ADDITION AND SUBTRACTION
number range 0-5
**ADDITION AND SUBTRACTION, number range 0–5**

Addition and subtraction, number range 0–5 contains 15 teaching sessions for practising addition and subtraction. Addition is practised in the first six sessions. The sessions emphasise the concept of addition and the commutative principle, and fluency practice using calculation strategies. The following six sessions focus on practising subtraction. In the sessions, understanding the concept of subtraction is practised as taking-away and the difference between numbers, and fluency is practised using calculation strategies. Finally, the connection between addition and subtraction is practised.

The teaching sessions are designed to be held in small groups of 2–6 children. One session takes 30–45 minutes. Each session includes active, teacher-directed work, games in pairs or in small groups, and individual written practice.

*Italicised* sentences are suggestions for the teacher’s verbal descriptions of the tasks or guidance for the children's work. It is not necessary to use them as written, but rather, they are meant as illustrating the thinking behind the task for the reader.

The warm-up tasks in the beginning of the session contain number sequence tasks to prepare for the coming session, or a task revising the subject of the previous teaching session.

**Core aims**

- understanding the concept of addition and subtraction
- understanding the concept of subtraction as taking-away and as the difference between numbers
- understanding the commutative principle and utilising it in addition
- add-one and add-two counting strategies in addition
- subtract-one and subtract-two counting strategies in subtraction
- the connection between addition and subtraction: the missing part of an addition/subtraction number sentence, and addition and subtraction fact families
- fluency of addition and subtraction in the number range 0–5

**Equipment needed for the entire material**

- small objects (e.g., bricks and sticks)
- counters
- dice
- an egg carton for each child (10 cups)
- a box
- a cloth
- a bag for addition and subtraction flash cards
- a beanbag or a soft ball
- dot cards and number cards, game boards, and worksheets (downloadable from the ThinkMath web site)
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TEACHING SESSION 1

Combining quantities

TEACHER-DIRECTED WORK

TASK 1. Concept of addition

AIMS

- understanding the concept of addition: combining quantities
- representing addition with number symbols

EQUIPMENT

- five small objects and an egg carton for each child
- plus and equals signs on Post-it notes

TASK PROCEDURE

In this task, we practise adding two quantities together.

A) I will now tell you a little story.

Matilda has two biscuits, and Jamie has two biscuits, too. How many biscuits do the children have altogether?

Let’s solve the question in the story using these little objects. How many biscuits did Matilda have? Ask one child to put the correct number of objects in the egg carton. The egg carton is always filled starting from the top left corner, first the top row and then the bottom row. The egg carton demonstrates the relationships between numbers, and when the base becomes familiar, the quantities do not always have to be counted one-by-one. How many biscuits did Jamie have? Ask a child to put the correct number of objects in the egg carton, following on from Matilda’s biscuits. How do we find out, how many biscuits the children have altogether? (Some may count the quantity one-by-one, some may see the answer directly.)

After finding the solution, the numbers used in the addition fact are marked on the board a little separate from each other. When we count two quantities together, we put a plus sign between the numbers (let one of the children attach the Post-it note between the numbers). Now everybody knows that the numbers have to be added together. After we’ve added them together, we put an “answer sign” (attach the equals sign note on the board), after which we write the answer. When starting to practise writing a number sentence in which both parts of the addition fact are known, the equals sign can be called “answer sign”. This may help some children understand where the
answer is written. When the whole addition fact is written, it is good to note that the answer sign also tells that the quantities or numbers on both sides of it are equally big.

B) Give each child five small objects and an egg carton.

Now I will tell another story. You can solve the problem in the story with your objects and your egg carton. When you know the answer, put up your thumb so I know. The thumb is used to show when the child is ready, because it is less noticeable than raising the arm. In this way, each child is given time to solve the problem, and the fastest child will not say the answer out loud. When the children have solved the problem, ask them to tell their answer and to explain why they got it. (E.g., This is Adam’s car and these are Neil’s cars. When you put them together like this, you get four: 1, 2, 3, 4.) Follow the same procedure with incorrect answers: when the child explains to the others how they got the answer, they may realise their mistake, or the other may note it and explain why the answer cannot be correct. The number sentences are marked on the board.

Adam has one car and Neil has three cars. How many cars do the boys have altogether?

Amy buys two bananas and three oranges from the shop. How many pieces of fruit does Amy buy altogether?

There are one truck and four vans in the parking lot. How many cars are there in the parking lot altogether?

WORKING IN PAIRS

TASK 1. Space Game

AIMS

- combining two quantities
- groundwork for the commutative principle

EQUIPMENT

- for each pair, two dice with the quantities 4, 5, and 6 covered with tape and the quantities 1, 2, and 3 marked on the tape with a pen, two different-coloured pencils
- Attachment: Space Game A
TASK PROCEDURE

The players take turns throwing two dice. The player whose turn it is says the addition fact formed by the eyes of the dice, and gives the answer. E.g., if the dice show 3 and 2, the child says, “Three and two are (or equals) five.” The task of the other player is to examine whether the addition fact is correct. The player finds the corresponding number on the game board, and colours or marks the star with their coloured pencil. If there is no number in question left uncoloured, nothing is marked on the board. The game is over when every number on the game board has been coloured. The player who managed to colour more stars is the winner.

NOTE
- During the game, you can ask the children whether it matters in which order the eyes on the dice are counted. It is good for the children to realise that when adding up quantities or numbers, the order does not matter – that addition is commutative. This enhances counting later on (adding a smaller number to a bigger one decreases the need to count, and if one remembers e.g., the sum 8 + 2, one also knows the answer to the sum 2 + 8). The commutative principle will be returned to in later teaching sessions.
INDIVIDUAL WORK

AIM

• adding up two quantities
• writing an addition sentence

EQUIPMENT

• Worksheet: Adding up quantities
TEACHING SESSION 2

Adding quantities

TEACHER-DIRECTED WORK

TASK 1. The concept of addition and the commutative principle

AIMS

- concept of addition: increasing the quantity
- understanding the commutative principle in addition

EQUIPMENT

- for each child, 8 bricks that can be joined together, of which half are of a different colour (e.g., Duplo, Multilink, or Unifix cubes)

TASK PROCEDURE

In this task, we practise adding.

A) I will now tell you a little story.

There are three (red) cars in the parking lot. One more (blue) car parks there. How many cars are there in the parking lot now altogether?

Let’s solve the question in the story using these objects. How many cars were there in the parking lot at first? Ask one child to place the correct number of (red) objects on the table. How many cars more parked in the parking lot? Ask another child to add the correct number of (blue) objects on the table. The question was: how many cars are there in the parking lot now altogether? How would you find that out?

Write the addition fact created on the board or on paper.

If there had been only one (blue) car in the parking lot at first, and three more (red) cars had parked there, how many cars would there have been in the parking lot altogether?

The combination of bricks can be turned the other way round. The quantity remains the same.
Write the addition fact created on the board or on paper, underneath the first addition fact:

\[3 + 1 = 4\]
\[1 + 3 = 4\]

The number of cars remains the same (4), although they drive into the parking lot in a different order.

B) Give each child eight bricks, of two different colours.

Now I will tell you a new story. You can solve the problem in the story using your bricks. When you know the answer, put up your thumb. When the children have solved the problem, don’t settle for them saying the correct answer, but ask them to explain how they got it. Do the same with incorrect answers: when the child explains to the others how they got the answer, they may realise their mistake, or the others may note it and explain why the answer cannot be correct.

*Oliver runs two laps around the sports field in the morning. In the evening, he runs three laps more. How many laps does Oliver run altogether?*

You can instruct the child to mark the laps run in the morning with one colour, and the laps run in the evening with another colour.

*How many laps would Oliver have run, if he would have run three laps in the morning and two in the evening instead?*

Observe, whether one of the children notices that the quantities are in fact already on the table, but are merely counted in the other order.

Write the addition facts on the board or on paper:

\[2 + 3 = 5\]
\[3 + 2 = 5\]

*Martha eats first four strawberry-flavoured sweets, and then one toffee-flavoured sweet. How many sweets did Martha eat altogether?*

*How many sweets would Martha have eaten, if she had first eaten one toffee, and four strawberry sweets later?*

Write the addition facts on the board or on paper:

\[4 + 1 = 5\]
\[1 + 4 = 5\]
For thinking together: When two numbers are added together, does it matter, from which number you start counting?

How could this be useful in addition? (One can start counting from a bigger number, e.g., if in the addition fact 1 + 18 all numbers would be added by counting on from 1, it would take a long time. When one starts counting from the bigger number, one is added to eighteen, solving the problem is much faster and the possibility of making mistakes is smaller.)

WORKING IN PAIRS

TASK 1. Treasure Game

AIMS

• understanding the commutative principle (forming two different addition facts from two numbers)

EQUIPMENT

• for each pair, two dice with the quantities 4, 5, and 6 covered with tape and the quantities 1, 2, and 3 marked on the tape with a pen, pencils (calculator)
• Attachment: Treasure Game

TASK PROCEDURE

The players throw one die simultaneously. This determines how many treasures on the game board the players get. The quantity of treasures can be counted in two ways. One child will first write in their own square an addition fact from the eyes on the dice, and says the addition fact out loud. If, for instance, the numbers 2 and 3 have come up, either 2 + 3 or 3 + 2 is written in the square. The other child figures out a different addition fact in their square. If the first child has marked 2 + 3, the other will mark 3 + 2. If necessary, the dice can be moved to illustrate how the numbers in the addition fact “change places”. The children count the answer for both addition facts together, and write it in the circle. The answer is the quantity of pieces of treasure they got. The same quantity was got with two different addition facts.
Additional challenge: Using a calculator, how many pieces of treasure the children got altogether can be counted in the end (adding the numbers in the circles). Does it matter, in what order the numbers are typed into the calculator?

**INDIVIDUAL WORK**

**AIMS**

- the commutative principle in addition

**EQUIPMENT**

- Worksheet: Commutative principle in addition
- dice and bricks, if needed
TEACHING SESSION 3  Add-one addition facts

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

• saying the next number in a number sequence

EQUIPMENT

• beanbag, soft ball, or similar object that can be thrown

TASK PROCEDURE

I will say a number. Think, what is the number that comes right after the number I’ve said. For example, if I say one, the next number is … two. Throw the beanbag to each child in turn and say a number between 0–4. The beanbag can also be thrown just between the children, in which case one child says the first number, and another replies by giving the following number.

NOTE

• The task gives a good opportunity for observing whether the child knows how to start counting on from the middle of the number sequence, or do they count also the previous numbers starting from one. If the child always starts counting from the beginning (from one), it is good also to strengthen number sequence skills (e.g., verbal counting forwards and backwards using a number line or number cards). Also in this addition material, practice will later be given in verbal counting and in counting on from a given number.

TASK 1. Add one

AIM

• saying the next number in a number sequence
• add-1 addition facts and their commutative addition facts

EQUIPMENT

• five small objects and an egg carton for each child

TASK PROCEDURE

Now we will practise counting so that we will always add one more to a number.

Hand out the objects and egg cartons to the children.
I will tell a little counting story. Use the objects to make in the egg carton what happens in the story. For example, like this: Peter has two football cards. I will put two objects in the egg carton to show how many cards there are. Peter gets one card more. I will put one more object in the egg carton to show that Peter got one card more. How many cards does Peter have now altogether? Ask one of the children to write the addition fact created on the board or on paper.

Go through the following addition facts using stories you make up, or using the stories below, and write each addition sentence on the board or on paper.

- **3 + 1**: Simon has three footballs. He gets one more football for his birthday. How many balls does Simon have now altogether?

- **1 + 1**: There is one person in the room. One more person comes in. How many people are there in the room now?

- **4 + 1**: Sandra has four euros. She finds one more euro on the ground. How many euros does Sandra have now?

For thinking together: At the end, examine the addition sentences written. What similarities do they have? Do the children note that the number in the final situation directly follows the number in the original situation? This can be illustrated by circling the number in the original situation and the number in the final situation. Whenever you add one, the answer is the next number in the number sequence, as happened also in the number sequence task done as the warm-up task.

**TASK 2. Add-one addition sentences with numbers**

**AIM**

- saying the next number in a number sequence
- add-1 addition sentences and their commutative addition sentences

**EQUIPMENT**

- Attachment: Addition cards (0 + 1, 1 + 1, 2 + 1, 3 + 1, 4 + 1, 1 + 0, 1 + 2, 1 + 3, 1 + 4)
**TASK PROCEDURE**

In this task, mental computation using shortened counting is practised (if the child does not yet remember the addition facts directly from memory, or cannot use the next-number rule).

The addition flash cards are put on the table in a deck, face down. Turn over one card, e.g., 2 + 1. **Now we will try to solve this addition fact without objects. In the addition fact, we add one to two** (show the numbers on the card). **Put up one finger to show that we are adding one. Then, we will put the first number, two, in our own calculator, which is our head. Touch your head with your finger and say silently in your mind, “two”. Continue counting from there, and at the same time, touch each finger you’ve put up with the other hand like this: “three” (touch the finger you’ve put up). When we added one to two, we got three.**

Continue in the same way with other addition facts. The children can take turns picking a card. In commutative addition facts (e.g., 1 + 4), observe first, whether one of the children notices that the order of the numbers in an addition fact can be changed. If not, go over the commutative principle again (1 + 4 and 4 + 1): same answers, but 4 + 1 is an easier addition fact to think and quicker to solve.

Finally, sort the sum cards so that the commutative addition sentences form pairs.

**NOTE**

- The method for this task can also be utilised later when operating with larger numbers, when the other addend of the addition fact is 1, 2, or 3. The next step is to keep the starting number in one’s mind without touching one’s head. The activity strengthens using the number sequence to assist in the task in the right way: by counting on, the correct answer is reached, but the entire number sequence does not have to be counted from the beginning. Compare this method, e.g., to counting using number lines, where the child usually says the numerals of the number being added. For example, in the addition fact 5 + 2, number five is located on the number line, steps forward are counted one, two, then checking which number one lands on (7). This does not support the correct use of the number sequence, as one does not progress to the larger numbers.
WORKING IN PAIRS

TASK 1. Climb a Tree Game

AIMS

- practising add-1 addition facts

EQUIPMENT

- the attachment Climb a Tree Game  A and B for each pair
- pencils

TASK PROCEDURE

One player gets Attachment A and the other player Attachment B. The attachments are folded so that one side shows the picture of the tree, and the other side shows the addition facts.

Player A reads the first series of addition facts to Player B, who has the picture side showing. Player B says the answer to the addition fact. If the answer is correct, they get to cross out one space in their rope ladder. If the answer is wrong, they do not cross anything out. There are eight addition facts in each series. If the player gets the correct answer to all addition facts, they get to the top of the ladder and can thus climb the tree.

When Player A has read one series of addition facts, the players change turn. Now Player B will read addition facts from their list for Player A to answer.

After the first round, a second round is played. The aim is to get at least as good a result as in one’s first round, or improve it.

NOTE

- Give the children the instructions by first demonstrating the game with one of the children.
- If a child does not remember the answer to an addition fact directly from memory, instruct the child to use their own ”calculator”, as in teacher-directed task 2, or using the ”next number in the number sequence” rule.
INDIVIDUAL WORK

AIMS

- improving fluency in add-1 addition facts, quick solving of addition facts

EQUIPMENT

- Worksheet: Focus on fluency (add 1)

NOTE

- Instruct the children to solve the addition facts as quickly as possible, but accurately; remind them that one can start counting on from the bigger number (why?).
TEACHING SESSION 4

Add-two addition facts

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

- revising add-1 addition facts

EQUIPMENT

- Attachments: Dot cards 0–4, Addition flash cards (1 + 1, 2 + 1, 3 + 1, 4 + 1, 1 + 2, 1 + 3, 4 + 1) in a bag

TASK PROCEDURE

A) Add-one tasks with dot cards. Show a dot card. How many dots can you see? If I would draw one more dot here, how many dots would there be then? Go through all dot cards 0–4 so that each child gets to answer at least once. If needed, the answer can be illustrated by putting an object (e.g., a counter) on the card.

B) Addition flash cards. Put the addition flash cards in a bag. Each child can have a turn at picking out a card, and showing and reading the addition fact on it to the others. The task of the other children is to solve the addition fact on the card as quickly as possible. At first, the children can put up their thumbs when they have solved the addition fact, and as the task progresses, the child who first solves the addition fact can say the answer out loud.

New addition facts:

0 + 2, 2 + 2,
3 + 2, 2 + 3
**TASK 1. Objects under a cloth**

**AIMS**
- practising add-2 addition facts
- shortened counting

**EQUIPMENT**
- 5 objects in a box, a cloth
- Attachment: Addition flash cards (0 + 2, 1 + 2, 2 + 2, 3 + 2)

**TASK PROCEDURE**

On the table, there is the cloth, five objects in a box, and the addition flash cards in a deck face down. One of the children turns over an addition flash card (e.g., 2 + 2) and reads the addition fact on the card out loud. After this, the child puts as many objects under the cloth as the first number in the addition fact indicates. Put two objects, or the other addend of the addition fact, on the table. **Now there are two objects under the cloth. If we add those under the cloth and these two other objects, how many objects do we have altogether?** Encourage the children to count using shortened counting: first the two objects under the cloth are put in the “calculator” (head) to be remembered, and the number sequence is counted on by pointing at the objects on the table, three, four. Finally, the objects under the cloth are revealed, and it is stated that 2 + 2 equals 4.

Continue in the same way until all addition flash cards have been done.

**TASK 2. Add 1 or 2**

**AIMS**
- strengthening addition in the number range 0–5, adding 1 or 2
- the commutative principle
EQUIPMENT

- Attachment: Addition flash cards (0 + 1, 1 + 1, 2 + 1, 3 + 1, 4 + 1, 1 + 0, 1 + 2, 1 + 3, 1 + 4, 0 + 2, 2 + 0, 2 + 2, 2 + 3, 3 + 2)

- Post-it notes or Attachment: Number cards 1–5

TASK PROCEDURE

The post-it notes or number cards 1–5 are placed on the table or on the board so that a few addition flash cards will fit next to them (these will be placed during the task). The addition flash cards are shuffled and placed on the table face down.

Each child takes turns picking an addition flash card and reading the addition fact on it out loud. The aim is that the child would attempt to solve the addition fact in their head. If they don’t remember the answer directly, they are directed to solve it by shortened counting using the “calculator”. In commutative addition facts, it is good to observe from which number the child begins counting, and if necessary, to remind them whether it would be better to start from the smaller or the bigger number.

When the child has solved the addition fact, they will take the addition flash card next to the post-it note / number card depending on what the answer was. It is good to place commutative addition flash cards as pairs. In this way, in the end, it will become evident that, in fact, many answers are known just by knowing the other addition fact, and utilising the commutative principle in counting.

WORKING IN PAIRS

TASK 1. Detective Game

AIMS

- strengthening add 1 or 2 addition facts
EQUIPMENT

- two different-coloured pencils and a die (with dots or number)
- Attachment: Detective Game

TASK PROCEDURE

A game for two players. The players have in front of them the Detective Game game board and a die, and a coloured pencil each. The players are detectives, whose task is to solve what addition fact fits a given answer.

One player throws the die. When they get a number 1–5, they cross with their coloured pencil an addition fact that the number they threw will answer. For example, when they have thrown a 4, they can mark the addition fact $2 + 2$ or $3 + 1$, but only one addition fact per turn. The other player should observe whether the detective solves the addition fact correctly. The players change turn. If the die gives a six, the player cannot mark any addition fact on the game board. If no suitable addition fact is found on the game board, the players change turns. The game ends when the detectives have solved all the addition facts on the game board. The winner is the detective who has solved more addition facts.

INDIVIDUAL WORK

AIM

- increasing the fluency in add 1 or 2 addition facts
EQUIPMENT

- Worksheet: Focus on fluency (add 1 or 2) A

NOTE

- Instruct the children to solve the addition facts as quickly as possible, but accurately.
TEACHING SESSION 5  

Focus on fluency

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

- solving addition facts quickly in the number range 1–5

EQUIPMENT

- Attachment: Addition flash cards (add 1 or 2: 0 + 1, 1 + 1, 2 + 1, 3 + 1, 4 + 1, 1 + 0, 1 + 2, 1 + 3, 1 + 4, 0 + 2, 2 + 0, 2 + 2, 2 + 3, 3 + 2)

TASK PROCEDURE

The teacher has the addition flash cards on the table in front of them in a deck. They turn over one card at a time. The child who says the correct answer first gets the card. If the child gives the wrong answer, they lose one of the cards they have already collected. If more than one child gives the correct answer at the same time, the card is placed at the bottom of the deck. When all addition facts have been solved, you can count who got the most cards.

TASK 1. Ghost Game

AIMS

- strengthening addition in the number range 1–5

EQUIPMENT

- blu-tack
- Attachments: 2 x Addition flash cards (0 + 1, 1 + 1, 2 + 1, 3 + 1, 4 + 1, 1 + 0, 1 + 2, 1 + 3, 1 + 4, 0 + 2, 2 + 0, 2 + 2, 2 + 3, 3 + 2), Ghosts
TASK PROCEDURE

The teacher attaches a picture of a ghost on 2–4 addition flash cards before the game, so that the children don’t know how many ghosts there are. The cards are shuffled and placed in a deck on the table, face down.

The children take turns picking cards from the deck. When it is their turn, a child can pick as many cards as they dare. When the child has picked a card, they solve the addition fact. After this, they decide whether they will continue picking cards. If a ghost comes up, the child loses all cards they have collected during that turn to the ghost. These cards and the ghost card are moved to a deck to the side. If the child decides to stop, they get to keep the addition flash cards, and those collected during that turn are safe from the ghost, and cannot be lost in the next turn. The game is over when all cards have been turned. The winner is the child with the most cards.

The teacher’s task is to observe how the child solves the addition facts, and to direct them if needed to use faster addition strategies (e.g., Can you solve the addition fact starting directly from the bigger number?).

WORKING IN PAIRS

TASK 1. Treasure Island Game

AIMS

- strengthening addition in the number range 1–5

EQUIPMENT

- two different-coloured pencils, small objects (sticks or similar, to be treasures)
- Attachment: Treasure Island Game

TASK PROCEDURE

A game for two players. The players have the Treasure Island Game board in front of them, and both have their own pencil. The task of the players is to take turns in finding two or three numbers that will make five when added up. Once they have found the numbers, the player circles
the numbers with their own colour. In this way, they conquer the treasure for themselves. One object is given for each treasure.

The numbers have to be next to each other on the game board. For example, like this:

![Image of game board with numbers]

The game ends, when neither player can find numbers adding up to five on the island.

The winner is the player with more treasures at the end of the game.

**INDIVIDUAL WORK**

**AIMS**

- Finding the addends for the numbers 3, 4, and 5.

**MATERIAALI**

- Worksheet: Which numbers make 3, 4, or 5?
TEACHING SESSION 6 Focus on fluency

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

- solving addition facts quickly in the number range 1–5

EQUIPMENT

- Attachment: Pyramid Game

TASK PROCEDURE

The teacher has a picture of a pyramid, with addition facts written on it. The aim is to go round a route in the pyramid. The teacher points at an addition fact in the bottom left corner of the pyramid. The children say the answer together. Proceed thus through the pyramid. After this, the teacher shows one addition fact at a time (from anywhere on the pyramid) to each child in turn. The task of the child is to solve the addition fact as quickly as possible.

WORKING IN PAIRS

TASK 1. Under the Pyramid Game

AIMS

- strengthening addition in the number range 1–5
EQUIPMENT

- a die with the numbers 4, 5, and 6 covered with tape, onto which the numbers 1, 2, and 3 have been marked, pencils and paper, counters, small objects (e.g., sticks or bricks to be treasure)
- Attachment: Under the Pyramid Game

TASK PROCEDURE

In the game, the players dig their way underneath the pyramid, where treasure lies hidden. The players proceed on the board according the count on the die, and solve the addition fact in the square. A correct answer gives one counter as treasure. When a player hits a square where there is only a number (e.g., the number 4), their task is to write as many addition facts as they remember that equal that number, using two numbers (e.g., $3 + 1, 2 + 2$). For each correct answer, the player gets a counter, or treasure. When the players get away from under the pyramid and back inside the pyramid, they count how many treasures they collected. The winner is the player with more treasures.

INDIVIDUAL WORK

AIMS

- fluent solving of all addition facts (number range 1–5)

EQUIPMENT

- Worksheet: Focus on fluency (add 1 or 2) B
TEACHING SESSION 7  Subtracting quantities

TEACHER-DIRECTED WORK

TASK 1. The concept of subtraction

AIMS

- the concept of subtraction: subtracting quantities as taking away
- representing subtraction in number symbols

EQUIPMENT

- 5 small objects and an egg carton for each child
- minus and plus signs on Post-it notes

TASK PROCEDURE

In this task, we will practice subtracting numbers.

A) I will now tell you a little story.

Beth has five sweets. She gives two to Michael. How many sweets does Beth have left?

Let’s solve the question in the story using these objects and the egg carton. How many sweets did Beth have? Ask one child to place the correct number of sweets in the egg carton. The egg carton is always filled starting from the top left, first the top row, then the bottom row. The egg carton illustrates the relationship of the numbers with each other, and when the base becomes familiar, all the quantities don’t always have to be counted. How many sweets did Beth give to Michael? Ask the child to remove the correct number of sweets from the egg carton. How many sweets does Beth have left?

After the solution is found, the subtraction fact is written on the board as a subtraction sentence, in “the language of mathematics”. First we mark the starting point: how many sweets did Beth have? (5) When something is taken away, we mark it with a line that we call a minus sign (let one of the children attach the post-it note after the number). After this, we mark the number that is taken away. (2) Now we know that from the first number, we subtract, or take away, another number. After the subtraction fact, we put an “answer sign” (attach an equals sign on the board), and after that, we write the answer. When practising to write number sentences where both numbers are
known, the equals sign can in this early stage be called the “answer sign”. It may help some children to realise where the answer is written. When the whole number sentence is written, it is good to note that the equals sign also tells us there are equally big quantities or numbers on both sides of it.

\[ 5 - 2 = 3 \]

B) Give each child five small objects and an egg carton.

Now I will tell another story. You can solve the problem in the story using your objects and egg carton. When you know the answer, put up your thumb. The thumb is used as a sign because it is less noticeable than putting up one’s hand. Thus all children are given time to solve the problem, and the quickest child won’t say the answer out loud. When the children have solved the problem, ask them to tell their answers. Check the subtraction fact together and write it on the board as a number sentence. If a child has solved the problem incorrectly, ask them to show how they solved it. In this way, you can find out where the child’s thinking went wrong. Observe whether the child understands where they made a mistake.

Emily has four dolls. She gives her little sister two dolls. How many dolls does Emily have left?

William has five cars. He lends his friend four cars. How many cars does William have left?

There are three cars in the parking lot. Two cars drive away. How many cars are left in the parking lot?

WORKING IN PAIRS

TASK 1. Robber and Banker Game

AIMS

- subtracting quantities from five

EQUIPMENT

- 25 objects for each pair and a die with dots or numerals (the number six has been covered over with tape, and is equal to zero), pencil
- Attachment: Robber and Banker Game A
TASK PROCEDURE

The game board and 25 objects are in front of the players. Two rounds are played. In the first round, one player plays the robber and the other plays the banker. The players change turns for the second round. The banker places five objects in front of the players (these can be called money, gold nuggets, or similar). The robber throws the die (e.g., 4), and robs as many objects from the banker, saying, “I rob four from you, you are left with one”. After this, the banker notes on the game board what has happened, in numbers: “Five minus four is one.” The players take the objects (the robber 4, the banker 1). The remaining four places on the board are played in the same way. In the end, the players count which one got more objects, the robber or the banker. The following five places are played in the same way, but with the players changing roles first.

INDIVIDUAL WORK

AIMS

- subtracting quantities
- writing the subtraction fact

EQUIPMENT

- Worksheet: Subtracting quantities
TEACHING SESSION 8  Subtract-one subtraction facts

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

• saying the previous number in a number sequence

TASK PROCEDURE

The number sequence is practised with a modified version of the children’s song “Five Little Monkeys”. The children can think of a new animal for each verse. While singing (or reciting as a rhyme), everyone shows with their fingers what is happening (taking away one).

*Five little monkeys bouncing on the bed, one fell off, and bumped his head.*
*Mummy called the doctor, and the doctor said,*
*“No more monkeys bouncing on the bed!”*  
*(How many animals are bouncing on the bed in the next verse? What animals could they be?)*  
*Four little horses bouncing on the bed… etc.*

TASK 1. Subtract one

AIMS

• saying the previous number in a number sequence
• subtract-1 subtraction facts

EQUIPMENT

• five small objects and an egg carton for each child
• Attachment: Subtraction flash cards (5 - 1, 4 - 1, 3 - 1, 2 - 1, 1 - 1)
TASK PROCEDURE

Now we will practise counting so that we always take away one. Give the children the objects and egg cartons.

I will tell a little counting story. Make what happens in the story in the egg carton with the objects. For example, like this: Samuel has three dinosaur toys. I will put three objects in the egg carton to show how many dinosaurs. Samuel lends one dinosaur to his little brother. I will take one object away from the egg carton, to show that this one dinosaur is being lent to the little brother. How many dinosaurs does Samuel now have altogether? Which of these subtraction flash cards would be the right one for this subtraction fact?

Go through the following subtraction facts either with stories you think up yourself, or using the ones below, and choose a suitable card for each subtraction fact.

4 - 1: There are four apples on the table. Joanna eats one of them. How many apples are left on the table?

2 - 1: Two children are swinging in the playground. One child jumps off the swing. How many children are swinging now?

5 - 1: Daniel has five balloons. One of them floats up into the sky. How many balloons does Daniel have left?

For thinking together: At the end, attach the cards onto the board, and write the answer for each one. What do the subtraction facts have in common? Do the children notice that the numbers in the starting point and the end point are next to each other in a number sequence? The answer is always one less than the number started out with. When subtracting one, the answer is always the previous number, as in the number sequence task in the warm-up task.

WORKING IN PAIRS

TASK 1. Space Game

AIMS

• subtract-1 subtraction facts

EQUIPMENT

• die (either with the numerals 1-6, or dots), two different-coloured pencils
• Attachment: Space Game B
TASK PROCEDURE

The players take turns throwing the die. The player whose turn it is subtracts one from the count of the die, and says the answer. For example, if the die shows 3, they say, “Three minus one is (or equals) two.” The task of the other player is to observe whether the subtraction fact was done correctly. The player finds the corresponding number from the game board and colours/marks that star with their colour. If the correct answer can no longer be found on the game board, nothing is marked. The game is over when every star on the game board has been coloured. The winner is the player who has coloured more stars.

NOTE

- During the game, you can ask the children how they solve the problems: do they remember the answer directly, think what the previous number was, use fingers for counting, etc. If the child uses their fingers, it is good to encourage them to see if they could already begin to work out the answer in their head.

INDIVIDUAL WORK

AIMS

- subtract-1 subtraction facts

EQUIPMENT

- Worksheet: Subtract-one subtraction facts
TEACHING SESSION 9  Subtract-two subtraction facts

TEACHER-DIRECTED WORK

WARM-UP TASK

AIM

- revising subtract-1 subtraction facts

EQUIPMENT

- Attachments: Dot cards 1–5, Subtraction flash cards (5 - 1, 4 - 1, 3 - 1, 2 - 1, 1 - 1) in a bag

TASK PROCEDURE

A) Subtract one with dot cards. Show one of the dot cards. How many dots can you see? If I were to cover one of the dots, how many dots would you see then? Go through all dot cards 1–5, so that each child gets to answer at least once. If needed, the answer can be illustrated by covering one dot with your finger.

B) Subtraction flash cards. Put the subtraction flash cards in a bag. Each child gets a turn picking a card, showing it, and reading the subtraction fact on it to the other children. The task of the other children is to solve the subtraction fact as quickly as possible. At first, the children can put up their thumbs when they have counted the answer, and as the task progresses, the answer can be said out loud by the child who gets the answer quickest. When the subtraction fact has been solved, put the card back in the bag. In this way, the subtraction facts can be repeated.

C) “Five Little Monkeys” song. In this song, two monkeys will fall off the bed. Begin with the numbers 2, 3, 4, or 5.

Five little monkeys bouncing on the bed, two fell off, and bumped their heads. Mummy called the doctor, and the doctor said, “No more monkeys bouncing on the bed.”

(How many monkeys are bouncing on the bed now? Choose a new number to start with, and a new animal.)

TASK 1. Objects in a box

AIM

- practising subtract-2 subtraction facts
- shortened counting
EQUIPMENT

- Attachment: Subtraction flash cards (5 - 2, 4 - 2, 3 - 2, 2 - 2), 5 objects, a non-transparent box

TASK PROCEDURE

On the table there are a box, five objects, and the subtraction flash cards in a deck, face down. One of the children turns over a subtraction flash card and reads the subtraction fact out loud (e.g., 4 - 2). Ask one of the children to put as many objects in the box as the subtraction fact indicates. Ask another child to take away two objects from the box, one at a time, so that the child always says how many there are left in the box after removing one. (“three, two”). The number that has been mentioned last is the answer to how many objects are left in the box. Check the answer by peeking into the box, or by tipping the objects onto the table. At the end, you can observe that whenever you subtract two, you move backwards from the number you started with by two numbers in the number sequence.

WORKING IN PAIRS

TASK 1. Space Adventure

AIM

- practising subtract-1 or 2 subtraction facts

EQUIPMENT

- a die, counters, pencils, small objects
- Attachment: Space Adventure

TASK PROCEDURE

The players take turns throwing the die, and move the equivalent number of steps on the game board. When they stop in a square, the player solves the subtraction fact on it. If the answer is correct, the player gets an object. The task of the other player is to observe that the subtraction
fact has been solved correctly. The game is over when both players reach the end. The player with more objects at the end is the winner.

INDIVIDUAL WORK

AIM

- fluency in subtract-1 or 2 subtraction facts, quick solving of the subtraction facts

EQUIPMENT

- Worksheet: Focus on fluency (subtract 1 or 2)
TEACHING SESSION 10  Comparing numbers

TEACHER-DIRECTED WORK

WARM-UP TASK

AIM

• revising subtract-1 or 2 subtraction facts

EQUIPMENT

• bean bag, soft ball, or similar object that can be thrown
  • Attachment: Dot cards 1–5

TASK PROCEDURE

A) Show one of the dot cards. How many dots can you see? If I were to cover one/two dots, how many dots would you see then? If needed, you can illustrate the answer by covering one or two dots with your fingers.

B) I will say a subtraction fact. Say the answer as quickly as possible. Throw the beanbag to each child in turn, and say a subtraction fact where the subtrahend is one or two.

TASK 1. Comparing quantities and numbers

AIM

• understanding the difference between numbers

EQUIPMENT

• Attachments: Subtraction flash cards (5 - 4, 5 - 3, 4 - 3, 4 - 2, 3 - 2, 3 - 1, 2 - 1), Number line 0–5
  • two small objects to be placed on the number line as markers, 9 objects (e.g., bricks that can be attached to each other)
TASK PROCEDURE

The subtraction flash cards are shuffled and placed on the table face down. One of the children turns over a card, and says the subtraction fact out loud (e.g., 4 - 3).

You can solve subtraction facts also by thinking what the difference between two numbers is. Let’s try this together, using these bricks and the number line.

Ask one child to build a tower with as many bricks as the first number on the subtraction flash card (4) and another child to build the second number (3). Place the towers next to each other. By how many bricks is this tower (4) higher than this tower (3)? By how many bricks is this tower (3) lower than this tower (4)? The difference between the number of bricks in the towers is one, so the difference between four and three is one.

Let’s look at the same problem on the number line. Ask one child to place an object on the number 4, and another one to place an object on the number 3. How many spaces are left between the numbers? One space is left between the numbers three and four, so the difference between the numbers is one.

Continue in this way with the other subtraction flash cards.

WORKING IN PAIRS

TASK 1. Football Game

AIMS

• understanding the difference between number

EQUIPMENT

• a die (6 is covered in this game, e.g., with tape), pencils, if needed, bricks that can be attached to each other
• Attachment: Football Game
TASK PROCEDURE

The players have the game board and die in front of them. The players choose their football team. One player throws the die that shows how many goals their team has scored in the game, and marks the number of goals on the scoreboard. The other player then throws the die, and marks the number of goals in the same way. After this, the players solve the difference between goals by thinking what the difference between the numbers is. In other words, they answer the question of how many goals more or less one team scored compared to the other. If needed, the number line or bricks can be used. The players write down the subtraction fact. It is good to note that when subtracting, the smaller number is taken away from the bigger number.

INDIVIDUAL WORK

AIM

- calculating the difference between numbers using subtraction

EQUIPMENT

- Worksheet: Difference between numbers
TEACHING SESSION 11  Focus on fluency

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

• observing the difference between numbers in a comparison situation

EQUIPMENT

• two objects, paper and pencils
• Attachment: Number line 0–5

TASK PROCEDURE

A series of verbal problems are solved together, using the number line. Objects are placed on the number line to mark the numbers in the stories. The children write a subtraction sentence based on the story.

*Dylan is five years old. His sister is two years old. What is the age difference between the children?*

*In the morning, the temperature outside was plus one degree. In the daytime, it was plus five degrees. What was the difference between the temperatures in the morning and in the daytime?*

*A toy dinosaur costs four euros. A toy car costs 2 euros. How many euros more does the dinosaur toy cost?*

*Thomas has three meatballs on his plate. Isabella has only one meatball. How many meatballs fewer than Thomas does Isabella have?*

TASK 1. Ghost Game

AIMS

• strengthening subtraction in the number range 1–5

EQUIPMENT

• Attachments: 2 x subtraction flash cards (5 - 1, 4 - 1, 3 - 1, 2 - 1, 1 - 1, 5 - 2, 4 - 2, 3 - 2, 2 - 2, 5 - 3, 4 - 3, 3 - 3, 5 - 4, 4 - 4, 5 - 5), Ghosts (3 pictures of ghosts)
• blu-tack
TASK PROCEDURE

Before the game, the teacher attaches 2–3 pictures on the subtraction flash cards, so the children don’t know the number of ghosts. The cards are shuffled and placed on the table in a deck, face down.

The children take turns turning over cards from the deck. The child can turn over as many cards as they dare to, during their turn. After turning over the card, the child solves the subtraction fact on the card. After this, they decide whether to continue turning over cards. If the ghost turns up, the child loses all cards collected during that turn. These cards and the ghost cards are placed in a deck to the side. If the child decides to stop, they get to keep the cards, and the cards collected during this turn are safe from the ghost and cannot be lost during the next turn. The game is over when all subtraction cards have been turned over. The player with the most cards at the end of the game is the winner.

WORKING IN PAIRS

TASK 1. Haunted House Game

AIMS

• strengthening subtraction in the number range 1–5

EQUIPMENT

• Attachment: Haunted House Game A, counters for the players, two dice (the dice have the numbers or quantities 1–3 only, twice)

TASK PROCEDURE

The players choose their own route by placing their counters in the start square. One can proceed in the haunted house only if one can solve subtraction facts correctly, and thus open a door to the next room. The winner is the player who first reaches the happy ghost.
During their turn, the player throws the two dice. If the count on either die (1, 2, or 3) is the answer to the problem in the room, the player can proceed to the next room. They can solve the problem in this room during their next turn. If neither die has the answer to the problem, the player doesn’t move their counter, but tries to get the correct answer during their next turn.

**INDIVIDUAL WORK**

**AIMS**

- fluency in all subtraction facts (number range 0–5)
- solving the subtraction facts quickly

**EQUIPMENT**

- Worksheet: Focus on fluency A
TEACHING SESSION 12
Focus on fluency

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

- combining a verbal problem and a subtraction fact

EQUIPMENT

- Attachment: Subtraction flash cards that correspond to the counting stories, and a few extra subtraction flash cards

TASK PROCEDURE

The subtraction flash cards are placed on the table so that everyone can see them well.

The teacher tells a counting story. The task of the children is to find a subtraction flash card that matches it. When a child finds the card, they put up their thumb. Thus, everyone will have time to think about the answer.

When the correct problem has been found, think about an answer for it. It is good to show the numbers that appeared in the story on the subtraction flash cards.

4 – 2: Benjamin has four balloons. Two of them burst. How many balloons does Benjamin have left?

5 – 1: Harriet has five euros. She buys a bag of sweets that costs one euro. How many euros does Harriet have left?

5 – 2: Charlie’s ice hockey team scored five goals. The opposite team scored two goals. How many goals more did Charlie’s team score?

4 – 3: Lauren got four email messages on Tuesday. On Wednesday, she got three messages fewer than on Tuesday. How many messages did Lauren get on Wednesday?

3 – 1: There are three plates on the table. I will put one of them in the cupboard, and then, there will be as many plates on the table as there are glasses. How many glasses are there on the table?
WORKING IN PAIRS

TASK 1. Hunting bugs

AIMS

- practising all subtraction facts (number range 0–5)

EQUIPMENT

- Attachment: Hunting bugs A and B
- different-coloured pencils

TASK PROCEDURE

One player gets Attachment A and the other gets Attachment B. The attachments are folded over in the middle, so that one side shows the bugs and the other side shows the subtraction facts.

Player A reads the first series of subtraction facts for player B to solve. Player B gives the answers to the subtraction facts. If an answer is correct, they get to cross out one bug. Thus, the bug has been caught. If an answer is incorrect, the player doesn't cross out anything. There are eight subtraction facts in each series. If the player answers all of them correctly, they have caught all of the bugs.

When Player A has read one series of subtraction facts, the players change turns. Now, Player B reads subtraction facts from their list, for Player A to solve.

After the first round, another round is played, and bugs are crossed out with a different-coloured pencil. The aim is to get as least as good a score as in the first round, or to improve one’s score.
TASK 2. Bug Game

AIMS

- strengthening subtraction in the number range 0–5

EQUIPMENT

- a die, counters for moving on the game board, pencils (or small objects to mark correct answers)
- Attachments: Bug Game, Series of subtraction facts for the Bug Game

TASK PROCEDURE

The players take turns throwing the die and proceed on the game board according to the count. After each turn, the other player gives the subtraction fact of their choice, to be solved by the player whose turn it was to move. If the player gives the correct answer, they can draw a line on a separate piece of paper to show they knew the answer. Alternatively, the players can collect counters for right answers. When both players get to the end, they count who solved more subtraction facts along the way.

INDIVIDUAL WORK

AIMS

- fluent solving of all subtraction facts (number range 0–5)
EQUIPMENT

- Worksheet: Focus on fluency B
TEACHING SESSION 13  
Missing number in addition

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

• revising addition

EQUIPMENT

• Post-it notes

TASK PROCEDURE

Ten addition facts in the number range 1–5 have been written on the board. The answers have been covered with Post-it notes.

E.g.,

\[ 3 + 1 = X \quad 2 + 3 = X \]
\[ 1 + 4 = X \quad 1 + 2 = X \]
\[ 5 + 0 = X \quad 1 + 1 = X \]
\[ 2 + 2 = X \quad 3 + 1 = X \]

One number in the addition fact, in this case, the answer, has been covered. What is the hidden number?

Go through all addition facts together, and remove the notes to reveal the answers.

TASK 1. Missing number

AIMS

• solving a missing number in an addition fact

EQUIPMENT

• Post-it notes
• five objects (e.g., bricks) for each child
TASK PROCEDURE

An addition fact has been written on the board, with the one addend covered with a Post-it note (e.g., $2 + \square = 5$).

In the earlier task, the answer was covered. This time, one of the addends/numbers being added together has been covered. Two plus something is equal to five. Let’s practise how we can find out what number has been covered.

Put on the table as many bricks as the answer of the addition fact (5). From these, take away as many bricks as the other number in the addition fact shows (2). What we have left is the number that is missing from the sum, and here, it is 3. Two and three make five. Demonstrate by putting the bricks back together again. Let one of the children reveal the hidden number.

Solve the rest of the addition facts in the same way. Let the children first think about how they can work out the covered number using bricks. Demonstrate the correct answer, or let one of the children demonstrate it.

E.g.,

\[
\begin{align*}
1 + x &= 4 \\
3 + x &= 3 \\
x + 2 &= 4 \\
x + 4 &= 5 \\
x + 4 &= 4 \\
2 + x &= 3
\end{align*}
\]

NOTE

- Through doing this task, little by little the children will learn that to find out the hidden addend, they have to subtract the other addend from the answer. This, however, often has to be taught to the children. If the child knows the partitions of a number, they might be able to say the missing addend directly (“one and three is four”). The method learned using subtraction can, however, be utilised also within a bigger number range.

INDIVIDUAL WORK

AIMS

- solving the missing number in addition
EQUIPMENT

- Worksheet: Missing number A
TEACHING SESSION 14  

Missing number in addition

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

- solving the missing number in addition using subtraction

TASK PROCEDURE

Addition facts with a missing number (e.g., marked with an empty square) are written on the board one at a time. The missing number is either the first or the second addend. How can we find out the missing number?

The other addend is subtracted from the answer. If needed, demonstrate the problem, e.g., with bricks, as was done in Teaching Session 13. Can the children solve the problem without concrete aids?

TASK 1. Getting acquainted with the triangle cards

AIMS

- solving the missing number in addition

EQUIPMENT

- Attachment: Triangle cards of the numbers 5, 4, and 3
- 4 small objects for each child, e.g., bricks
TASK PROCEDURE

A) Here we have cards with numbers. What shape is the card? (Triangle.) That’s why these are called triangle cards. With triangle cards, we can do different addition facts.

![Triangle Card Example]

Take, for example, the card with the numbers 1, 3, and 4. Which number is the biggest? (4) The biggest number on the card is always in the blue triangle. Take as many bricks as the number shows.

If we divide the bricks into two groups, so that one group has one brick, how many bricks are there in the other group? The card shows exactly the same thing in numbers. Number 4 has been divided into two parts: 1 and 3. They are in the yellow triangles.

Try the same task with a few cards.

B) Think, what kinds of addition facts can be made with the triangle cards. For example, take the card with the numbers 2, 2, 4. Fold back the number on the blue triangle (4), so it can’t be seen. What addition fact can you make from these two numbers that you can still see? What is the answer of the addition fact? You can check by turning back the blue triangle, so you can see it. Put the triangle cards on the table face down. Let the children take turns picking a card and hiding the blue triangle. Each child will ask the others what addition fact can be created with the numbers, and what the answer is.

C) Try to make addition facts with a missing number with the triangle cards. Take, e.g., the card with the numbers 1, 2, 3. Fold back the number on one of the yellow triangles (e.g., 2) so it cannot be seen. What number do we have to add to one, to make number three? Write the sum on the board also, for the children to see (1 + _ = 3). The addition fact is checked by turning back the yellow triangle, so it can be seen: 1 and 2 make 3.
WORKING IN PAIRS

TASK 1. Triangle dominos

AIMS

- solving the missing number in addition

EQUIPMENT

- Attachment: Triangle dominos (the cards are cut separate from each other)

TASK PROCEDURE

A game for 2–3 players. One card is placed on the table as the starting card. The rest are shuffled and dealt to the players. The task of the players is to solve the missing number on the triangle card. The player who finds the missing number among their cards places it on the card on the table so that the triangle now has all three numbers.
After this, the next missing number is solved. The player who didn't get to place a card before gets to try this first. The game is continued until the players can no longer place a card on the table. The player with least cards left wins the game.

Several rounds are played, changing the starting card.

**INDIVIDUAL WORK**

**AIMS**

- solving the missing number in addition

**EQUIPMENT**

- Worksheet: Missing number B
TEACHING SESSION 15      Fact families with triangle cards

TEACHER-DIRECTED WORK

WARM-UP TASK

AIMS

- solving the missing number on a triangle card

EQUIPMENT

- Attachment: Triangle cards (numbers 2-5)

TASK PROCEDURE

A game of speed. What is the hidden number on a triangle card? The quickest to solve the problem gets the card. A card is lost for an incorrect answer.

Hold the triangle cards in your hand so the children cannot see the numbers. Fold back either the blue or a yellow triangle to hide the number, and show the card to the children. Every now and then you can also ask how the children solved the problem: e.g., just knew it immediately, solved it through addition or subtraction, etc.

TASK 1. Fact families from triangle cards

AIMS

- forming four calculations from a triangle card

EQUIPMENT

- 5 small objects (e.g., bricks)
- Attachment: Triangle cards (numbers 2-5)

TASK PROCEDURE

Show the children one triangle card. What addition fact can you make with these numbers, so that all three numbers are used? (E.g., 1 + 2 = 3.) Show the same with bricks. Write the number sentence on the board. Is there another addition fact you can make with the same numbers? (2 + 1 = 3)

What subtraction fact can you make with these numbers, so that all three numbers are used? (E.g., 3 - 1 = 2.) Show the same with bricks. Write the number sentence on the board. Can you make another subtraction fact with the same numbers? (3 - 2 = 1) Go through the same with another triangle card.

In the end, establish that two addition and two subtraction facts can be formed from one card. These four calculations formed from three numbers are called a fact family.
WORKING IN PAIRS

TASK 1. Fact families using triangle cards

AIMS

- forming four calculations from a triangle card

EQUIPMENT

- Attachment: Triangle cards (numbers 2-5), Fact families
- (small objects, e.g., bricks)

TASK PROCEDURE

The pairs take a triangle card each.

Each pair marks in the triangle on the worksheet the numbers on their triangle card. After this, they figure out together, which two addition and which two subtractions facts they can form with the triangle cards. Bricks or folding back numbers on the triangle cards can be used to help. The pair writes down the addition and subtraction facts on the worksheet.

The teacher checks the calculations, after which the pair gets a new triangle card.
INDIVIDUAL WORK

AIMS

• forming fact families from three numbers

EQUIPMENT

• Worksheet: Fact families