. Having to understand by reading? – **Reading**
  - 2.3. Having to take part in discussion; communicate views in understandable manner and ask questions? – **Conversation**
  - 2.4. Having to summarize, make observations, notes (verbally)? – **Verbal articulation**
  - 2.5. Having to summarize, make observations, notes (written)? – **Written articulation**
  - 2.6. Having to come up with a solution (as opposed to answer)? – **Problem solving**
  - 2.7. Having to make choices? – **Decision making**
  - 2.8. Having to make value estimations? – **Value estimation**
  - 2.9. Developing curiosity? – **Curiosity**
  - 2.10. Having to imitate/mimic? – **Imitation**
  - 2.11. Having to do something on her/his own? – **Doing**
  - 2.12. Having to learn from each other and cooperate? – **Cooperation**
  - 2.13. Having to talk and learn about their own abilities, limitations, likes and aspirations? – **Self awareness**
  - 2.14. Having to think from someone else’s perspective – **Empathy**
  - 2.15. Having to understand one’s own and other people’s preferences, emotions and propose/do things accordingly? – **Coping with emotions**
  - 2.16. Having to set priorities, plan one’s own work? – **Coping with stress**
  - 2.17. Space created to initiate – **Initiation**
3. At each age-group certain things are more interesting than the others to the kids. So, using those things as teaching/learning tools becomes more effective and engaging.
4. This list of activities will help to understand to what extent different children are already familiar with the concepts that will be introduced in this chapter. This would be very important in terms of planning classroom such that both the

advanced and lagging behind students are properly accommodated and it will have very positive impact on pace of learning and the discipline in the classroom.

In respect of this chapter, given activities will help to assess the ability to classify objects based on similarity and differences, understanding of 'more-less-equal to' and counting.

5. This should daily routine included at the beginning of every class for 10 minutes. The facilitator will ask the students few specific questions about yesterday's study. **This will help to establish a 'Revise-introduce-connect' chain.** While asking these questions, make sure to ask them first to the kids who speak up less often and then go to the other kids

\*\*\*

## Appendix 2 – Supplementary material

### 1. Counting poem 1

१ राजा का बेटा था  
२ दिनों से बीमार था  
३ सिपाही दौड़ के आए  
४ दवा की पुडिया लाये  
५ मिनट में गरम कराई  
६-६ घंटे बाद पिलाई  
७ मिनट में नैना खोले  
८ मिनट राजासे बोले  
९ अशर्फी दान कराई  
१० बोलो भाई, कैसी गिनती आई

### 2. Counting poem 2

१,२,३,४      भैयाजी की तापली लार  
५,६,७,८      आगे पहाड़ पीछे सपाट  
९,१०,११,१२      शक्कर मीठी नोन खारा  
१३,१४,१५,१६      धम से बोला बम का गोला  
१७,१८,१९,२०      हाथी की होती दो खीस

### 3. Addition poem 1

एक और एक दो,  
मुझे एक पेन दो.  
दो और दो चार  
एक साथ बोलो यार,  
तीन और दो पाच,



करो मोर जैसा नाच  
नऊ और एक दस,  
रात हो गइ खेल करो अब बस.

#### 4. Subtraction poem 1

दस थी चिड़ियाँ, बड़ी चिव-चिव,  
एक गई उड़, रह गई नौ  
नौ थी चिड़ियाँ, बड़ी नटखट  
एक गई उड़, रह गई आठ  
आठ थी चिड़ियाँ, खाये दही भात  
एक गई उड़, रह गई सात  
सात थी चिड़ियाँ, मेरे आगे-पीछे  
एक गई उड़, रह गई छे  
छे थी चिड़ियाँ, करती नाच  
एक गई उड़, रह गई पांच  
पांच थी चिड़ियाँ, बड़ी मजेदार  
एक गई उड़, रह गई चार  
चार थी चिड़ियाँ, पूछो कौन-कौन  
एक गई उड़, रह गई तीन  
तीन थी चिड़ियाँ, अच्छी भली ओ  
एक गई उड़, रह गई दो  
दो थी चिड़ियाँ, बिलकुल नेक  
एक गई उड़, रह गई एक  
एक थी चिड़िया, ओ भी भुर्र  
कोई नहीं चिड़िया मेरे साथ फिर

#### 5. Time poem 1

दोपेहेर का बज गया एक  
मम्मी ने किया केक  
केक खाने में एक घंटा गया  
मेने पढाई नहीं किया।

दोपेहेर के बज गए चार  
मम्मी ने दिया मार  
रोने में फिर एक घंटा गया  
मेने पढाई नहीं किया।

रात के बज गए नौ  
टीव्ही में देखे हाथी सौ  
टीव्ही देखने में एक घंटा गया  
मैने पढाई नहीं किया।

\*\*\*

## **Appendix 3 – Activities**

### **1. More, less, same, equal to**

- Show a set of 2–3 chalk, pebbles, rubber or some other items in one hand and 5–6 in the other hand and ask students which hand has more objects. When some of them cannot tell more–less, ask them to match objects from one group to the other. Explain that objects from whichever set could not get matching pair to them will thus have more objects.
- Ask if there are more girls or boys in the classroom. Explain this in same manner as above
- Repeat the same with the number of people in family, number of siblings, notebooks, pens, pencils or any other objects inside or near the classroom.

### **2. Counting with objects**

- Ask the students to sit in circle and keep different objects in the middle like chalk, pebbles, crayons, beads and beads. Now count these items in different ways. like –
- Keep 4–5 Pebbles in one line and count them while pointing to each pebble and asking the children to repeat while paying attention to your finger.
- Take some bead in hand and put down while counting 1, 2, 3 ... and ask the kids to repeat.
- Count the fingers of your hand while pointing to each and ask kids to follow.
- After ensuring that there is enough repetition with different items and the practice of counting to 5 children is well understood, ask each student to do counting themselves with different objects.

### **3. Members of family**

- Ask a student's name and write on the board. After this, ask them, "How many people live in your house?" It is expected that most children will not be able to answer. Then ask the children about their brothers and sisters, the parents, the rest of the others and as they mention, help the children to count while showing fingers and saying it aloud. Write the answers on the board (eg. brother–2, sister–1, parent–2 etc.). In the end, write all together and show the count with fingers. Similarly, one by one, write about each student on the board. At this stage, children are expected to learn only oral counting. Therefore, do not ask students to write or remember whatever is written on the board. This normal–looking activity can make the children very excited. Because children can connect the classroom learning to their own lives.

### **4. Make group of given number**

- Make 8-10 shapes in each students slate or notebook as shown in the picture given below, and ask the children to create a group by making a circle on specific number of objects (like the four triangles, six rounds, etc.)

#### **5. Number cards –**

- Give children the cards which have numbers till 5 on one side and matching number of dots on the other side. Explain the method of reading cards by asking all to pay attention. First, by pointing the finger count the dots on one side and say how many they are. Then show the side with number and say, for example, "So this is four." Repeat the same 4-5 times using different cards. After this, give a card in the hands of the children and ask each student to count and then to tell how many are the cards. Give cards to read in random order instead of 1, 2, 3, 4, 5.

#### **6. कितने भाई कितने**

- Ask student to run in a circle.
- While running 1 student will ask “कितने भाई कितने”, Then all the students will reply “आप बोलो जितने”.
- Then that student need to say a number from 1 to 5. For Ex.3
- After hearing the number student will stand in a group.(students will stand in a group of 3)
- Make the circle again and continue the game.

#### **7. Picture reading – Math**

- Show different pictures to the children and ask questions related to the counting of items in the picture
- For example – चित्र में कितनी लड़कियां हैं? गाय के कितने पैर हैं? etc.

#### **8. As many claps as fingers**

- Ask students to stand in circle.
- Now instruct with demonstration that they should clap as many times as they see the fingers.
- The ones who go wrong have to sit down.
- Initially students struggle to understand this activity. Give them some time.

#### **9. Count and circle**

- Make simple group of shapes as shown below in the notebooks or the slates of the students
- Ask them to count the shapes and circle around the correct answer

#### **10. Count and write**

- Give students some objects(pieces of chalk, beads, pebbles, etc).

- Ask them to count the objects and write the number of objects on their slates or notebook.

### **11. Roll the Dice**

- Make a circle of 4–5 students
- Now roll the dice observe if they are able to recognise the numbers till 6
- If yes then roll 2 dice at a time, ask them to add both the numbers.
- In this activity, some students will answer and some students will not but don't force all of them to answer, let them Observe, they will also learn eventually.

### **12. War of Cards**

- For this activity, you need to make groups of two students each.
- Place the cards in front of them.
- One of the two students will pick two cards,
- second student will add the numbers from both the cards.
- after adding he/she will search for the card which contains the answer from the deck of cards (For Ex. If the addition of the two cards is 6 then the card containing 6 number will be taken out)
- If the answer is right then he/her can keep all 3 cards but if the answer is wrong then opponent can keep the cards. At the end whoever is having the maximum number of cards will be the winner.

### **13. Pair of 10**

- For this activity, you need to make 20 pair of chits and write down numbers from 0 to 9.
- Keep all the chits in front of them.
- Ask the students to pick the chits one by one till their addition of the numbers on the chits becomes 10.
- Later you can ask for other answers (e.g. 6, 9, 4) than 10.
- Initially they will find it little difficult but eventually they will get it.

### **14. Mental Maths**

Examples of problems:

- Noori has 6 red pencils and 2 black pencils in her box. How many pencils are there in the box altogether ?
- In a garden there are 4 mango trees and 3 orange trees. How many trees are there in the garden altogether?
- There are 2 books on a shelf. 5 more books are added on the shelf. How many books in all will be there on the shelf ?
- John has 5 toffees. His mother gave him 4 more. How many toffees in all does he have ?

### **15. Zero in Addition**

Examples of problems:

- Take a container and put some objects in it.
- Ask the children to count the objects.
- Now put three objects more and ask the children to say three more objects

have been added. Ask them to count the objects now.

- Take another container and put, say five objects in it. Do not put any more objects. Ask children to say zero objects have been added.
- Ask them to count the objects in the container. Help children to realise that “five and zero make five only”.
- Continue this process with several pairs of numbers.

#### 16. Let's go Fishing

- Take some printouts of a fish.
- A number(digit or words) will be written on every fish.
- Every student picks up one fish and read out the number on it.
- Students keep taking turns.
- At the end they add the numbers in their fishes.
- The students with the highest number wins.

#### 17. कौन छोटा और कौन बड़ा

- For this activity,take some balls,marbles,pens etc
- Some balls take out of the collection for ex.5 and 6
- Ask student which is more or less.
- Repeat this activity with all the students.

#### 18. ज्यादा, बराबर और कम

- Take abacus for this activity ,make circle of 4-5 students.
- Ask one by one student, question like “show me 4 and 6 count” after any action.
- Ask student between 4 and 5,which one highest and lowest number.
- Repeat this activity upto student can understand relation between more and less.

#### 19. Count and subtract

- Provide students copy of worksheet as like below.
- Also draw some images on board.
- Ask student count and after performing subtraction.
- Ask how many are remaining.

#### 20. सुनो कहानी

- For this activity,refer the story format given.

#### The story of Laddoos

Mother made 6 laddoos and kept them in a jar. Then she went to the market to buy vegetables. When Rama came home from school, she saw the laddoos. The laddoos were very tempting. Rama ate 2 laddoos. When mother came home, she saw 4 laddoos in it.

Mother : Rama, did you eat 2 laddoos ?

Rama : I ate one laddoo mother.

Mother : Rama, are you telling the truth ?

Rama : Mother, I liked the laddoo very much. So I ate one more laddoo.

### 21. चिट्ठी में क्या है'

- Make some cheetas with numbers 1 to 10. Make circle of 6 students
- Ask students to pick up 2 cheats. Identifying them which one greater and smaller.
- Ask students subtract greater number to smaller one.
- Carry out this activity with all the students.

### 22. Subtraction using lines

- For this activity, take problem on board in the form of numerical.
- For ex.  $5-3=?$ . Make 5 number of lines and out of these cut 3 then count remaining one.



### 23. Subtract and match

- Provide students copy of worksheet as like below.
- Make same problems on board and ask student answers.
- Then ask student to find same answers in opposite side options and make pairs.

### 24. Read and Solve

Examples of problems:

- When I go to market I bought 4 balloons and 2 are flew away, how many are remaining?
- There were 3 pencils with Samira. She gave 1 pencil to her friend. How many pencil left with Samira now?
- A fruit- basket contained 9 mangoes. My brother distributed 6 of them to his friends. Find the number of mangoes.

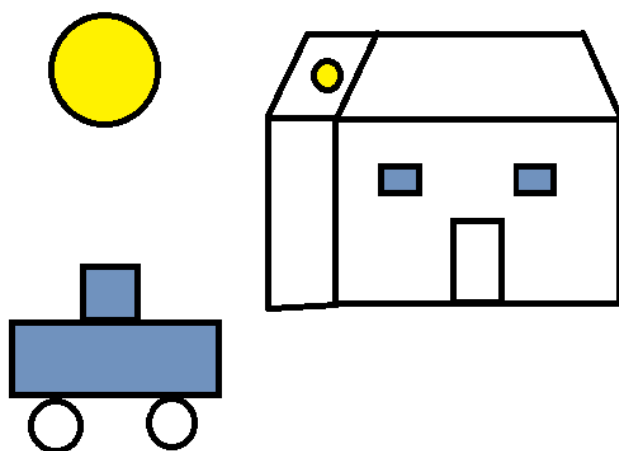
### 25. Measure with Hands

- Take a black board.
- You show them how to measure it with the span of hand.
- Then ask them to measure it and Check whether they are doing it properly or not.
- Similarly do it with feet as well. Ask them to measure the classroom's one side with their feet.

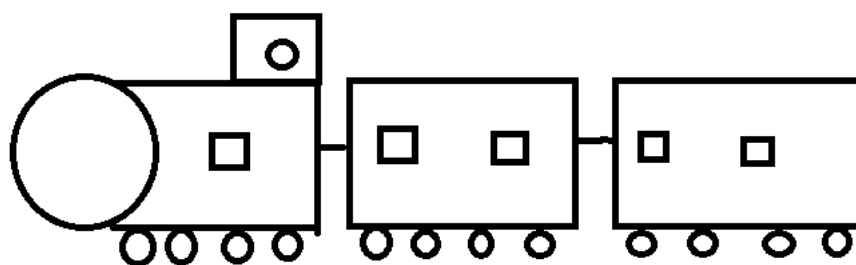
### 26. Identify the shapes

- Draw following figure on board.





- Ask students one by one, How many circles are there? after getting the answer write that number on board. For Ex. Circle=4, Rectangle=3. Complete this for all the shapes.
- Carry on the same activity for another picture as shown below.



### 27. Count the letters

- Write january to December on board.
- Ask students to tell how many words are having 5 letter?
- Also ask for words are having 3 letter, 6 and 4 letters respectively
- .For Ex. 2 Names=4 letters, 1 Name=6 letters
- Then ask them to count all the occurrences of Character 'A', 'E' and 'R'. write them on board. For Ex. 7=A, 9=R, 11=E.

### 28. Objects and Patterns

- Collect 8 pencils and 4 eraser.
- Ask students to sit in a circle.
- Place 2 pencils then 1 eraser again 2 pencils and 1 eraser.
- Let students observe the given pattern then ask them what will come next? If they are able to get it right continue the pattern.
- If they don't get the pattern, Explain them again. Try to Have a one-to-one conversation with each student.

### 29. Fun Patterns

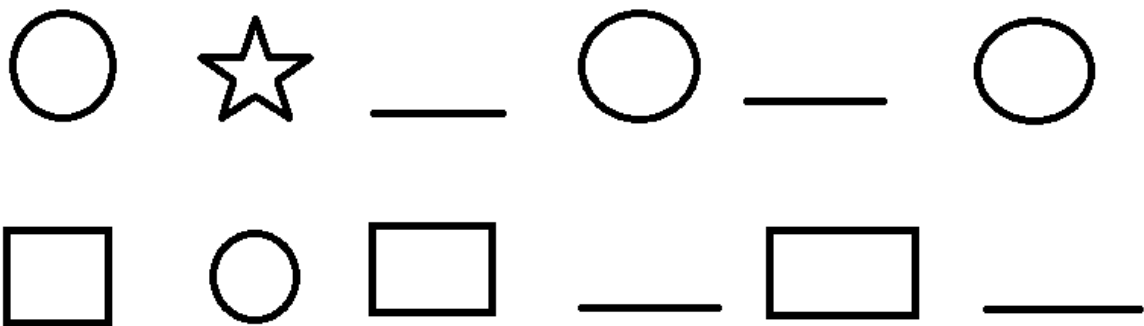
- Ask students to sit in a circle..
- Draw following pattern on board.



- 
- Let students observe the given pattern then ask them what will come next? If they are able to get it right continue the pattern.
- If they don't get the pattern, Explain them again. Try to Have a one-to-one conversation with each student.

### 30. Missing Places

- Ask students to sit in a circle..
- Draw following pattern on board.
- Ask students one by one to fill the missing places.

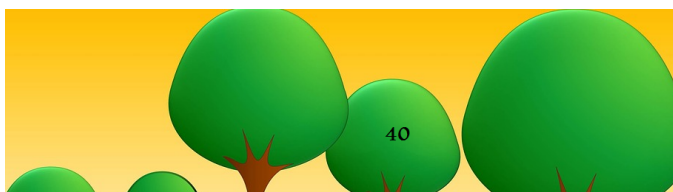


### 31. Odd one out

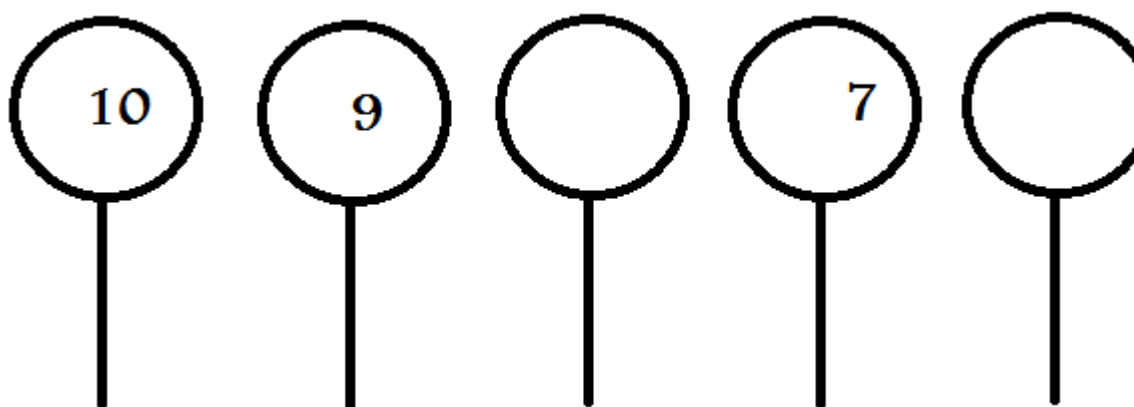
- Ask students to sit in a circle..
- Take 5 pencils of same colour and one pencil with different colour.
- keep those in front of students and tell them how to identify the odd one and take that odd pencil out.
- Similarly do it with multiple objects like bunch of whistles(One having different colour),Pencils-Eraser, bags-bottle etc.

### 32. Numbers with Objects

- Ask students to sit in a circle..
- Draw 5 trees and write as in the picture.



- Ask the students 'What will come in the blank spaces.
- Similarly try the same thing with variety of objects as shown below.



### 33. Alternate Actions

- Ask all students to stand in a Horizontal line.
- Tell First student to keep hands in the air.
- Ask next students to put hands pointing towards the sky.
- again ask next student to keep hands in the air.
- Follow the pattern. Let student observe the pattern and check whether they are able to cathe the pattern or not.
- Also then again start the pattern with 3 students and keep some space between them, After that ask other student to fill in the place.

### 34. Thickest and Thinnest

- Ask Every student to bring any 2 objects like bag, book, pencils, bottle, stones etc.
- Then ask students one by one Which object among all is the Thickest and which is Thinnest.

### 35. Tens And Ones

- Ask students to sit in a circle.
- Make 4 groups of 10 marbles and 5 open marbles.
- Now ask students to count how many groups of tens are there. After

getting that answer write the number on board below Tens.

- Then let them count the open marbles after counting that write the number on board beside the previous one below Ones.
- In this way continue this activity with various numbers by adding/removing the marbles.

### **36. Number Line**

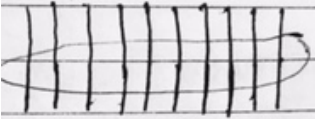
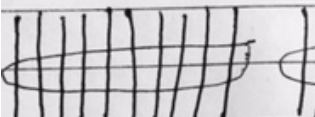
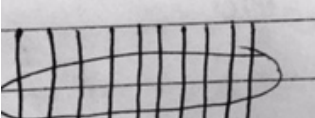
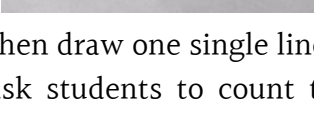
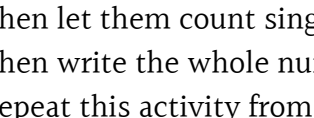
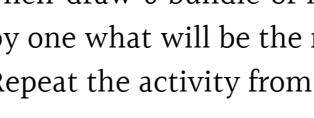
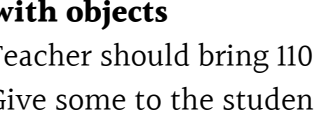
- Make a number line writing numbers 1 till 20 (or 1 till 10) on a paper as shown below.
- Get a set of cards which has numbers from 1 till twenty written on them.
- Shuffle the number cards and place them face down in a stack. Have the child pick up the first card.
- After she's looked at the card, ask her to name the number that comes before it. Then have her name the number that comes *after* it. If your child hesitates, you can rephrase the question by asking which number is 1 less (or 1 more) than the card she is holding.
- Using the number line, have your child check to see if she has named the numbers correctly. If so, she keeps the card. She can start a "winnings" pile to keep all of the cards she's won.
- Continue in the same manner until your child has looked at all of the cards. Ask her to count the cards in her "winnings" pile.

### **37. Marbles Count**

- Ask students to sit in a circle.
- give them marbles and ask them to make 4 groups of 10-10 marbles.
- give 5 open marbles then let them count how many tens and how many ones are there, ask them to write the number in their copies.
- Repeat this for multiple numbers.

### **38. Bundle of lines**

- Ask students to sit in a circle.
- Draw 5 bundles of 10 lines.

	Tens	Ones
	5	1
	5	2
	5	3
	5	4
	5	5
	5	6
	5	7

- then draw one single line.
- ask students to count the bundles after getting a number write it below tens.
- then let them count single pencil, write the number below ones.
- then write the whole number.
- repeat this activity from 51 to 60.
- Then draw 6 bundle of lines and some open line and ask each student one by one what will be the number.
- Repeat the activity from for the numbers from 61 to 70.

### 39. Count with objects

- Teacher should bring 110 sticks to the class.
- Give some to the students and ask them to make bundles of 10 sticks each.
- After making bundles, keep 5 bundles in front of them, and some open sticks. then ask students one by one, How many tens are there?; How many ones are there?; So what will be the number?
- After exercising the number till 70.
- Introduce the number from 71 to 80.
- keep 7 bundles in front of them and start keeping one pencil at a time.
- start from 71, 72, 73, 74 and so on.

### 40. Bundle of lines

- Ask students to sit in a circle.
- Draw 8 bundles of 10 lines.
- then draw one single line.
- ask students to count the bundles after getting a number write it below tens.
- then let them count single pencil, write the number below ones.
- then write the whole number.
- repeat this activity from 81 to 90.

- Then draw 9 bundle of lines and some open line and ask each student one by one what will be the number.
- Repeat the activity from for the numbers from 91 to 100.

#### **41. Missing Numbers**

- Ask students to sit in a circle.
- Write numbers from 51 to 60 with some blank spaces.
- Ask one student to come forward and fill the black numbers.
- Then write numbers from 61 to 70 with some blank spaces.
- Ask Another student to come forward and fill the black numbers.
- Repeat this activity till number 100.

#### **42. Snakes & Ladders**

- Teacher should bring 5 printouts of NCERT, Math Magic, Grade 1, pg-123.
- Make pairs of 2 students each.
- Give 1 printout & 1 dice to each group.
- Explain them how to play Snakes & Ladders.

#### **43. Count and Write**

- Make a circle of students. Put some colourful stones and pencils in front of them ( like 10,11 etc.).
- Ask students one by one, count and write on there copy.
- Carry out this activity with multiple times.

#### **44. 20 तक के अंक कि सीढ़ी**

- Remove the snake and ladder from usual snake and ladder board (No rule is applied in this game).
- Move forward according to the number in the dice. The game ends with first player reaching number 20.
- Who will reach first, he/she will be the winner.

#### **45. Count and Match**

- Draw some pictures one side of board like birds, balloons etc. and another side there relative numbers.
- Ask one student count and indentify match there pair.
- Repeat these activity for all students.

#### **46. Make a group of 10 and Write numbers.**

- Provide students copy of worksheet as like below.
- Ask student make a group of 10 and write 1 for these group in first box.
- After then ask them how many are extras? and write answer in another box.



**47. अंक पहचनो**

- Make cards 10 to 20 numbers.
- Show them different numbers of card and ask students which number is these?
- Carry out this activity with all the students.

**48. Bigger, smaller, biggest, smallest**

- Write 2 numbers on board and ask them which one is bigger or smaller?
- After that write 3 to 4 numbers on board.
- Ask students which one is biggest or smallest?
- Repeat this activity with all the students.

**49. Missing numbers**

- Make group of 5 to 6 students.
- Take some cards of numbers and put it in the form of “ \_\_ 12 \_\_ ”.
- Ask them write on there copy and find out the answers.
- Repeat this activity with multiple numbers.

**50. Rolling dice**

- For this activity,take 3 dice. Make circle of 5 to 6 students.
- Now roll the dice observe and ask student identify the number and note down there copy.
- After then ask them to add the numbers. And observe they able to give answer or not.
- If difficulty occurs help them.

**51. Count and Add**

- Make a group of 5-6 students after then give them some collection of like pebbles, comb, chocolate, seeds etc.
- Ask them make group of 10 items.
- After then ask them to add number (any number 1 to 9).

**52. Addition with cards**

- Make some cheetas 1 to 20 numbers.
- Give problems on there copy like  $7+5=?$ .after then ask student pick up the cards of given value (5 and 7).
- Ask them to add it and pick up card of answer .

**53. Count, subtract**

- Give problems like  $17-4=?$  on students copy.
- Ask them to write number which is more than 10 in form of following format.

- Ask students subtract 4 from 7. To understand the concept, repeat these activity.

#### **54. Addition and subtraction with a number line**

- Ask students to draw number line on there copy.
- Write problem on board as like given below. Mark the bigger number on scale.
- Count in reverse direction upto they cannot get number which is subtract from bigger number.

#### **55. Watch and Learn**

- Teacher should bring coins of 1,2,5,10 and notes of 5,10,20,50,100.
- start with the coins, show them each coin and tell them the value of every coin.
- After coins, show them notes, also the value of each note.
- If it is not possible to bring the currency teacher can take a printout of NCERT math magic, grade 1, pg 124

#### **56. Make an Amount**

- Teacher should bring coins of 1,2,5,10.If it is not possible to bring the currency teacher can take a printout of NCERT math magic, grade 1, pg 124
- Ask students to make a amount start with 1,3,5,7 etc.
- then add notes in it and again ask them to make a amount.

#### **57. Object's Amount**

- Bring an empty pack of toothpaste, wrapper of soap etc.
- Ask the students to read the price tag on the pack and pick up a coin or note from the collection of coins/notes for which the said object can be bought.

#### **58. Assign price to objects**

- Ask in a circle.Ask students some following questions:
  - (a) From where do we buy things, say, pencils, erasers, sweets etc?
  - (b) What do we give to the shopkeeper for the things we buy?
- Take 3 pencils, assign 1 Rs. to each pencil.
- Then ask students how many Rs I will need to buy this pencils.
- Try to do this various objects Ex. Pen, Eraser, Sharpner etc. and with various coins Ex. 2,5,10
- Mix 2 or 3 objects, assign price to each object, Then ask students how many Rs I will need to buy all this objects.

#### **59. Write the numbers**

- Provide students copy of worksheet as like below.

- Ask the students count the number of bundle and ones.
- Write number of bundles in one box and number of ones in another box.
- Carry out this activity with all the students.

#### **60. उछलते आंकड़ें**

- Take one basketball, write the numbers from 0 to 9 on the surface of ball.
- Make a circle of 6 to 7 students. Pass the ball to one student
- Ask him/her to tell the number on which their right hand is. For Ex. 3
- After that ask them to tell the number of left side. For Ex. 4
- After getting both the numbers, let them combine both the numbers then ask what will be the number? For Ex. 34
- after getting the numbers, pass the ball to next students and repeat the process.

#### **61. देखों और पहचनो**

- Make cards 0 to 9 numbers.
- Show the students two cards and ask them which number is these?
- Repeat this activity with multiple times.

#### **62. Numbers ki train**

- Make 4 -5 set of cards ( 21 to 40 numbers).
- Make a group of two students, give them one set for one group.
- Ask the students arrange the cards in ascending order.

#### **63. Write missing numbers.**

- Provide copy of the following worksheet.
- Ask them while solving and help them to complete.

#### **64. Coin War**

- Played like the card game War, students each turn over a card from their pile.
- They count the coins on their card.
- The student with the highest amount keeps both cards.
- They keep playing until all their cards have been turned over. The student with the most cards at the end wins.

#### **65. Number the Sticks**

- Ask students to sit in a circle.
- place 5 sticks in front of them.
- ask student how many sticks are there in front of them.
- after getting the answers, tell them to write the number on their copies.
- Make variations in the number of sticks.
- If sticks are not available take any objects like pencils or stones.

**66. How many beads**

- Ask students to sit in a circle.
- give beads string to first student and let him count till 12.
- then give string to next student and ask him to count after 12.
- likewise continue this activity for all the students.

**67. How many Tens**

- Ask students to sit in a circle.
- Write one number on board. For Ex. 55.
- ask students How many tens are there? and how many Ones are ther?
- Repeat the activity for multiple numbers.

**68. Subtract**

- Ask students to sit in a circle.
- Draw 5 trees on board.
- ask students to count the trees.
- then erase 2 trees, now ask students how many are remaining.
- Try to ask each student and do this activity for multiple numbers.

**69. Move Backward**

- Remove the snakes and ladders from the snake and ladder board game or make a new number board.
- Use 2 dice – one normal and other dice which as ‘+/-’ symbol printed on it.
- Throw 2 dice. Depending upon the dice move forward/backward in the board.
- For example in one dice if the number is 5 and the other has ‘-’ sign, then move backward 5 steps on the board

**70. Family Member's**

- Let students sit in a circle.
- Ask them ‘how many family members are there in your family?’
- After getting answers, ask if one more brother/sister added in your family, So what will be the total member of family?
- This activity will help them to understand the numbers.

**71. Make Pair's**

- Make 20 chits, On 10 chits write the numbers from 1 to 10, and on another 10, draw any objects pictures from 1 to 10.(For Ex. On 1st card–One object, 2nd card–Two Objects, etc).
- Mix all the cards.
- then ask the students to find out the appropriate pairs.

**72. Walk on Watch**

- Draw a big circle on floor, and write(12,3,6,9) like in watch in that circle.

- Ask them to walk on the watch, like ask them to walk till 3 or 5.
- Carry out this activity multiple times.

### **73. Counting by Calender**

- Ask students, if he knows how many days are in a month. Let him flip through the calendar and explore the answer to this question. Point out that a month can have as few as 28 days, or as many as 31.
- Cut the calendar apart into individual squares with dates on them. Mix the cards and spread them out in front of your child.
- Start by having your kid put the numbers in order from least to greatest. If he has trouble with this, flip to another page in the calendar and have him match the number cards to the numbers on the calendar.

### **74. 1,2,3 Blast off**

- Get students sitting in their rows or groups. Each student in the row is assigned two numbers from 1 to 9 (e.g. a student is assigned 4 and 7).
- Once all the rows or groups have their assigned numbers, call out a number (e.g. 12).
- The students have to then stand up so that the students who are standing up add up to 12. For example, if one students has 5 and another has 7 those two can be standing up while the rest of the row is sitting.
- This one requires a bit of explaining and modelling, especially for elementary and middle school students.

### **75. Subtract by 100**

- Give 1 dice, 1 paper, and 1 pencil to each student.
- Ask them to write 100 on paper.
- Roll the dice, whatever number will come, subtract the number from 100.
- Carry on this activity till the number becomes 0.
- the one who will reach to 0 first will be the winner.

### **76. Game of Fingers**

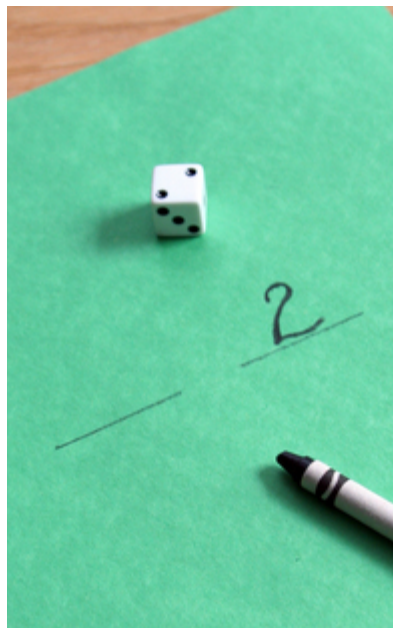
- This game can be played with 2 students, One will become a leader.
- leader will call out a name( For Ex. 7).
- both of them have to make the number using their fingures.(for ex. 4-,5-2)
- If they come up with the same number, leader will get a point.
- Likewise, one who will get 10 points first, will win the game.

### **77. कितने कदम की दूरी?**

- keep a thing(For Ex. a bag, bottle) on a distance from kids.
- Now ask the kids how many steps it will take to reach to the objects.
- after getting their response, Ask them to reach towards the object and tell how many steps they required to reach.

### 78. Make a number

- Each kid draws two horizontal dash lines on the paper as shown below
- Each of the horizontal lines represents a place value. First line represents tens and second line represents ones.
- Now choose a goal for the round – either to get the smallest 2-digit number or to get biggest 2-digit number?
- Now each player rolls the dice once and then writes the number shown on the cube on one of the lines on his paper. Here's where strategy begins. Each player chooses where he wants to place each digit. For example, if a student gets a “2” and the goal is to create the largest number, he may choose to place the 2 on the horizontal line holding the ones place (because it would be more likely to get a number larger than 2 in next round which can be placed in tens place).
- The player that gets largest number in round wins that round (for example if 5 students got 32, 76, 42, 81, 53, the winner would be the student who got 81)
- The difficulty level can be increased to 3 and 4 digit number as kids get comfortable with the game.



### 79. अंक बताओ, चॉकलेट ढूँढो

- In this the kids will be divided into pairs. In each round one kid from the pair will know location of a chocolate hidden under the slates. slates which have numbers written on them. He/she will help her friend to guess where the chocolate is, by telling the number (and not pointing).

### 80. कार्डों का युद्ध – जोड़ना



- Play addition game with a deck of cards.
- Each player will take out 2 cards.
- Ask them to add them.
- After their response student with the higher number can keep both the cards and other student have to put the cards back to the deck.
- Student with highest card we win the game.

#### **81. Race of speed**

- Draw 2 lines on floor at distance of 15 foot.
- ask 4 students to stand on 1 line.
- Tell 1st student- to run till next line.
- 2nd student- to walk till next line.
- 3rd student-to jump till next line
- 4th student- to crawl till next line.
- Then ask student who came 1st and why?
- Tell them which activity takes less time and which activity takes longer time.

#### **82. Walk by activity**

- Draw a big circle on floor, and write(12,3,6,9) like in watch in that circle.
- Then tell one activity to student (For Ex. Going to school, Having lunch, playing), and ask them to stand on time, Like at what time they do that activities.
- Carry on this activity with all the students.

#### **83. Mark the height**

- Call one student in front.
- ask him to stand near wall, then mark his height on wall by pen.
- then call 2 students in front, let 1 student stand near wall and ask other to measure the height of student.
- Carry out this activity with all the kids.

#### **84. Take me out**

- Teacher should bring various shapes in the class.
- Ask students to sit in a circle.
- keep all the objects in front of them.
- Ask them to categorize the objects in groups.
- For Ex. Triangle- all the triangle shaped objects will be at one place.
- Carry out this activity as a group.

#### **85. Train of tens**

- Teacher should make chits of number like 10,20,30 till 100.

- Mix all the number and give it to students.
- Ask them to make a train of numbers sequentially.
- Carry out this activity with all the students.

#### **86. Count the boxes**

- Teacher should bring a chart of 'Marathi Alphabets'
- give it to one student and ask him/her to count the squares.
- Likewise ask all student to count the boxes.
- This activity helps them to remember the numbers.

#### **87. Count and give**

- Every students will get some coins ( you can get some printable version and cut it in shape or buy the game money bundles available in market).
- Now teacher says a number and student has to take out and give back as many coins to teacher as the said number

#### **88. Who am I?**

- Print printable money flashcards and put them out face up in front of both players.
- The Chooser chooses one of the flashcards. The Guesser then asks a series of "yes" and "no" questions to try to find which of the flashcards has been chosen.
- For example he/she can ask is number less than/ more to 8,etc
- Optional Rules
  - The Guesser can only ask 5 questions.
  - The Chooser scores 1 point if they guess correctly first time.
  - The Guesser scores 1 point if the Chooser guesses wrong.
- Variations
  - To make the game easier, choose fewer than 8 coin flashcards.
  - To make the game harder, choose more than 8 flashcards.

#### **89. Beads and Numbers**

- सौ मणियों की माला जिसमें अलग अलग संख्या की जगह कार्ड लगा सकते हैं।
- This game is to improve kid's counting ability and speed by familiarising them with counting in groups(say 10 – as in beads string the colors of the beads changes after 10 beads.)
- give them any number and ask them to hang the number in appropriate place.
- For example if you give the child a card with number 33, s/he needs to put the card after 33 beads.
- You can use use paper clips, cloth clip or use any other types of number cards

#### **90. Bingo – subtraction**

- Each player gets a bingo card with subtraction equation. Caller calls out a number. Student has to find the equation whose result is same as the

number being called. The student to strike of all the numbers first across any row / column and ultimately the whole card is winner.

**91. कार्ड-पासे जोड़ी - घटाना**

- We will use 2 dice in this game. Roll out 2 dice. We will subtract the dots in one dice from the other to get a smaller number. For example if first dice has 2 dots and second dice has 4 dots. Ask the students, subtract smaller number from bigger number. Carry out this activity with all students.

**92. Measure with feet**

- Ask the students to measure 1 side of classroom by their feet.
- give 1 side to each student.
- After getting the answer, ask them to write the number in their copies.

**93. Letters in my full name**

- Make a circle
- Ask each kid how many letter are there in their name. If they cannot tell, help them.
- Now tell them, you will say a number aloud one by one. All those kids have to sit down and get up if number of letters in their name matches to this number.
- The ones who get it wrong will be out
- Game will end when there are only 2-3 kids left

**94. माला बनाओ**

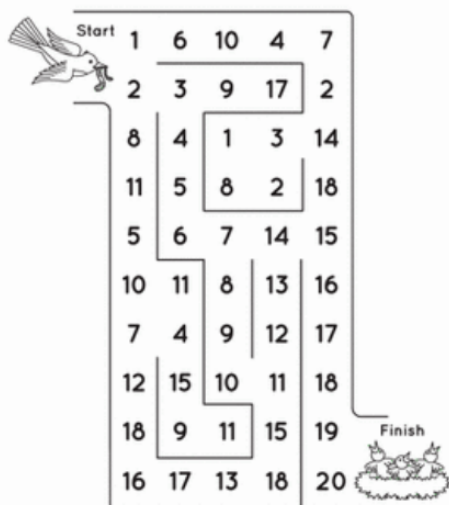
- Make a circle, give beads and threads to the students.
- Ask them to make string of 10,11,12 etc. beads.
- Keep the students and use in counting.

**95. Find the matches**

- Simply give a group of children a deck of card or number cards specifically made.
- Ask them to find all the matching cards.
- In group settings, the children will learn numbers from each other
- Meanwhile, ask the children which number it is when they find a match

**96. Reach me fast**

- Provide students copy of worksheet as like below.
- Ask the students to reach finish location sequentially through the numbers.



### 97. Count to 20 (courtesy of Marilyn Burns)

- This is a game for two players.
- Each player can count two consecutive numbers (i.e. 1, 2) or only one number. The objective of the game is to be the first to “count to 20.”
- You can vary this up by changing the rules (e.g. count to 10, count to 30, three consecutive numbers, even numbers, elements in the periodic table, etc.).

### 98. कार्डों का युद्ध – घटाना

- Play subtraction game with a deck of cards.
- Each player will take out 2 cards.
- Ask them to subtract smaller number from bigger number.
- After their response student with the lowest number can keep both the cards and other student have to put the cards back to the deck.
- Student with highest card we win the game.

### 99. २० से घटाए

- Give 1 dice, 1 paper, and 1 pencil to each student.
- Ask them to write 20 on paper.
- Roll the dice, whatever number will come, subtract the number from 20.
- Carry on this activity till the number becomes 0.
- the one who will reach to 0 first will be the winner.

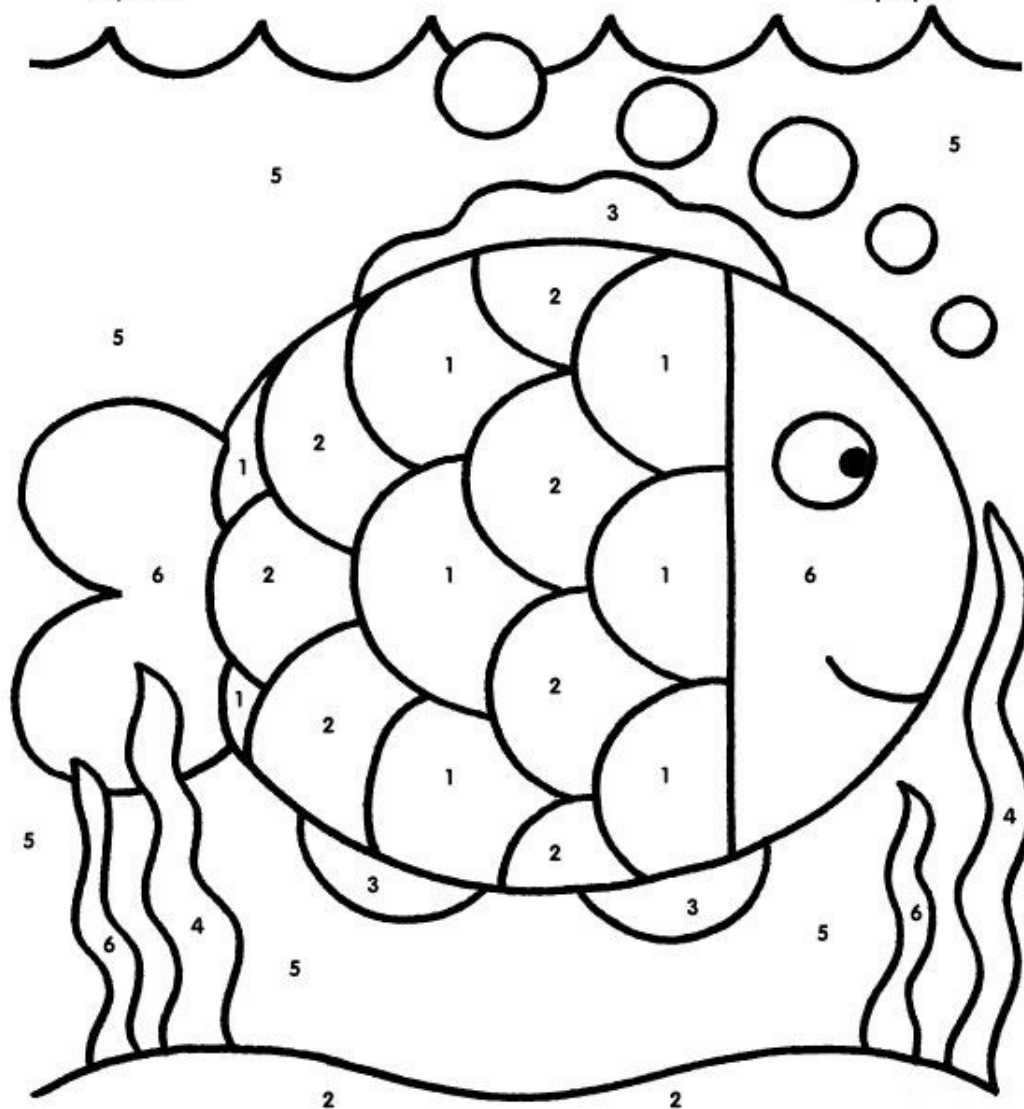
### 100. Colour according to the instructions:

Take the printouts of given below pictures and give it to all the students for colouring.

1-red  
2-orange  
3-yellow

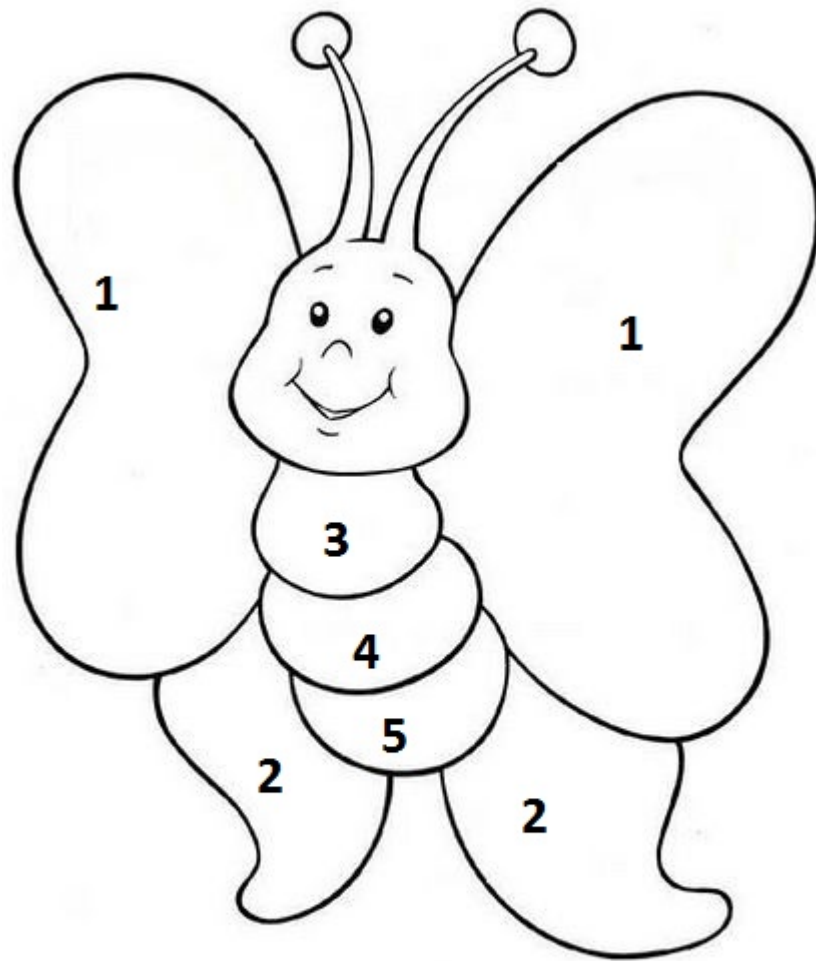
## A color by number fish.

4-green  
5-blue  
6-purple

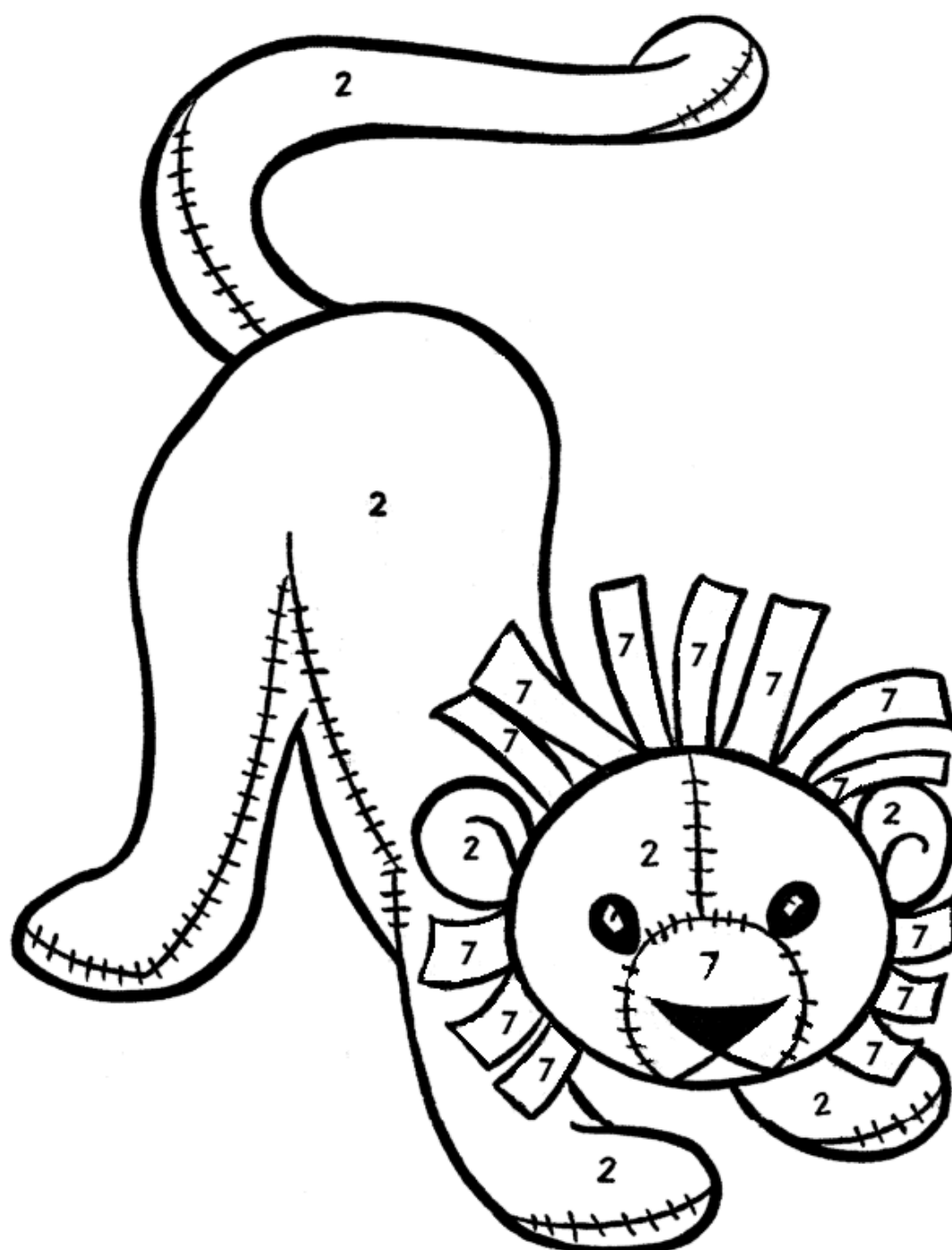








**1-yellow    2-blue    3-green**  
**4-red       5-orange**



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1—Red  
2—Yellow

3—Blue  
4—Green

5—Orange  
6—Purple

7—Brown  
8—Black

## Appendix 4 – Worksheets

### 1. Listen and trace

Give students following worksheet. Tell the students they have to trace whichever number is said aloud. Explain with a demo what they have to do when they are asked, “Trace a number.” Randomly say aloud different numbers and observe if students are tracing them.

