

Maths and Me: 1st Class – Short-Term Plan, Unit 15: Money (May: Weeks 1&2)

Strand(s) > Strand Unit(s)

Measures > Money, Number > Numeration and Counting; Sets and Operations. Algebra > Expressions and Equations.




Learning Outcome(s)

Through appropriately playful and engaging learning experiences children should be able to recognise the value of money and use euro and cent in a range of meaningful contexts; demonstrate proficiency in using and applying different counting strategies; select, make use of and represent a range of addition and subtraction strategies; interpret the meaning of symbols or pictures in number sentences.

Lesson	Focus of Learning (with Elements)	CM	Learning Experiences	Assessment
1	Euro Coins: Articulates and shares prior understanding of money and euro denominations (U&C), (R), (C); Recognises the relative value of coins, up to the value of at least €1 (U&C); Describes similarities and differences between coins (C); Estimates values of undetermined amounts of money (R)		D Choral Counting L1 D Notice & Wonder L1–2, 5 D Think-Pair-Share L1–2, 5 D Reason & Respond L1–2, 4–6 C Least and Most L1 D Quick Images L1	Intuitive Assessment: responding to emerging misconceptions
2	Notes and Coins: Uses the euro (€) and cent (c) symbol to represent money (C); Analyses different ways of combining coins/amounts to make particular sums (R); Describes similarities and differences between coins and/or notes (C)		D Write-Hide-Show L1, 4–5 D Toolkit: Money – What Coin Am I? L2 C Game: ‘Dip, Dip, Dip’ L3 C Maths Stations: ‘More, Less or Equal?’ Games L3	Planned Interactions: responding to insights gleaned from children’s responses to learning experiences
3	More, Less or Equal?: Compares and orders collections of coins (R); Uses the <, > and = symbols to represent the relationship (U&C)		C Counting Can L4, 6 C Is it a Fair Trade? L4 C Write-Hide-Show L1, 4–5 D Number Strings L6 C The Human Number Line L7 C Role Play L7	Assessment Events: information gathered from completion of the unit assessment in the Progress Assessment Booklet page 26
4	Counting and Making Amounts: Recognises the relative value of coins, up to the value of at least €1 (U&C); Analyses different ways of combining coins/amounts to make particular sums (R)		Print resources Pupil Book pages 94–100 Home/School Links Book pages 34–35 PCMs 51–55	
5	The Garden Shop: Determines what can be bought for certain sums of money (U&C); Explores a variety of ways to record calculations (C)			
6	Finding Totals: Selects and uses appropriate mental and written strategies (including number sentences) for estimating and calculating totals/simple bills (totals not to exceed 99c) (A&PS); Explores a variety of ways to record calculations (C)			
7	Shopping: Exchanges money for goods/items in real-life or role-play contexts (A&PS)			
8	Review and Reflect: Reviews and reflects on learning (U&C)			

Key: Elements: (U&C) Understanding and Connecting; (C) Communicating; (R) Reasoning; (A&PS) Applying and Problem-Solving. **CM:** Cuntas Míosúil: please tick when you have completed the focus of learning. **Learning Experiences:** C concrete activity; D digital activity; P activity based on printed materials, followed by lesson numbers.

Additional information for planning

 Progression Continua	See '1st Class <i>Maths and Me</i> Progression Continua Overview' for a detailed breakdown of how all progression continua are covered.
 Maths Language	See '1st Class <i>Maths and Me</i> Language Overview', individual lesson plans and the Unit 15 Maths Language Cards.
 Equipment	See '1st Class <i>Maths and Me</i> Equipment Overview' and individual lesson plans.
Inclusive Practices	<ul style="list-style-type: none"> See Let's Strengthen and Let's Deepen suggestions throughout lesson plans. See Unit 15 Let's Strengthen Suggestions for Teachers. (These address the Common Misconceptions and Difficulties listed below.) See Unit 15 Let's Strengthen PCM. See Unit 15 Let's Deepen PCM.
Integration	See individual lesson plans.

Background and rationale

- Through playful, engaging, age-appropriate activities, the children will be guided in exploring the theme of money and the ways in which money is used around us.
- The Money unit follows those of Number, including Sets and Operations, so the children are familiar with adding with renaming. Algebra, including Number Patterns, has also been covered and the children are familiar with skip counting. The Money unit allows for review and further consolidation.
- Throughout, the children use their MWBs to record, work out, respond and initiate. As in *Maths and Me* Senior Infants, open-ended questions allow the children to develop and justify their mathematical approaches and skills.
- This topic will culminate in the children creating their own shopping experience. There is opportunity here for parents to become involved too. As a two-week unit, there is time and scope for considerable learning to take place.

The theme of this unit is **Shopping**.

Common misconceptions and difficulties

While money is an integral part of modern life and society, children are encountering cash less frequently. Rounding to the nearest 5 was introduced in 2015, and as the phasing out of 1c and 2c continues, the children will be less and less likely to encounter these. Therefore, children are increasingly less familiar with cash.

- The children may see paper money and coins as separate types of currency.
- They may confuse the value of the coins and notes, especially if they have the same digits (e.g. 2c, 20c and €2) and/or the number is larger (e.g. incorrectly assume that a 50c coin is worth more than a €1 or €2 coin).
- They may not appreciate that the size of a coin or note is not proportional to, or representational of, its value.
- When drawing coins/notes to make an amount, the children may incorrectly suggest coin or note denominations that do not exist (e.g. to make 8c the child draws a 4c coin and a 4c coin).
- The children may incorrectly assume that amounts made from notes are always greater in value than amounts made from coins (i.e. two €5 notes are not worth more than six €2 coins).

- They may incorrectly assume that amounts made from more notes/coins are always greater in value than amounts made from fewer coins/notes (i.e. two 10c coins are worth more than nine 2c coins).
- They may incorrectly use the € and c symbols and decimal point.
- They may incorrectly assume that to compare you must count all of both sets.
- Some children may experience difficulty with:
 - Exchanging amounts for an equivalent value
 - Converting amounts from euro (using € and the decimal point) to cent (using c) and vice versa
 - Counting coins/notes
 - Identifying/comparing equal and unequal amounts, and using the inequality symbols ($<$, $>$)
 - Making change.
- Furthermore, problems involving money calculations presented to young children frequently do not relate to their life experiences or can be unrealistic in terms of buying power (e.g. an apple for 3c). In this unit, we have tried to include as many realistic scenarios as possible that are also within the limits of the number and operations concepts that children have encountered to date.

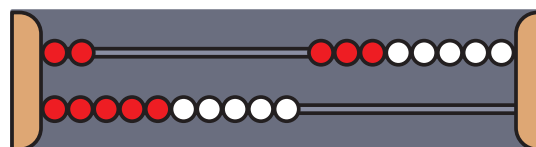
The Unit 15 Let's Strengthen Suggestions for Teachers address the common misconceptions and difficulties listed above.

Mathematical models and representations

- Representations of coins and notes
- Dice
- Number paths and other counting supports (e.g. rekenreks, counters)



Representations of coins and notes



Rekenrek



Dice

Teaching tip

Coins, Euro Notes, and Number Path manipulative printables are available to support this unit. Click on the resources icon on the *Maths and Me* book cover on edcolearning.ie

Days 1 and 2, Lesson 1

Euro Coins

Focus of learning (with Elements)

- Articulates and shares prior understanding of money and euro denominations (U&C), (R), (C)
- Recognises the relative value of coins, up to the value of at least €1 (U&C)
- Describes similarities and differences between coins (C)
- Estimates values of undetermined amounts of money (R)

Learning experiences

- D** Digital activity: Forwards and Backwards Counting to/from 100
MAM Routine: Choral Counting
- D** Video: At the Shop (1) **MAM Routines: Notice & Wonder, with Think-Pair-Share; Reason & Respond, with Think-Pair-Share**
- C** Concrete activity: Least and Most
- C** Sorting activity: Sorting Coins **MAM Routine: Think-Pair-Share**
- D** Toolkit: Money **MAM Routine: Think-Pair-Share**
- D** Digital activity: Estimate and Count
MAM Routines: Quick Images, with Write-Hide-Show
- P** Pupil Book page 94: Euro Coins

Equipment

- Play money (a sufficient variety of coins: 1c to €2)
- Counting supports, such as number paths, 100 squares, rekenreks and counters
- Per pair: a pot to hold coins

Maths language

- most, worth, spend, money, cash, cashless, notes, coins, different, cent, euro, symbol, buy, change, pay, card, payment, least, first, next, value, sort, same, row, edges, smallest, largest, thinnest, estimate, count, pay

Warm-up

**D Digital activity: Forwards and Backwards Counting to/from 100****MAM Routine: Choral Counting**

Use different starting points for counting in ones, e.g. from 10 or 20. You could also progress to skip counting in 2s, 10s and/or 5s. Consider revisiting the digital activity from Unit 7, Lesson 3: Skip Counting in 2s, 10s and 5s (B).

Ask the children to record a pattern of skip counting on the open number line on the back of their MWBs.

Teaching tip

On Day 1, you could count to 50, and on Day 2 you could repeat the Warm-up and count to 100.

Let's strengthen

Use a counting support such as a rekenrek for counting in 5s and 10s and prepared number lines for counting in 2s.

Let's deepen

Challenge the children to skip count in 2s or 5s with the coins and to record it on their MWBs.

Main event

**D Video: At the Shop (1) MAM Routines:**
Notice & Wonder, with Think-Pair-Share

Play the video and, using Think-Pair-Share, ask:

- What do you notice?
- What do you wonder?



Record the children's responses to both questions on the board. Allow the children the opportunity to respond to (agree/disagree with or query) others' responses but do not confirm or reject any of the ideas. Note any 'wonderings' that could become the basis for a subsequent maths investigation.

**D Video: At the Shop (1) MAM Routines:**
Reason & Respond, with Think-Pair-Share

Play the video again and, using Think-Pair-Share, ask the questions below. The children can use their MWBs to record and compare their ideas.

- In what different ways did people 'spend' money? (cash, cashless)
- When people paid with cash, what did the cash look like? (focus on coins)
- Are notes and coins the same or different? How?
- Draw all the coins you can think of on your MWB. Compare with your partner.
- How many different coins have you each drawn?
- Some children wrote 'c' on coins. What does the 'c' mean on the coin?
- Some children have used the € symbol. What does this mean?
- How can we tell how much each coin is worth?
- If you had cash, where would you keep it?
- How would you find out how much money you have in your purse/wallet/piggy bank?
- Why do we sometimes get change when we buy something?
- How can we work out what our change will be? (Some children may be able to offer examples, e.g. 'If I had 10c and spent 8c, I would get 2c change.')
- Did anyone in the video pay without using cash? How? (bank card)
- If a bank card is used as payment, where does the money come from?

Let's strengthen

The children will benefit from working with physical coins instead of drawing them.

C Concrete activity: Least and Most

Provide the children with a selection of coins of different denominations: 1c, 2c, 5c, 10c, 20c, 50c, €1 and €2. Ask the children to work in pairs.

- Draw the coins on your MWBs, starting with the coin worth the least amount.
- Let's share what we know on the IWB (e.g. which coin comes first, which coin comes next)?
- Using the least number of coins possible, draw coins to the value of 7c on your MWB.
- Now, using the most number of coins possible, draw coins to the value of 7c on your MWB.
- How many different ways did you find to do the least amount and most amount of coins?

Teaching tip

Go to the Manipulatives e-Toolkit and open the Money tool to display the coins on the IWB. Display the different combinations of coins on the IWB. Add any combinations that the children did not suggest.

Further consolidate this concept by using this as an extra Warm-up activity on multiple days across the unit (with the target value of the coins getting progressively more difficult).

Let's strengthen

- The children may prefer to order actual coins rather than draw them.
- Repeat the activity with lesser or similar amounts (e.g. 4c).

Let's deepen

- Repeat the activity with greater amounts, such as 17c, 50c, €1, or challenge the children to make the amount using coins with odd/even values only.
- Challenge the children with an extension activity: display a variety of coins (e.g. $5 \times 1c$; $6 \times 2c$; $4 \times 5c$; $3 \times 10c$; $2 \times 20c$), followed by a mixture of coins to the maximum value of 50c. Ask the children to add the value of these coins. What strategies will they use?

C Sorting activity: Sorting Coins

MAM Routine: Think-Pair-Share

Ask the children to work in pairs. Give each pair multiple coins of each denomination (1c to €2). Ask:

- How can we sort the coins? What sorting rule could we use? (denomination, size, image, colour, etc.)
- Work with your partner to agree on a rule, and then sort the coins.

As the children work, ask them about their sorting rule, and see if they can think of other rules. At the end of the activity, share the sorting rules the children came up with. Ask:

- Which coin has the least/most value?
- Is 'c' written on every coin? Why not?
- Which is worth more: 1c or €1?
- If I had five 1c coins, which single coin would that equal?

Let's strengthen

Work in pairs or small groups and model a sorting strategy or provide a sorting rule card (see Unit 15 Let's Strengthen PCM).

D Toolkit: Money **MAM Routine: Think-Pair-Share**

The children work in pairs. Give each pair multiple coins of each denomination (1c to €2). Explain that coins have many features to help us tell them apart. Display the Money tool from the Manipulatives e-Toolkit on the IWB. Share the children's findings on the IWB by similarly arranging the digital coins and discussing their features. Alternatively, the class can work as a whole, using the digital coins. Using Think-Pair-Share, ask the children:

- How many different coins are there? (eight)
- What is the same? What is different?
- Two coins have the number 1 on them. Why? What words are written on these coins? (cent/ euro. Note that the cent coins have 'Euro cent' written on them, so you might need to explain that people just refer to them as 'cent'.)
- Which one is worth more?
- Two coins have the number 2 on them. Why? What words are written on these coins? (cent/ euro).
- Which coin is worth more?
- With your partner, arrange the coins in a row, starting with the coin which is worth the least. What do you notice? (colour, pattern)

- Look at the three brown (copper) coins (cent). Feel the edges of the coins. What do you notice? (2c has a grooved edge.) Why do you think this is? (visual impairment aid)
- What word is the same on all three gold coins? (cent) Feel the edges of the coins. What do you notice? (5c and 10c have ribbed edges; 20c has a nicked edge.) Why do you think this is?
- Look at the coins with two colours. What word is written on the coins? (euro)
- What letter can we write instead of the word 'cent'?
- What symbol can we use instead of the word 'euro'?

Teaching tip

Print out the Coins manipulative printable from least to most value to display in the classroom.

Let's strengthen

The children may benefit from using the Coins manipulative printable from least to most value for a matching activity.

Let's deepen

Challenge the children to identify what digits do not feature on euro coins and to find other design features such as 12 stars, the globe (1c to 5c coins), a map (10c to €2 coins), a country name or the Irish harp. Can the children compare the thickness of the coins?

D Digital activity: Estimate and Count **MAM Routines: Quick Images, with Write-Hide-Show**

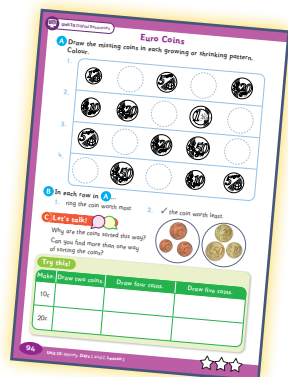
Play the slideshow, which shows a collection of coins on each slide. Using Write-Hide-Show, ask the children to estimate and write the total value on their MWBs. The progression is from amounts less than/ equal to 20c (Senior Infants) to a total of 100c. Provide counting supports for scaffolding, if needed.

Encourage the children to share estimates and to discuss whether they are reasonable. If some children connect 100c with €1, ask them to share this information with the class. When several children have had the opportunity to give their estimates, reveal the collections again and discuss the counting strategies used.

Let's strengthen

The children may be ready to recognise and name the coins featured, without calculating the total. Use counting supports.

P Pupil's Book page 94:
Euro Coins



Optional consolidation and extension possibilities

Money Display On the display table, ask the children to sort coins/images into *greater than/less than* categories. Use sorting circles (see PCM 51).

Sorting Sort coins/images into *cent/not cent*. Use sorting circles (see PCM 51).

Games Bank Play a version of 'Dip, Dip, Dip' from the Games Bank. The children dip into a bag containing a selection of coins. They draw out one coin each. Whoever draws the coin of a higher value wins both coins. The child with the most coins wins the game. Further extend the game so that the child with the greatest *value* of coins at the end wins the game.

Coin Rubbings Use a selection of coins to make coin rubbings of both sides. (You can develop this into a parallel task by differentiating the selection of coins.) Working in pairs, the children then put the same selection of coins (with multiple numbers of each

coin) into a bag. They take turns to dip into the bag (without looking at the coins), choose a coin and place it on top of the coin rubbing of the same side of that same coin. If, on the next turn, they get the same coin, then the other side of the rubbing is covered. If that coin is selected on subsequent turns, it is returned to the bag. The first child to cover all coin rubbings wins the game.

Coin-rubbing Display Supply the children with paper and coins and make a coin-rubbing display.

Estimation Station Place coins of one denomination in a jar. Provide sticky notes for the children to make their estimates of how many coins and/or how much money altogether.

Home/School Links Book Page 34 can be completed at any stage after this lesson.

My Maths Fact File Page 125 can be completed at any stage after this lesson.

Day 3, Lesson 2

Notes and Coins

Focus of learning (with Elements)

- Uses the euro (€) and cent (c) symbol to represent money (C)
- Analyses different ways of combining coins/amounts to make particular sums (R)
- Describes similarities and differences between coins and/or notes (C)

Learning experiences

- D** Toolkit: Money – What Coin Am I?
- D** Video: At the Shop (2) **MAM Routines: Notice & Wonder, with Think-Pair-Share; Reason & Respond, with Think-Pair-Share**
- P** Pupil Book page 95: Notes and Coins

Equipment

- Play money (coins and notes)
- Counting supports, such as number paths, 100 squares, rekenreks and counters

Maths language

- how many? more, amount altogether, bigger, size

Warm-up



D Toolkit: Money – What Coin Am I?

Open the Money tool from the Manipulatives e-Toolkit and display the range of coins on the IWB. Describe a coin and ask the children to guess the coin, based on the description. All or some of the statements below can be used.

The children can draw or write all possible answers to the first clue and eliminate coins by erasing or crossing them out. You can model this with the e-manipulative on the IWB.

Coin 1 (2c)

- The word 'cent' is written on me.
- I am brown/copper in colour.
- My value is between 1c and 5c.

Coin 2 (€2)

- I have two colours.
- The word 'cent' is not written on me.
- I am greater than €1.

Coin 3 (20c)

- The word 'cent' is written on me.
- I do not have two colours.
- I am not brown/copper.
- My value is greater than 5c.
- My value is the same as 10c plus 10c more.

Let's strengthen

Encourage the children to use correct language such as 'altogether', 'bigger', 'size', 'digits' and 'pattern'.

Let's deepen

Encourage the children to record all possible answers on their MWBs and to eliminate the incorrect coins as the clues are read out.

Main event



D Video: At the Shop (2) *MAM Routines: Notice & Wonder, with Think-Pair-Share*

Play the video and, using Think-Pair-Share, ask:

- What do you notice?
- What do you wonder?



Record the children's responses to both questions on the board. Allow the children the opportunity to respond to (agree/disagree with or query) others' responses, but do not confirm or reject any of the ideas. Note any 'wonderings' that could become the basis for a subsequent maths investigation.



D Video: At the Shop (2) *MAM Routines: Reason & Respond, with Think-Pair-Share*

Play the video again and, using Think-Pair-Share, ask the questions below. The children can use their MWBs to record and compare their ideas. The children will need a variety of notes and coins in all denominations.

Teaching tip

You can use the Euro Notes manipulative printable to make a display and reference point in the classroom, or you could use the Money tool e-manipulative to display them on the IWB.

- In what different ways did people spend money in the video? (cash, cashless)

- When people paid with cash, did you notice cash that was not coins?
- Find all the different notes you can from those on your table. How many different notes do you have altogether?
- How can we tell how much each note is worth?
- Are notes euros or cents? How do we know? (Because of the symbol. Demonstrate how to write the € symbol on the IWB.)
- Can you write the € symbol on your MWB?
- Do you agree or disagree? 'The more euros a note is worth, the bigger the note is in size.' Investigate this, using the notes on your table.
- Do you agree or disagree? 'All €5 notes are grey in colour.' Investigate this, using the notes on your table.
- What colour is the €10/€20/€50 note?
- Why is there no €1 or €2 note? What do we use instead?
- Take turns, giving your partner €5/€10/€20/€50 using the least/most amount of notes possible.
- (Distribute €1 and €2 coins.) Give your partner €7/€15/€27 using the least/most amount of notes and coins possible.

Let's deepen

Challenge the children to identify which digits do not feature on euro money (3, 6, 7, 8, 9, etc.) Is there a pattern?

Give the children a variety of notes and coins from other countries (see PCM 52).

Cut and sort:

- Coins and notes
- Coins and notes with symbols, and those without
- Known currency names and unknown.

Match:

- Coins and notes from the same country.

P Pupil's Book page 95:
Notes and Coins



Optional consolidation and extension possibilities

Money Display Ask the children to bring in notes and coins from around the world.

Estimation Station Place notes of one denomination in a jar. Provide sticky notes for the children to make their estimates of how many notes and/or how much money altogether.

Day 4, Lesson 3

More, Less or Equal?

Focus of learning (with Elements)

- Compares and orders collections of coins (R)
- Uses the $<$, $>$ and $=$ symbols to represent the relationship (U&C)

Learning experiences

- C** Game: 'Dip, Dip, Dip'
- C** Maths Stations: 'More, Less or Equal?' Games
- P** Pupil Book page 96: More, Less or Equal?

Equipment

- Coins
- Bag
- Unit 15 Maths Language Cards (greater than, less than, equals)
- 9-sided dice
- Counting supports, such as number paths, 100 squares, rekenreks and counters

Maths language

- value, number sentence, less, tens, ones, greater than, less than, equal, sign, added

Warm-up

C Game: 'Dip, Dip, Dip'

Set up a bag containing one coin of each denomination. Choose a target money amount, e.g. 57c. Work as a whole class. 'Dip' into the bag and pull out one coin. Ask the children:

- Is this coin enough, too little or too much to meet the target amount?
- How can we write this in a number sentence, e.g. 50c is less than 57c? ($50c < 57c$)

Model, introducing the greater than ($>$), less than ($<$), and equals ($=$) symbols (see Unit 15 Maths Language Cards) and continue until the children are comfortable using the symbols. Extend the activity by adding more coins to the bag and choosing two coins. When added together, are these two coins the same as (equal to), greater than or less than the target amount? Model writing the number sentence, e.g. $20c + 10c < 50c$.

Main event

C Maths Stations: 'More, Less or Equal?' Games

Set up three Maths stations for the children to rotate around to play three different games.

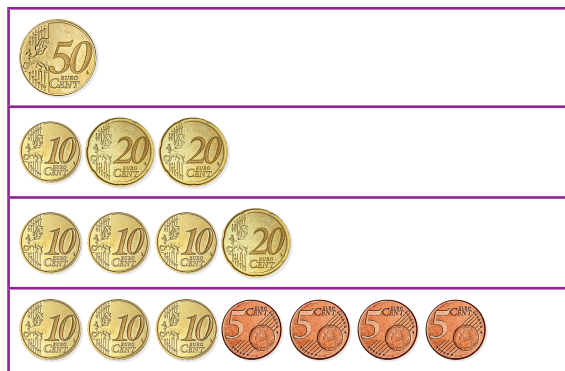
**Teaching tip**

The Least and Most game from Lesson 1 could also be used as a fourth station.

1. The Same As/Equals

The children work in groups of four and arrange their MWBs together in four rows to form a larger rectangle. They take turns to be Child 1.

Child 1 puts a coin or combination of coins in the corner of their MWBs. The other three children put the same amount of money on their MWBs, using a different combination of coins each time. For example:



The results can be recorded as number sentences, e.g. $50c = 10c + 20c + 20c$.

2. Dip, Dip, Dip (More, Less or Equal?)

In groups of four, the children take turns to choose a target amount less than 100c, e.g. 57c. They can use the 0–9 spinner. Spin first for the tens and again for the units.

They play 'Dip, Dip, Dip' as previously modeled, recording each child's turn on their MWBs with the greater than (>), less than (<) and equals (=) symbols (see PCM 53: Symbol Cards).

Extend the activity by adding more coins to the bag. Ask the children to pull out two coins this time:

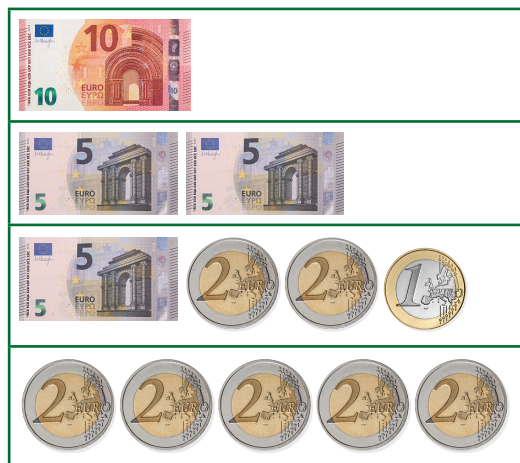
- When added together, are these two coins the same as (equal to), greater than or less than the target amount?
- Write the number sentence.

Let's deepen

- Use €1 and €2 coins and/or notes to make €50. How much more is needed to make the two equal?

- Game: The Same As/Equals

Child 1 puts a note on their MWB. The other three children must put coins and/or notes to the same value on their MWB. For example:



- Challenge: Can all four MWBs have different combinations?

3. Spinner: More, Less or Equal?

In pairs, the children take turns to spin the 0–9 spinner. The first spin is the tens, the second is the ones. The children then gather coins to that value. Use the coins to write a number sentence using less than (<), greater than (>) or equals (=) symbols.

Let's strengthen

Use one dice. Is there a coin to match that exact amount? Or try using one 9-sided dice, two 6-sided dice or one 6-sided dice.

P Pupil's Book page 96: More, Less or Equal?

Optional consolidation and extension possibilities

Classroom Display Photograph the Same As/Equals game. Use the photos to make a display or upload them onto the IWB and use them for a revision and/or a Warm-up activity (e.g. Can you make 50c another way?).

Headline Story Present a Headline Story scenario to the children. They record their headline stories in pictures or words in their Maths Journals. Examples:

- I had 90c. My friend had less/more.
- I had greater than 50c. My friend had less/more.
- I had more money than my friend.

Review and Reflect Use the Prompt Questions poster to focus on More, Less or Equal aspects of the unit.

Day 5, Lesson 4

Counting and Making Amounts

Focus of learning (with Elements)

- Recognises the relative value of coins, up to the value of at least €1 (U&C)
- Analyses different ways of combining coins/amounts to make particular sums (R)

Learning experiences

- C** Concrete activity: Counting Can
- D** Digital activity: Is it a Fair Trade? **MAM Routines: Reason & Respond, with Write-Hide-Show**
- C** Trading activity: Is it a Fair Trade?
- P** Pupil Book page 97: Counting and Making Amounts

Equipment

- A can/jar (it must make noise when coins are dropped into it)
- Per pair: a pot to hold coins
- Coins (1c to €2)
- Counting supports, such as number paths, 100 squares, rekenreks and counters

Maths language

- fair, trade, how much more? how much less?

Warm-up

C Concrete activity: Counting Can

You will need a selection of 1c, 2c, 5c, 10c, 20c and 50c coins. With the children's help, count out a number of coins, e.g. $20 \times 1c$ coins.

- What amount is that altogether?

Tell the children to close their eyes, listen and count as you drop a random number of the same denomination coins, one by one, into the can/jar. Ask the children to open their eyes and show them the can/jar.

- How much is in the can/jar?

Repeat the activity using different denominations.

Let's strengthen

Use a counting support such as a rekenrek for counting in 5s, 10s and 20s. Use a number line for counting in ones and prepared number lines for counting in 2s.

Let's deepen

Ask the children: If I took out 1c/2c/5c/10c/20c (or multiples of), how much would I have left?

Main event



D Digital activity: Is it a Fair Trade?
MAM Routines: Reason & Respond,
with Write-Hide-Show

For each of the three slides, ask the children to consider this question: Is it a fair trade?



Using Write-Hide-Show, the children give their answers on their MWBs. The answers are then considered, giving the children a chance to explain and justify. Revoicing should be used to strengthen and deepen.

Slide 1

- Is it a fair trade?
- How many coins does Jay have?
- How many coins does Mia have?
- Jay has lots of coins and Mia has only one. Does that mean Jay has the most money?
- How much more does Jay need to have an equal amount of money to Mia? Draw the coin or coins he would need.

Teaching tip

You can model the possible answers suggested by the children by opening the Money tool from the Manipulatives e-Toolkit and moving coins or coin combinations onto the IWB. Making a mistake and having the children notice and discuss why it is a mistake will foster a positive outlook on making mistakes and learning from them.

Slide 2

- Is it a fair trade?
- How many coins does Mia have?
- How many coins does Jay have?
- 'I think Jay has the most money.' Do you agree or disagree?
- How much less does Jay have than Mia?
- What coin or coins would he need to have an equal amount of money to Mia? Draw the coin or coins he would need.

Slide 3

- Is it a fair trade?
- How many coins does Jay have?
- How many coins does Mia have?
- 'Jay has a gold-coloured coin so he must have the most.' Do you agree or disagree?
- What if Jay lost one of his coins? How much would he have then? Draw other coins he could use to replace the lost coin.

Let's strengthen

Use counting supports and/or play coins. Provide the children with printouts of the slideshow images.

C Trading activity: Is it a Fair Trade?

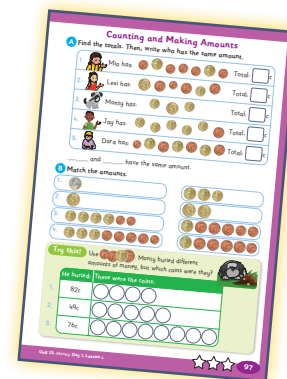
Play without the €2 coin. The children work in pairs and take turns. Child A takes a single coin and Child B 'grabs' a handful of coins. Would they trade the single coin for the handful? Ensure the children grasp fundamental concepts, e.g. €1 = 100c, 50c + 50c and other combinations.

- Is it a fair trade? Why?

Let's deepen

- The children may be ready to use the €2 coin too. How much more for a fair trade? Write the number sentence.
- Using notes (€5, €10, €20) and coins (50c, €1 and €2), the children work in pairs and take turns. Without looking at the notes, Child A chooses a single note and Child B 'grabs' a handful of coins. Is it a fair trade? Record on the MWBs using <, > or =.

P Pupil's Book page 97:
Counting and Making
Amounts



Optional consolidation and extension possibilities

Games Bank Play 'Dice Roll' from Lesson 4 as a parallel task using 1 × 9-sided dice, 2 × 6-sided dice or 1 × 6-sided dice.

Target Board Play the Target Board activity on PCM 55.

Home/School Links Book Page 35 can be completed at any stage after this lesson.

Day 6, Lesson 5

The Garden Shop

Focus of learning (with Elements)

- Determines what can be bought for certain sums of money (U&C)
- Explores a variety of ways to record calculations (C)

Learning experiences

- C** Concrete activity: What Number Am I?
MAM Routine: Write-Hide-Show
- D** Digital activity: The Garden Shop **MAM Routines: Notice & Wonder, with Think-Pair-Share; Reason & Respond**
- P** Pupil Book pages 98–99: The Garden Shop

Equipment

- Coins (1c to €2)
- Counting supports, such as number paths, 100 squares, rekenreks and counters

Maths language

- how much? price, highest, lowest, order

Warm-up

- C** **Concrete activity: What Number Am I?**
MAM Routine: Write-Hide-Show

Before the activity, elicit from the children the strategies used for addition and subtraction, using the Calculation Strategy Wall Cards.

Ask the children to write each answer on their MWBs and hide it. Following each clue, ask the children to share their answers and strategies used.

Clues:

- I am 5, and 5 more. What number am I?
- I am 12, and 7 more. What number am I?
- I am 6 less than 20. What number am I?
- I am 9, and 5 more. What number am I?

- I am 7 less than 17. What number am I?
- I am 7, and 6 more. What number am I?
- I am 8, and 9 more. What number am I?
- I am 9 less than 18. What number am I?

Let's strengthen

The children may benefit from counting supports.

Let's deepen

The children may be ready to write number sentences in response to the activity. (See Unit 15 Let's Deepen PCM.)

Main event

D Digital activity: The Garden Shop
MAM Routines: Notice & Wonder, with Think-Pair-Share

Display the poster and, using Think-Pair-Share, ask:

- What do you notice?
- What do you wonder?



Record the children's responses to both questions on the board. Allow the children the opportunity to respond to (agree/disagree with or query) others' responses, but do not confirm or reject any of the ideas. Note any 'wonderings' that could become the basis for a subsequent maths investigation.

D Digital activity: The Garden Shop
MAM Routine: Reason & Respond

Explain that the characters are growing their own food from seed. Elicit from the children what food might be grown from seed and where they might buy seeds. (They'd need to visit the garden shop and buy the seeds.)

Display the poster and click to play or ask the questions below. Ask the children to give reasons for their responses. Provide a variety of coins from 1c to 50c. As you work through the questions, use the Zoom and Spotlight tools to focus on the prices of specific items.

- What do you see for sale?
- How much is a bag of onion seeds?
- What price are the tomato seeds?
- Write the highest/lowest price you can see.
- Find the exact coins to pay for a packet of carrot seeds.

- What coins would you need to pay for garden gloves?
- What could you buy with one 20 cent coin?
- Which costs more: the trowel or the windmill?
- What change would you get from 50 cent if you bought the bean seeds?
- Find the exact coins to pay for a packet of strawberry seeds.

You can also expand on the questions above, e.g. by asking the price of other types of seeds that are shown in the picture.

Let's strengthen

The children may benefit from using number lines.

Let's deepen

The children may be ready to work out the change.

P Pupil's Book pages 98 and 99:
The Garden Shop



Optional consolidation and extension possibilities

STEM Set up an investigation station. How many coins of different denominations balance each other? For example: How many 1c coins balance one 20c coin? How many 5c coins balance two €1 coins?

Estimation Station Place a mixture of coins and notes in a jar. Provide sticky notes for the children to estimate how many coins and notes and/or how much money altogether.

Day 7, Lesson 6

Finding Totals

Focus of learning (with Elements)

- Selects and uses appropriate mental and written strategies (including number sentences) for estimating and calculating totals/simple bills (totals not to exceed 99c) (A&PS)
- Explores a variety of ways to record calculations (C)

Learning experiences

- C** Concrete activity: Counting Can
- D** Digital activity: Shopping at the Garden Shop
MAM Routines: Reason & Respond, with Number Strings
- P** Pupil Book page 100: Finding Totals

Equipment

- Coins
- Jar/can
- Counting supports, such as number paths, 100 squares, rekenreks and counters

Maths language

- cost, smaller, strategies, totals, most expensive, cheapest

Warm-up

C Concrete activity: Counting Can

You need a selection of 1c, 2c, 5c, 10c, 20c and 50c coins. With the children's help, count out a number of coins, e.g. $20 \times 1c$ coins.

- What amount is that altogether?

The children now close their eyes, listen and count as you drop a random number of the same denomination coins, one by one, into the jar. Ask the children to open their eyes and show them the jar. Ask:

- How much is in the jar/can?

- How much more is needed to reach the target amount? (You decide the target amount based on the total in the jar/can.)

Repeat the activity using different denominations.

Let's strengthen

The children may find physical coins and/or counting supports such as number lines and rekenreks helpful.

Let's deepen

Use €1 and €2 coins.

Main event

D Digital activity: Shopping at the Garden Shop

MAM Routines: Reason & Respond, with Number Strings

Display the image of the Garden Shop and invite the children to do some shopping.

Ask the following questions:

- Let's use number strings to work out how much the onion and bean seeds would cost altogether. How much do they each cost?
- Which is the bigger amount: 49c or 38c? Write the bigger amount.



- Let's look at the smaller amount: 38c. How many tens are there?
- Write the first number string: $49 + 10 = 59$; $59 + 10 = 69$; $69 + 10 = 79$.
- Now we've added the three 10s, write the last number string: $79 + 8 = 87$.
- The total of $49c + 38c = 87c$
- What other strategies could we use to work out the totals?
- Use number strings and other strategies, with Write-Hide-Share to get these totals:

- How much altogether for broccoli and cabbage seeds?
- How much altogether for two packets of tomato seeds?
- How much altogether for blueberry and strawberry seeds?
- How much altogether for the most expensive seeds and the cheapest seeds?

Let's strengthen

The children may find physical coins and/or counting supports helpful.

Let's deepen

Extend the activity with the following questions:

- I have 10c and want to buy the tomato seeds. Draw the other coins I need. Write a number sentence.
- I have 20c and want to buy the blueberry seeds.

Draw the other coins I need. Write a number sentence.

- I have 50c and want to buy the garden gloves. Draw the other coins I need. Write a number sentence.
- I have 50c and want to buy the trowel. Draw the other coins I need. Write a number sentence.

Challenge the children to use subtraction number sentences too.

P Pupil's Book page 100: Finding Totals



Optional consolidation and extension possibilities

Story Strengthen the children's understanding of money by reading stories with a money theme. Stories could be used as part of your literacy plan and will help further develop and extend essential aspects of these money lessons.

Data Supply bags of mixed coins and/or notes and ask the children to sort, group and record the contents using tally charts or PCM 57: Block Graph

Days 8 and 9, Lesson 7

Shopping

Focus of learning (with Elements)

- Exchanges money for goods/items in real-life or role play contexts (A&PS)

Learning experiences

- C** Concrete activity: The Human Number Line
- C** Role-play activity: Preparation for the Market
MAM Routine: Role Play
- C** Role-play activity: The Market **MAM Routine: Role Play**

Equipment

- Coins
- Numeral cards
- Materials for class market stalls:
- Items for sale could include the plants the children have grown from seed during geography/science (The Farmer's Market)
- Small items from the classroom, such as pencils, erasers, toy farm animals and marbles (The School Shop)
- A 'pretend' preloved items sale; with the help of parents a real 'preloved' sale, perhaps using lost property items (The Preloved Sale)
- Small pieces of card/paper for price tags
- Purses (children could bring in their own) or small bags/pots
- Counting supports, such as number paths, 100 squares, rekenreks and counters

Maths language

- exact amount

Warm-up

C Concrete activity: The Human Number Line

Select a group of children (e.g. eight children) and give them each a numeral card. It can be any sequence of numbers. Ask the children to silently, without communicating, assemble in line, beginning with the smallest number. When ready, have another child (or yourself) walk the section number line as the class recites the numbers as he/she reaches them. It takes one step to move from one number to another. Then quiz the class, who answer using their MWBs. (For the purpose of illustration, the example below will deal with the sequence 7 to 14.) The 'walking' child can 'prove' each answer. For example:

- Starting at 7/8/9/10/11/12/13, how many steps to 10, 20, etc.? Can you write a number sentence for that?
- Close your eyes and 'imagine' the number paths. You are at 8, etc. How many more steps to 12? etc. Open your eyes and write the number sentence.
- Write this number sentence: 7, count on 5, etc.

Let's deepen

If each child in the line is a 2c coin, how many steps from 4c to 8c? If each child is a 5c coin, how many steps from 10c to 25c?

Main event

C Role-play activity Preparation for the Market
MAM Routines: Role Play

Assign roles and set expectations for the role play, for example:

- The children take turns being the customer and shop assistant.
- Each customer has a purse of coins that includes multiple coins of all denominations.
- Shop assistants have a 'till' with multiple coins of all denominations.
- Shop assistants set the prices, from the cheapest (e.g. 10c) to the most expensive (e.g. 99c). A range of prices is important.
- Customers will fill their purses with multiple coins of every denomination.
- Emphasise the *pretend* nature of this market.
- The goods for sale are the plants the children have grown during geography/science (alternatively, use small items from the classroom).
- If class numbers dictate, one group of children takes part in the role play while the other children are the 'audience'. The groups take turns, and constructive feedback can be given: What worked well? What did you like? What did you think of the prices?

Teaching tip

Giving parents plenty of notice, ask them for donations of small items for upcycling in the sale.

C Role-play activity The Market
MAM Routines: Role Play

The market could take place indoors or outdoors. There could be one or more market stalls, with groups of customers assigned to each stall. Before the market opens, the shop assistants set the prices, write them on the price tags and display them beside the items for sale. The customers fill their purses, and the market opens. Questions/phrases shop assistants might ask/say:



- Join the queue, please.
- Who is next?
- What would you like to buy today?
- Do you have the exact amount, please?
- Would you like to work together on finding the right coins to pay?
- Is your change correct?
- I am short of 5c coins today. When you're paying, can you give me as many as possible, please?

Questions/phrases customers might ask/say:

- I would like to buy ..., please.
- How much is the ..., please?
- I have 50c. What can I buy?
- Do you give change?
- Would you like to work together to find the change?
- I may have enough money for another plant. Let me count.

Let's strengthen

For each of the items for sale, make a card showing a picture of the item, its price and the coins needed to buy it.

Let's deepen

The children may be ready to work with higher denominations of money.

Optional consolidation and extension possibilities

Activity Stations

- The shop or market can be left in place for free play and consolidation.
- Organise a money hunt, as in the story *Pigs Will Be Pigs*. This can be a parallel activity with the coins and/or notes, varying the number of coins/notes to be found and the value of those. Include an instruction, e.g. 'Find three coins and write a number sentence to find the total value of the coins' or 'Find three coins and write their values from lowest to highest.'

Literacy Ask the children to speculate about being the tooth fairy. How much money would the fairy bring? Would they bring something other than money? What if a child loses two teeth at the same time – will they get double the money? You could extend this to a creative oral or writing activity.

Day 10, Lesson 8

Review and Reflect

Focus of learning (with Elements)

- Reviews and reflects on learning (U&C)

Warm-up

Carry out a warm-up activity of your choice from one of the lessons in this unit.

Main event

Use this menu of activity ideas to choose how best to structure this last lesson of the unit to suit your needs and the needs of your class.

Let's talk!

Review and Reflect Poster: Use Think-Pair-Share alongside the prompt questions to review the unit.

Let's play!**C** Game: Three Coins

Take turns.

You need: 

Take three coins without your partner seeing them.

Tell your partner how many coins and how much you have altogether. Can they work out which coins you have?

Can your partner make the same amount of money using less or more coins?

Let's deepen

Play with four or five coins instead of three coins.

Maths language

Ask the children to explain the following terms, perhaps using examples or drawings on MWBs: *coin, note, money, cash, cashless, cost, price, more, less, expensive, cheapest, euro, cent, trade, the same as, is equal to/equal(s)*

Use the Unit 15 Maths Language Cards to revise the key terms. For example: If the image and text are cut apart, can the children match them?

Maths talk: Oral review and reflect

On your MWBs draw (or arrange with coins and notes):

- The euro coins, in order, starting with the coin that is worth the least amount of money
- The euro note that has the least value
- The euro note that has the greatest value
- A euro note that is greater than the note of least value and less than the note of most value
- Three coins which have something the same as each other. How many possible answers can you draw?
- Three coins which have something different from each other. How many possible answers can you draw?
- Three coins in order of value, least to most. How many possible answers can you draw?
- Two coins and use one of these symbols between them: $<$, $>$, $=$. How many possible answers can you draw?

Let's strengthen

The children may benefit from working with coins and notes instead of drawing.

Let's deepen

Select three or four coins and use $<$, $>$, or $=$ between them.

Progress Assessment Booklet

Complete Questions 56–59 on page 26. Alternatively, these can be left to do as part of a bigger review during the next review week.

Let's create

Think about our school and the things that make it a great school. Design a euro coin or a euro note to celebrate our school. What coin would you choose: 1c, 5c, €1, etc.? What note would you choose: €5, €10? How would people know how much your coin/note is worth? How would people know whether your coin/note is cent or euros?

Let's strengthen

Identify children who might benefit from extra practice with some of the key concepts or skills in this unit. Use the Unit 15 Let's Strengthen PCM. Consult the Unit 15 Let's Strengthen Suggestions for Teachers.

Let's deepen

Use the Unit 15 Let's Deepen PCM.

[illegible]