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Resource Bank

Alternative Teaching Resources in Math



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Teacher's Notes

Grade: 1
Topic: Word Problems up to 20
Learning outcome: The student reads simple word problems, chooses the correct mathematical operation (addition or subtraction), and solves problems using numbers up to 20.
The worksheet was developed by: LSpecPA cooperation partner, Rēzekne Primary School – Development Centre

Level 1	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	1. Look carefully at the pictures. 2. Count the objects in each group. 3. Think about whether the number of objects is increasing or decreasing. 4. Write the calculation in the boxes. 5. Calculate the total number. 6. Write the answer. 7. Check whether your answer matches what is shown in the pictures.	**The student correctly:** ● counts the objects in the pictures; ● determines whether addition or subtraction should be used; ● writes the mathematical operation; ● identifies the correct answer using numbers up to 20. **The student begins to understand:**	The teacher observes whether the student: ● understands the content of the problem; ● can identify the important numbers; ● connects the pictures with the text; ● chooses the correct mathematical operation; ● can explain their reasoning.	● Acting out mathematical operations using real objects ● Counting on fingers ● Moving objects into groups ● Grouping objects in twos, fives or tens to make counting easier ● Modelling mathematical operations on a number line ● Role-play	First, look at each group of pictures together. Encourage pupils to count aloud. Use guiding questions: ● "How many objects can you see?" ● "Are there more or fewer now?" ● "Which sign should we use?" Demonstrate the calculation step by step on the board. Help pupils connect the picture with the mathematical symbol. Give pupils enough time to count. Encourage pupils to work in pairs: ● one pupil counts; ● the other checks the answer.

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		● that the plus sign means “the number increases”; ● that the minus sign means “the number decreases”.	Particular attention should be paid to students: ● who are still developing their reading skills; ● who need more time to understand the task; ● who confuse addition and subtraction.	activities (“shop”, “basket”, “the birds flew away”) ● Having the student draw the problem **Use of colour:** ● one colour for the given numbers; ● another colour for the mathematical operation; ● another colour for the answer. **Pair work:** ● one student reads the problem; ● the other models it using objects. ● Thinking aloud (“I choose addition because the number increased.”) ● Breaking the task down into small steps ● Digital interactive activities on a tablet or computer ● A mathematics corner in the	Praise pupils for using the correct thinking process, not only for giving the correct final answer. **Self-assessment:** “Did I choose the correct operation?” “Does my answer match the question?” ● Retelling the word problem in their own words ● Explaining their strategy to the class ● Comparing different ways of solving the problem ● Creating word problems independently ● Connecting the task to everyday situations and personal experience **Support** ● Use larger pictures and concrete objects to model the operations. ● The teacher and pupil act out the situation together. ● Allow the pupil to count on their fingers or use a number line. ● Read the task together several times.

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				classroom with manipulatives **Movement activities:** ● students represent numbers themselves; ● students join or leave the group.	**Additional Challenge** ● The pupil creates a similar problem independently. ● The pupil explains the solution to a classmate. ● The pupil creates their own picture example for the word problem.

Level 2	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	● Read the word problem carefully. ● Find the important numbers in the text. ● Look at the pictures and count the objects. ● Think: Are more objects added, or are some taken away? ● Choose the correct operation. ● Write the calculation in the boxes. ● Solve the problem. ● Write the answer in a full sentence. ● Check that your answer	● correctly identifies the numbers given in the problem; ● connects the text with the pictures; ● chooses the correct mathematical operation; ● calculates the result correctly; ● gives a short answer in a complete sentence.	**The teacher observes:** 1. Whether the pupil understands the content of the word problem. 2. Whether the pupil can identify the important numbers in the text. 3. Whether the pupil connects the pictures with the situation described in the text.	Worksheet with word problems Pencil and eraser Coloured pencils or highlighters for highlighting the important numbers Number line to 20 Number cards Mathematical symbol cards (+, −, =) Magnetic numbers or movable cards for modelling the calculations **Counting objects:**	Read the word problems together with the pupils at first. Ask guiding questions: ● “What happened in the problem?” ● “Are there more or fewer now?” ● “Which operation should we use?” Highlight the key words in the text together with the pupils: ● “more”; ● “altogether”; ● “were left”. Make connections between the text, the pictures and the mathematical operation.

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	matches the pictures.	The pupil begins to understand the meaning of the words: ● “more”; ● “altogether”; ● “were left”; ● “flew away”; ● “ate”; ● “added”.	4. Whether the pupil chooses the correct mathematical operation. 5. Whether the pupil can explain why they chose that particular operation. 6. Whether the pupil writes the answer in a complete sentence. **Particular attention should be paid to pupils:** ● who read slowly or lack confidence when reading; ● who confuse the meanings of the mathematical operations; ● who focus only on the pictures and ignore the text.	● buttons; ● blocks; ● sticks; ● bottle caps; ● pebbles; ● chestnuts; ● pine cones; ● leaves; ● acorns; ● seashells. Sets of natural materials for sorting and counting Picture cards showing everyday situations A whiteboard or laminated cards for repeated writing practice An interactive whiteboard or digital presentation Pockets or envelopes for sorting counting materials Maths mats or work surfaces for grouping objects	Demonstrate the solution process step by step. Encourage pupils to explain their thinking aloud. Use pictures as support, but gradually encourage pupils to rely more on the text. Encourage pupils to work in pairs: ● one pupil reads the text; ● the other analyses the pictures. **Support** ● The teacher reads the problem together with the pupil. ● Highlight the important numbers in the text using colour. ● Act out the situation using objects. ● The pupil counts the pictures aloud. ● Use simple, short sentences. **Additional Challenge** ● The pupil creates a similar word problem independently. ● The pupil explains the solution process to a classmate. ● The pupil solves the problem without using the pictures.

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Level 3	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	• Read the word problem carefully. • Find the important numbers. • Think: What happened in the problem? Did the number become greater or smaller? • Choose the correct mathematical operation. • Write the calculation. • Solve the problem. • Write the answer in a complete sentence. • Check your solution.	**The pupil:** • independently reads and understands the word problem; • identifies the important information in the text; • chooses the correct mathematical operation; • calculates the result correctly; • writes the answer in a complete sentence; • can explain the steps used to solve the problem. **The pupil uses the following**	**The teacher observes:** 1. Whether the pupil understands the content of the word problem without visual support. 2. Whether the pupil can identify the essential information in the text. 3. Whether the pupil chooses the correct mathematical operation. 4. Whether the pupil can explain their thinking process. 5. Whether the pupil gives the answer correctly in a complete	Worksheet with word problems Pencil and eraser Coloured pencils for highlighting important words and numbers Number line to 20 Mathematical operation cards (+, −, =) Number cards Magnetic numbers for individual work Whiteboard or small individual whiteboards for writing solutions Interactive whiteboard for analysing the problems together **Practical counting materials as needed:**	Discuss the content of the word problem before solving it. Teach pupils to highlight the important words and numbers in the text. Demonstrate the problem-solving steps: 1. read; 2. find the important information; 3. choose the operation; 4. calculate; 5. write the answer. Encourage pupils to explain their thinking process. Connect word problems with real-life situations. Gradually reduce the teacher's support to encourage independent work. Discuss different ways of solving the problems. **Support** • The teacher reads the problem together with the pupil. • Highlight the important words

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		terms correctly: ● “altogether”; ● “more”; ● “were left”; ● “added”; ● “took away”; ● “ate”.	sentence. 6. Whether the pupil can work independently. **Particular attention should be paid to pupils:** ● who read slowly or lack confidence when reading; ● who have difficulty choosing the correct mathematical operation; ● who find it difficult to understand the text without pictures.	● pebbles; ● chestnuts; ● pine cones; ● sticks; ● buttons. Maths exercise book Laminated cards for repeated writing and correcting mistakes	and numbers in the text. ● Use a number line or concrete objects to model the mathematical operations. ● Ask guiding questions: ○ “What happened?” ○ “Are there more or fewer now?” ○ “Which operation should we use?” **Additional Challenge** ● The pupil creates their own word problem. ● The pupil solves problems with larger numbers. ● The pupil finds different ways of solving the problem. ● The pupil explains the solution to a classmate.

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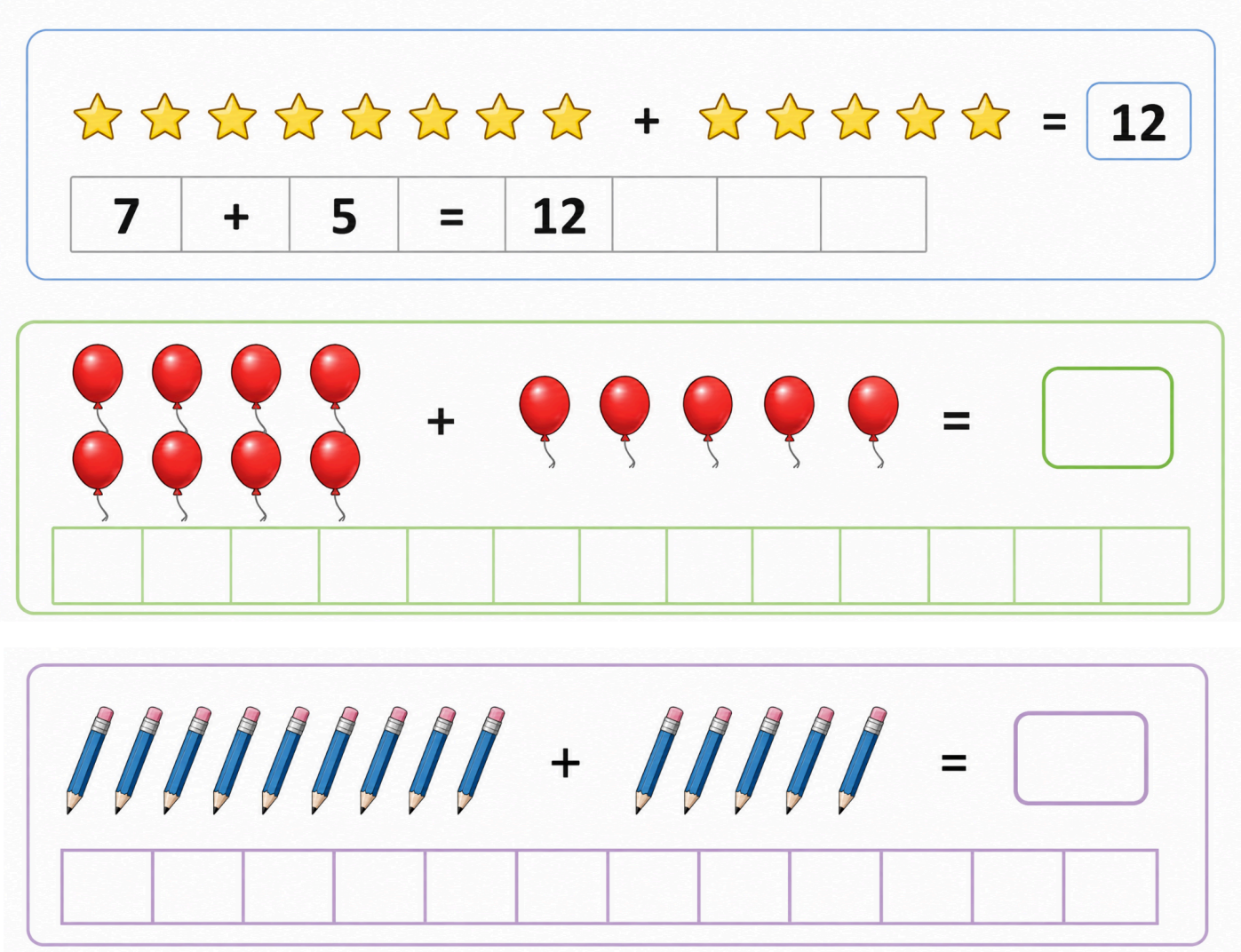
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Name: Grade: Date:

Picture Addition

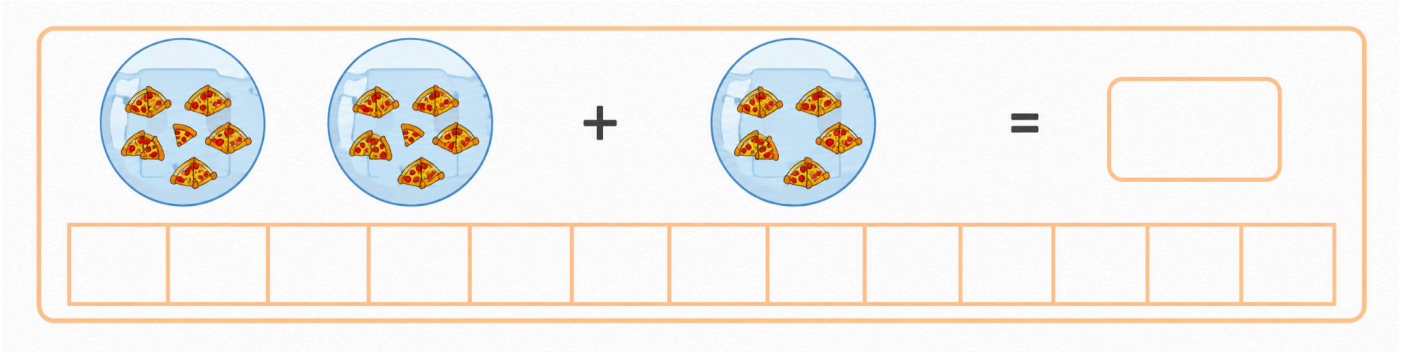
Level 1	What do I need to do?	What can I use to solve this task?
	1.Count the pictures in both groups. 2.Add them together. 3.Write the total in the box.	Pictures, number line

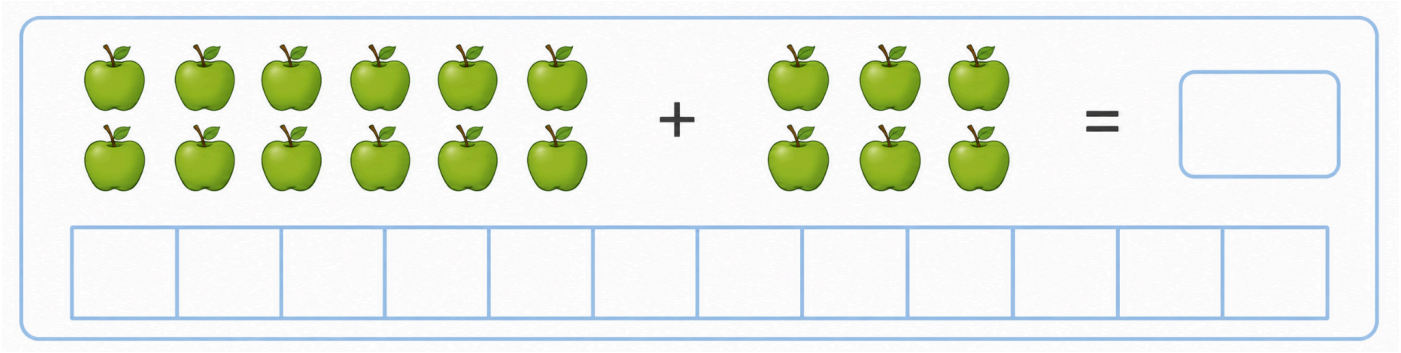
Example:

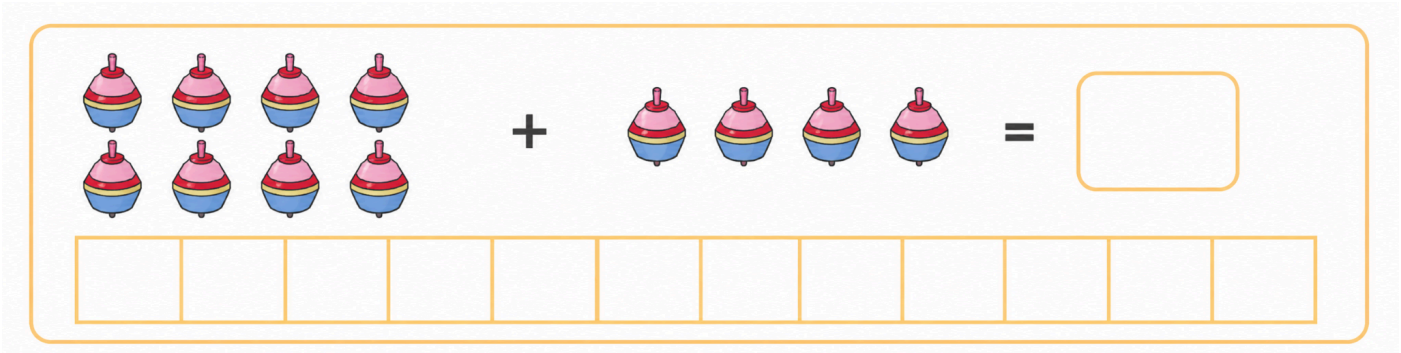


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Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):







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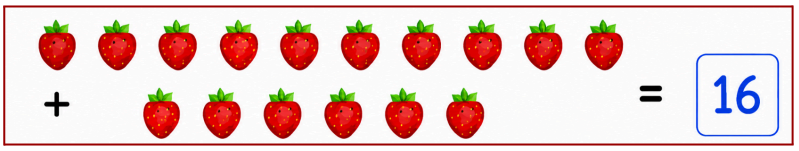
Name: Grade: Date:

Picture Addition

Level 2	What do I need to do?	What can I use to solve this task?
	1.Read each problem. **2.Count the pictures.** **3. Complete the calculation.** **4. Write the answer.**	**Pictures, number line**

Example:

Elina had 10 strawberries.
She received 6 more strawberries.
How many strawberries does Elīna have now?

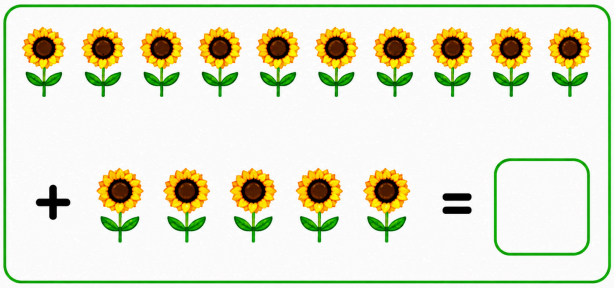


Calculation:

10	+	6	=	16

Answer: Elina now has 16 strawberries.

1.There are 10 sunflowers growing in the garden.
5 more sunflowers have bloomed.
How many sunflowers are now growing in the garden?



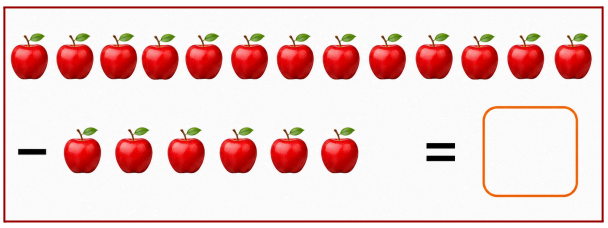
Calculation:

Answer: _____

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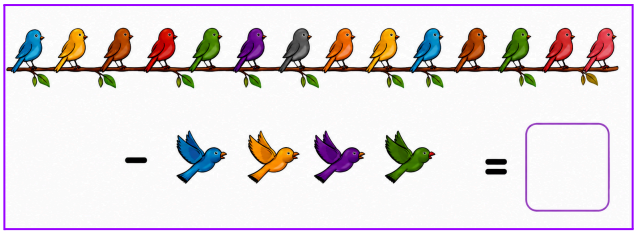
2. John had 13 apples.
He ate 6 apples.
How many apples did John have left?



Calculation:

Answer: _____

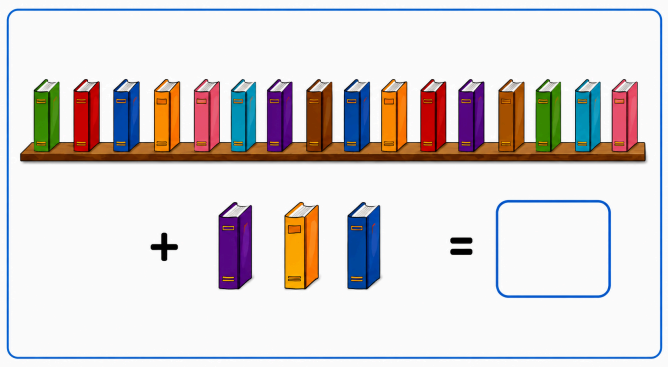
3. There were 14 birds sitting on a branch.
4 birds flew away.
How many birds were left on the branch?



Calculation:

Answer: _____

4. There were 16 books on the shelf.
Elina added 3 more books.
How many books are on the shelf now?



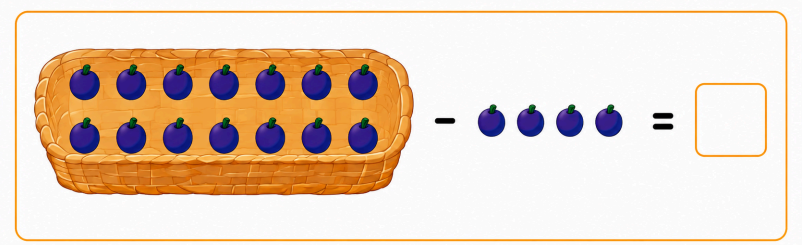
Calculation:

Answer: _____

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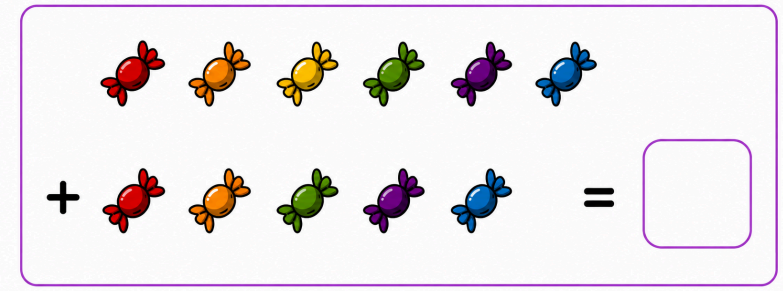
5. There were 14 plums in the basket.
Pether ate 4 plums.
How many plums were left in the basket?



Calculation:

Answer: _____

6.There were 6 sweets on the table.
Mum brought 5 more sweets.
How many sweets are on the table now?



Calculation:

Answer: _____

Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):





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Name: Grade: Date:

Math Story Adventures

Level 3	What do I need to do?	What can I use to solve this task?
	1.Read each problem. **2. Decide whether to add or subtract.** **3. Complete the calculation.** **4. Write the answer.**	**Counters, a number line, a number grid.**

Example:

Version 1 (Addition)

Anna had **8** books.
She received **5** more books as a gift.
How many books does Anna have altogether now?

8	+	5	=	13		

Version 2 (Subtraction)

Peter had **14** pencils.
He gave **6** pencils to a friend.
How many pencils did Peter have left?

14	−	6	=	8		

1.Lina had **9** stickers.
She received **7** more stickers from a friend.
How many stickers does Lina have altogether now?

Answer: _____

2. Mark had **16** LEGO bricks.
He built a tower using **8** bricks.
How many bricks did Mark have left?

Answer: _____

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3. There were **11** pupils in the classroom.
6 more pupils arrived during the lesson.
How many pupils are in the classroom now?

Answer: _____

4. There were **18** sweets on the table.
9 sweets were eaten.
How many sweets were left on the table?

Answer: _____

5. There were **12** books in the library.
The librarian added **5** more books.
How many books are in the library now?

Answer: _____

6. Amanda had **15** euros.
She spent **7** euros on ice cream.
How many euros did Amanda have left?

Answer: _____

Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):





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Teacher's Notes

Grade: 1
Topic: Numbers up to 20: counting, reading, writing and ordering
Learning objective(s): The student counts, reads, writes and compares numbers up to 20, identifies neighbouring numbers, continues number sequences, and arranges numbers in ascending and descending order using practical examples and visual materials.
The worksheets were designed by: LSpecPA cooperation partner, Rezekne Primary School – Development Centre

Level 1	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	1.Look carefully at the pictures and count the objects. 2. Read the number words and write them as numerals. 3. Continue the number sequences, write the missing numbers and identify the neighbouring numbers. 4. Arrange the numbers from smallest to largest. Work slowly and check your work after each task.	The student correctly counts the objects, recognises and writes numbers up to 20, continues number sequences without errors, and identifies neighbouring numbers. The numbers are correctly arranged in ascending order.	The teacher observes whether the student: 1.counts in sequence without counting the same objects more than once; 2.recognises numerals and matches them with number words; 3.can use a number line up to 20; 4.understands the concepts “before”, “after”, “more” and “less”; 5.can work independently and	**For counting** ● Buttons ● Building blocks ● Bottle caps ● Sticks ● Pebbles ● Chestnuts ● Acorns ● Counting cubes ● Coloured counters **For numeral recognition** ● Numeral cards from 0 to 20 ● Number and picture matching cards ● Magnetic numerals ● Number chart up	● Use simple, uncluttered images with sufficient space between the objects. ● Instructions should be brief and placed directly above each task. ● If a student has reading difficulties, the teacher should read the task instructions aloud. ● Avoid including too many visual elements in one part of the page, as this may cause difficulties with visual perception. ●Numerals should be large and easy to read. ● Grouping objects in sets of three helps Grade 1 students perceive quantities more easily and reduces the likelihood of

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			follow the instructions in the correct order. 6.Particular attention should be paid to students who confuse the formation of numerals or skip numbers in a sequence.	to 20 **For creating number sequences** ● Number line up to 20 ● Laminated number sequences ● Missing-number cards	counting errors. **Support**: Use larger images, allow students to count using their fingers or physical objects, and provide a number line as a support tool. The student may work with a partner and receive support from the teacher. **Additional challenge:** The student creates a similar task for a classmate or identifies neighbouring numbers without using a number line.

Level 2	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	1.Continue the number sequences by following the rule (+1, +2 or −1). 2. Arrange the numbers in ascending and descending order. 3. Compare the numbers using the symbols >, < and =. 4. Find the largest and smallest number. 5. Work carefully and check that all the numbers are written in the correct order. 6. Continue the number	The student correctly continues number sequences, uses comparison symbols without errors, identifies the largest and smallest numbers, and arranges the numbers in the correct order.	The teacher observes whether the student: 1. understands the principle of number sequences; can analyse sequences and identify the next number; 2. uses mathematical symbols correctly; 3. understands the difference between ascending and	For practising number order and sequences ● Number line up to 20 ● Number cards up to 20 ● Magnetic numerals ● Number sequence cards ● Laminated task cards For comparing numbers ● Comparison	Use only one clear pattern in each task. Introduce the symbols >, < and = gradually, together with a visual explanation. Avoid lengthy text or multiple rules in a single line. The worksheet should provide sufficient space for writing. **Support:** Use a number line or visual representations, provide a smaller range of numbers, and allow the student to work with the teacher. **Additional challenge:** The student creates their own number sequences, works with numbers up to 30, or

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	sequences by following the rule (+1, +2 or −1).		descending order; 4. uses mathematical language such as “greater than”, “less than” and “equal to”. The teacher should also observe whether the student explains their choices and justifies their answers.	reference card ● Demonstration cards For ordering numbers ● Sets of number cards ● Number strips ● Group-work task cards	explains the sequence rule orally.

Level 3	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	1. Count the objects and write the correct number. 2. Read the number words and write them as numerals. 3. Find the error in the number sequence and explain why the number does not belong. 4. Arrange the numbers in ascending and descending order. 5. Read the word problem, choose the correct operation and solve it.	The student correctly identifies the incorrect number in the sequence, arranges the numbers in the correct order, and solves the word problem. The student can justify their solution.	The teacher observes whether the student: 1. can analyse information and identify errors; 2. understands patterns in number sequences; 3. chooses the correct mathematical operation in a word problem; 4. can explain their reasoning; 5. uses	For solving word problems ● Picture cards showing everyday situations ● Word problem cards ● Mathematical operation symbol cards ● Number cards up to 20 For identifying and analysing errors ● Sequence cards containing errors ● Logic task cards	Use short sentences and situations familiar to students in word problems. Avoid including unnecessary information that is not needed to solve the problem. Images should be simple and relevant to the content of the task. For more complex tasks, it is advisable to provide an example or solve a task together before students begin working independently. **Support:** Use concrete objects for counting and modelling mathematical operations. Act out the word problem using objects. **Additional challenge:** The student

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			mathematical terms such as “added”, “altogether” and “left”. 6. The teacher should also observe the student’s ability to work independently and apply previously acquired skills in a new situation.	● Number sequence cards ● Demonstration materials For modelling mathematical operations ● Building blocks ● Buttons ● Pebbles ● Chestnuts ● Sticks ● Counting cubes Digital resources ● Interactive whiteboard ● Kahoot quizzes ● Wordwall activities ● Liveworksheets worksheets	creates their own word problem or explains several possible methods of solving it. Numbers greater than 20 may also be used.

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Name: Grade: Date:

Number Adventure: 1-20

Level 1	What do I need to do?	What can I use to solve this task?
	1.Complete each task. 2. Check your answers.	Number line, ascending and descending order reminders, number-neighbour reminder

1. Count and write the number.

! Count slowly and carefully.
! Do not count the same object twice.



Answer: _____

2. Read and write in digits.

NINE = _____

3. Write the missing number.

3, 4, _____, 6

4. Arrange the numbers in ascending ⬆️ and descending ⬇️ order.

8, 2, 5

Ascending: _____

Descending: _____



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5. Write the number neighbours.

Number Neighbours

_____ 7 _____
_____ 12 _____
_____ 15 _____



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Self - check	Teacher's comments
I finished the task.	
I checked my work.	

How did I do (circle):





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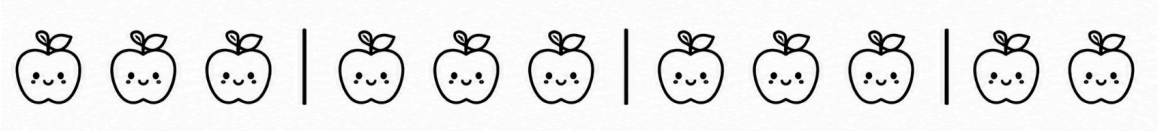
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Name: Grade: Date:

Number Adventure: 1-20

Level 2	What do I need to do?	What can I use to solve this task?
	1.Read each problem. 2.Count the pictures. 3. Complete the calculation. 4. Write the answer.	Pictures, number line

1. Count and write the number.



Answer: _____

2. Read and write in digits.

SIXTEEN = _____

TWELVE = _____

EIGHTEEN = _____

3. Write the missing numbers.

11, 12, _____, 14, _____, 16

5, _____, 7, 8, _____, 10

14, 15, _____, _____, 18

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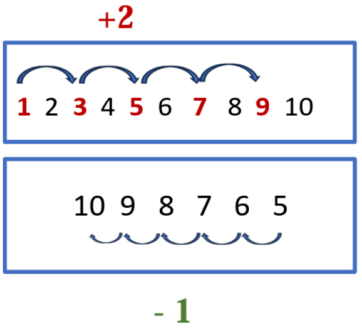
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4. Continue the number sequences.

2, 4, 6, _____, _____, _____

1, 3, 5, _____, _____, _____

20, 19, 18, _____, _____, _____



5. Arrange the numbers in ascending order.

19, 2, 11, 15, 8

Answer: _____

6. Arrange the numbers in descending order.

6, 20, 9, 13, 1

Answer: _____

7. Write the number neighbours.

Number Neighbours

_____ 9 _____
_____ 14 _____
_____ 18 _____
_____ 5 _____
_____ 11 _____

8. Find the largest and smallest numbers.

3, 17, 8, 12, 20

Smallest: _____

Largest: _____

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9. Compare the numbers.

Write >, < or =.

7 ___ 12

15 ___ 15

19 ___ 16

= means **equal to**
> means **greater than**
< means **less than**

Self - check	Teacher's comments
I finished the task.	
I checked my work.	

How did I do (circle):





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Name: Grade: Date:

Number Adventure: 1-20

Level 3	What do I need to do?	What can I use to solve this task?
	1.Read each task. 2. Complete it carefully. 3. Write your answer. 4. Check your work.	Counters, a number line, reminders

1. Count and write the number.



Answer: _____

2. Read and write in digits.

NINETEEN = _____

SEVENTEEN = _____

SEVEN = _____

TWENTY = _____

ELEVEN = _____

👉 "-TEEN" is used in numbers from 13 to 19.
👉 "-TY" is used in tens: twenty, thirty, forty, etc.

3. Find the mistake. Which number does not fit the sequence?

2, 4, 6, 9, 10
Answer: _____

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8, 10, 12, 13, 16
Answer: _____

4. Arrange the numbers.

In ascending ⬆ order
20, 4, 15, 1, 12, 8
Answer: _____

In descending ⬇ order
3, 19, 7, 14, 10
Answer: _____

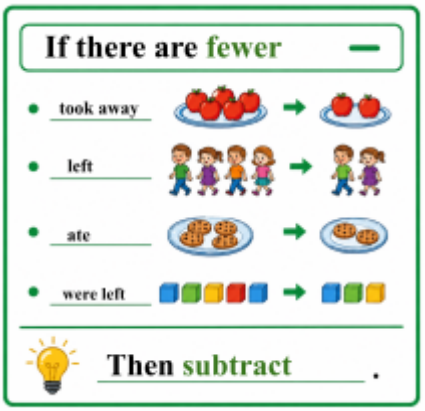
5. Solve the problem.

There were 12 balls in the box.
5 more balls were added.
How many balls are there now?

How many balls are there now?

Answer. There are now ___ in the box.





Self - check	Teacher's comments
I finished the task.	
I checked my work.	

How did I do (circle):







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Lesson Plan

Grade: Grade 1
Topic: Numbers up to 20 - counting, reading, writing and ordering
Lesson duration: 40 minutes

By the end of the lesson, the student will be able to:

- count objects up to 20;
- read and write numbers;
- identify neighbouring numbers;
- continue number sequences;
- compare numbers;
- arrange numbers in ascending and descending order;
- analyse errors in number sequences (Level 3);
- solve a simple word problem.

Note: These learning outcomes directly reflect the three levels of differentiation included in the worksheets: ***Level 1*** *focuses on counting, recognising numbers and understanding number order;* ***Level 2*** *focuses on continuing number sequences, identifying neighbouring numbers, ordering and comparing numbers; and* ***Level 3*** *focuses on applying these skills independently in more complex tasks, identifying patterns, analysing errors and justifying solutions.*

Required Materials and Resources

For the teacher: interactive whiteboard; demonstration number line from 1 to 20; magnetic digits and digit cards; cards with the symbols **<, >, =**; teacher observation sheet; self-assessment cards 🟢 🟡 🔴.

For the pupil: differentiated Level 1, Level 2 or Level 3 worksheet; individual number line from 1 to 20; counting materials – buttons, blocks or counting cubes; visual reminder cards **“Number Neighbours”** and **“Ascending and Descending Order”**; pencil and eraser.

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Part 1. Introduction (10 min)

Lesson stage	Time	Teacher's actions (what the teacher says and does)	Expected student activity / responses	Materials	Formative assessment / observation focus	Differentiation / methodological notes
Opening routine	2 min	The teacher welcomes the pupils. When everyone is seated, the teacher says: **"Good morning! It is lovely to see you in our Mathematics lesson. Let's check whether everyone is ready to work. Does everyone have a pencil, an eraser and a worksheet?"** When everyone is ready, the teacher continues: **"Today we are going to learn about numbers up to 20. We will have different tasks, and everyone will be able to show what they already know."**	Pupils greet the teacher, prepare their workspace and take out the necessary materials. Expected responses: **"Yes." "I'm ready."**	Worksheets, pencils, erasers.	The teacher observes whether pupils are ready to begin, follow classroom routines and can organise their workspace independently.	If a pupil is not ready, the teacher calmly helps them organise their workspace.
Review of prior knowledge	5 min	The teacher attaches a number line up to 20 to the board. Asks: **"Who can name the smallest number?" "Which is the largest number?" "Now let's all count together from 1 to 20."** Then: **"Let's try counting backwards from 20 to 1."** The teacher	Pupils answer: **"One." "Twenty."** They count together to 20 and backwards. They answer: **7, 13, 14 and 16.**	Number line, magnetic digits, digit cards.	The teacher observes whether pupils count in sequence without skipping numbers, can use the number line, and understand the concepts **before, after, neighbours**.	If a pupil makes a mistake, the teacher does not correct it immediately, but encourages them to use the number line and find the correct answer independently.

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		continues with questions: **“Which number comes before 8?” “Which number comes after 12?” “Name the neighbours of 15.”**				
Formulating the lesson objective	3 min	The teacher says: **“Today, each of you will work at a level that is suitable for you. This does not mean that one level is more difficult than another. Everyone will have tasks that will help them learn more.”** The teacher continues: **“We will learn to count, write numbers, identify neighbouring numbers, continue number sequences and order numbers.”**	Pupils listen, ask questions and agree to begin the work.	Worksheets, board.	The teacher observes whether pupils understand the lesson objective and know what they will be expected to do.	Emphasise that the most important thing is each pupil’s individual progress, rather than comparison with others.

Part 2. Practical Work (20 min)

Lesson stage	Teacher activity – what the teacher says and does	Levels	Materials	Formative assessment / observation focus	Methodological notes
Distributing worksheets (2 min)	The teacher says: **“Now each of you will receive your worksheet. Remember – everyone works at the level that is appropriate for them. If anything is unclear, raise your hand.”** The	Pupils receive the **Level 1**, **Level 2** or **Level 3** worksheet.	Worksheets, number line.	Does the pupil understand the instructions and begin working independently?	Do not describe any level as **“easier”** or **“more difficult.”**

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	teacher distributes the differentiated worksheets.				
Task 1 – Counting Objects (4 min)	The teacher says: **"Let's start by counting. Look carefully at the task. Count slowly and make sure that you count each object only once."** The teacher demonstrates a counting strategy by pointing to each object in turn with a finger or pencil. Asks: **"How many objects did you count?" "Which numeral represents this number?" "How can you check your answer?"** For pupils with more advanced skills, the teacher additionally asks: **"Can you work out how many there are without counting them all again?" "How did you do it?"**	**Level 1:** Counts the objects shown on the worksheet and selects or writes the corresponding numeral. Counts one by one, pointing to each object or moving the counting objects if necessary. Matches the quantity of objects to the corresponding numeral. **Level 2:** Independently counts the objects, writes the corresponding numeral and checks the result. Recognises and reads numbers up to 20. If the objects are arranged in groups, tries to use grouping rather than starting to count from the beginning each time. **Level 3:** Independently determines and records the number of objects, chooses an efficient counting strategy and justifies the answer. Compares quantities of different objects or completes the more challenging	Worksheets, buttons, blocks, number line.	✓ Counts systematically. ✓ Does not count the same object more than once. ✓ Uses an efficient counting strategy.	If a pupil experiences difficulties, provide buttons or blocks for practical counting.

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		number-recognition task included in the worksheet. **Additional challenge:** Works out how the same quantity can be grouped in different ways.			
Task 2 – Writing Numbers (4 min)	The teacher says: **"Now we will find the neighbours of numbers. Every number has a number that comes immediately before it and a number that comes immediately after it."** Using the number line, the teacher demonstrates the example **11–12–13**. Asks: **"Which number comes before 12?" "Which number comes after 12?" "How much smaller is the previous number?" "How much greater is the next number?"** The teacher reminds pupils: **"The number before is 1 less; the number after is 1 more."**	**Level 1:** Identifies neighbouring numbers with visual support. Uses a number line or digit cards, finds the given number and names the number before and after it. For example: **6–7–8; 11–12–13; 14–15–16.** **Level 2:** Independently identifies the previous and next number for the numbers given on the worksheet. After completing the task, explains: **"The previous number is 1 less, and the next number is 1 more."** Checks the answers using the number sequence. **Level 3:** Identifies neighbouring numbers without using a number line and justifies the answer. Completes more	Worksheets, digit cards.	✓ Recognises number names. ✓ Writes numerals correctly. ✓ Writes clearly and legibly.	If a pupil has reading difficulties, the teacher reads the words aloud.

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		challenging tasks in which only one of three consecutive numbers is given or missing numbers have to be found. **Additional challenge:** The pupil chooses a number and creates a task for a classmate to identify its neighbours.			
Task 3 – Number Sequences (5 min)	The teacher says: **"Now we are going to explore number sequences. Before you write the next number, look carefully at the first few numbers and think – how are they changing?"** The teacher asks: **"Are the numbers getting greater or smaller?" "How much does each successive number change by?" "How can you check your answer?"** For **Level 3**, the teacher additionally says: **"There is an error in this sequence. First identify the rule of the sequence, then decide which number does not follow it."**	**Level 1:** Continues simple number sequences in which the numbers change by **1** or another clearly recognisable step. The pupil first says the next number aloud and then writes it down. If necessary, uses a number line. **Level 2:** Continues more complex number sequences by identifying the pattern. Before continuing, the pupil states the rule of the sequence, for example: **"Each successive number is 2 greater."** After completing the task, checks whether the same rule applies throughout the sequence.	Number line, magnetic digits.	✓ Identifies the pattern. ✓ Justifies the answer. ✓ Uses mathematical terminology.	If necessary, use guiding questions instead of giving the pupil the answer.

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		Level 3: Analyses a number sequence, identifies and corrects an error, and explains why the particular number does not follow the pattern. Then continues the sequence according to the rule. **Additional challenge:** Creates their own number sequence with one deliberately inserted error and asks a classmate to find it.			
Task 4 – Ordering and Comparing Numbers (5 min)	The teacher says: **"Now we will order and compare numbers. Remember – in ascending order, we arrange numbers from smallest to largest, and in descending order, from largest to smallest."** Before pupils begin, the teacher demonstrates one example using a number line. Asks: **"Which number is closer to the beginning of the number line?" "Which number is greater?" "How do you know?"** In comparison tasks, the teacher reminds pupils of the	**Level 1:** Orders **8, 2, 5** in ascending order: **2, 5, 8**, and in descending order: **8, 5, 2**. Identifies neighbouring numbers: **6–7–8; 11–12–13; 14–15–16**. If necessary, uses a number line and digit cards. **Level 2:** Orders the numbers given in the worksheet and identifies the smallest and largest number. Compares numbers using **<, >, =**. Correct answers: **7 < 12; 15 = 15; 19 > 16.** The teacher asks: **"How did you decide which number is greater?"**			

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	meaning of the symbols <, >, =.	**Level 3:** Independently orders and compares the numbers given in the worksheet and justifies their choices. Analyses situations in which numbers have been ordered incorrectly, identifies the error and corrects it. The teacher asks: **“Where exactly is the error?” “How should the numbers be ordered?” “How can you prove that your order is correct?”** **Additional challenge:** The pupil creates **4–5 numbers up to 20** and asks a classmate to arrange them in ascending or descending order.			

Teacher Questions During Practical Work

During practical work, the teacher uses short guiding questions that help pupils not only find the correct answer, but also explain their thinking:

- “How did you get this answer?”
- “How can you check whether your answer is correct?”
- “Which number comes before/after the given number?”
- “How did you identify the neighbouring numbers?”
- “How do the numbers change in this sequence?”
- “By how much does the number increase or decrease?”

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- “Which number is greater/smaller? How do you know?”
- “Are the numbers arranged in ascending or descending order?”
- “Where is the error? How would you correct it?”
- “Can you find another way to solve it?”

Teacher Observation Focus in Part 2

Skill observed	What the teacher specifically observes
Counting	Counts objects and numbers up to 20 in the correct sequence.
Number recognition	Recognises, reads and writes numerals correctly.
Neighbouring numbers	Identifies the previous and next number.
Number sequences	Identifies the pattern and continues the sequence correctly.
Comparing	Identifies the greater, smaller or equal number and uses >, <, = correctly.
Ordering	Arranges numbers in ascending and descending order.
Error analysis	Identifies an incorrect number sequence or solution and can correct it.
Reasoning	Can briefly explain how they arrived at the answer.
Using support	Purposefully uses a number line, reminder card or practical materials.
Independence	Understands the instructions and begins and completes the task with as little teacher support as possible.

Part 3. Lesson Conclusion (10 min)

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Lesson stage	Time	Teacher activity – what the teacher says and does	Pupil activity / expected responses	Materials	Formative assessment / observation focus	Methodological notes
Review of work	3 min	The teacher asks pupils to put down their pencils and review the tasks together. **"Now we will check our work together. It is not important that every answer is correct – what matters is understanding what you can already do and what you still need to practise."** The teacher shows the correct answers on the interactive whiteboard or on a large worksheet. Asks: **"How did you get this answer?" "Did anyone solve it in a different way?" "Which task was the easiest?"**	Pupils compare their answers with the correct ones, correct mistakes, explain their solutions and ask questions if anything is unclear.	Interactive whiteboard, worksheets, magnetic digits.	The teacher observes whether the pupil can identify and correct an error, explain their solution and respond to feedback.	Emphasise that mistakes are part of learning. Give pupils an opportunity to notice and correct their own errors.
Self-assessment	2 min	The teacher says: **"Now think about your work. How did you do today?"** Pupils are invited to choose one of the cards or show their self-assessment with their fingers: 🟢 **"I understood everything and can help others."** 🟡 **"I understood most of it, but I would still like some more practice."** 🔴 **"I still need help."** The teacher then asks: **"What did you learn today?"**	Pupils choose the appropriate card and explain their choice. For example: **"I learnt to identify neighbouring numbers." "I would still like to practise writing numbers."**	Green, yellow and red cards (or emotion cards).	The teacher gains information about pupils' self-assessment and their understanding of the lesson content.	If a pupil finds it difficult to assess their own learning, the teacher supports them with guiding questions.
Feedback and assessment of achievement	3 min	The teacher gives positive feedback: **"Today I noticed that you counted the objects very carefully and tried to explain your solutions. I was particularly pleased that several**	Pupils listen, feel pleased with what they have achieved and ask questions.	Praise stickers (if used), achievement cards.	The teacher assesses not only the result, but also the pupil's participation, effort and cooperation.	Praise is based on a **specific observation**, rather than on a general judgement.

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		pupils found and corrected their own mistakes.” The teacher gives individual praise for effort or progress.				
Lesson conclusion	2 min	The teacher summarises: **“Today we learnt to count, read and write numbers up to 20, identify neighbouring numbers, continue number sequences and order numbers. In the next lesson, we will use these skills in new tasks.”** If homework is assigned, the teacher explains what pupils need to do. The lesson ends with a positive message: **“Thank you for your work! Have a lovely day!”**	Pupils tidy their workspace, put away their materials and say goodbye.	Worksheets, diary/homework planner (if homework is assigned).	The teacher observes whether pupils can organise their workspace and follow the end-of-lesson routine.	End the lesson in a calm atmosphere, emphasising each pupil’s progress.

Assessment Summary

Skill being assessed	Observation criteria	Achieved	Partially achieved	Support needed
Counts objects up to 20	Counts systematically and does not count the same object twice	□	□	□
Writes numerals	Correctly converts number names into numerals	□	□	□
Identifies neighbouring numbers	Correctly names the previous and next number	□	□	□
Continues number sequences	Identifies the pattern and continues the sequence correctly	□	□	□
Compares numbers	Correctly uses the symbols >, <, =	□	□	□
Orders numbers	Arranges numbers in ascending and descending order	□	□	□
Justifies the solution	Explains their thinking using mathematical terminology	□	□	□
Works independently	Follows instructions and completes the task independently	□	□	□

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Teacher Reflection After the Lesson

What went well?

- Did pupils achieve the lesson objective?
- Which tasks generated the greatest interest?
- Which differentiation methods were the most effective?

What caused difficulties?

- Were there any tasks that several pupils did not understand?
- Was more time needed for practical work?
- Were all pupils able to work independently?

What could be improved in the next lesson?

- Use more practical materials.
- Provide additional challenges for pupils with higher levels of attainment.
- Allow more time for whole-class error analysis.

Next Steps

Based on the teacher's reflection and pupils' performance during the lesson, in future learning:

- pupils who still have difficulties with **number order and identifying neighbouring numbers** should continue to use a number line and digit cards;
- **comparing and ordering numbers** should be consolidated while gradually reducing visual support;
- pupils should receive additional practice in **identifying patterns in number sequences**, progressing from simple to more complex sequences;
- pupils with a higher level of proficiency should be given **error-analysis, reasoning and pupil-created tasks**;
- future lessons should continue to develop **independence and self-checking**, encouraging pupils to use a reminder card or another available support tool before asking the teacher for help.

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Teacher's Notes

Grade: 1

Topic: Patterns and simple data: number patterns, geometric patterns, tables, pictograms or simple charts

Learning objectives: Students should develop the ability to recognize combinations and repeat them in the correct sequence; to extract information from text and present it in tabular form, to understand and extract information from simple diagrams.

The worksheet was designed by: Asociacia Dyslexia – Bulgaria

Level1	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
	1. Read each of the instructions carefully. 2. Examine the pattern at the beginning of each chain. 3. Complete the chain. 4. Don't forget to check before moving on to the next chain.	●The student understands and follows the instructions. ●Recognizes the pattern and follows it by following the indicated sequence. ●Is aware of the concept of "even numbers".	The teacher observes: ● Did the student understand the task. ● Did (s)he carefully examine and understand the given example. ● Is (s)he able to follow instructions. ● Is (s)he able to recognize the sequence and repeat/continue it	●A pencil ●An eraser ●Coloured pencils (crayons or markers) ●The worksheet	● Give the instructions one at a time – wait for the students to complete one action before giving the instruction for the next. ● Look at the given example together and discuss it with the students. ● Before they start the task, you can make several similar examples on the board together. ● Provide enough time for the task to be completed. ● Help students who are having difficulty. If necessary, repeat the

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			correctly. ● Is (s)he able to work independently or does he/she need additional guidance/help		instructions, ask guiding questions - What is the first figure in the series?; Which numbers do we call "even"?, etc.

Level 2	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
	There are three different tasks in this level: A/ 1. Look carefully at the given example. 2. Write down the expressions and calculate to find the value of each flower. B/ 1. Look carefully at the given example. 2. Think about how to express what you see in a mathematical expression. 3. Write down the result.	● The student knows how to find an unknown additive. ● Performs the actions correctly. ● Writes down the result correctly. ● Is able to decipher the pictogram and compose a mathematical expression. ● Understands the logic of the	The teacher observes: ● Does the student understand the instructions? ● Is (s)he able to maintain the necessary concentration? ● Is (s)he able to work independently? ● Does (s)he know how to find the unknown additive? ● Does (s)he know how to present visual	●A pencil ●An eraser ●The worksheet	● Give the instructions one by one – wait for the students to complete one action before giving the instruction for the next. ● Look at the given example together and discuss it with the students. ● Provide enough time to complete the task. ● If a student is having difficulty doing it on his own, remind him of the concepts or help him with guiding questions: If you know that one flower plus 2 equals 4, then how much will the flower be equal to? 2 + how much does 4 make?

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	C/ 1. Look carefully at the picture problems. 2. You have to find out what number corresponds to each flower. 3. Think about how you can find it. **4.** Check.	task. ● Correctly assesses how to find the value of each of the unknowns. ● Knows how to do a check.	information with mathematical expression? ● Can (s)he reason logically? ● Does (s)he know how to do a check?		etc. ● Give the students who are having difficulty the opportunity to seek "help from a friend".

Level 3	**Instruction for a student**	**Expected answer**	**Assessment / observation focus**	**Materials / Resources**	**Methodological recommendations**
	A/ 1. Read the task carefully 2. Complete what you understood from the task in the table 3. Look at it carefully 4. Read the statements carefully and compare them with the data in the table 5. Mark "True" or "False" against each statement. B/ 1. Look at the diagram carefully. 2. Each column shows the	● The student reads the text of the task independently; ● Extracts the necessary information from the text and enters it in the table. ● Understands the statements and correctly determines which of them are true and which are false. ● Is able to read	The teacher observes: ● Does the student understand the instructions? ● Is (s)he able to maintain the necessary concentration. ● Is (s)he able to work independently. ● Is (s)he able to extract information from a text. ● Is (s)he able to correctly enter the	● A pencil ● An eraser ● Coloured pencils (crayons or markers) ● The worksheet	● Give the instructions one by one - wait for the students to complete one action before giving the instruction for the next. ● Look at the given example for each task together and discuss it with the students. ● Before the students start the task, do a few examples together (orally) (e.g. "Vlady has 3 primroses, 1 snowdrop and 5 crocuses in the bouquet" and the children indicate how to enter the data in the table). For task B/ explain how to

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	number of a certain flower in the fairy garden. After you determine the number of flowers, enter the numbers in the table.	simple diagrams and transfer information in tabular form.	information extracted from the text in the table. • Can (s)he correctly determine which of the statements are true and which are false? • Can (s)he read simple diagrams and transfer the information from them into a table?		read the information in the diagram - offer them another diagram - for example, one that shows the number of girls and boys in the class and "read" it together. • Provide enough time to complete each task. • If a student is having difficulty doing it on their own, help them with guiding questions: "What flowers are in Polly's bouquet? Where on the chart will you write them?" etc. • Give students who are having difficulty the opportunity to ask for "help from a friend".

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Name: Grade: Date:

Flower Math

Level 1	What do I need to do?	What can I use to solve this task?
	1. Read each of the instructions carefully. 2. Look at the pattern at the beginning of each chain. 3. Complete the chain. 4. Don't forget to check before moving on to the next chain.	• A pencil or a pen • Coloured pencils or markers • An eraser

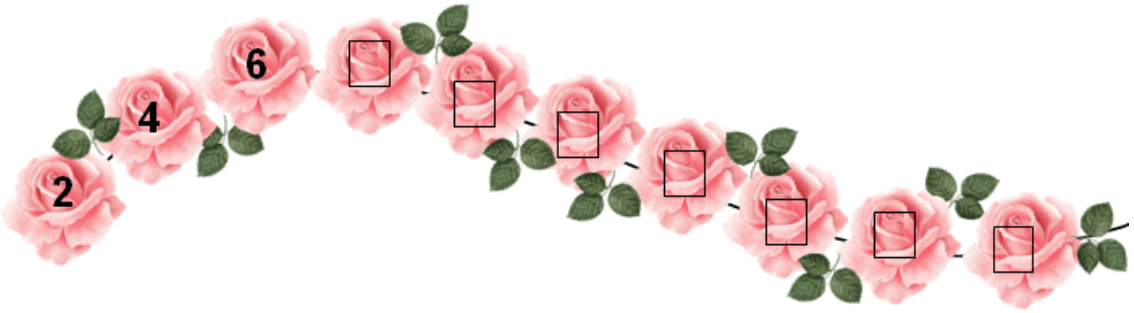
1 Continue the chain following the model.



2 Continue the chain following the model. Be careful about the colour of the shapes.

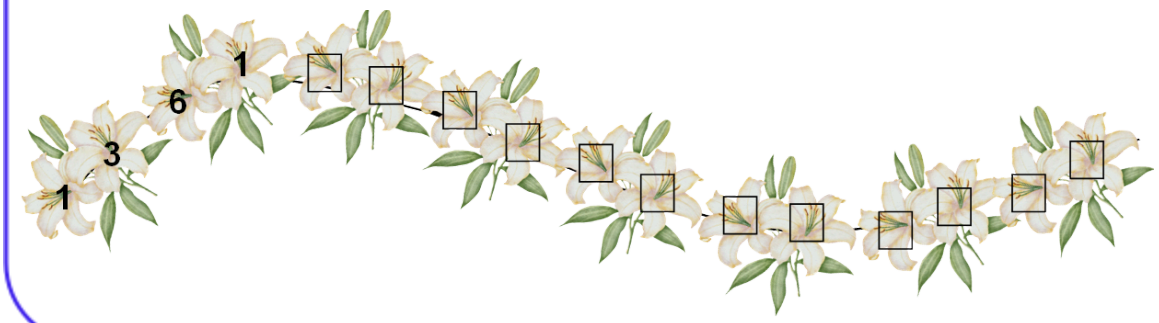


3 Continue the chain following the model. Be careful – all the numbers are even.



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4 Continue the chain following the model.



Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):







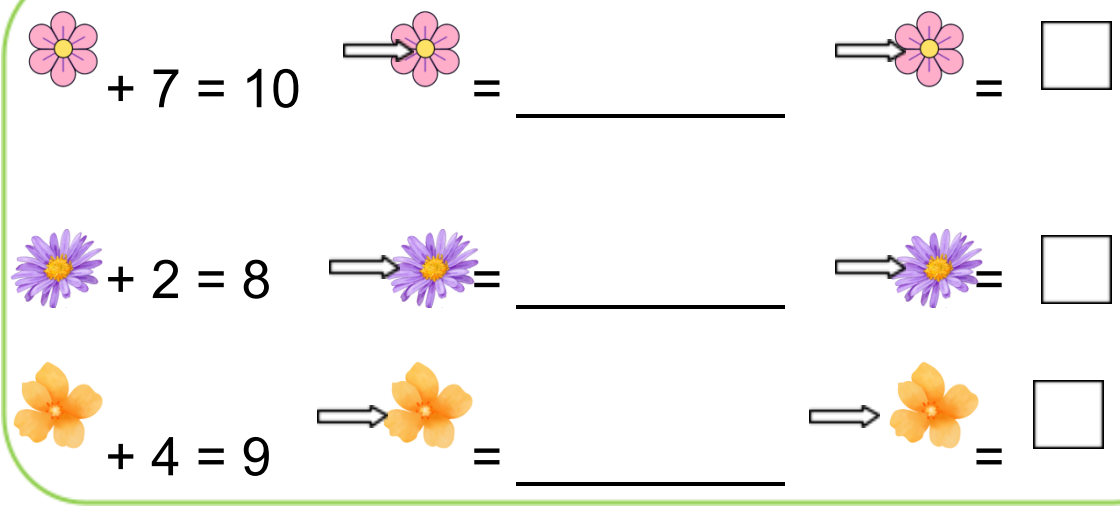
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Level 2	What do I need to do?	What can I use to solve this task?
	A/ 1. Examine the given example carefully. 2. Express and calculate to find the value of each flower. B/ 1. Examine the given example carefully. 2. Think about how to express what you see in a mathematical expression. 3. Write down the result. C/ 1. Examine the picture problems carefully. 2. You need to find what number corresponds to each flower. 3. Think about how you can find it. 4. Check if you have worked correctly.	• A pencil or a pen • An eraser

EXAMPLE A:





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EXAMPLE B:



⇨ 7 – 2 = 5



⇨ _____ = ☐

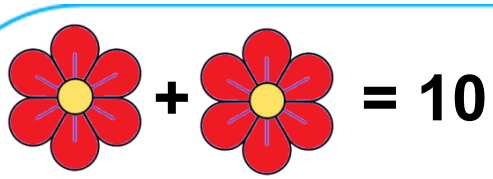


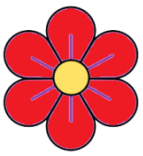
⇨ _____ = ☐

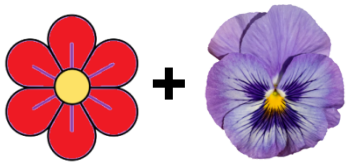


⇨ _____ = ☐

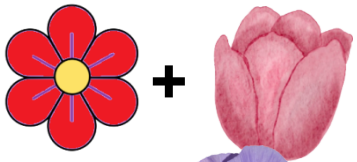
C/ Look. Think. Calculate. Write down.



= 10  = ☐



= 8  = ☐

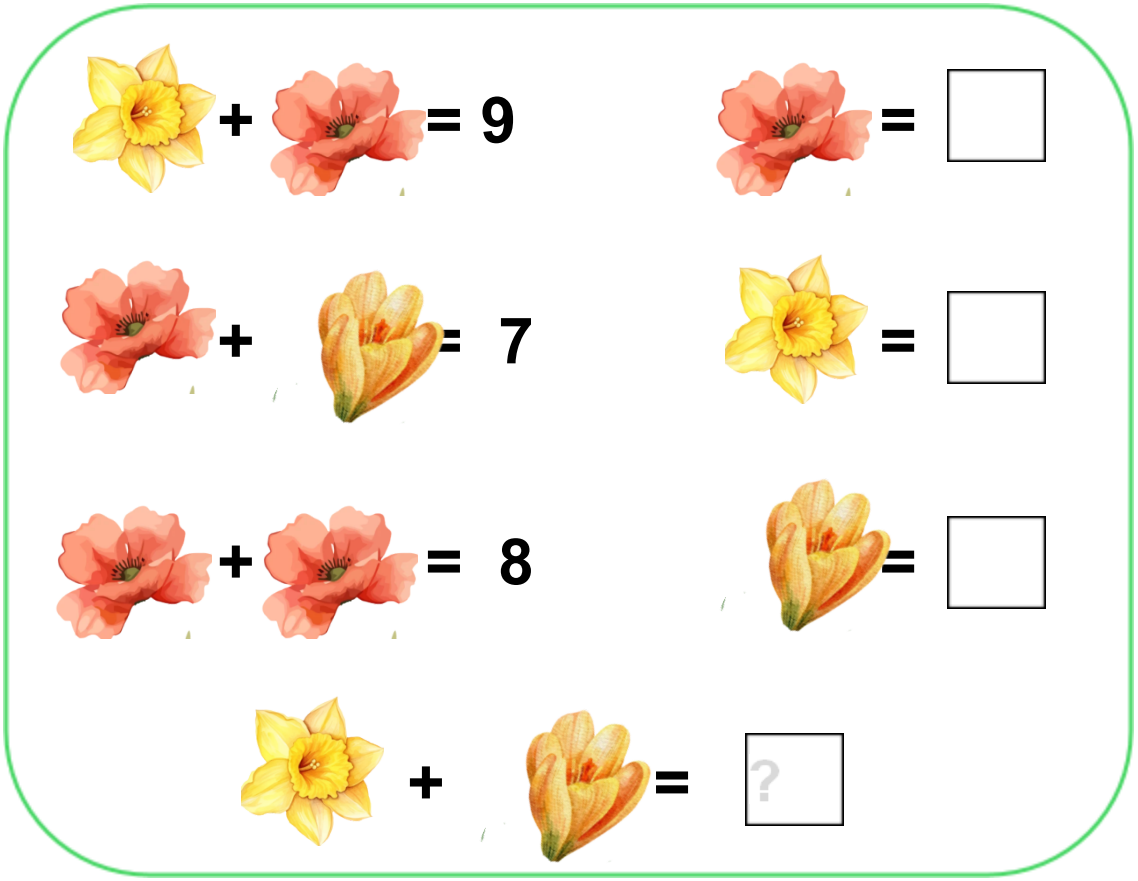


= 6  = ☐



= ?

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Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):





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Level 3	 **What do I need to do?**	 **What can I use to solve this task?**
	A/ 1. Read the task carefully 2. Fill in what you understood from the task in the table 3. Examine it carefully 4. Read the statements carefully and compare them with the data in the table 5. Write "Yes" - true and "No" - false against each statement. B/ 1. Look carefully at the diagram. 2. Each column shows the number of a particular flower in the fairy garden. 3. Once you have determined the number of flowers, enter the numbers in the table.	• A pencil or a pen • An eraser • Coloured pencils or markers

A/ Tony, Molly and Nelly decided to give bouquets of spring flowers to their beloved teacher. In the Tony's bouquet there were 3 primroses, 3 violets, and 1 crocus. Molly's bouquet consisted of 5 snowdrops and 4 crocuses. And Nelly's bouquet had 6 violets, 1 snowdrop and 2 crocuses.

1/ Read carefully and complete the table:

	primroses	crocuses	violets	snowdrops
Tony				
Molly				
Nelly				

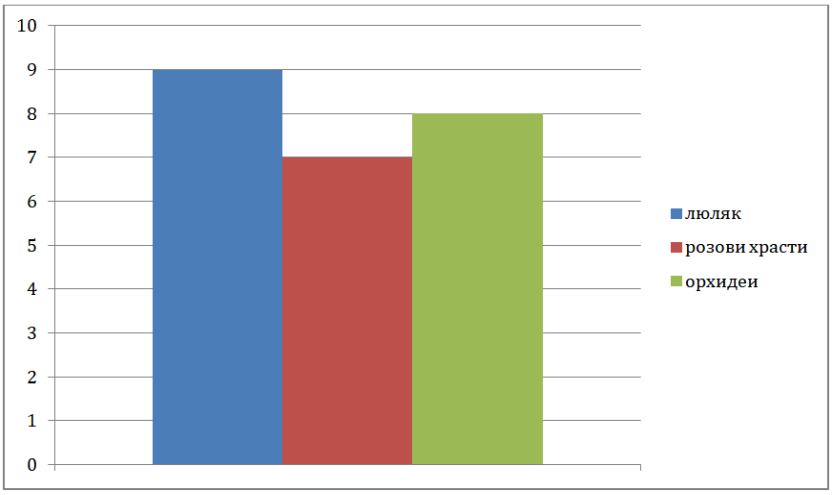
2/ Read the statements and mark “True” or “False”:

	True	False
In Tony’s bouwuet there were 2 primroses, 3 violets, 2 snowdrops, and a crocus.		
In Molly’s bouquet there were 5 violets, 4 crocuses and no snowdrops.		

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In Nelly's bouquet there were all four types of flowers.		
In Molly's bouquet there were more flowers than in the bouquets of the other two children.		
In Tony's bouquet there were not any snowdrops.		

B/ Look carefully at the diagram and fill the table: How many flowers of each type were there in the Fairy garden?



flower	number
	
	
	

Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):





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Teacher's Notes

Grade: 1

Topic: Numbers up to 20; units and tens

Learning objectives: Students distinguish between a digit and a number; understand the concepts of "units" and "tens"; understand the value of a digit depending on its place in the number; read and write numbers up to 20 correctly; are able to represent numbers from 10 to 20 as composed of tens and ones.

The worksheet was designed by: Asociacia Dyslexia – Bulgaria

Level1	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
	• Read the instructions. • Study carefully the example. • Read the number. • Choose a colour. • Colour as many figures as the number indicates. • Count the coloured figures and check if you worked correctly. • Write each of the numbers as a sum of units.	•The student understands the instructions and the given example. •Counts correctly. •Correctly relates the number to the quantity of objects. •Correctly writes the number as a sum of units. •Understands the difference between a digit and a number.	The teacher observes: • Does the student understand the task correctly? • Does (s)he carefully examine and understand the given example. • Is (s)he able to correctly relate quantity to the given number. • Does (s)he understand that each number is	•A pencil •An eraser •Coloured pencils (crayons or markers) •The worksheet	• Give the instructions one at a time – wait for the students to complete one action before giving the next instruction. • Study the given example together and discuss it with the students. • Remind the difference between a digit and a number. • The students read the number and count as many figures as it indicates. • They colour the counted figures in their preferred colour. • Explain to the children that any number can be

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			made up of the corresponding number of units. ● Does (s)he distinguish between a number and a digit.		represented as a sum of units. ● Demonstrate this using real objects (pencils, balls, cubes, etc. materials available in the classroom) ● Allow enough time to complete the task. ● Help the students who are having difficulty. If necessary, repeat the instructions, ask guiding questions - How much does the number show?; How many figures should you colour? How many units does the number consist of?, etc.

Level 2	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
	● Now I will read some numbers. ● Listen carefully. ● Write down each of the numbers you hear. ● In each of the numbers you wrote down, colour the digit of the units in blue. ● Colour the digit of the tens in red. ● Transfer the numbers to	● The student correctly writes two-digit numbers. ● Understands the value of the digit depending on its place in the number. ● Correctly determines the units and tens.	The teacher observes: ● Does the student understand the instructions? ● Is (s)he able to maintain the necessary concentration? ● Is (s)he able to work independently?	●A pencil ●An eraser ●Coloured pencils (crayons or markers) ●The worksheet ● List of numbers from 10 to 20 that the teacher will dictate.*	● Give the instructions one at a time – wait for the students to complete one action before giving the next instruction. ● Remind the difference between a digit and a number. ● Explain the meaning of the concepts “units” and “tens” and how the same digit can mean a different quantity depending on its place in the number.

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	the table: in one column, write the digit of the tens, in the other – the digit of the units. ● Check if you have coloured and transferred the numbers correctly.	● Correctly transfer the information in the table.	● Is the student aware of the value of the digits depending on their place in the number. ● Does (s)he understand the concepts of "units" and "tens". ● Can (s)he correctly determine the units and tens in the composition of the number? ● Can (s)he correctly write down numbers under dictation? ● Can (s)he correctly transfer information into a table.	* To increase the level of difficulty, the teacher can dictate numbers in the following way: "1 ten and 5 units" or "3 units and one ten"	● Study the given example together and discuss it with the students. ● Before the students start the task, do a few examples together (orally) - you name (or write on the board) a number from 10 to 20 and the children must say which digit shows how many tens there are, and which one shows the number of units. ● Allow enough time to complete the task. ● Help the students who are having difficulty. If necessary, repeat the instructions, ask guiding questions: Which digit shows how many tens are there in the number? In which colour will you colour it?, etc. ● Give the students who are having difficulty the opportunity to seek "help from a friend".

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Level 3	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
	• Congratulations! You have reached Level 3! • At this level, you have to solve two tasks: 3A/ and 3B/. **Task3A/** • Read the number. • Think about how many tens and how many units it is made up of. • Draw as many objects as the number indicates, grouping them into tens and units(see the sample). Write the number as a sum of tens and units. **Task 3B/** • Read the number. • Count the drawn figures. • In the first square write how many they are. • Colour them in the colour of your choice. • Draw as many more figures in the same	• The student correctly determines the number of units and tens in the number; • Correctly relates number to the quantity of objects. • (S)He is aware of the structure of the number as the sum of tens and units. • (S)He can represent numbers from 10 to 20 as a sum of tens and units. • Understands and correctly follows multi-step instructions. • Can complete to ten (to say how many more (s)he needs to get 10). • Can represent	The teacher observes: • Does the student understand the instructions? • Is (s)he able to maintain the necessary concentration? • Is (s)he able to work independently? • Is the student aware of the value of the digits depending on their place in the number. • Does (s)he understand the concepts of "units" and "tens". • Can (s)he correctly determine the units and tens in the composition of the number?	•A pencil •An eraser •Coloured pencils (crayons or markers) • The worksheet • Additional cards with numbers from 10 to 20 written on them, which the students can use according to the algorithm of tasks 3A/ and 3B/ for individual work.	• Give the instructions one at a time – wait for the students to complete one action before giving the next instruction. • Remind the meaning of the concepts "units" and "tens" and how the same digit can mean a different quantity depending on its place in the number. • Study the given example together and discuss it with the students. • Before the students start the task, do a few examples together (orally) 1. You name (or write on the board) a number less than 10 and the students must say "how many more?" to complete to 10; • 2. You name (or write on the board) a number from 10 to 20 and ask "If you have 10, how many more to get … (the number you named/wrote)?" 3. Write down the actions

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	row as you need to have 10 (one ten). ● Colour the new figures you drew in a colour different from the first one. ● Count how many figures you have drawn. ● Write their number in the second square. ● On a separate line, draw as many more figures so that the total number of figures in both lines corresponds to the number indicated at the beginning. ● Colour them in a different colour than the previous ones. ● Count the figures in the second line. ● Write their number in the empty square. ● Write down all the actions with a mathematical expression (see the sample).	actions with a mathematical sentence.	● Can (s)he correctly complete to ten (find out how many more (s)he needs to get 10)? ● Can (s)he represent the number as a sum of tens and ones? ● Can (s)he correctly write down the actions performed in a mathematical sentence.		with a mathematical sentence. ● Allow enough time to complete the task. ● Help the students who are having difficulty. If necessary, repeat the instructions, ask guiding questions: „6 + how many will be 10? How many more do we need to add to get 12?", etc. ● Give the students who are having difficulty the opportunity to seek "help from a friend".

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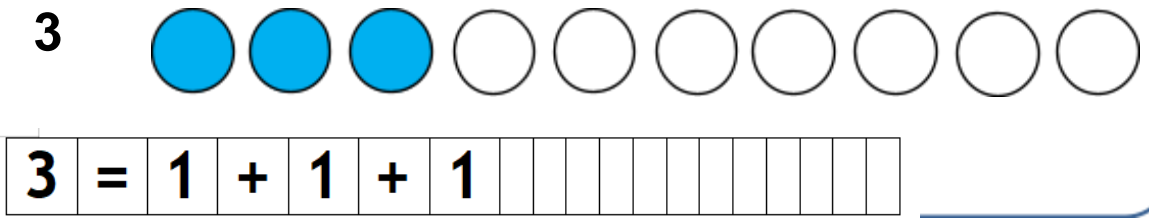
Name: Grade: Date:

Read. Colour. Count. Write.

Level 1	What do I need to do?	What can I use to solve this task?
	1. Look at the number written. 2. Choose a colour. 3. Colour as many figures as the number indicates. 4. Count the coloured figures and check if you worked correctly. **5.** Write each of the numbers as a sum of units.	• Coloured pencils, crayons or markers

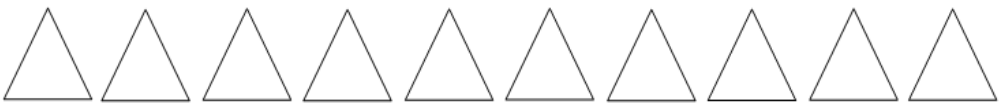
EXAMPLE:

3



3 = 1 + 1 + 1

2



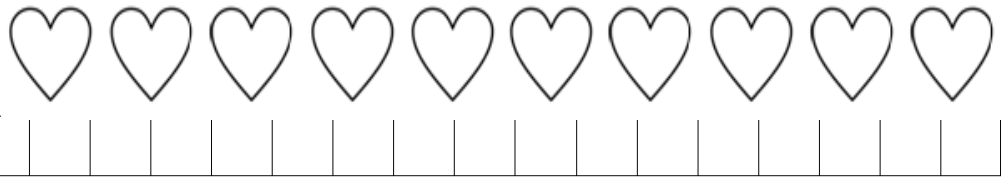
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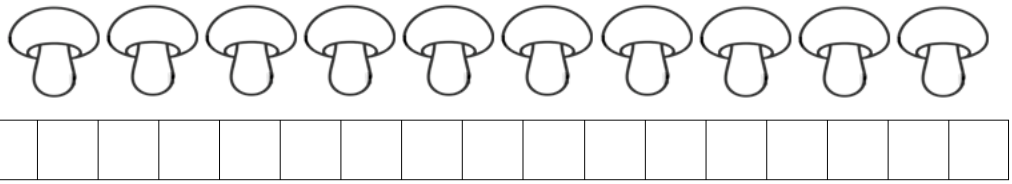
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5



4



7



9



Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):







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Level 2	 **What do I need to do?**	 **What can I use to solve this task?**
	1. Listen carefully to the teacher – (s)he will dictate numbers. 2. Write down the numbers one after another 3. Colour the units in each number in red. 4. Colour the tens in each number in blue. 5. Transfer the numbers to the table, writing the units and tens in the appropriate column. 6. Count and check if you have worked correctly.	• Coloured pencils, crayons or markers

EXAMPLE:

1. Listen and write: **15,.....**
2. Colour: **15**
3. Transfer to the table:

tens	units
2	9
...	...

1. **Listen and write:**

....

2. **Colour:**

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3. **Transfer the numbers to the table:**

tens	units

Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):





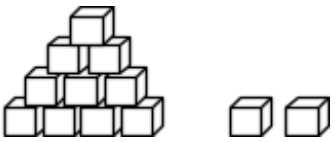
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Level 3A & 3B	 **What do I need to do?**	 **What can I use to solve this task?**
	A/ 1. Read the number. 2. Think about how many tens and how many units it is made up of. 3. Draw as many objects as the number indicates, grouping them into tens and units (see the sample). 4. Write it as the sum of tens and ones. B/ 1. Read the number. 2. Count the figures drawn. 3. Write their number in the first square. 4. Colour them in a colour of your choice. 5. Draw as many more figures in the row as you need to complete the ten (to get a total of 10). 6. Colour them in a colour different from the first one. 7. Count how many more figures you have drawn? 8. Write their number in the second square. 9. On a separate row, draw as many more figures so that the total number of figures in the two rows matches the number indicated at the beginning. 10. Colour them in a colour different from the previous ones. 11. Count the figures in the second row. 12. Write their number in the empty square. 13. Write all actions with a mathematical sentence (see the sample).	• A pencil and an eraser; • Coloured pencils, crayons or markers.

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EXAMPLE:

A/ **12** ⇨ 

1	2	=	1	0	+	2	=	1 tens	+	2 units

17

14

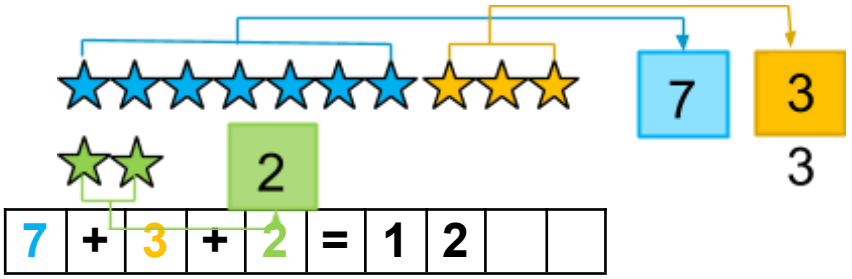
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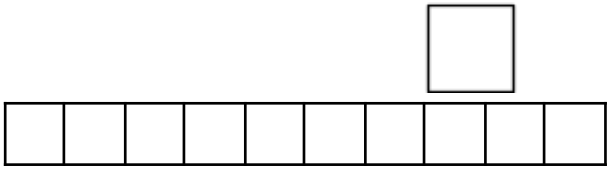
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EXAMPLE:

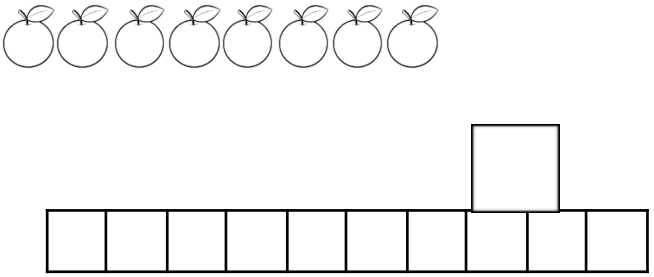
B/ 12



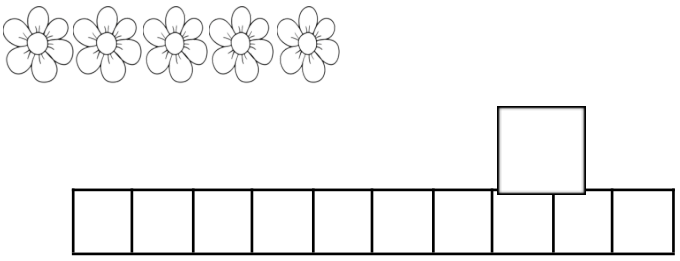
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11



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Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):







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LESSON PLAN

GRADE: 1
CURRICULAR AREA: Arithmetic
SUBJECT: Mathematics
LESSON TOPIC: Numbers up to 20 - Units and Tens
LESSON TYPE: combined
SPECIFIC SKILLS: mastering numbers up to 20; understanding the concepts of units and tens; understanding the value of the digit depending on its place in the number

THE PURPOSE OF THE LESSON:

OPERATIONAL OBJECTIVES:
O1 Students understand the difference between a digit and a number.
O2 Students understand the concepts of units and tens.
O3 Students can read and write correctly numbers up to 20.
O4 Students can present the numbers up to 20 as a sum of tens and units.

TEACHING STRATEGY:
Methods and techniques: brain storm; visualisation, questions and answers, demonstrations, exercises.
Teaching aids: worksheet, pencil, eraser, coloured pencils (crayons or markers)
Organisational approaches: frontal, individual

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Lesson segments/ steps	Op. Ob.	The scientific content of the lesson	Teaching strategy					Evaluation	Timing
			Methods	Aids	Forms of organisation				
					F	G	I		
1. Organizational moment	-	- Checking students' readiness for the lesson, - Checking homework	-	-	F				4 min
2. Gaining attention	-	Different pictures are shown on the smart board - for example, mushrooms and the question is asked: How many mushrooms are there?; acorns?; apples? etc. Children name the number of objects and write down the corresponding number. They recall the mathematical concept of zero.	Brain storm	Smart board	F				5 min
3. Announcing the topic and objectives of the lesson	-	Today we will get acquainted with the numbers from 11 to 20; we will understand how they are formed, what each digit in the number means, we will get acquainted with the concepts of "units" and "tens". Children count from 11 to 20 in forward and reverse order. They perform several simple tasks such as "Maya has 12 balloons, and Lina has 15 balloons. Who has more balloons?" (oral)	-	-	F				5 min

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4. Updating one's knowledge	**O1**	The students have the task of writing down the numbers. They recall the difference between a digit and a number – there are ten digits (0, 1…. 9), and numbers are written with combinations of digits and are countless. They perform tasks related to the relation between quantity and number and writing the corresponding number (from 1 to 10).	Questions - Answers; exercises	Worksheet; Level 1	F		**I**		5 min
5. Directing learning	**O2, O3**	Each child has 20 plastic sticks. The teacher sets a task for them to arrange ten sticks in a row in front of them on the desk. (S)He asks: "How many sticks are there? How do you write the number 10?" /they write/. "If we put one stick under the row of ten sticks /they put/, how many sticks are there in total on the desk? How do we write 11?" /they write/. The teacher invites the children to gather the ten sticks into a bundle and explains that the ten single sticks put together form one TEN. Ten UNITS = one TEN.	Questions - Answers; Old knowledge – New knowledge; exercises	20 plastic sticks for each student; smart board	F		**I**		7 min
6. Aiming for performance	**O4**	Solving tasks with the application of new knowledge	Exercise;	Worksheet; Levels 2 and 3			I		**6 min**
7. Concluding the Activity/ Homework	**O2, O3, O4**	Competitive game: "Mathematical relay". The class is divided into teams of 5-6 children. Each child is given a serial number (from 1 to 5/6). Each team has the same set of cards, each card has a problem written on it (for example: 14 =	Exercise; Game	Cards with tasks		**G**			8 min

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		one ten + ? units", or " one ten + five units = ?"). The child with number 1 draws a card, solves the problem and puts it on the desk. Then the child with number 2 draws a card, and so on until all the problems are solved. Finally, everyone checks the solution together and the team that solved all the problems the fastest and most correctly wins. At the end of the lesson, the teacher sets the homework tasks.							

F = frontal G = group I = individual

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Teacher's Notes

- **Class:** 1st Grade
- **Topic:** Determining Quantities, Comparing, and Mathematical Symbols (A Journey to the Land of Shapes)
- **Learning Objectives:**
  - Determine quantities by counting, compare them, and correctly apply the terms "more", "less", and "equal".
  - Understand the mathematical comparison symbols (>, <, and =) and use them correctly to represent relationships between numbers.
  - Promote logical thinking through number riddles and creatively implement mathematical comparisons in a drawing.
- **Worksheet Created By:** GEDONSOFT GMBH

	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
TASK 1: Cosmic Loading: Determining Quantities	"Count the space objects in the boxes. Compare the quantities: Circle the box with MORE objects. Color the box with LESS objects yellow. Check the box if the boxes have an EQUAL amount of objects."	Box A (4 rockets) is circled, Box B (2 UFOs) is colored yellow. For Box C and D (3 stars each), the field for "equal" is checked. .	Can the student correctly count quantities in the number range up to 10? Are the terms "more", "less", and "equal" correctly assigned visually and cognitively?	Student worksheet, colored pencils	Easier: For students who have difficulty counting, real counting blocks or tokens can be placed on the table to physically recreate the quantities. Challenging: Students can be asked to draw two boxes themselves on the back of the sheet, where one box has exactly one more object than the other.

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TASK 2: The Crocodile Mouth - Greater Than, Less Than	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	The greedy crocodile "Chomp" always eats the bigger number! Fill in the blanks with the correct crocodile mouth symbol (>, <) or the equal sign (=).	„Insert the correct mathematical symbol into each blank (for example: 5 > 3).	Does the student understand the orientation of the relational symbols (greater than and less than)? Can they compare abstract numerical values and enter the appropriate symbol without error?	Student worksheet, pencil	Easier: The crocodile mouth can remain drawn on the chalkboard as a visual memory aid (with teeth pointing toward the larger number). Challenging: Students can write down their own pairs of numbers and ask their partner to insert the correct symbol (partner work).

TASK 3: Cosmic Number Riddle and Your Quantity Monster	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	"First, solve the tricky number riddle. Then, use the large space to draw your very own space monster according to the exact comparison rules!"	The correct solution to the number riddle in the answer section. A creative drawing of a monster within the frame that corresponds to the mathematical specifications of the riddle (e.g., a monster with more arms than legs).	Can the student translate text information into mathematical logic? How well do they succeed in transferring abstract rules into a creative, visual representation?	Student worksheet, pencil, eraser, and colored pencils.	Easier: Ask the student guiding questions about the riddle (e.g., “If the monster has 4 eyes, how many ears could it have so that there are fewer ears than eyes?”) to help them get started. Challenge: After completing the drawing, students can label their monster using words or symbols (e.g., eyes > mouths) to reinforce their

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					understanding of comparison symbols.

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Name: Klasse: Datum:

Comparing Quantities Practice

TASK 1: Cosmic Loading: Determining Quantities	What do I need to do?	What materials do I need?
	Count the space objects in the boxes. Compare the quantities and follow the instructions: **Circle** the box with **MORE** objects. **Color** the box with **LESS** objects **yellow**. **Check the box** if the boxes have an **EQUAL** amount of objects.	Colored pencils.



Self-Assessment	Teacher's Comments
[ ] I finished the task.	
[ ] I checked my work.	

How did I do? (Please circle):

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TASK 2: The Crocodile Mouth (Greater Than, Less Than)	What do I need to do? 	What materials do I need? 
	The greedy crocodile “Chomp” always eats the bigger number! Look at each pair of numbers and fill in the blank with the correct symbol: ● **>** means the left number is bigger ● **<** means the right number is bigger ● **=** means both numbers are equal	**Pencil.**



(Example: Comparison of number pictures or plain numbers, e.g., 5 and 3, where the open crocodile mouth points to the 5)

Exercises

1. 8 _____ 5
2. 3 _____ 7
3. 6 _____ 6
4. 9 _____ 2
5. 4 _____ 1
6. 5 _____ 5
7. 2 _____ 8
8. 7 _____ 9

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9. 1 _____ 0

10. 10 _____ 6

Bonus – Draw the crocodile mouth yourself!

11. 4 _____ 9
12. 8 _____ 8
13. 3 _____ 1

Self-Assessment	Teacher's Comments
[ ] I finished the task.	
[ ] I checked my work.	

How did I do? (Please circle):





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TASK 3: Cosmic Number Riddle and Your Quantity Monster	What do I need to do? 	What materials do I need?  .
	First, solve the tricky number riddle. Then, use the large space to draw your very own space monster according to the exact comparison rules!	Pencil, eraser, and colored pencils

Number Riddle

Read the clues carefully and find the secret numbers:

- **I am greater than 4 but less than 6. Who am I? _____**
- **I am less than 9 but greater than 7. Who am I? _____**
- **I come just before 6 and just after 4. Who am I? _____**
- **I am the largest 1-digit number. Who am I? _____**
- **I am greater than 1 but smaller than 3. Who am I? _____**

Draw Your Quantity Monster!

Now look at the numbers you found above and draw your own Space Monster following these rules:

- **The monster must have more eyes than the number in question 1.**
- **The monster must have fewer arms than the number in question 2.**
- **The monster must have exactly the same number of legs as the number in question 3.**
- **The monster must have fewer spots on its body than the number in question 5**

Self-Assessment	Teacher's Comments
[ ] I finished the task.	
[ ] I checked my work.	

How did I do? (Please circle):

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Teacher's Notes

Class: 1. Grade
Topic: Sizes and Measurement – Lengths, Weights, and Capacities (On the Trail of Sizes: The Great Measurement Hunt!)
Learning Objectives:

- Compare objects directly with each other and correctly assign attributes such as "longer", "heavier", and "more capacity".
- Correctly assign different measurement tasks to the appropriate measuring tools (ruler/measuring tape, scale, measuring cup).
- Develop initial estimation skills using non-standardized units of measurement (paperclips) and creatively implement relational size conditions in a drawing.

Prepared By : GEDONSOFT GMBH

TASK 1: Direct Comparison: Lengths, Weights, and Capacities	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	"Look closely at the pictures and compare the objects directly with each other: Circle the item that is LONGER. Color the animal yellow that is HEAVIER. Check the box where MORE WATER fits inside."	a) The bus is circled. b) The elephant is colored yellow. c) The checkbox "The large bucket" is checked.	Can the student correctly compare qualitative characteristics of sizes (length, weight, capacity) through pure visual inspection and assign them to the appropriate terms?	Student worksheet, colored pencils	Easier: If the abstract image comparison is difficult, real objects (e.g., a long pencil and a short sharpener, or a cup and a bucket) can be placed directly on the table. Challenging: Students can be asked to search the classroom for two objects where one is heavier than a book but lighter than a school backpack.

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TASK 2: Tool Hunt: How Do We Measure Correctly?	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	"Which tool helps us with our work? Connect the measurement task on the left side to the correct measuring tool on the right side using a straight line."	Match each question with the correct measuring tool. Draw a line. How long is my table? → _____ How heavy is the sack of flour? → _____ How much juice is in the glass? → _____ Measuring Tools: Ruler / Measuring Tape Scale Measuring Cup	Does the student recognize the link between the characteristic to be measured (length, mass, volume) and the necessary measuring instrument?	Student worksheet, pencil.	Easier: Real measuring tools (ruler, kitchen scale, measuring cup) can be shown in a circle to visually support the assignment. Challenging: Ask the students which tool they would use to measure how much water fits into an entire bathtub to expand their understanding.

TASK 3: Tricky Estimation Riddle and Your Measurement Monster	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological notes
	"First, solve the short estimation riddle and enter the number. Then, use the large free space	Estimation Riddle: A plausible number that is greater than 5 (e.g., 7, 8, or 10	Does the student understand the principle of indirect comparison (e.g., if	Student worksheet, pencil, eraser, and colored pencils	Easier: Real paperclips and an eraser can be provided to the students to concretely model the length relationship.

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	to draw your very own measurement monster. Pay close attention to the two monster rules for the long arm and the cup!"	paperclips). Drawing: A creative monster with an arm that is visibly longer than its body, and a cup in its hand (with a size capacity ranking between a spoon and a bathtub).	A = 5 paperclips and B > A, then B must be > 5)? Can they correctly translate the rules of relational signs into their own representation or drawing?		Challenging: A third rule can be invented for the students' monster, e.g., "Draw feet for the monster that are shorter than its nose."

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Name: Class: Date:

On the Trail of Sizes: The Great Measurement Hunt!

TASK 1: Direct Comparison: Lengths, Weights, and Capacities	What do I need to do?	What can I use to solve this task?
	Look closely at the pictures, compare the objects directly with each other, and follow the instructions: **Circle** the item that is **LONGER**. **Color** the animal yellow that is **HEAVIER**. **Check the box** where **MORE WATER** (more capacity) fits inside.	Colored pencils.

a) LENGTH: [Picture: A long bus] vs. [Picture: A small car]

Circle the longer object with a pencil!





b) WEIGHT: [Picture: A large elephant] vs. [Picture: A small mouse]

Color the heavier animal with a yellow pencil!





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c) CAPACITY: [Picture: A large bucket] vs. [Picture: A small cup]

Where does more water fit inside?

- [ ] The large bucket
- [ ] The small cup





Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):





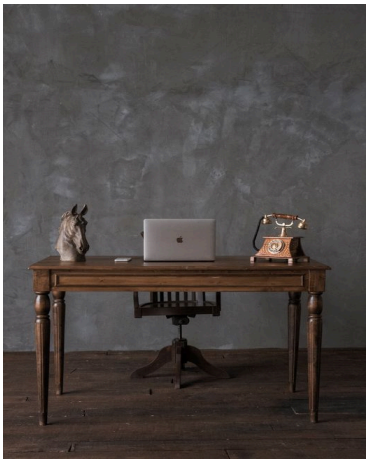


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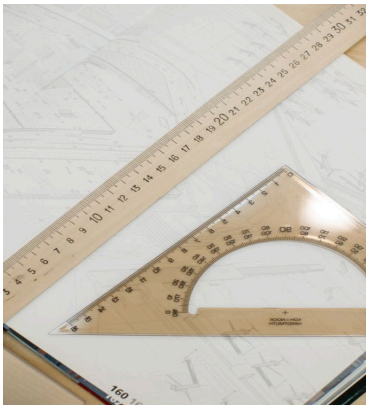
TASK 2: Tool Hunt: How Do We Measure Correctly?	What do I need to do?	What can I use to solve this task?
	Which tool helps us with our work? Connect the measurement task on the left side to the correct measuring tool on the right side using a straight line.	Pencil.

What do we want to know? **Which tool helps us?**









1



2



3

How long is my table?	.....	A.The ruler / The measuring tape
How heavy is the sack of flour?	.....	B.The scale
How much juice is in the glass?	.....	C.The measuring cup

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Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):



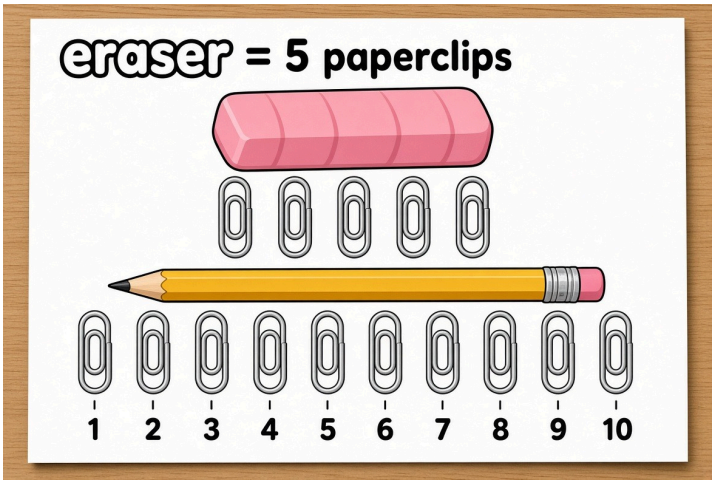




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TASK 3: Tricky Estimation Riddle and Your Measurement Monster	What do I need to do?	What can I use to solve this task?
	Solve the short estimation riddle.	Pencil, eraser, and colored pencils.



Look at the picture and estimate.

- The eraser is as long as **5 paperclips**.
- The pencil is **a little longer** than the eraser.
- The pencil is **shorter than 10 paperclips**.

Estimate: How many paperclips long is the pencil?

My pencil is approximately _____ paperclips long.

My estimate:

☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

Self - check	Teacher's comments
☐ I finished the task.	
☐ I checked my work.	

How did I do (circle):





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Lesson Plan

Comparing Numbers and Quantities

(more, less, equal, greater than, smaller than)

- **GRADE:** 1st Grade
- **CURRICULUM AREA:** Arithmetic (Numbers and Operations)
- **COURSE:** Mathematics
- **LESSON TOPIC:** Comparing Numbers and Quantities (more, less, equal, greater than, smaller than)
- **LESSON TYPE:** Knowledge Acquisition and Application
- **DURATION:** 40 + 40 Minutes (2 Lesson Hours)

Part I: Lesson Aim and Objectives

- **Lesson Aim:** To enable students to compare quantities and numbers from their environment in a structured manner, as well as to correctly apply and name the terms and mathematical symbols for "more", "less", "equal", "greater than", and "smaller than".
- **Operational Objectives (Student Outcomes):**
  - **O1:** Compares quantities and correctly assigns the terms "more", "less", and "equal".
  - **O2:** Names and writes the mathematical comparison symbols (>, <, =) correctly.
  - **O3:** Aranges scrambled number cards in order of size using relational symbols.
  - **O4:** Solves word problems and designs their own quantity pictures according to specified comparison conditions.

Part II: Teaching Strategy

- **Methods and Techniques:** Lecture, Classroom Dialogue (Question-Answer), Demonstration (The Crocodile "Chomp" / Demonstration-Performance), Gamification (Playful comparison with dice).
- **Teaching Materials and Media:** Visual objects (Lego bricks or wooden beads), large crocodile mouth cards (> and <), smartboard visualizations, worksheets.
- **Social Forms:** Frontal instruction (Plenary) and Individual work.

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Part III: Lesson Flow (Table Model)

Phase	Objective	Content	Method	Media	Social Form	Duration
1. Introduction & Organization	-	Ensuring classroom order and focusing the class's attention on the mathematics lesson.	Conversation	-	F	5 min
2. Motivation & Lead-in	-	The teacher shows two transparent boxes with building blocks (e.g., 3 blocks on the left, 7 blocks on the right): "Which box has more blocks? How can we tell?"	Classroom Dialogue	Two boxes with building blocks	F	5 min
3. Goal Orientation	-	Announcement of the journey to the "Land of Number Comparisons". Presentation of today's mission: to determine quantities using "more", "less", and "equal".	Lecture	-	F	5 min
4. Activating Prior Knowledge	O1	Brief choral counting of everyday objects. Comparison of two finger quantities shown by the children (e.g., 2 fingers on the left, 5 fingers on the right) to activate intuitive quantity knowledge.	Brainstorming / Impulse	-	F	5 min

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Phase	Objective	Content	Method	Media	Social Form	Duration
5. Core Lesson Delivery	O1, O2	Introduction of the greedy number crocodile "Chomp": The crocodile always opens its mouth wide (>) towards where there is more to eat. Introduction of the symbols >, <, and =.	Demonstration & Practice	Crocodile mouth cards, wooden beads	F / I	30 min
6. Consolidation / Application	O3, O4	The students work on the prepared worksheet "A Journey to the Land of Shapes". The exercises are tiered from easy to challenging.	Independent Application	Worksheets	I	20 min
7. Closure & Homework	-	Summary: The teacher writes two numbers on the board, and the children form the correct crocodile mouth (> or <) using their arms. Homework: Draw two boxes at home (one with more dots, one with fewer).	Summary	Board / Smartboard	F	10 min

Part IV: Worksheet Template

- **Task:** Task 1: Cosmic Loading – Determining Quantities

STAGE 1: Task 1 – Cosmic Loading (Easiest)

Count the space objects in the boxes. Compare the quantities and follow the instructions.

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- Circle the box that has MORE (more) rockets.
- Color the box yellow that has LESS (less) stars.
- Check the box to indicate whether the boxes have EQUAL (equal) amounts of crystals: [ ] YES or [ ] NO.

STAGE 2: Task 2 – The Crocodile Mouth (Intermediate)

Enter the correct crocodile mouth (> or <) or the equals sign (=) into the space. Remember: The crocodile always eats the larger number!

- 5 rockets _____ 3 rockets
- 2 planets _____ 6 planets
- 4 moons _____ 4 moons

STAGE 3: Task 3 – Cosmic Number Riddle & Quantity Monster (Challenging)

Solve the cosmic number riddle and draw your own Quantity Monster!

- Find a number that is GREATER THAN 6 (greater than 6), but SMALLER THAN 8 (smaller than 8). Write the number down: _____
- **Creative Task:** Draw a space monster in the empty field next to it according to the following conditions:
  - Give the monster a number of eyes that is GREATER THAN 4.
  - Give the monster a number of legs that is SMALLER THAN 3.

Abbreviations: F: Frontal (Whole Class Plenary), I: Individual (Individual Work), G: Group (Group Work)

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Lesson Plan

Comparing Length, Weight, and Capacity

(Non-standardized and Standardized Units)

- **GRADE:** 1st Grade
- **CURRICULUM AREA:** Measurement
- **COURSE:** Mathematics
- **LESSON TOPIC:** Comparing Length, Weight, and Capacity: Non-standardized and Standardized Units
- **LESSON TYPE:** Knowledge Acquisition and Application
- **DURATION:** 40 + 40 Minutes (2 Lesson Hours)

Part I: Lesson Aim and Objectives

- **Lesson Aim:** To enable students to directly compare objects from their environment regarding the properties of length, weight, and capacity. They will learn the difference between non-standardized units (steps, cups) and standardized units (meters, kilograms, liters) in a playful manner.
- **Operational Objectives (Student Outcomes):**
  - **O1:** Compares objects directly and correctly assigns the terms "longer/shorter", "heavier/lighter", and "more/less capacity".
  - **O2:** Measures objects using non-standardized units (e.g., handspans, steps, cups) and recognizes why these results are inaccurate.
  - **O3:** Names the basic standardized measurement units and their tools (ruler for meters, scale for kilograms, measuring cup for liters).
  - **O4:** Solves simple measurement tasks and correctly estimates dimensions in everyday life.

Part II: Teaching Strategy

- **Methods and Techniques:** Lecture, Guided Classroom Dialogue (Question-Answer), Haptic Demonstration (direct weighing and measuring in the room), Gamification (The Game: "We Become Measurement Detectives").
- **Teaching Materials and Media:** Classroom objects (books, pencils), a simple balance scale, plastic cups and water/sand, a long tailor's measuring tape, flashcards on the smartboard, worksheets.

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- **Social Forms:** Frontal instruction (Plenary for introduction), Partner work (during measuring), and Individual work.

Part III: Lesson Flow (Table Model)

Phase	Objective	Content	Method	Media	Social Form	Duration
1. Introduction & Organization	-	Ensuring classroom order and focusing the class's attention on the mathematics lesson.	Conversation	-	F	5 min
2. Motivation & Lead-in	-	The teacher has two children (one tall and one short) measure the width of the chalkboard in "handspans". Why do they count different numbers?	Experiment / Classroom Dialogue	The classroom chalkboard	F	5 min
3. Goal Orientation	-	Announcement of the journey to the "Land of Measurement Detectives". Presentation of the mission: to find out how to measure length, weight, and capacity correctly.	Lecture	-	F	5 min
4. Activating Prior Knowledge	O1	Showing two bottles (one full and one nearly empty) as well as two books (one thick and one thin). Intuitive query: "Which is heavier?", "Which holds more?"	Brainstorming / Impulse	Everyday objects	F	5 min

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Phase	Objective	Content	Method	Media	Social Form	Duration
5. Core Lesson Delivery	O1, O2, O3	Station Demonstration: 1. Length: Measuring with feet vs. ruler (meter). 2. Weight: Feeling with hands vs. balance scale (kilogram). 3. Capacity: Scooping with spoons vs. measuring cup (liter).	Demonstration & Haptic Practice	Balance scale, cups, water, ruler	F / P (Partner)	30 min
6. Consolidation / Application	O3, O4	The students work on the prepared worksheet "On the Trail of Sizes: The Great Measurement Hunt!". The exercises are tiered from easy to challenging.	Independent Application	Worksheets	I	20 min
7. Closure & Homework	-	Summary: The teacher names an object (e.g., milk carton) and the children call out the matching tool in unison (Measuring cup!). Homework: Find one item at home that is heavier than an	Summary	Smartboard	F	10 min

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Phase	Objective	Content	Method	Media	Social Form	Duration
		apple and one item that is shorter than your pencil.				

Part IV: Worksheet Template: "On the Trail of Sizes: The Great Measurement Hunt!"

This worksheet is structured in three stages based on the principle of "From Easy to Challenging":

STAGE 1: Task 1 – Direct Comparison (Easiest)

Look closely at the pictures. Compare them directly and follow the instructions.

- Circle the object that is LONGER (longer). *(Picture: A long bus and a small car)*
- Color the animal yellow that is HEAVIER (heavier). *(Picture: An elephant and a mouse)*
- Check the box to indicate which container holds MORE WATER (more capacity): [ ] The large bucket or [ ] The small cup.

STAGE 2: Task 2 – Tool Hunt (Intermediate)

Which tool helps the measurement detective? Connect the measurement task on the left side with the correct tool on the right side using a straight line.

- How long is my table? ..... The ruler (Meter / Centimeter)
- How heavy is the sack of flour? ..... The scale (Kilogram / Gram)
- How much juice is in the bottle? ..... The measuring cup (Liter)

STAGE 3: Task 3 – Estimation Riddle & Measurement Monster (Challenging)

Solve the tricky measurement riddle and draw your own Measurement Monster!

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- An eraser is 5 paperclips long. My pencil is longer than the eraser. Estimate: How many paperclips long could the pencil be? Write a number down: _____ paperclips.
- **Creative Task:** Draw your very own "Measurement Monster" in the empty space next to it according to the following conditions:
    - Draw an arm on the monster that is LONGER than its body.
    - Draw a cup in the monster's hand that holds LESS water than a bathtub, but MORE than a spoon.

Abbreviations: F: Frontal (Whole Class Plenary), I: Individual (Individual Work), G: Group (Group Work)

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Teacher's Notes

Grade: Preschool or 1st Grade
Topic: Geometric Shapes (A Journey through the Land of Shapes)
Learning objective(s):

- To recognize basic geometric shapes (circle, triangle, square, rectangle) and distinguish them by color.
- To associate and match everyday objects with geometric shapes.
- To create a creative drawing using geometric shapes and quantify them by counting.

The worksheet was designed by: CTA

	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
Level 1: Let's Color the Shapes	"Color the shapes below in the specified colors: Circle (Red), Triangle (Blue), Square (Green), Rectangle (Yellow)."	Students color all outlines according to the key: Circles → Red, Triangles → Blue, Squares → Green, and Rectangles → Yellow.	Ability to follow visual color-shape keys, color recognition, and basic spatial shape differentiation.	Grade 1 - Worksheet, colored pencils / crayons	**Support:** Teacher can draw the 4 color-coded key shapes on the board as a permanent visual reference. **Challenge:** Ask students to count how many of each color they used in total.

	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
Level 2: Shape Hunt - Matching	"Draw a line from each picture to the matching	Correctly drawn lines connecting	Connecting abstract geometric shapes	Grade 1 - Worksheet, lead	**Support:** Point to classroom objects (e.g., clock,

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	shape." / "Match everyday objects with the geometric shapes they look like by drawing a line."	real-world items to outline shapes: • Watermelon slice → Triangle • Picture Frame → Rectangle • Coin → Circle • Chocolate Bar → Square	with concrete daily objects and fine-motor control (line drawing).	pencil / ruler.	whiteboard) to model matching before doing paper work. **Challenge:** Ask students to point out 2 additional items in the classroom that match a square or rectangle.

Level 3: Drawing with Shapes	**Instruction for a student**	**Expected answer**	**Assessment / observation focus**	**Materials / Resources**	**Methodological recommendations**
	"Draw the shapes and complete the house!" (Follow the dashed colored lines: Red Triangle roof, Green Circle window, Blue Square windows, Orange Rectangle door).	Accurate tracing and drawing over all colored dashed lines to finish the house outline, keeping shapes intact.	Fine motor control (tracing dashed lines), spatial reasoning, combining geometric shapes to form a meaningful whole (part-to-whole relationship).	Grade 1 - Worksheet, lead pencil, colored pencils.	**Support:** Guide students step-by-step: "First trace the red roof with your red pencil, then move to the round window." **Challenge:** Ask students to draw additional elements in the yard (e.g., a square fence, a triangular tree) using the 4 core shapes.

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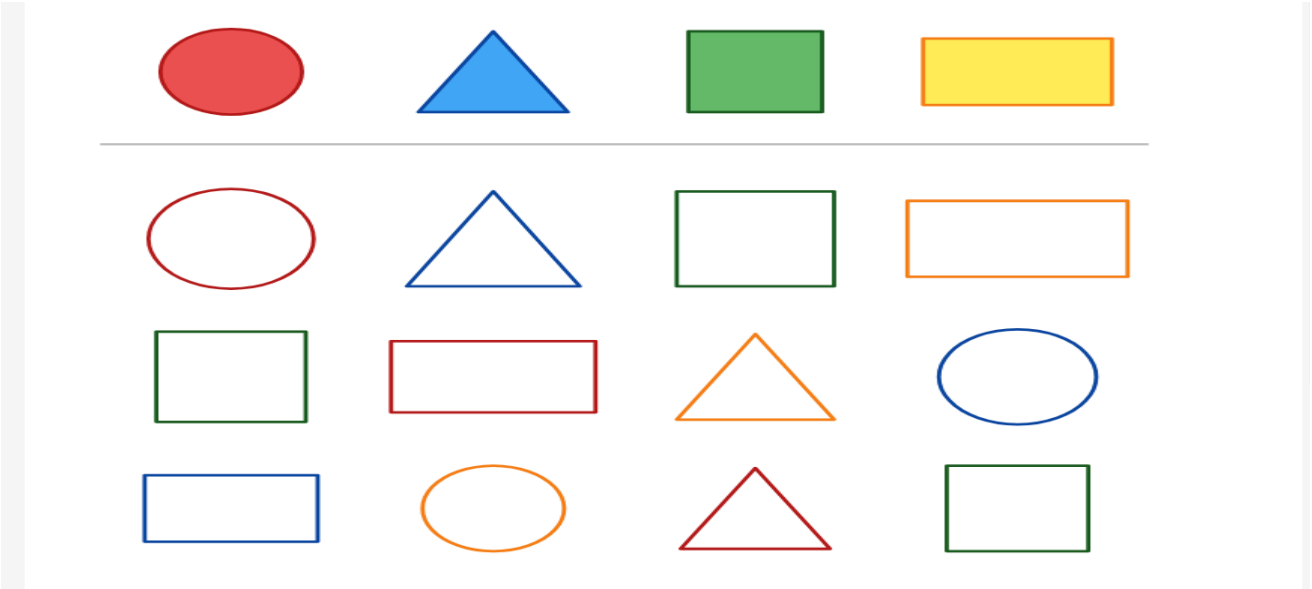
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Name: Grade: Date:

Journey to the Land of Shapes

TASK 1: Let's Color the Shapes	What do I need to do?	Materials Needed?
	Color the shapes below in the specified colors: Circle (Red), Triangle (Blue), Square (Green), Rectangle (Yellow).	Colored pencils / crayons.

Example:



Self-Evaluation	Teacher's Comments
I finished the task.	
I checked my work.	

How did I do? (Circle one):

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TASK 2: Shape Hunt (Matching)	What do I need to do?	Materials Needed?
	Draw everyday objects with the geometric shapes they look like by drawing a line.	Pencil.

Example:



Example:

Look at each picture. Match it to the correct shape.

			
Watermelon	Picture Frame	Coin	Chocolate Bar

Draw a line from each picture to the matching shape



Self-Evaluation	Teacher's Comments
I finished the task.	
I checked my work.	

How did I do? (Circle one):



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TASK 3: Let's Draw with Shapes	What do I need to do?	Materials Needed?
	Draw a robot or a house using only the 4 shapes we have learned. Note down below how many shapes you used.	Pencil, eraser, and colored pencils / crayons.

Example:



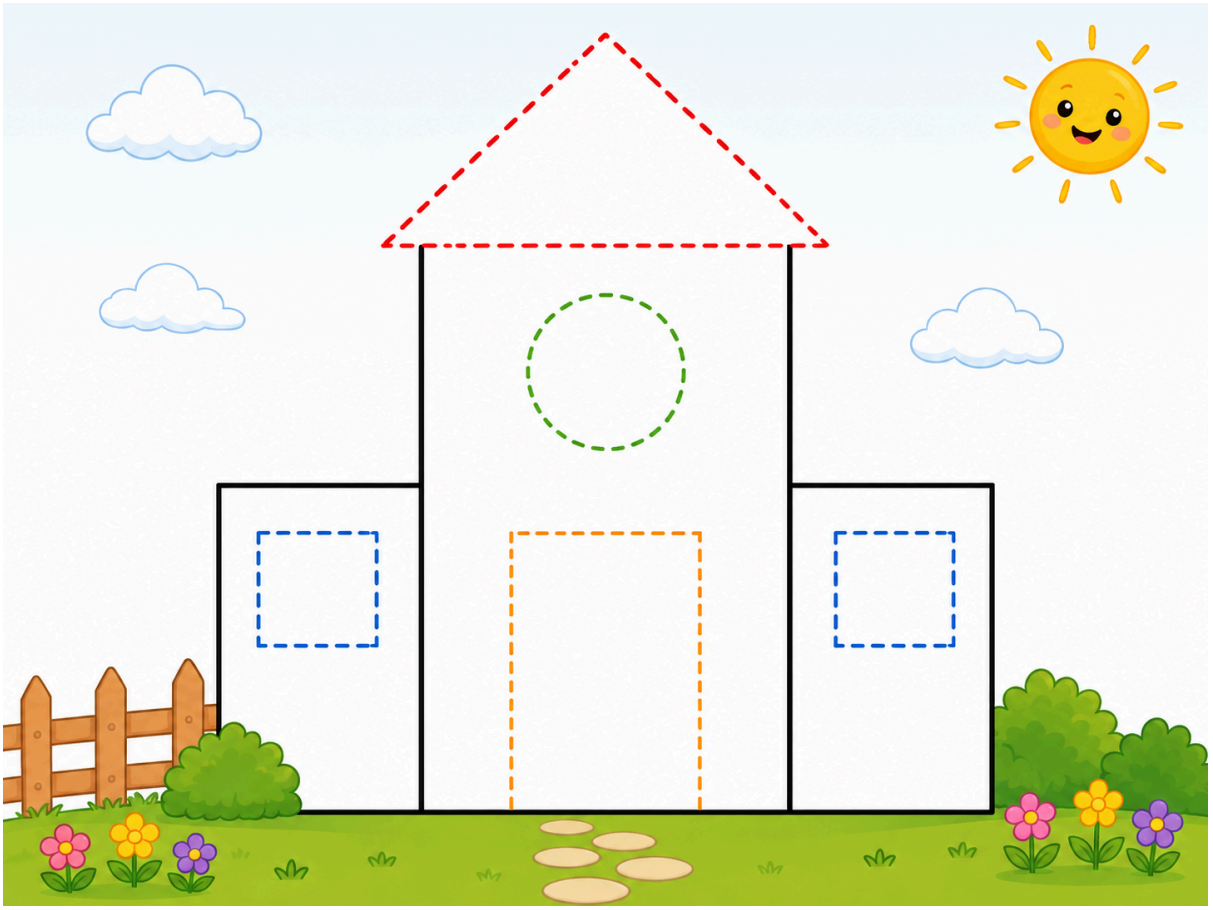
7 Squares, 1 Rectangle, 1 Triangle...

Example:

🔺 Triangle – Draw the roof.
🟢 Circle – Draw the round window.
🟦 Square – Draw the square windows.
🟧 Rectangle – Draw the door.

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Self-Evaluation	Teacher's Comments
I finished the task.	
I checked my work.	

How did I do? (Circle one):







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Teacher's Notes

Grade: Preschool or 1st Grade
Topic: The Concept of Time and Clocks (Catching the Time)
Learning objective(s):

- To recognize basic units of time (day, week, month) and understand sequential relationships (today-tomorrow).
- To display whole hours on an analog clock by drawing the hour and minute hands.
- To express and visualize daily routines by associating them with time.

The worksheet was designed by: CTA

	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
Level 1: Calendar Riddle	"Fill in the blanks in the sentences below with the appropriate time concepts and numbers."	"There are 7 days in a week. There are a total of 12 months in a year. If today is Tuesday, tomorrow will be Wednesday."	Does the student know the basic cycles of time (number of days in a week, months in a year) and the sequence of days?	Grade 1 - Worksheet 1, lead pencil.	**Support:** For students who struggle to remember the days or months, support can be drawn from the classroom wall calendar. **Challenge:** Ask additional questions such as "What day was yesterday?" or "Which day comes after Friday?"

	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
Level 2: Drawing the Clocks	"Draw the hour hand (short hand) and minute hand	• CLOCK 03:00: Minute hand	Understanding the functions of the	Grade 1 - Worksheet, lead	**Support:** To prevent students from confusing the

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	(long hand) inside the clocks according to the given whole hours."	pointing at 12, hour hand pointing at 3. • CLOCK 09:00: Minute hand pointing at 12, hour hand pointing at 9.	hour and minute hands and knowing that the minute hand points to 12 for whole hours.	pencil, and red pencil.	lengths of the hands, the "short hour hand, long minute hand" rule can be demonstrated on an educational toy clock model in the classroom. **Challenge:** Simple time-advancement questions can be asked, such as "What time will it be 1 hour after this clock?"

Level 3: My Time	**Instruction for a student**	**Expected answer**	**Assessment / observation focus**	**Materials / Resources**	**Methodological recommendations**
	"Draw your favorite daily activity or choose from the visual routines, then note down the exact time you do this activity."	Realistically filled time values below the activity pictures (e.g., Breakfast at 08:00, Homework at 15:00, Going to School at 08:30), ordered by daily priority.	Establishing logical connections between daily personal routines and specific times, plus prioritizing activities sequentially.	**Grade 1 - Worksheet, lead pencil, eraser, and colored pencils.**	**Support:** Guide students with questions such as "What time do you usually eat breakfast?" or "What time do you start your homework?" **Challenge:** Have students draw clock hands on a blank clock face corresponding to their written routine time.

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Name: Grade: Grade:

Let's Catch Time

TASK 1: Calendar Riddle	What do I need to do?	Materials Needed?
	Write the appropriate time concepts and numbers in the blanks below.	Pencil.



Example:

If today is Monday, tomorrow will be Tuesday.

There are ..... days in a week.
There are a total of ..... months in a year.
If today is Tuesday, tomorrow will be .....

Self-Evaluation	Teacher's Comments
I finished the task.	
I checked my work.	

How did I do? (Circle one):

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TASK 2: Let's Draw the Clocks	**What do I need to do?** 	**Materials Needed?** 
	Draw the hour hand (short hand) and the minute hand (long hand) inside the clocks according to the given whole hours.	Pencil and red pencil.

Example: It is 4:00. The minute hand is on 12, the hour hand is on 4.



CLOCK 03:00 (Draw with the minute hand on 12 and the hour hand on 3)

CLOCK 09:00 (Draw with the minute hand on 12 and the hour hand on 9)

Self-Evaluation	**Teacher's Comments**
I finished the task.	
I checked my work.	

How did I do? (Circle one):





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TASK 3: My Time	What do I need to do? 	Materials Needed? 
	Draw your favorite activity of the day and note down below what time you do this activity.	Pencil, eraser, and colored pencils / crayons.

Example:
My favourite activity during the day: Playing in the park!!
At what time do I do it? At 16 : 30!! And you?



The exact time I do this activity: .....



The exact time I do this activity: .....

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The exact time I do this activity: .....



The exact time I do this activity: .....

Now list what you did in order of priority !!

Self-Evaluation	Teacher's Comments
I finished the task.	
I checked my work.	

How did I do? (Circle one):





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1st Grade Mathematics Lesson Plan: Let's Catch Time

General Information

- **Course:** Mathematics
- **Grade Level:** 1st Grade
- **Unit:** Measurement
- **Topic:** Measuring Time (Days, Weeks, Months, and Clock Awareness)
- **Duration:** 40 + 40 Minutes (2 Lesson Hours)
- **Lesson Type:** New Knowledge Acquisition and Application

Part I: Educational Framework & Objectives

Lesson Aim: To enable students to recognize, sequence, and connect basic time units (days, weeks, months, years) with daily routines, and read/display whole hours on an analog clock.

Target Learning Outcomes (Curriculum Standards):

- **O1:** Names the days of the week and months of the year in the correct sequential order.
- **O2:** Identifies and distinguishes the concepts of day, week, month, and year on a calendar.
- **O3:** Reads and displays whole hours on an analog clock by correctly identifying the hour hand (short) and minute hand (long).
- **O4:** Relates personal daily routines to time concepts (yesterday, today, tomorrow, and specific hours).

Part II: Differentiation & Scaffolding Strategy

Learning Tier	Pedagogical Support & Adaptations
Support (Scaffolding)	• Display a large classroom calendar and use a toy analog clock with movable hands. • Use the "short hour hand, long minute hand" rule with color-coded hands (Red = Hour, Blue = Minute).
Core (Grade Level)	• Complete worksheet tasks step-by-step: sentence completion, clock hand drawing, and ordering routines.

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Learning Tier	Pedagogical Support & Adaptations
Challenge (Extension)	• Ask time-advancement questions (e.g., "What day was yesterday?" or "What time will it be 1 hour later?"). • Have students draw clock hands on a blank clock face corresponding to their written routine time.

Part III: Instructional Execution Plan (Table Model)

Stage	Outcomes	Pedagogical Content & Teacher Script	Methods & Interaction	Materials & Tools	Duration
1. Preparation & Warm-up	-	Establish classroom routines, table readiness, and greeting.	Interactive Conversation	Classroom Setup	5 min
2. Engagement & Discovery	-	Ask: *"On which days do we come to school? What day is today?"*	Guided Inquiry (Q&A)	Interactive Board	5 min
3. Topic & Aim	-	Introduce the thematic hook: *"Today we are going to learn how we catch and measure time!"*	Direct Lecture	Wall Calendar	5 min
4. Activating Prior Knowledge	O1, O4	Recall sequential relationships: *"If today is Monday, what will tomorrow be?"*	Brainstorming	Calendar Visuals	5 min
5. Explicit Teaching & Demonstration	O1, O2, O3	Show 7 days and 12 months on the calendar. Demonstrate whole hours on the analog clock (minute hand on 12 for whole hours).	Demonstration & Direct Modeling	Model Clock & Calendar	30 min
6. Performance & Guided Practice	O1, O2, O3, O4	Distribute the **"Let's Catch Time"** worksheet. Guide students through Calendar Riddles, Clock Drawing (03:00 & 09:00), and Routine Matching.	Formative Individual Practice	Worksheet & Pencils	20 min
7. Closure & Self-Evaluation	O4	Summarize key time cycles. Students complete their self-check smiley rubric and list daily activities by priority.	Reflection & Feedback	Self-Evaluation Section	10 min

Part IV: Associated Worksheet Details & Scaffolding Breakdown

Worksheet Material: **"Grade 1 - Worksheet: Let's Catch Time"**. It follows a 3-stage progressive structure:

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- **Level 1: Calendar Riddle (Recognition & Sequencing Level)**
  - **Objective:** Understanding basic time cycles (7 days in a week, 12 months in a year) and day sequences.
  - **Content:** Completing fill-in-the-blank sentences (e.g., "There are 7 days in a week. There are a total of 12 months in a year. If today is Tuesday, tomorrow will be Wednesday").
  - **Pedagogical Function:** Low-cognitive-load warmup to solidify calendar vocabulary.
- **Level 2: Let's Draw the Clocks (Clock Awareness Level)**
  - **Objective:** Displaying whole hours on an analog clock.
  - **Content:** Drawing short hour hands and long minute hands inside clock faces for given times (03:00 and 09:00).
  - **Pedagogical Function:** Reinforces spatial understanding of clock hands and minute hand position at 12.
- **Level 3: My Time & Routine Ordering (Production & Application Level)**
  - **Objective:** Connecting daily routines with specific times and prioritizing activities.
  - **Content:** Matching visual daily routines (breakfast, going to school, homework, playing in the park) with exact times and ordering them by daily priority.
  - **Pedagogical Function:** Encourages self-reflection and practical application of time in daily life.

Part V: Assessment & Verification Framework

- **Formative Assessment:** Monitor accuracy in calendar sentence completion (Level 1) and hand placement on clocks (Level 2).
- **Performance Assessment:** Evaluate student ability to associate personal routines with realistic times and sequence them logically (Level 3).
- **Self-Evaluation:** Student self-check rubric (😊 Great / 🤔 Need Help / 😟 Hard) at the bottom of the worksheet.

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Teacher's Notes

Grade: I
Topic: Addition of natural numbers within the range 0–20, with and without carrying over/ regrouping
Learning objective(s):

- Performing addition by counting the items in given sets (toys, vegetables, fruits).
- Representing and calculating sums using the number line as a visual aid.
- Solving simple problems that involve specific mathematical language ("with... more," "neighbors of numbers").

The worksheet was designed by: LTGM

	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
Level 1	Look at the pictures of toys and vegetables, write the correct addition problem for each group, and find the answer. Colour the items to get the number written in the box. Write the correct addition problem as well. Calculate correctly.	Correctly writing the basic operations (for example, for robots) and coloring the exact number of required elements. Solving simple math problems	The student's ability to match sets of objects with the corresponding numbers and to use the "+" symbol. Correctly writing basic operations (for example, for robots) and coloring the exact number of items requested. The ability to match a quantity with the corresponding number.	Worksheet, pencils, tokens with pictures for visual aids. Interactive whiteboard.	The task can be made easier by counting the objects aloud before writing down the numbers. Students who are struggling can use concrete objects (tokens, sticks, abacuses) to simulate the groupings shown in the pictures. For advanced students, you can ask them to create a short story based on the picture.

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			The ability to translate the phrase "... more" into an addition operation		Read the problem statements aloud with the students to ensure they understand the data correctly.

Level 2	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
	Solve the given addition problems and show how you arrived at the answer using the number line. Start with the first number and draw the necessary "steps" to the right. Also, check the operations written on the speech bubbles and colour only the ones with the correct answer, explaining where mistakes crept in on the others. Then solve the problem with the apples and pears in the basket to find the total.	Correct answers and a graphical representation of the jumps on the 0–20 axis. Identifying the correct operations Correctly solving addition problems Solving the math problem by following the steps for solving a problem.	Accuracy in performing calculations that involve carrying over digits, and the ability to use supporting tools (the number line) for verification.	"Grade 1 Addition" worksheet, coloured pencils. Number line (chart) Interactive whiteboard	Students who are having difficulty can use concrete objects (tokens, sticks, abacuses) to simulate the groupings shown in the pictures. For more advanced students, you can ask them to create a short story based on the picture. Read the problem statements aloud with the students to ensure they understand the information correctly.

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Level 3	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
	Fill in the blanks with the correct numbers to get the result shown. Perform the given operations correctly. Identify the “neighbors” of the given numbers (for example, the number immediately below 7 and the number immediately above 9) and form an addition problem using them.	Solving the math problem correctly Filling in the grid correctly Identifying the correct operations Identifying the neighbors of certain numbers	Mastery of mathematical terminology and the ability to identify and correct errors in others’ calculations. Solving equations with multiple terms	Advanced-level worksheet, colored pencils.	This step can be achieved through cooperative learning, where students explain to their classmates why a calculation is correct or incorrect. It may be advisable to have students write the numbers separately before attempting to form the entire addition problem.

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Name: Grade: Date:

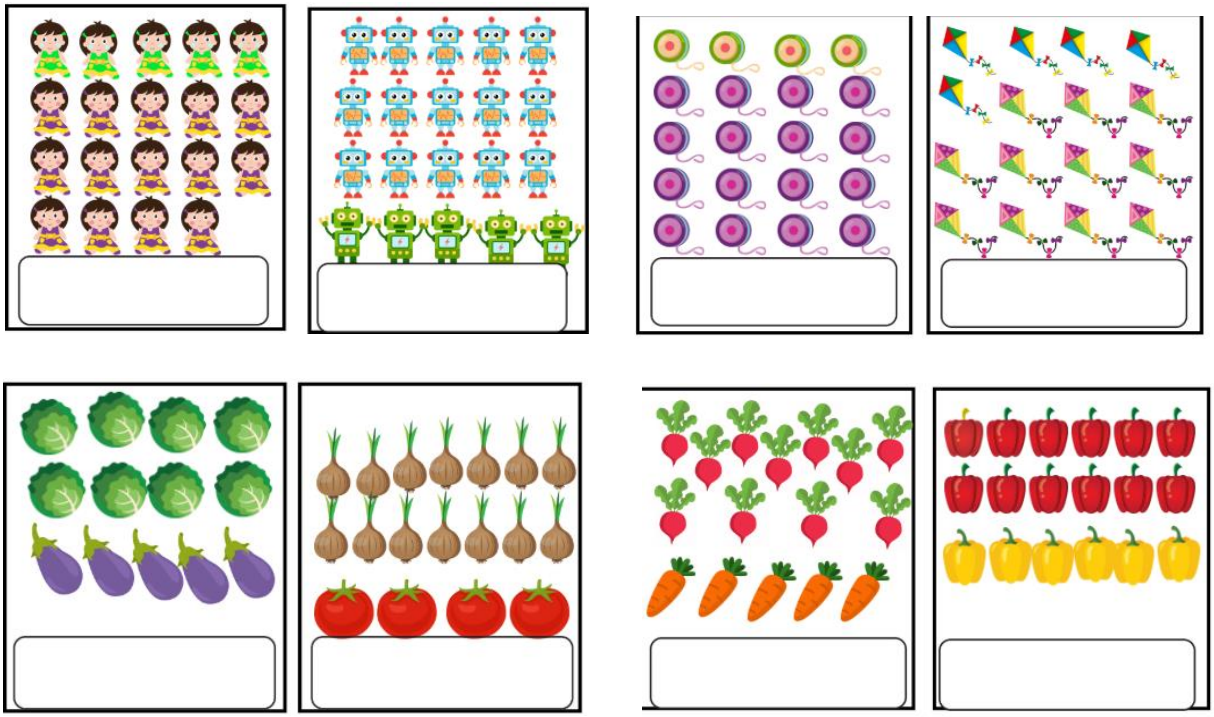
Image Math

Level 1	What do I need to do?	What can I use to solve this task?
	1. Read each of the instructions carefully. 2. Look at the images in each exercise. 3. Write the operation and the result. 4. Don't forget to check before moving on to the next image or to the next exercise.	• A pencil or a pen • Coloured pencils or markers • An eraser

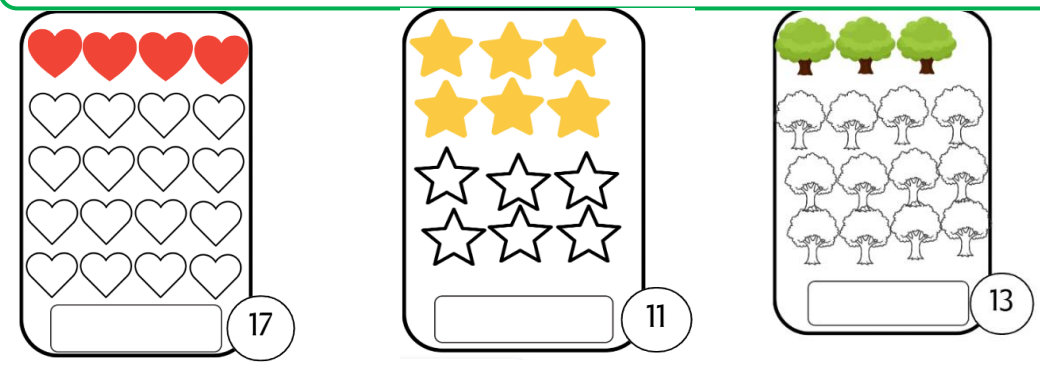
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1.Observe the images, write the correct operation, then solve



2 Colour the elements to obtain the number written in the box. Write the correct operation, too.



3. Calculate:

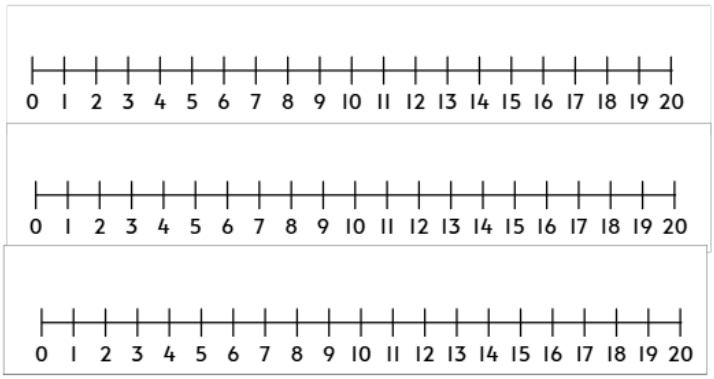
11 + 4 = ☐☐	11 + 7 = ☐☐	12 + 4 = ☐☐	8 + 6 = ☐☐
16 + 2 = ☐☐	9 + 4 = ☐☐	7 + 4 = ☐☐	8 + 7 = ☐☐
15 + 5 = ☐☐	7 + 7 = ☐☐	13 + 4 = ☐☐	12 + 5 = ☐☐

4. Dana is 8 years old. Maia, her sister, is 6 years older. How old is Maia?

5. Andrew has 7 yellow pencils and with 3 more blue ones. How many pencils does Andrew have?

Level 2	 **What do I need to do?**	 **What can I use to solve this task?**
	1. Remember what you know about the number axis. 2. Solve the operations, check the result and represent it on the axis. 3. Verify the operations on the clouds and choose only the correct ones. 4. Read the instructions carefully and solve the problems	• A pencil or a pen • An eraser • Coloured pencils

1 .Solve the operation and represent it on the number axis:



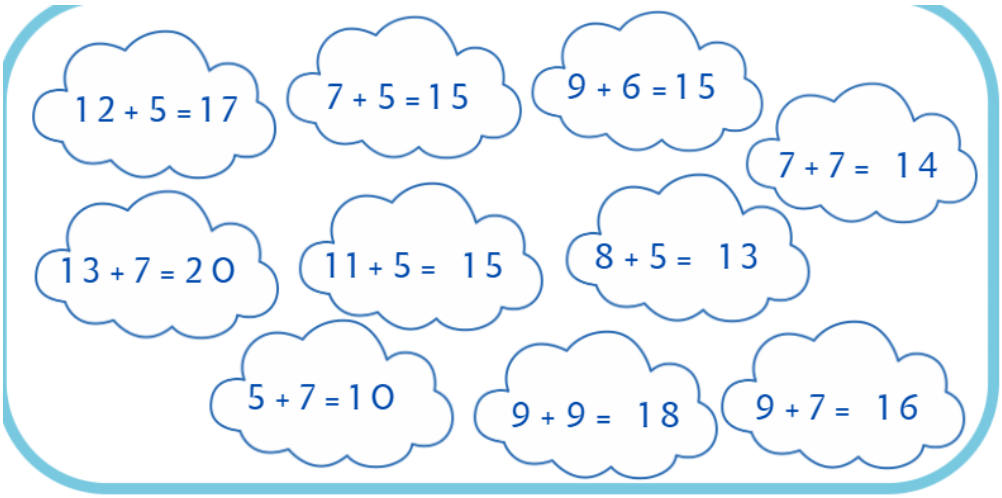


7 + 5 =

8 + 4 =

9 + 6 =

2. Colour the clouds on which the operations are solved correctly:



3. Calculate:

11 + 9 = ☐☐	11 + 9 = ☐☐	12 + 8 = ☐☐	8 + 3 = ☐☐
16 + 7 = ☐☐	9 + 9 = ☐☐	7 + 5 = ☐☐	9 + 7 = ☐☐
15 + 4 = ☐☐	7 + 8 = ☐☐	13 + 6 = ☐☐	11 + 5 = ☐☐

4. In a basket there are 7 apples and 8 pears. How many fruits are there in total?

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

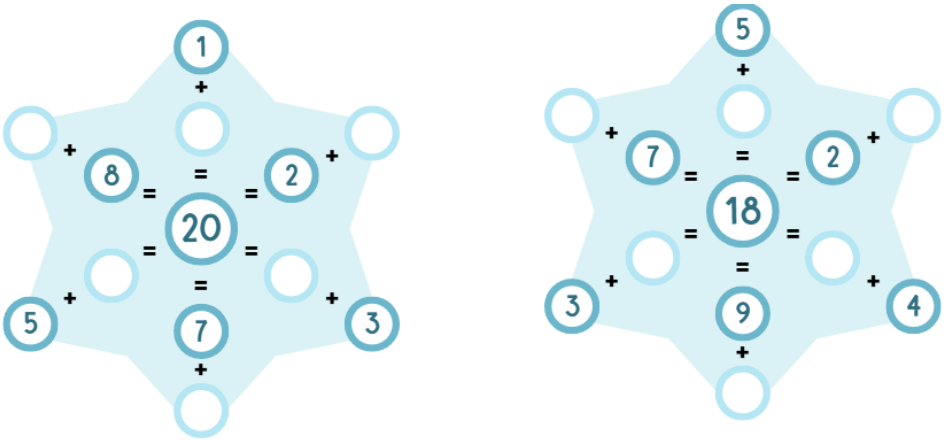
5. I have 6 blue balloons and with 3 more red ones. How many balloons do I have in total?

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

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Level 3	 **What do I need to do?**	 **What can I use to solve this task?**
	1. Check the images carefully, then find the numbers which solve the operations given. 2. Take a look at the correspondence between images and numbers. Then solve the exercises. 3. Remember what you know about numbers and their neighbours. Then read the task carefully and solve.	• A pencil or a pen • An eraser • Coloured pencils or markers

1. Fill in with the correct numbers:



2. Knowing that:



Calculate:



3. Calculate:

14 + 4 =	11 + 7 =	12 + 8 =	7 + 6 =
16 + 3 =	8 + 4 =	14 + 4 =	8 + 9 =
9 + 11 =	6 + 7 =	12 + 6 =	11 + 5 =

4. To the smaller neighbour of the number 7, add the larger neighbour of the number 3 and the larger neighbour of the number 9. What is the result?

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Teacher's Notes

Grade: I
Topic: Subtraction within the 0-20 range
Learning objective(s):

- Write the subtraction operation corresponding to sets of objects (bears, butterflies, trees) presented visually.
- Represent the removal of elements from a set by crossing them out with a line, to obtain a remainder indicated below the line.
- Perform quick subtraction calculations within the range of 0–20, both with and without carrying.
- Solve simple subtraction problems inspired by the immediate environment (balloons, birds, candies).
- Use specific mathematical terminology correctly (subtraction, remainder, neighbors of a number).

The worksheet was designed by: LTGM

	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
Level 1	Look at the pictures (butterflies, trees, bears) and write in the box the subtraction problem that corresponds to the items being removed. Cross out the required number of items from the sets so that the number of items remaining matches the number under the	For example, for the number 8, the student will cut out the required number of bunnies from a set of 16 and write the appropriate operation.	The student's ability to associate the practical action of "taking/cutting" with the minus sign and to correctly count the remaining items. The ability to correctly count the items	Worksheet, colored pencils, picture tokens, sets of objects, magnetic board, interactive whiteboard, The application https://www.mathlearningcenter.org/apps	The task can be simplified by using concrete objects (tokens or sticks) that the student can physically set aside before working on the worksheet. Use a counter or tokens to physically simulate

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	underline, then write the subtraction problem you performed. Solve the quick calculations and find out how many balloons Maria has left and how many pencils Ioana has after she shares them with her friends.	Students correctly solve subtraction problems. Students solve math problems by following the steps.	remaining in a set after removal and to write the appropriate operation. The use of appropriate mathematical language.		removing items from the worksheet. Explain to students that when subtracting multiple terms (as in Joanna's case), we subtract each quantity one at a time.

Level 2	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
	Connect each subtraction problem with its correct answer in the opposite column using lines. Look at the problems written on the hearts and color only the ones with the correct answer. Count how many birds are left on the branch and how many candies you have left after you give some to your siblings.	Students identify the result of each operation. Students correctly solve subtraction problems. Students solve math problems by following the steps.	Accuracy in mental calculation within the 0–20 range, with and without carrying over. Ability to identify errors in completed exercises (mathematical critical thinking)	Worksheet, colored pencils, picture tokens interactive whiteboard, The application https://www.mathlearningcenter.org/apps	Encourage students to check the result of the subtraction by performing the inverse operation (addition). For the candy problem, suggest that students first add the given candies (4+7) and then subtract the total from 19. There are two ways to solve the problems (Method I—using two subtraction operations; Method II—using one

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					addition and one subtraction operation). Students can work in pairs to explain why an operation in the heart is correct or incorrect, thereby developing their mathematical language.

Level 3	Instruction for a student	Expected answer	Assessment / observation focus	Materials / Resources	Methodological recommendations
	Fill in the blanks in the tables and diagrams with the missing numbers to get the final result shown. Solve the subtraction problems and write down the correct answer. Find the “neighbors” of the numbers 19, 8, and 9 as required, perform the successive subtractions, and write down your results. Solve the long sequences of combined operations to arrive at the numbers at the end of the equations.	Students identify the result of each operation. Students correctly solve subtraction problems. Students solve math problems by following the steps. Students use mathematical terminology.	Knowledge of specific terminology (neighbors, smaller/larger, predecessor, successor) and its application in calculations. The ability to maintain focus throughout a series of calculations involving multiple intermediate steps.	Worksheet, colored pencils, picture tokens interactive whiteboard, The application https://www.mathlearningcenter.org/apps	Before starting Problem 4, make sure the students have mastered the concepts of predecessor and successor. Let the students work at their own pace on the complex grids, offering support only in understanding the structure of the table.

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Name: Grade: Date:

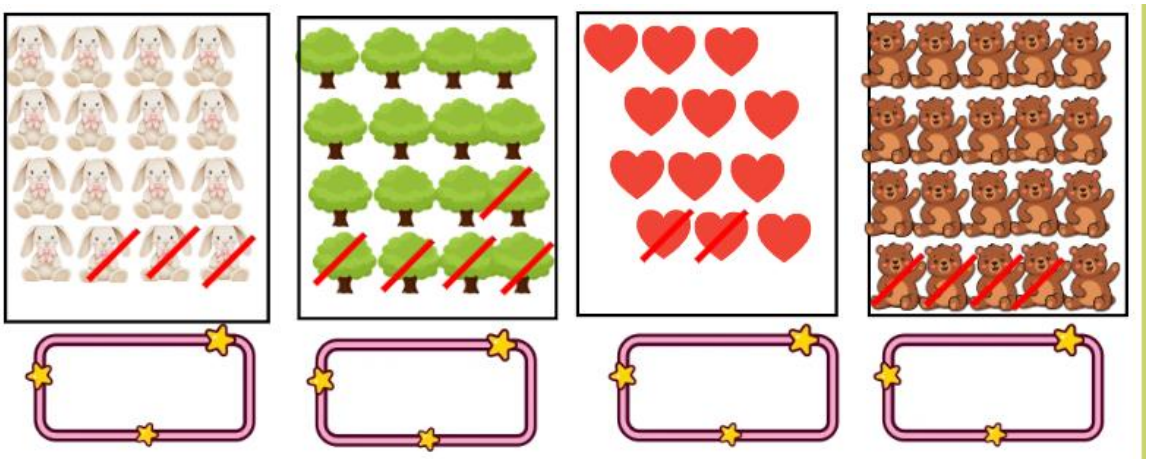
Image Math

Level 1	What do I need to do?	What can I use to solve this task?
	1. Remember what you know about substraction. 2. Read each of the instructions carefully. 3. Look at the images in each exercise. 4. Write the operation and the result. 5. Don't forget to check before moving on to the next image or to the next exercise.	• A pencil or a pen • Coloured pencils or markers • An eraser

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1. Observe the images, write the correct operation, then solve:



2. Remove items from the set to obtain the number shown. Write down the correct operation:



3. Calculate:

11 – 4 = ☐☐	11 – 7 = ☐☐	12 – 4 = ☐☐	12 – 6 = ☐☐
16 – 2 = ☐☐	9 – 4 = ☐☐	11 – 4 = ☐☐	13 – 7 = ☐☐
15 – 5 = ☐☐	17 – 7 = ☐☐	13 – 4 = ☐☐	12 – 5 = ☐☐

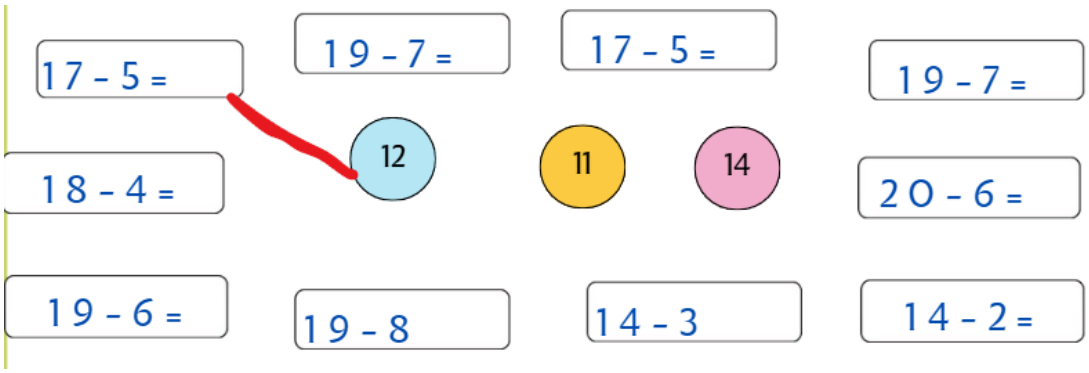
4. Maria has 15 balloons. If 4 of them pop, how many balloons does she have left?



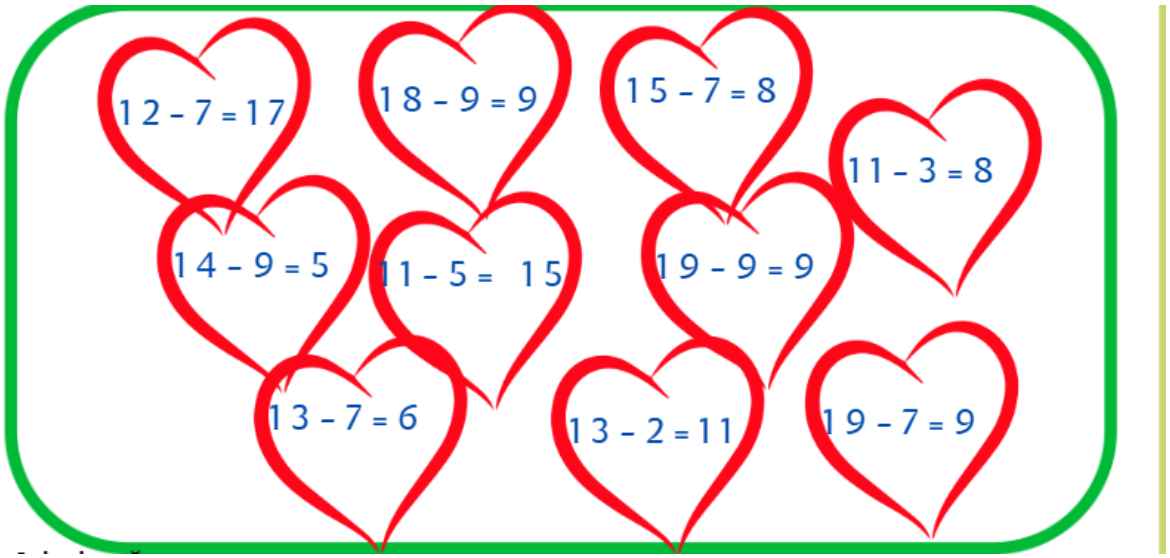
5. Joana has 19 coloured pencils. She gives Dana 4 pencils and Matt 3 pencils. How many pencils does Joana have left?

Level 2	 **What do I need to do?**	 **What can I use to solve this task?**
	1. Remember what you know about the substraction rules. 2. Solve the operations, check the result, and write it down. 3. Verify the operations on the hearts and choose only the correct ones. 4. Read the instructions carefully and solve the problems.	• A pencil or a pen • An eraser • Coloured pencils

1. Connect the operation with the correct result:



2. Colour the hearts on which the operations are solved correctly:



3. Calculate:

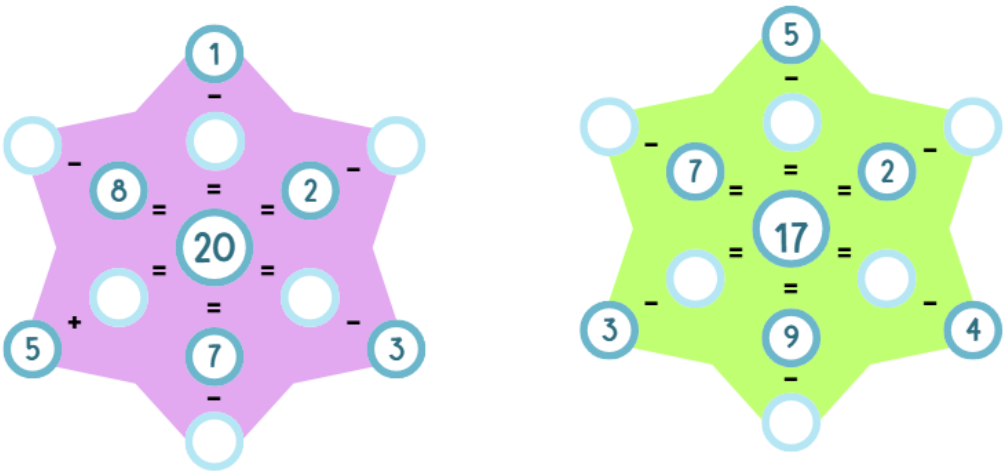
11 - 9 = ☐☐	14 - 9 = ☐☐	12 - 8 = ☐☐	18 - 3 = ☐☐
16 - 7 = ☐☐	20 - 5 = ☐☐	17 - 5 = ☐☐	19 - 7 = ☐☐
15 - 4 = ☐☐	17 - 8 = ☐☐	13 - 6 = ☐☐	11 - 5 = ☐☐

4. There are 20 birds on a branch. If 9 fly away, how many birds are left on the branch?

5. I have 19 candies. I give 4 to my brother and 7 to my sister. How many candies do I have left?

Level 3	What do I need to do?	What can I use to solve this task?
	1. Check the images carefully, then find the numbers which solve the operations given. 2. Take a look at the correspondence between images and numbers. Then solve the exercises. 3. Remember what you know about numbers and their neighbours. Then read the task carefully and solve.	• A pencil or a pen • An eraser • Coloured pencils or markers

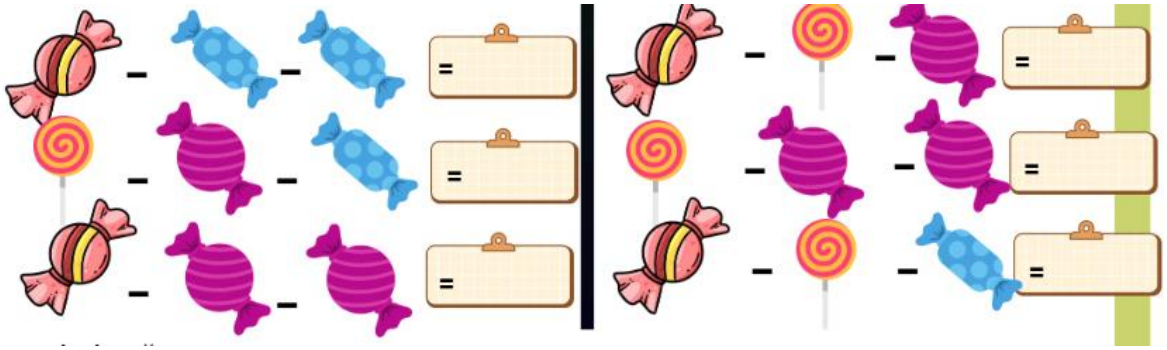
1. Fill in with the correct numbers:



2. Knowing that:



Calculate:



3. Calculate:

14 – 4 = ☐☐	11 – 7 = ☐☐	12 – 8 = ☐☐	17 – 6 = ☐☐
16 – 3 = ☐☐	18 – 4 = ☐☐	14 – 4 = ☐☐	18 – 9 = ☐☐
19 – 11 = ☐☐	16 – 7 = ☐☐	12 – 6 = ☐☐	16 – 5 = ☐☐

4. Subtract the larger neighbour of 8 and the smaller neighbour of 9 from the smaller neighbour of 19. What is the result?

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LESSON PLAN

DATE:

GRADE: 1st

SUBJECT: Mathematics and exploration of the environment

UNIT: A wonderful world

TOPIC: Revision (Addition and subtraction of numbers from 0 to 100, with and without carrying; geometric shapes; geometric solids; the year; the seasons; the months of the year)

LESSON TYPE: review and organisation

SPECIFIC SKILLS:

1.4**.** Performing addition and subtraction, both mentally and in writing, within the range 0–100, frequently using counting

1.6. Using mathematical terms and symbols (term, sum, total, difference, , =, +, -) when solving and/or setting problems

2.2. Recognising geometric shapes and solids in the immediate environment and in accessible two-dimensional representations (including drawings, art reproductions and schematic representations)

3.1. Solving problems by observing patterns in the immediate environment

5.2. Solving simple problems involving addition or subtraction within the range 0–100, with the aid of objects, images or schematic representations

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OPERATIONAL OBJECTIVES:

O1 – to carry out addition and subtraction within the range 0–100, either mentally or in writing, based on previously acquired knowledge; the objective is considered achieved if 90 per cent of pupils carry out at least two addition or subtraction problems, based on previously acquired knowledge.

O2 – to name geometric shapes and solids, based on previously acquired knowledge; the objective is considered achieved if 90 per cent of pupils name at least two geometric shapes or solids, based on previously acquired knowledge.

O3 – to solve simple problems involving addition or subtraction within the range 0–100, based on previously acquired knowledge; the objective is considered achieved if 90 per cent of pupils solve at least one problem, based on previously acquired knowledge.

TEACHING STRATEGIES

METHODS AND PROCEDURES: conversation, explanation, exercises,

TEACHING AIDS: worksheets, laptop, interactive whiteboard, chest, padlock, PowerPoint presentation

ORGANISATIONAL FORMS: whole-class, in teams, individual

DURATION: 50 MINUTES

References:

•Programa şcolară pentru disciplina Matematică şi explorarea mediului, clasa pregătitoare, clasa pregătitoare, clasa I, Clasa a-II-a, Bucureşti, 2011

• Matematica prin joc- Elena Simionică; Florica Caraiman, Editura Polirom, Iaşi, 1998;

• Didactica matematicii în învăţământul primar- Mihail Roşu, 2006;

• Elemente de didactica matematicii în grădiniţă şi învăţământul primar- Constantin Petrovici; Mihaela Neagu, Editura PIM, Iaşi, 2002

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Lesson sequences	Op. Ob.	The Scientific Content of Learning	Teaching strategies			Evaluation
			Methods	*Means*	*Organization*	
1. Organizational Moment 1 min.		Optimal conditions are created for the lesson to take place: preparing the necessary teaching materials, ensuring a quiet environment, and guiding the pupils through their preparatory work.	Conversation		Frontal	
2. Gaining attention 1 min.		I would point out that, in order to obtain the third digit and open the chest, the pupils must continue the adventure and complete the new tasks set for them.	Conversation	Chest, padlock	Frontal	Current observation
3. Announcement of the topic and objectives 3 min.		The **revision plan** is presented and explained; it is stuck into the pupils' exercise books and displayed on the blackboard. (Appendix 1) Andrew wants to make his way back down to the meadow, but to do so he must solve several math problems. At every step, he will encounter exercises and problems. We will help him carry out addition and subtraction within the range 0–100, with and without carrying or borrowing, solve problems, name shapes and geometric solids, and identify certain aspects related to the seasons and the months of the year.	Explanation	Presentation on Power Point	Frontal	Current observation
4. Guiding Learning 35 min.		The pupils are divided into 5 teams. Each team is given an exercise to complete. They have 10 minutes to complete the task. I explain the tasks and step in where there is any confusion. I tell the pupils that once their team has finished the task, they can either tackle other	Explanation Exercice	Worksheet (Annex 3)	Team work	Current observation

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	O1 **O2** **O1** **O2** **O2** **O1** **O3**	exercises or colour a castle on which the revision plan is written (additional activity). In *exercises 1 and 2*, the pupils are asked to identify the geometric shapes, then work out the sum and difference of the numbers written on the shapes of the same type. I ask the pupils questions relating to mathematical terminology (sum, difference). In *Exercise 3*, the pupils are asked to identify the geometric shapes in the pictures, then to complete the tasks set. In *Exercise 4*, the pupils are asked to read the statements and determine whether they are true or false. I advise the pupils to pay attention to the properties of the geometric shapes and to the time references (year, seasons, months of the year). After they have completed the tasks, the statements are read out one by one, and the answers are explained orally. A pupil reads out the problem (*Exercise 5*). We identify the details of the problem. We discuss the fact that Andrew picked 38 tulips and 7 daffodils, and the question asks for the total number of flowers. Once the working time has elapsed, the solutions are checked on the board. Pupils from each team take turns coming to the board to solve the exercise.	Exercice Exercice Exercice Exercice	Worksheet (Annex 3) Worksheet (Annex 3) Power Point Presentation (Annex 2)	Team work Team work Team work Frontal	Written evaluation Written evaluation Oral Evaluation Current observation
5. Ensuring Retention And Transfer 3 min.		The homework is set: two exercises from the textbook. The homework is explained and the pupils' understanding of the tasks is checked together with them. Further explanations are provided where necessary.	Conversation Explanation	Notebooks	Frontal	Current observation
6. Concluding the activity 2 min.		Individual and group feedback is given on the pupils' work. I tell the pupils that I have discovered the last digit of the combination. I unlock the padlock and invite the pupils to discover the treasure.	Conversation		Frontal	Current observation

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ANNEX 1

REVISION PLAN

1. Addition and subtraction of numbers between 0 and 100, with and without carrying.

2. Geometric shapes

3. Geometric solids

4. Year. Seasons. The months of the year

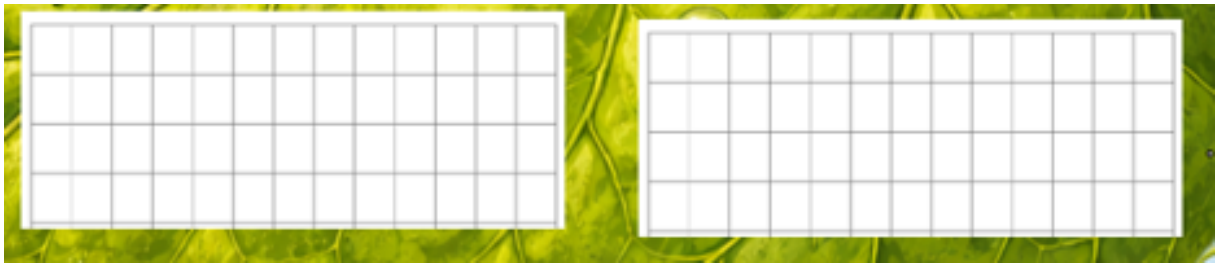
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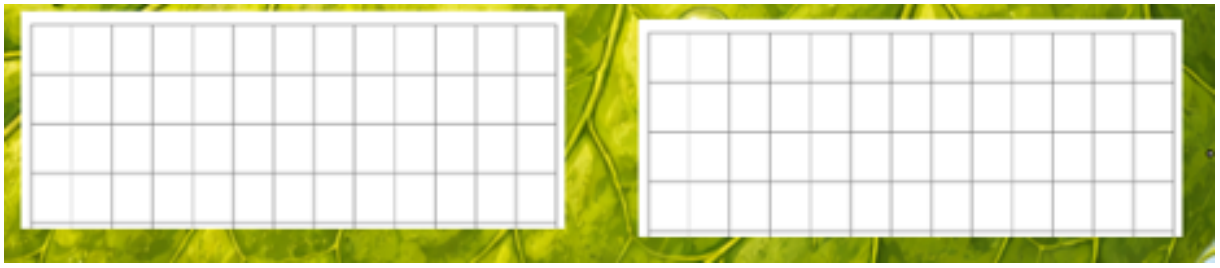
ANNEX 2

Exercise 1: Work out the sum and the difference of the numbers written on the squares and circles:





Exercise 2: Work out the sum and difference of the numbers written on the rectangles and triangles:

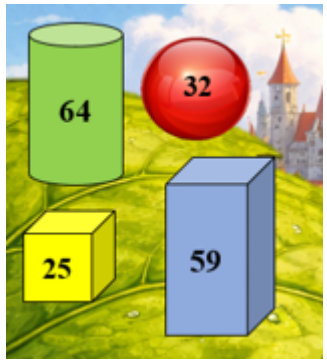




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Exercise 3: Observe the following geometric shapes:



a) Work out the sum of the numbers written on the cylinder and the cube:

b) Find the number that is 7 greater than the number written on the cuboid:

c) Find the number that is 10 less than the number written on the sphere.

Exercise 4: Write T is a sentence is true and F if it is false, the say the correct answer for the false ones:

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a) The dice is shaped like a cube.

b) The cube has square-shaped faces.

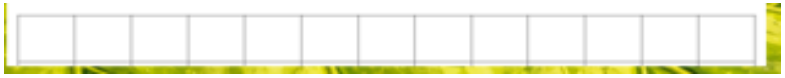
c) A week has six days.

d) A ball is shaped like a cylinder.

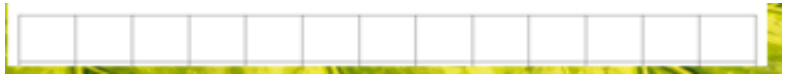
e) A year has 10 months.

f) Summer months are June, July, August.

Exercise 5: Andrew picked 30 tulips and 7 daffodils from the castle garden. How many flowers did he pick in total?



If he loses ten flowers, how many does he have left?



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