A learning chunk is not a session plan. It provides a series of teaching and learning ideas around a skills(s) area. It is intended that teachers can select and adapt the ideas to meet the requirements of their learners in different contexts.

Buying items: cost and change

Curriculum references: MSS1/E2.1, MSS1/E2.2

Context: Learners will use money skills in many contexts in their everyday lives and need to feel confident with different ways of combining coins to work out amounts spent, give appropriate coins/notes and to work out (or check) change.

Teaching approach	Teaching and learning ideas	Resources
Whole group warm up/mental maths activities – to get the learners active and to build their confidence in using notes and coins and combining them in different ways	**Which coin/note?** • The teacher holds up an item and gives its price. The learners have a set of cards giving the common denominations of notes and coins. They have to hold up the card that would be best to pay for the item. • Alternatively, learners could use an individual whiteboard to write down the best coin/note to use and also to indicate if they would expect change or not. **Variation** • Some learners could work out which coin/note to offer to pay for two of the items given.	• Sets of cards giving the common denominations of coins and notes • Individual whiteboards and wipe off pens (if required)

Teaching approach	Teaching and learning ideas	Resources
	What's the 'pair'? • To help learners gain confidence with the main number bonds useful in working out change, they have sets of cards showing a set of paired options, e.g. all multiples of 10 between 10p and £1. The teacher gives an amount and the learners each hold up the 'pair' that will go with that amount to make up £1, e.g. if teacher gives 40p, learners would hold up 60p. • Similarly they could do the same for multiples of 5 between 5 and 100, e.g. if the teacher gives £45, learners would choose £55. **Variation** • Put a set of cards face down. Learners take it in turns to turn up two cards. If they add up to £1, they keep the cards; if not they turn them over again and the next person takes their turn. The person with the most cards when all are taken is the winner.	• Appropriate sets of paired cards giving the options for common bonds between 1 and 100. These could be, for example, multiples of 10 only **or** multiples of 5 and 10 – depending on the learners.
	Paying out • Learners each take (blind) an agreed number of coins from a tin/bag. The teacher gives prices and if learners can make up exactly the right amount of money to pay for that item, they give those coins. The first to get rid of all their coins wins. **Variation** • If some learners are less confident than others the teacher might give each learner a selection of coins. Learners could also have a turn each to try to get rid of some coins (a different price each in turn). This would give less confident learners a better chance to work out the coins and amounts.	• Tin/bag of mixed coins

Teaching approach	Teaching and learning ideas	Resources
Discussion and small group/pair work – to get the learners involved in practical activities, which will build their skills with common coin combinations, so they feel able to use these to pay for items and give/check change	**Jigsaw pairs** • Use strips of card marked out into ten equal parts and labelled to show from 0p up to £1 in 10p intervals and then cut them into matched pairs. Learners work in pairs. One chooses an amount of money and picks out the strip which represents that amount. The other learner finds the matching strip which will make the total amount up to £1. They put the two together and check it against a £1 strip. • When they are confident with these main bonds, they can progress to putting several strips together to start rather than using just one. They then decide which extra strip would be needed to make the total up to £1. By dong this they will be practising and building their confidence with putting different options together to make up £1. e.g. 20p + 50p + 20p = *extra strip needed to make £1 would be 10p*. **Which note/coin?** • Learners choose and use an appropriate price list (menu, catalogue, DIY store prices) and work out the cost of an agreed number of items. They decide which note/coin to give to pay for the items bought. They then work out how much change they would get.	• Set of paired lengths of card for each way of making up £1 (e.g. 10p + 90p, 20p + 80p, etc.); each pair comes to the same length when put together • Strips as above but multiple copies of each amount/length • Appropriate price list relevant to learners' interests and context

Teaching approach	Teaching and learning ideas	Resources
	Can I afford it? • Learners use an appropriate price list and work out the estimated cost of an agreed number of items. They decide if they have enough money to pay for these from a given amount. If not, they can swap one of their items for a different (cheaper one) if they want. • Before doing this activity as a group, the learners could discuss the approximate amounts for different prices on the list, e.g. £2.99 is nearly £3.00. **Variation** • Some learners with less confidence might want a copy of the list with the approximate amounts added to it. • More confident learners could produce their own 'approximates' price list individually ready to do the activity.	• Price list relevant to learners' interests and context
	How much change? • Use two strips of card marked out into ten equal parts and labelled to show from 0p up to £1 in 10p intervals and place them side by side so that the 0p on one strip is next to the £1 on the other as shown below. 0p 10p 20p 30p 40p 50p 60p 70p 80p 90p £1 £1 90p 80p 70p 60p 50p 40p 30p 20p 10p 0p	• 0p to £1 strips marked in 10p intervals

Teaching approach	Teaching and learning ideas	Resources
	• Using the top strip to represent the amount spent, learners can explore what the change will be (on the bottom strip). Amounts which are multiples of 10p will be shown on the strips, but they can also use the activity to explore other random amounts, by deciding where on the top strip the amount spent (cost) would go approximately, and then use the bottom strip to work out roughly how much change they will get/give from £1, e.g. 23p spent. *Where is 23p on the cost (top) strip? Between 20p and 30p.* *What corresponds on the change (bottom) strip? Between 80p and 70p. So the change should be more than 70p, but less than 80p.* **Is this change right?** • Working in pairs/small groups, learners consider amounts spent and the coins given as change from a specific amount and decide together if the change is right or not. If not, they decide what they would need to do to make it right. e.g. 45p spent and £1 given. Change: 20p, 20p, 20p, 5p. *In this case the change is not right. They would need to change one 20p for a 10p.* **Variation** • One learner chooses (or is given) an amount spent and amount given. They pick out the coins needed to make up the change and then chose to keep the coins the same **or** to add a coin or remove a coin. The other learners have to decide if the change is right and if not what to do to correct it.	• Combinations of amount spent and possible change (appropriate to learners' skills and confidence) • Selection of coins

Teaching approach	Teaching and learning ideas	Resources
	Counting out change • Model counting out change using coins, counting up from an amount spent to the amount offered in payment. e.g. 35p spent and £1 given. *Starting from 35, 5p makes 40; 10p makes 50; 50p makes £1.* • Discuss and practise this skill as a group, considering different options of how to make up the change depending on what coins you have available.	• Selection of coins
Problem-solving/ investigations – to develop learners' awareness of patterns that may be useful and to help them to make links to other maths skills/topics	**Coin combinations** • Learners explore the different ways to make up different given amounts of money. What are the largest and smallest numbers of coins needed to make up each amount? Would you typically use all of the possible combinations in real life? Discuss the advantages and disadvantages of giving the right money. • Discuss and encourage learners to experiment with the idea that people sometimes give more money than needed when they pay for something, e.g. they spend £2.60 and give £3.10. Why not just give £3?	• Selection of mixed coins

Teaching approach	Teaching and learning ideas	Resources
	Take the money out • Sometimes, once learners are confident with the main 'pairs' which make up £1 (60p + 40p, 70p + 30p, etc.), they want to give too much change for intermediate amounts. This activity will help them to explore and understand how price and change relate. Give the learners a bag containing 9 x 10p and 10 x 1p. They then take out the right money for a given price, e.g. for 37p they would pick out 3 x 10p and 7 x 1p. The change will be the amount left, so they count this up. Explore and discuss the pattern – and how they can use this to help them check change amounts even when they don't have the full bag of coins available. • This activity can be adapted, depending on what the learner is working on, so the bag could contain 9 x 10p and 2 x 5p for some learners. For other learners it might contain 4 x £1 plus 9 x 10p plus 10 x 1p (to explore change from £5).	• Bags containing, as appropriate: 9 x 10p plus 10 x 1p (change from £1) **or** 4 x £1 plus 9 x 10p plus 10 x 1p (change from £5) **or** 9 x £1 plus 9 x 10p plus 10 x 1p (change from £10)
	Sorting and counting up • Encourage learners to explore how many of each coin are needed to make up £1, e.g. 5 x 20p, 10 x 10p, etc. • Get learners to sort mixed collections of coins by putting like coins together and piling them in appropriate size piles (e.g. 20p in piles of 5) and use this approach to count up how much money was in the collection. Discuss when this might be a useful skill. • When they have done this several times, encourage them to estimate first how much money they think will be there before they sort and count.	• Tin/bag of mixed coins

Teaching approach	Teaching and learning ideas	Resources
Integration of IT	• Set up a spreadsheet to show a shopping bill giving items and prices. The learners use the Σ formula and dragging round the cells containing the prices to work out the total and then use a subtraction formula to work out the change from a given amount of money. • Alternatively, set up a spreadsheet to show a simple menu or relevant list of prices. Learners use Σ and selecting cells containing the prices for specific items to work out the cost. They can try several combinations of items to see which they can afford within a given budget.	• IT with spreadsheet programme
Embedded/contextualised activities – to encourage learners to practise/use the skills they are learning in contexts most relevant to them	• These skills are applied in many everyday life and working contexts including food shopping, take away/restaurant menus, using catalogues, paying in the works canteen, working in a garden centre, social care (shopping for residents), giving/receiving office petty cash, etc. Encourage learners to identify contexts which are appropriate to them and to practise with examples from these.	• Embedded materials: Retail – Handling cash, Re 2:13–2:14 • Embedded materials: E2E – Giving change, Ee 4:13 (p. 320) • *SfL* learner materials – *SfL* LM/NE2 Unit 2 (pp. 6–10)
Application of skills – to encourage learners to identify contexts which are appropriate to them and to practise with examples from these	• Discuss alternative ways of paying for items and the relative advantages and disadvantages of each. • Ask learners to keep a diary/think about the different ways they have used money in the week, e.g. paying with cash, giving children their dinner money, using a slot machine, etc. • Discuss as a group when they need to use exact coins, estimate, receive change, etc.	