**Pearson Functional Skills Mathematics Entry Level 1**

**Scheme of Work overview**

**Subject Content Level GLH**

**Using numbers and the number system – whole numbers**

1. E1.1 Read, write, order and compare numbers up to 20 E1 4

2. E1.2 Use whole numbers to count up to 20 items, including zero E1 2

3. E1.3 Add numbers which total up to 20, and subtract numbers E1 6

from numbers up to 20

4. E1.4 Recognise and interpret the symbols +, − and = E1 1

appropriately

**Using common measures, shape and space**

5. E1.5 Recognise coins and notes and write them in numbers with E1 4

the correct symbols (£ & p), where these involve numbers up to 20

6. E1.6 Read 12-hour digital and analogue clocks in hours E1 4

7. E1.7 Know the number of days in a week, months and seasons E1 2

in a year; be able to name and sequence

8. E1.8 Describe and make comparisons in words between E1 3

measures of items including size, length, width, height, weight

and capacity

9. E1.9 Identify and recognise common 2-D and 3-D shapes, E1 3

including circle, cube, rectangle (including square) and triangle

10. E1.10 Use every day positional vocabulary to describe position E1 3

and direction, including left, right, in front, behind, under and above

**Handling information and data**

11. E1.11 Read numerical information from lists E1 4

12. E1.12 Sort and classify objects using a single criterion E1 4

13. E1.13 Read and draw simple charts and diagrams, including a E1 6

tally chart, block diagram/graph

**Revision** E1 2

**Assessment**  E1 2

Specification references

**Using numbers and the number system – whole numbers**

**1** Read, write, order and compare numbers up to 20

**2** Use whole numbers to count up to 20 items including zero

Prior knowledge

* Recognise numerals from 0 to 10.
* Know the value of numerals from 0 to 10.
* Use numerals from 0 to 10.
* Compare two given numbers of objects in groups of up to ten.
* Use ordinal numbers from first to tenth, when describing position in a sequence of numbers.
* Count reliably up to ten.

Keywords

digits, units, tens, difference, order, compare, most, least, fewest, greatest, smallest

Objectives

The learner should be able to:

* recognise the numerals 0–20
* read numbers up to 20, including zero
* understand numbers can be represented in different ways, e.g. Roman numerals
* write numbers up to 20, including zero
* recognise numbers written in different fonts and styles
* order and compare numbers up to 20 including zero
* understand the relative position in a sequence of numbers, e.g. first, second, third
* count reliably up to 20 items
* understand that if items are rearranged the number stays the same
* know how to count on and back from any number below 20.

Possible success criteria

* Read numbers in everyday documents and contexts, e.g. signs, notices, adverts, posters.
* Match numbers in words and numerals.
* Match missing numbers in a sequence.
* Rearrange numbers in order.
* Count items, rearrange them and count them again.
* Count on from 0 starting with a different number, up to 20.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Select the correct number floor button in a lift.
* Count the items in a delivery.
* Count the number of children in a group.
* Find the smallest number in a context list of numbers below 20.
* Find the highest number in a context list of number below 20.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Count the number of boys and girls in a mixed group.
* Given a list of 4 people’s names and the number of days holiday each person has left, order the number of days holiday from most to least

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Are there more boys than girls in the group?
* Who has the most days of holiday left?

Common misconceptions

* Learners may not understand that the position of a numeral gives it a particular value.
* Learners may reverse the digits in a number, e.g. 02 for 20.
* Learners may misread ‘teen’ numbers, e.g. reading 19 as ‘one-ty nine’ rather than ‘nineteen’.
* Learners may find it difficult to count back and find a number that is ‘one less than’.
* Learners may not understand that numbers can be expressed in different ways e.g. 16, sixteen, sixteenth.
* Learners may struggle with mathematical vocabulary.

Specification references

**Using numbers and the number system – whole numbers**

**3** Add numbers which total up to 20

**4** Recognise and interpret the symbols + and = appropriately

Prior knowledge

* Add single-digit numbers
* Recognise and interpret + and =
* Check by counting

Keywords

digit, units, tens, add, plus, sum of, total, equals, is equal to, is the same as

Objectives

The learner should be able to:

* recognise the numerals 0–20
* add single and two-digit whole numbers with totals to 20
* understand the operation of addition and related vocabulary
* understand addition gives the same result irrespective of the order in which two or more numbers are placed
* know the symbols + and =
* understand + represents the operation of addition
* understand = represents equality and related vocabulary
* understand how to check calculation using whole numbers 0–20.

Possible success criteria

* Identify different words used for addition.
* Use different strategies for mental addition.
* Find the pairs of numbers up to 20.
* Use a number line for addition by counting on.
* Understand the order in which to key in numbers and operations when using a calculator.
* Be able to clear the display of a calculator and know this should be done before starting a new calculation.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Find the number of cans in a full box and the number of cans on a shelf.
* Find the number of males and females in a group.
* Find the number of items, within a context group, that need to be added together.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Find the total of cans in a full box of twelve plus three cans on the shelf.
* Find the total number of males and females in a group.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Confirm the total number of cans is the amount required.
* Confirm there are enough chairs for the total number within the group.

Common misconceptions

* Learners may not understand the place value of the digits in a calculation.
* Learners may begin adding with the left-hand column first.
* Learners may not realise they will have to add a ‘carried’ number.
* Learners may find it difficult to add when a zero is involved. They may not record a zero in the answer.
* Learners may be unaware that addition is associative, e.g. 5 + 1 = 6 and 1 + 5 = 6. If they understand this concept, they will find it much easier to recall the addition facts.
* Learners may believe that they have to add in the order in which the question was asked.
* Learners may be unsure of number order and therefore make mistakes. They may count their starting number, e.g. when finding the number pair 7 + \_\_ = 11, they say ‘7, 8, 9, 10, 11’ and therefore believe the missing number to be 5.

Specification references

**Using numbers and the number system – whole numbers**

**3** Subtract numbers from numbers up to 20

**4** Recognise and interpret the symbols − and = appropriately

Prior knowledge

* Subtract single-digit numbers
* Recognise and apply − and =
* Check by counting

Keywords

digits, units, tens, difference, take away, subtract, less than, equals, is equal to, is the same as

Objectives

The learner should be able to:

* recognise the numerals 0–20
* subtract single and two-digit numbers from numbers up to 20
* understand the operation of subtraction and relevant vocabulary
* understand that a whole number can only be subtracted from itself or from a larger number
* understand that subtracting zero leaves a number unchanged
* know the symbols − and =
* understand − represents the operation of subtraction
* understand = represents equality and related vocabulary
* understand how to check calculation using whole numbers 0–20.

Possible success criteria

* Identify different words used for subtraction.
* Use different strategies for mental subtraction.
* Subtract numbers from 20 and compare with the pairs of numbers totalling 20. Identify patterns.
* Use a number line for subtraction by counting back.
* Understand the order in which to key in numbers and operations when using a calculator.
* Be able to clear the display of a calculator and know this should be done before starting a new calculation.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Identify the number of items within a context.
* Identify the number of eggs in a recipe.
* Identify the number of bread rolls to serve guests.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Work out the shortfall in numbers within a context.
* Work out the shortfall of eggs in the cupboard and eggs required in a recipe.
* Work out the shortfall of bread rolls in a box and those needed to serve guests.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Make a decision about how many more items are required.
* Make a decision about how many more eggs are required.
* Make a decision about how many more bread rolls are required.

Common misconceptions

* Learners who lack understanding of place value will continue to make mistakes with column subtraction. Such errors are often dismissed as careless mistakes, when in fact the learner has a weakness in their understanding.
* Learners who lack understanding of exchanging will think subtractions involving zeros cannot be done.
* Misconceptions may occur when inaccurate language is used, e.g. with the calculation 20 – 12, when talking about 20 − 10 learners may refer to this as 2 – 1.
* Learners may begin subtracting with the left-hand column first.
* With tens and units and other formal vertical subtraction calculations, learners may take the smaller unit number from the larger, regardless of whether it is part of the larger or smaller number, e.g. 15 − 7 = 12.
* Learners may not understand the commutative rule and so may be unaware of the relationship between addition and subtraction questions, e.g. 8 + 5 = 13 so 13 − 5 = 8.
* Learners may not understand the concept of ‘finding a difference’. They can count on or back but are unsure which method to choose.
* Learners may not understand vocabulary relating to subtraction.

Specification references

**Using common measures, shape and space**

**5** Recognise coins and notes and write them in numbers with the correct symbols (£ & p), where these involve numbers up to 20

Prior knowledge

* Recognise and select coins up to 20p
* Recognise and select notes up to £10

Keywords

pounds, pence, coin, note

Objectives

The learner should be able to:

* recognise and select coins and notes
* write money amounts up to 20, using the correct symbols
* know the names and value of coins and notes involving numbers up to 20.

Possible success criteria

* Select coins to match requirements in given situations.
* Exchange coins and notes for equivalent value up to 20.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Find the cost of an item on a price list.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Choose the correct coins to purchase the item.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Confirm whether the value of another item on the list is more or less than the one selected.

Common misconceptions

* Learners may not understand that the position of a numeral gives it a particular value.
* Learners may be confused by the use of different units of money, e.g. £ or p.

Specification references

**Using common measures, shape and space**

**6** Read 12 hour digital and analogue clocks in hours

Prior knowledge

* Relate familiar events to the names of significant times in the day

Keywords

o’clock, midday, digital clocks, analogue clocks

Objectives

The learner should be able to:

* understand and use vocabulary related to the time of day
* understand the times are repeated in the 12-hour clock
* understand and use a.m. and p.m.
* understand that analogue clock faces can be marked in different ways
* read the position of the hands on a clock face
* understand that a digital clock shows hours (and minutes).

Possible success criteria

* Read the time on different analogue clock faces.
* Read the time on different 12-hour digital clocks.
* Match times in words to clocks with different faces.
* Match the times on analogue and digital clocks.
* Use a TV listing to find out the time of programmes at different times of the day.
* Complete activities on a simple day plan.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Find programme times in listings for television, radio and cinema.
* Identify the correct given time for an event from an event fixture list.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Match the time of a programme to an analogue and/or digital clock.
* Match the time of an event to an analogue and/or digital clock.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Decide whether the programme finishes before a given time.
* Decide whether the event finishes before the start of another given event.

Common misconceptions

* Learners may lack understanding of a.m. and p.m.

Specification references

**Using common measures, shape and space**

**7** Know the number of days in a week, months, and seasons in a year; be able to name and sequence

Prior knowledge

* Relate familiar events to the names of the days of the week

Keywords

days, months, seasons, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, January, February, March, April, May, June, July, August, September, October, November, December, Spring, Summer, Autumn, Winter

Objectives

The learner should be able to:

* know the days of the week and their order
* know the months of the year and their order
* know the seasons of the year and their order.

Possible success criteria

* Use vocabulary of the different days of the week, weekday and weekend in different contexts.
* Use vocabulary, i.e. different times of day, weekday, weekend.
* Use a TV listing to find out about the programmes on a given day.
* Mark events on a weekly planner.
* Match the months in words to their abbreviations.
* Use a standard calendar to find different days or dates.
* Identify events in the four seasons, e.g. New Year, religious festivals, public holidays.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Choose a day and time for a training session.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Mark given events on a weekly planner.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Decide when an activity or event takes place.

Common misconceptions

* Learners may find it difficult to order days of the week, months and seasons.

Specification references

**Using common measures, shape and space**

**8** Describe and make comparisons in words between measures of items including size, length, width, height

Prior knowledge

* Describe and compare marked differences in size between two items using simple comparative vocabulary such as large, big, small
* Describe and compare marked differences in lengths and heights of two items using simple comparative vocabulary such as long, short, tall

Keywords

size, length, width, height, large, larger, largest, small, smaller, smallest, long, longer, longest, short, shorter, shortest, wide, wider, widest, narrow, narrower, tall, taller, tallest

Objectives

The learner should be able to:

* describe size
* use direct comparisons for the size of at least two items
* understand and use vocabulary related to size
* describe length, width and height
* use direct comparisons for length, width and height
* understand vocabulary related to length, width and height.

Possible success criteria

* Compare the length, width and height of different objects.
* Compare the length of objects and decide if they are longer, shorter or the same length.
* Consider the size of a room using correct vocabulary, e.g. length, long, width, wide, height, high.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Sort objects in order of size, e.g. boxes, bottles, clothes.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Compare the length, width and height of different objects.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Confirm which item is the largest/smallest.
* Confirm which item is the longest/shortest.
* Confirm which item is the widest/narrowest.

Common misconceptions

* Learners may lack understanding of the vocabulary for length, width and height.

Specification references

**Using common measures, shape and space**

**8** Describe and make comparisons in words between measures of items including weight and capacity

Prior knowledge

* Describe and compare marked differences in weights of two items using simple comparative vocabulary such as heavy, light
* Describe and compare marked differences in capacity and quantity of two items using simple comparative vocabulary such as full, empty, holds more, holds less, has more, has less

Keywords

weight, capacity, heavy, heavier, heaviest, light, lightest, full, empty, holds more than, holds less than

Objectives

The learner should be able to:

* describe weight
* use direct comparisons for weight
* understand and use vocabulary related to weight
* understand that weight is not related to size
* describe capacity
* use direct comparisons for capacity
* understand and use vocabulary related to capacity
* understand that capacity is a measure of volume
* understand that shapes of containers can be deceptive.

Possible success criteria

* Compare the weight of two objects to decide which is heavier, lighter.
* Compare objects of the same size but different weights. Order them by weight.
* Identify containers of different shapes which hold the same amount.
* Identify common containers for liquids and solids, e.g. bottles, cans, tins, jars, cartons, boxes.
* Compare different common containers for liquids and solids, e.g. bottles, cans, tins, jars, cartons, boxes.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Select the lighter of two given items.
* Select the heaviest item from a selection of items.
* Choose a suitable container to fill with water.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Compare the weight of two different sizes of the same product to decide which is heavier.
* Compare the weight of two different sizes of the same product to decide which is lighter.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Decide which item is the heaviest/lightest.
* Decide which container holds more than/less than.

Common misconceptions

* Learners may lack understanding of the vocabulary for weight and capacity.

Specification references

**Using common measures, shape and space**

**9** Identify and recognise common 2-D and 3-D shapes, including circle, cube, rectangle (including square) and triangle

Prior knowledge

* Recognise some common 2-D shapes (circle, square, rectangle, triangle) using familiar and simple vocabulary to describe their shape and size, such as straight, curved, flat, larger, smaller
* Recognise some common 3-D shapes (ball, box) using familiar and simple vocabulary to describe their shape and size such as straight, curved, flat, larger, smaller
* Identify and select a variety of shapes to make simple pictures, patterns and models

Keywords

circle, cube, rectangle, square, triangle, faces, sides, equal, 3-D, 2-D, straight, curved, flat

Objectives

The learner should be able to:

* recognise common 2-D shapes
* know the names of common 2-D shapes
* recognise common 3-D shapes
* know the names of common 3-D shapes
* understand the difference between 2-D and 3-D shapes.

Possible success criteria

* Select a circle, rectangle, square and triangle from a range of 2-D shapes.
* Classify objects by shape.
* Select a cube from a collection of objects.
* Draw common shapes.
* Find shapes in everyday objects, e.g. photographs, pictures, clothes.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Identify shapes in a curtain or wallpaper design.
* Identify a cube from a collection of objects.
* Select a mirror of a given shape from a selection of mirror shapes.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Draw the shape of a given object, e.g. a rectangular place mat.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Confirm the number of sides of the rectangular place mat.

Common misconceptions

* Learners may be confused by the change of vocabulary between 2-D and 3-D, e.g. when sides become faces.

Specification references

**Using common measures, shape and space**

**10** Use everyday positional vocabulary to describe position and direction, including left, right, in front, behind, under and above

Prior knowledge

* Understand and apply simple positional vocabulary, including in/out, under/over, front/back, in front of/behind
* Understand and apply direction of movement, including up/down, left/right

Keywords

left, right, in front, behind, under, over, above

Objectives

The learner should be able to:

* understand everyday positional vocabulary.

Possible success criteria

* Follow spoken instructions or directions using positional vocabulary.
* Follow written instructions or directions using positional vocabulary.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Obtain directions to the shop using positional vocabulary.
* Obtain instructions about where to find an item of equipment in a cupboard using positional vocabulary.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Follow directions to the shop using positional vocabulary.
* Follow instructions about where to find an item of equipment in a cupboard using positional vocabulary.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Make a decision regarding the position of the shop.
* Make a decision regarding the position of the item of equipment in the cupboard.

Common misconceptions

* Learners may lack understanding of positional vocabulary.
* Learners may confuse left and right.

Specification references

**Handling information and data**

**11** Read numerical information from lists

Prior knowledge

* Recognise and describe lists of up to five items that are ordered either numerically or alphabetically, by pattern of sequence

Keywords

list, numerical, alphabetical

Objectives

The learner should be able to:

* obtain simple information from lists
* understand that lists can be ordered in different ways, e.g. numerically, alphabetically
* understand that not all lists are ordered logically
* understand that a list can contain words, numbers or both.

Possible success criteria

* Obtain a variety of information from a range of simple lists, e.g. contact details, quantities, fixtures.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Find a telephone number from a short contact list.
* Read information from a short price list.
* Find ingredients required for a recipe/meal.
* Choose items on a menu.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Highlight the telephone number from a short contact list, for a stated contact.
* Find the cost of a chosen item.
* Produce a shopping list for a recipe/meal.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Decide whether the chosen item on a list is less than another item on the list.
* Decide how many items are required for the recipe/meal.

Common misconceptions

* Learners may find it confusing when lists are not ordered logically.

Specification references

**Handling information and data**

**12** Sort and classify objects using a single criterion

Prior knowledge

* Sort up to ten objects by a single criterion including shape, size, weight, quantity, colour, function

Keywords

criteria, sort, group

Objectives

The learner should be able to:

* understand the concept of a criterion, e.g. a single feature such as colour, shape, gender, height.

Possible success criteria

* Know the different criteria used to classify different objects.
* Sort objects according to type.
* Classify a range of objects by a given criterion.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Identify different bottles by colour for recycling.
* Identify different types of clothing.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Sort and group a variety of items.
* Sort and group different coloured bottles for recycling.
* Sort and group a variety of items for a jumble sale (dresses, coats, jumpers).

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Decide which is the smallest/largest group.
* Confirm the number of an item within a group.

Common misconceptions

* Learners may lack understanding of the vocabulary relating to sorting and classifying.

Specification references

**Handling information and data**

**13** Read and draw simple charts and diagrams, including a tally chart, block diagram/graph

Prior knowledge

* Use simple representations or diagrams for counting numbers up to 20 including a number line
* Work out given problems using numbers up to 20

Keywords

tally chart, block diagram, graph, title, label, key, scale

Objectives

The learner should be able to:

* understand that the purpose of charts and diagrams is to communicate information
* understand that information can be represented in different ways
* understand that a title, label and key provide information
* know what is meant by a tally
* make observations and record numerical information using a tally
* know that tally marks have to be counted
* understand that the height of the bar indicates the numerical value in that category
* understand that values are compared through the height of the bars
* use a scale to extract and represent information.

Possible success criteria

* Collect suitable data by observation.
* Record data correctly.
* Display given data correctly using a tally chart.
* Display given data correctly in a suitable block diagram.
* Display given data correctly in a suitable graph.
* Sketch a simple room plan showing the location of main features.

Opportunities for solving mathematical problems and decision making

Entry Level 1 learners are expected to be able to:

* use given mathematical information and recognise and use simple mathematical terms appropriate to Entry Level 1
* use the methods given above to produce, check and present results that make sense
* provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all learners and easily described.

Examples of opportunities

Learners are required to extract information given in relevant real-world contexts, e.g.

* Obtain numerical information from given simple charts.
* Obtain the highest daily hours of sunshine, rainfall and temperature from a weather chart.

Learners are required to obtain and present results and check their own working to an appropriate level of accuracy necessary for the specific task.

E.g.

* Carry out a survey and present results using a tally chart to show the preferred day of the week for meetings, or favourite holidays.
* Draw a block diagram to show the number of ice creams sold by a newsagent in a week, or how people in the office get to work.
* Draw a block diagram/graph of the highest daily temperatures in a week.

Learners are required to show working in order to gain marks. This working rationalises the answer they present. Learners may be expected to make a yes/no decision.

E.g.

* Make a decision relating to the results of a tally chart, e.g. how many people said Wednesday was their preferred day for meetings, or a cruise was their favourite type of holiday.
* Make a decision relating to a simple block diagram, e.g. the day on which the most ice creams were sold, how many people travel to work by bus, or how many days the temperature was below 10°C.

Common misconceptions

* Learners may lack understanding of the vocabulary used for handling information and data.
* Learners may find it difficult to interpret a scale to extract and interpret information.
* Learners may find it difficult to choose a scale to use for a block diagram/graph.