Maths and English in Prison Work and Training

A Focus on Rehabilitation
Welcome

This document has been inspired by the innovative work carried out by HMP Kirklevington Grange and HMP Haverigg in their exploration of developing prisoners’ English and maths alongside learning vocational skills/ working practices in prison workshops and industries.

The work undertaken by HMP Haverigg and HMP Kirklevington Grange have, in turn, inspired other prisons to design their own projects and ‘job sheets’, specific to the departments and workshops within their prisons.

This workbook begins with a short explanation of task-based or ‘job sheet’ learning and how this can encourage/ support the development of maths/ English. This first section includes an overview of the work carried out in three prisons in England (adult male, Categories B – D). The following section entitled ‘Work Tasks’ includes examples of different approaches for developing workplace/ vocational and maths and English abilities developed in these prisons.

We encourage you to be inspired by the work carried out by other prisons and explore the possibility of trialling something similar within your own establishment.

Background on developing embedded maths, English (and digital literacies)

There is a simplicity to the idea of supporting (prison) learners’ maths and English development in the context of vocational/ workplace learning. This is because the tasks we carry out in our work and daily lives are rich with embedded maths and English: It is, in fact, impossible to divorce the elements of vocational learning and separate ‘work skills’ from their maths, English and other facets. In 2006, the National Research and Development Centre for Adult Literacy and Numeracy undertook large-scale research into embedded learning, leading to the production of case studies and a report called ‘You wouldn’t expect a maths teacher to teach plastering…’:1. The findings were clear; embedded learning leads to higher retention and course success rates (for both vocational and maths and English outcomes). The research also identified the importance of maths, English and vocational practitioners (in a prison context, vocational trainers and instructional officers) working together with shared values towards shared outcomes. We can think of these outcomes in terms of qualification achievements, but also in terms of developing people’s confidence and improving quality of life chances, in prison and outside.

Motivation: role of the trainer/ instructor

The importance of trainers and instructors motivating prisoners under their watch by helping them see the value of maths and English cannot be understated. Trainers and instructors in prison have often been employed previously in the areas they work in and, even if not, can draw on working life experience. As such, they often “…have a natural legitimacy in the eyes of learners. They represent the role to which the learner

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aspires.”\textsuperscript{2} Such ‘natural legitimacy’ enables trainers and instructors to encourage learners to believe in their own abilities from work and life-situated perspectives and this is important if prisoners are to recognise, and believe in, the value of maths and English development for their lives. Furthermore, by seeing progress in ‘real life’ contexts it’s possible to help prisoners with a lack of self-belief to have a greater expectation that they can succeed in learning. Here we can see that ‘embedded learning’ done thoughtfully and creatively, can play a pivotal role in prisoners’ learning and development pathways.

Claire Collins, Associate, Education and Training Foundation, July 2018

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INTRODUCTION
What is task-based learning?

The development of maths and English in workplace/vocational training settings is fairly common practice in prisons and in the wider education and training sector. This approach, often called ‘embedded learning’ can take many forms; from encouraging learners to want to take up learning opportunities by illustrating how they are already more or less successfully using maths/English at work, to planned maths/English learning interventions woven into or alongside workplace learning/vocational training tasks. The three prisons featured in this guide developed their own approaches as follows:

1. HMP Kirklevington Grange – Full, ‘developed’ projects, with learning materials and an initial review. The projects can lead to vocational, maths and English qualification outcomes.

2. HMP Haverigg - Job sheets that replicate those used in workplaces outside prisons, where prisoners answer questions related to the task and, with support from instructors and mentors can see the progress made in their work, with a focus on English and maths.

3. HMP Liverpool – An initial design phase, illustrating how sharing the approaches used by HMP Haverigg and HMP Kirklevington Grange with other vocational trainers/instructors can provide the basis for professional development.
Making embedding a natural process

Developing embedded maths and English within prison work and training does not need to be an additional element, bolted onto tasks carried out in the workshop or work setting. Instead, developing embedded maths and English should be a natural process that begins with the work/training. Maths and English is used continually throughout the completion of a work task but is rarely evidenced or made explicit. Making these skills explicit allows the learning to become more meaningful and true to life. In turn, learners can see how, why and where the skills are required in their working life.

Below are lists of criteria from the Functional skills subject content (see Appendix for full content) which are regularly employed in the work tasks in this document.

**English** commonly included in the work task resources:

<table>
<thead>
<tr>
<th>Entry Level 1 (E1)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;L #3 Follow single-step instructions from short statements and explanations.</td>
<td></td>
</tr>
<tr>
<td>R #8 Read correctly words designated for E1</td>
<td></td>
</tr>
<tr>
<td>R #9 Read simple sentences containing one clause.</td>
<td></td>
</tr>
<tr>
<td>SPaG #11 Punctuate simple sentences with a capital letter and a full stop.</td>
<td></td>
</tr>
<tr>
<td>SPaG #13 Use lower-case letters when there is no reason to use capital letters.</td>
<td></td>
</tr>
<tr>
<td>SPaG #15 Spell correctly words designated for E1.</td>
<td></td>
</tr>
<tr>
<td>W #16 Communicate information in words, phrases and simple sentences.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Entry Level 2 (E2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;L #1 Identify and extract the main information and detail from short explanations.</td>
<td></td>
</tr>
<tr>
<td>R #7 Read correctly words designated for E2.</td>
<td></td>
</tr>
<tr>
<td>R #12 Use illustrations, images and captions to locate information.</td>
<td></td>
</tr>
<tr>
<td>SPaG #13 Use basic punctuation correctly.</td>
<td></td>
</tr>
<tr>
<td>SPaG #16 Spell correctly words designated for E2.</td>
<td></td>
</tr>
<tr>
<td>W #17 Communicate information using words and phrases appropriate to audience and purpose.</td>
<td></td>
</tr>
<tr>
<td>W #19 Write in compound sentences, using common conjunctions.</td>
<td></td>
</tr>
<tr>
<td>W #20 Use adjectives and simple linking words.</td>
<td></td>
</tr>
</tbody>
</table>

**Code Key:**
- S&L = speaking, listening & communication
- R = reading
- SPaG = spelling, punctuation and grammar
- W = writing
| Entry Level 3 (E3) | S&L #1 Identify and extract relevant information and detail in straightforward explanations.  
|                   | S&L #2 Make requests and ask concise questions using appropriate language in different contexts.  
|                   | R #8 Read correctly words designated for E3.  
|                   | R #9 Identify, understand and extract the main points and ideas in and from texts.  
|                   | SPaG #15 Use mostly correct grammar.  
|                   | SPaG #17 Spell correctly words designated for E3.  
|                   | W #18 Communicate information, ideas and opinions clearly and in a logical sequence (e.g. chronologically, by task).  
|                   | W #21 Write in compound sentences and paragraphs where appropriate.  
|                   | W #22 Use language appropriate for purpose and audience.  |
| Level 1 (L1)      | SPaG #21 Spell words used in work, study and daily life, including specialist words.  
|                   | W #22 Communicate information, ideas and opinions clearly, coherently and accurately.  |
| Level 2 (L2)      | S&L #1 Identify relevant information from extended explanations or presentations.  
|                   | S&L #7 Use language that is effective, accurate and appropriate to context and situation.  
|                   | W #23 Communicate information, ideas and opinions clearly, coherently and effectively.  
|                   | W #26 Convey clear meaning and establish cohesion using organisational markers effectively.  |
Maths commonly included in the work task resources:

<table>
<thead>
<tr>
<th>Entry Level 1 (E1)</th>
<th>N #3 Add numbers which total up to 20, and subtract numbers from numbers up to 20. N #4 Recognise and interpret the symbols +, -, x, / and = appropriately. M, S&amp;S #10 Use everyday positional vocabulary to describe position and direction including left, right, in front, behind and above. I&amp;D = Read numerical information from lists. I&amp;D #13 Read and draw simple charts and diagrams including a tally chart, block diagram / graph.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Level 2 (E2)</td>
<td>N #1 count reliably up to 100 items. N #4 Recognise and interpret the symbols +, -, x, / and = appropriately. N #5 Add and subtract two-digit numbers. N #6 Multiply whole numbers in the range 0x0 to 12x12 (times tables). N #8 Divide two-digit whole numbers by single-digit whole numbers and express remainders. N #9 approximate by rounding to the nearest 10, and use this rounded answer to check results. M,S&amp;S #12 Calculate money with pence up to one pound and in whole pounds of multiple items and write with the correct symbols (£ or p) M,S&amp;S #14 Use metric measures of length including millimetres, centimetres, metres and kilometres. M,S&amp;S #21 Use appropriate positional vocabulary to describe position and direction including between, inside, outside, middle, below, on top, forwards and backwards. I&amp;D #22 Extract information from lists, tables, diagrams and bar charts. I&amp;D #24 Sort and classify objects using two criteria. I&amp;D #25 Take information from one format and represent the information in another format including use of bar charts.</td>
</tr>
<tr>
<td>Entry Level 3 (E3)</td>
<td>N #2 Add and subtract using three-digit whole numbers. M,S&amp;S #10 Calculate with money using decimal notation and express money correctly in writing in pounds and pence. M,S&amp;S #11 Round amounts of money to the nearest £1 or 10p. M,S&amp;S #14 Use and compare measures of length, capacity, weight and temperature using metric or imperial units to the nearest labelled or unlabelled division.</td>
</tr>
<tr>
<td>Level 1 (L1)</td>
<td>M,S&amp;S #15 Compare metric measures of length including millimetres, centimetres, metres and kilometres. M,S&amp;S #18 Use a suitable instrument to measure mass and length.</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>N #5 Use simple formulae expressed in words for one or two-step operations.</td>
</tr>
</tbody>
</table>
What makes a good prison workshop project?
Working with prison instructional officers, we compiled a list of factors that need to be considered when planning a task-based learning approach.

- Leads to something real/ tangible:
  - Prisoners need to easily ‘see’ / imagine what it is they will make.
  - Ensure there is an image on the front of the project that shows the finished product.

- There is a link between what prisoners are making and their lives (in or out of prison).

- Include some open questions/ tasks to allow for problem solving/ choices.

- Enable prisoners to be creative to help them feel proud of what they make - this means that the activity could have a positive impact on self-esteem.

- Ensure that a range of learning preferences are catered for (e.g. make good use of diagrams).

- Create opportunities for self-reflection and instructor feedback.

- Ensure that the task follows a step-by-step process, that it is neither too easy nor too challenging.

- If possible, can the project lead to a qualification? If not, an internal certificate?

- Mimic a ‘job sheet’ that is as close as possible to real life.

- Use the language of ‘employer’ / ‘employee’.

- As tasks get more advanced, include e.g. costings/ market research.
WORKSHOP PROJECTS
# Project Briefs

## Workshop projects

*with introduction by HMP Kirkleavington Grange*

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bird Box</td>
<td>A thorough work-based project for the woodwork workshop. The project sheets follow the process of researching, designing and producing a nest box.</td>
</tr>
</tbody>
</table>

## Job Sheets

*with introduction by HMP Haverigg*

<table>
<thead>
<tr>
<th>Job Sheet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold smoking bacon</td>
<td>A project for use in the smoke house. The objective of the job is to smoke and prepare a packet of saleable bacon.</td>
</tr>
<tr>
<td>Door &amp; frame</td>
<td>Creating a door and frame in the woodwork workshop. Job sheets are included for doors hinged on the left and right side.</td>
</tr>
<tr>
<td>Painting a cell / room</td>
<td>Painting and decorating a cell/room. There are two job sheets; one basic (Job Sheet A) and another more challenging (Job Sheet B).</td>
</tr>
<tr>
<td>Cutting hessian</td>
<td>Cutting hessian for the construction of sandbags. Project to be completed within the textiles workshop.</td>
</tr>
<tr>
<td>Constructing Sandbags</td>
<td>Sewing hessian sandbags to specific measurements. Project to be completed within the textiles workshop.</td>
</tr>
<tr>
<td>Shed floor (8ft x 6ft)</td>
<td>Taking place in the woodwork workshop, the end product of this project is a shed floor of 8ft by 6ft.</td>
</tr>
<tr>
<td>Shed side panel (4ft)</td>
<td>Taking place in the woodwork workshop, the end product of this project is a 4ft shed side panel.</td>
</tr>
</tbody>
</table>
**Task Sheets in Progress**

*with introduction by HMP Liverpool*

| Multi-Skill Construction Area: Garden | A fairly complex project bringing together multiple workshops inc plumbing, woodwork, gardening, building and construction, decorating and plastering. |
| Leather Workshop | Based on an existing leather workshop production line that produces items for prison staff. |
Project Tasks - HMP Kirklevington

The team who developed the nest-box project from HMP Kirklevington Grange did so as part of an ‘OTLA’ project (OTLA NE and Cumbria) between 2016 and 2017. The following explanation of their work was written by the following members of the OTLA team:

Dave Tindall – Maths tutor (Novus)
Jo Diamond – English tutor (Novus)
Neil Hugill – Woodwork instructor (HMPPS)
Cathy Blacklock – Ollass Manager (Novus)
Bev Grey – Learning, Skills and Employment manager (HMPPS)

Introduction to the project

As a group we claim to have a clear strategy of how we can collaborate our different skills set and best achieve our overall aim to embed and underpin English and maths in the woodwork workshop, with a view to extend this into other vocational areas in future. We have trialled several approaches and we feel we have come up with a strategy that works for all parties and achieves the overall aim, as well as enabling different individual staff and learners within the project to achieve their own objectives and outcomes.

Project description & explanation

As a team we are in the process of producing and trialling a set of contextualised resources that can be used by woodwork learners and instructors to run and record a woodwork project that contains both practical woodwork, producing items for sale in social enterprise as well highlighting and documenting the use of embedded functional skills. We have experimented with several different approaches and have adapted and combined several different ideas to come up with a final plan that meets the needs of all involved. We have also gathered feedback from instructors and learners to help inform our decision-making process.

Our final project outline consists of a three part structure:

Stage 1: Starting point, ascertaining candidate suitability for the role and identifying any support and development needs with an initial project. Following this will be more detailed functional skills diagnostic for successful candidates.3

Stage 2: Creating a support network and development plan to build on contextualised English and maths within the workshop. Including peer lead support champions based in the workshop and the additional opportunity to come into class for ‘top up’ sessions where needed.

3 See example context based initial / diagnostic assessment below.
Stage 3: Producing a final project which will showcase a learner’s progress and achievements in both practical woodwork and contextualised English and maths. The project will involve producing a more complex item for sale in social enterprise and will also include producing a project portfolio that reflects their English and maths skills.

For the first part of the process we produced an initial project package for new starters to work through which includes several elements of contextualised English and maths as well as leading them through the physical production of a product. This will act as an early indicator of suitability for a candidate to be working within the woodwork workshop, also be used by Neil to determine the most suitable roles for individual learners and highlight strengths and development needs in contextualised and relevant English and maths skills.

After the first initial project has been attempted/completed by new starters, Neil will use the resulting product and project documentation to make a decision on whether they are a suitable candidate for the workshop and if so, what roles will best suit them. For the learners who are successful and who are staying in the workshop, a second more detailed contextualised English and maths diagnostic will take place. From this a detailed support and development plan can be put into place which involves collaboration from a variety of parties including:

The woodwork instructor - who will provide practical advice and support from a technical point of view.

Peer lead support ambassadors – who will champion functional skill in the work shop and offer peer support, encouragement and guidance.

Novus – will offer contextualised ‘top up’ sessions where a clear gap in learner knowledge has been identified from the more detailed second assessment.

We are currently in the process of planning and producing the final stage of the project. This will be supporting documents to help learners create their final showcase product and a supporting portfolio. After meetings with Neil and Bev we have identified a selection of three joinery items which will be complex enough to offer ample opportunity for learners to demonstrate their skill in both technical joinery and functional skills. This will be a project that learners will carry out in the workshop and will be supported by Neil and peer lead support ambassadors. The overall outcome of this should be a high-quality item that is fit for sale in the external shop, accompanied by a thorough and relevant portfolio which may be used to document the individual’s competencies in contextualised English and maths in their learning and skills record of achievement.
Initial Review (Joinery)

Initial Functional Joinery Skills Assessment

1. Scale 1cm : 2m

A. What are the real life dimensions of the lounge?

..........................................................................................................................

B. What are the real life dimensions of the kitchen?

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C. You wish to place a bath, length 1.7m across the bathroom wall in front of the cupboard. Will it fit?

..........................................................................................................................

Please explain how and why it will or won’t fit:

..........................................................................................................................
..........................................................................................................................
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2. Please convert the following measurements:

55cms = ........................m
42cms = ....................mm
47mm = ......................cm
1250mm = ...................m
4.2m = ......................cm
1.8m = ....................mm

3. A piece of 4 by 2 is 1.85m long.
   How many 9cm pieces of 4 by 2 can you cut fully? Show your working:
   (Disregard any loss caused by cutting)

Answer = .............................

4. If a piece of wood is specified as 20cms +/- 2cms, what is the maximum length it could be and what is the minimum length it could be?

   Maximum = .......................... Minimum = ..........................
A. On circle A draw a 90° angle

B. On circle B draw a 45° angle

C. On circle C draw a 22° angle

6. A bench uses the following pieces of wood:

   12 slats @ £1.24 each
   2 end pieces @ £5.68 each
   3 strengthening bars @ £3.62 each

A. Calculate the materials cost for 1 bench:

   Answer = ............................

   Answer = ............................
B. Calculate the materials cost for 13 benches:

Answer = ..............................

C. What wood treatment would you choose to use on the bench?

..........................................................................................................................

Explain your choice:

..........................................................................................................................
..........................................................................................................................
..........................................................................................................................

D. Describe the instructions for use given on the tin for this product:

..........................................................................................................................
..........................................................................................................................
..........................................................................................................................

E. Summarise any health and safety warnings given on the tin for this product:

..........................................................................................................................
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..........................................................................................................................
F. You order the material needed to make your bench from the supplier. When they arrived you realise that they have only sent you 10 slats and 2 strengthening bars.

Draft an email of complaint to the customer service department. Remember to include details of the problem and tell the supplier what you expect them to do about it.
Building a Nestbox

Carpentry Introduction
Creating an item to sell in the external shop
Make a nestbox

Work through the following guide to help you build a simple nestbox. If it is good enough it will go on sale in the external shop.

Are you up for the challenge?!

1. Natural nest holes don’t come in standard sizes, so please use the following sizes as a guide. Use a plank about 150 mm wide and 15 mm thick. Use the diagram to help you.

Select your piece of wood, mark it out and make the cuts.

The inside of the box must be at least 100mm square. Use a tape measure to check that your base meets these requirements.

My base measures ..................mm □ (It meets the requirement)

How much is 100mm in centimetres? ..................cm
2. The bottom of the entrance hole must be at least 125 mm from the floor. If it is less, young birds might be scooped out by a cat.

Based on your drawing, how far from the floor will your entrance hole be?

........................mm

Draw on the scale diagram an acceptable position for your entrance hole.

Scale 1mm : 4mm
3. The size of the entrance hole depends on the type of bird you want to attract:

- 25 mm for Coal Tits, Marsh Tits and Blue Tits
- 28 mm for Great Tits and Tree Sparrows
- 32 mm for Nuthatches and House Sparrows

Which is the most common bird found in the UK? ...................................................

Which is the least common bird found in the UK? ...................................................
Based on this information which type of bird would you hope to attract?

Why?

What size hole do you need?

When you have decided on the best size and position, use the drill to make the entrance hole.

Now use a tape measure to check that the entrance at least 125mm from the bottom.

My entrance measures ..................mm from the floor.  □ (It meets the requirement)
4. Use galvanised nails or screws to assemble the nestbox. The inside front surface should be rough – this will help the young birds to clamber up. A drainage hole in the base will also help to stop the box getting damp inside.

Explain how you ensured the inside front surface is rough:

...........................................................................................................

Why is this important?

...........................................................................................................

5. Hinge the lid with a strip of leather or rubber (an old piece of bicycle inner tube would do). Do not nail the lid down (because the box will need to be clean out in autumn). Instead, use a catch to keep it closed.

What did you decide to use as a hinge?

...........................................................................................................

Why?

...........................................................................................................

Why should you use a catch to keep the nestbox closed?

...........................................................................................................
6. Softwood boxes (such as pine) can be treated with water-based wood preservatives, such as Fenceguard or Sadolin.

Have a look at the selection of wood treatments available to you and read the tins carefully.

<table>
<thead>
<tr>
<th>Which treatment is most suitable to use?</th>
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</thead>
<tbody>
<tr>
<td>..................................................................................................................................................</td>
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<table>
<thead>
<tr>
<th>Why?</th>
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<tr>
<td>..................................................................................................................................................</td>
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</table>

<table>
<thead>
<tr>
<th>Summarise the instructions for use:</th>
</tr>
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<tbody>
<tr>
<td>..................................................................................................................................................</td>
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<td>..................................................................................................................................................</td>
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<table>
<thead>
<tr>
<th>Identify any health and safety warnings:</th>
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<td>..................................................................................................................................................</td>
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<td>..................................................................................................................................................</td>
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</table>

Apply only to the outside of the box, and not around the entrance hole.

Make sure the box dries and airs thoroughly before going on sale.
7. Ask your instructor what the cost price was for all the materials you used to build your nestbox.

<table>
<thead>
<tr>
<th>Materials</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td></td>
</tr>
<tr>
<td>Nails/screws</td>
<td></td>
</tr>
<tr>
<td>Hinge</td>
<td></td>
</tr>
<tr>
<td>Catch</td>
<td></td>
</tr>
</tbody>
</table>

Now calculate the total cost of materials used:

Approximately how many hours did you spend building the nestbox?

.............................................

Based on this information what do you think is an appropriate sale price for the nestbox?

.............................................
8. Now your nestbox is ready to go on sale, your customer may appreciate some additional information to help them make the most of the product.

Putting up your nestbox

Bird boxes should be positioned 2-5 metres above the ground, out of direct sunlight, opening away from the prevailing wind (i.e. facing N-NE), and tilted downwards slightly against rain.

Boxes may be fixed to trees with nails or tied on with bands (but be careful to allow for tree growth). Boxes can also be fixed to walls.

Avoid placing boxes within 30 metres of other bird boxes of the same type, bird tables or feeders.

Try to make sure that there is a clear flight path to the box and plenty of perching opportunities nearby, but not too close.

Maintaining your nestbox

Clean out your nest box once a year, 2-3 weeks after any nestlings have fledged (Oct-Nov).

Remove any old nests or bedding and wash out the box with warm soapy water. Do not use pesticides or flea powder.

Check to see that the box is still securely attached to its tree. As the tree grows, its girth will widen, which may force out the fixing nails. The nails may also start to rust. If you tied your nest box to the tree, the bands will need to be loosened slightly each year.

Do not disturb your nest box during the breeding season.

Using the above guidelines, design a leaflet, flyer or poster for the customer explaining how to position and maintain the nestbox. Use a separate sheet.

If you are feeling adventurous, use the computers in education to create a professional document.
Job Sheets – HMP Haverigg

Like the team at HMP Kirklevington Grange, the team at HMP Haverigg wanted to develop approaches to engage prisoners in education alongside work/training tasks. However, the approach taken in this prison was different to the project based approach in so far as the outcomes were to be about engagement through illustrating where maths/English is used as part of workplace tasks and, through this, showing prisoners how progress at work/in training includes progress in maths and English. Here. There were no planned qualification outcomes for vocational or maths/English; the tasks prisoners undertake simply ‘shine a light on’ what they already do at work.

Job sheet learning model

The diagram below shows the model developed at HMP Haverigg, with ‘workplace projects’ (later re-named ‘job sheets’) at the heart. This learning is not bolted on; it is about making the tasks prisoners carry out in workshops/prison work explicit and visible. For example, when working in a woodwork shop, making a wooden gate, prisoners already have to measure wood, follow verbal instructions, etc. These practices are plotted out on job sheets and then learning support specialists/mentors and instructional officers support prisoners to recognise what they are doing and how it relates to maths/English and mentors support prisoners who might struggle to undertake, e.g. maths-based tasks. Mentors and instructors can also use the more/less successful completion of the job sheets as a way to encourage prisoners to take up education opportunities in the prison. In turn, the education team can build on the tasks carried out in workshops when planning maths and English classes. The model can be seen below:
The role of mentors

Peer mentors play a crucial role in the model developed at HMP Haverigg. They have are being specially trained to support job sheet learning, alongside other learning support tasks. The peer mentor role outline and policy for this prison are included in the Appendix.

Language of work

Because the team at HMP Haverigg wanted prisoners to be able to take their ‘job sheets’ out of prison and to replicate a real-world scenario, they encourage the use of role titles: ‘employee’ and ‘employer’. This language is explicitly stated on the Job sheets included in this guide.

Each employee job sheet includes:

1. Front cover with a photo from the workshop or the end product.
2. Questions and tasks that support the development of naturally-embedded maths and/or English.
3. A space for ‘employee’ (prisoner) and ‘employer’ (instructor) to reflect and feedback.
4. A space for the ‘employer’ to sign off the work done if completed to the required standard.

Use these example task sheets as a template to create your own, specific to your prison. If you create something that has been successful, please email us via chloe.hynes@ccconsultancy.co.uk so we can share with others in the sector.

The lead instructor for the job sheet learning approach at HMP Haverigg explains more about the approach and how the project developed in his introduction to this work below.
Introduction by lead instructor for job sheet learning

At first, my line manager approached me asking me if I would be interested in developing embedded learning functional English and maths in the workshops. He explained that this was to be national throughout the prisons. This was all about prisoners/learners working to engage in education.

In developing approaches for prisoners/learners who don’t engage in education, I looked at designing a job sheet template for each individual workshop. Our aim was to focus on the production in that workshop as a way to engage prisoners/learners in education without making it look like education.

We decided to develop ‘job sheets’. The job sheet was to have no more than four pages with approximately five work related English and maths questions and a pictorial cover sheet showing a finished product. This was for the prisoner/learner to show how and what they have learned and also for the instructors to encourage prisoners/learners by explaining that the prisoner/learner has shown, through completion of the work task, that they have used certain levels of maths and English.

Job sheets are self-explanatory information sheets that you would normally receive in a workplace to produce a product, with prisoners/learners answering the work related questions to show their learning and knowledge of how they have made the item.

The job sheets are not an educational test. They are not designed by education but by the instructors in the workshops.

My colleagues, the instructors, gave me the information on the products they were producing. We discussed together relevant pictures and questions to include. I then went away and developed each job sheet and then went through it again with the instructors of the workshop. When happy with this outcome, working with Claire Collins from the Education and Training Foundation, I forwarded them to Claire for approval and for support to identify what level the maths and English questions were. The instructors have ownership of the process as it was their ideas. I was just the pen and paper!

This could be a way for prisoners to gain some self-esteem and believe that they can do things and, hopefully, give them a chance of not reoffending with a chance of employment.

Barry Hartle

Instructional Officer Band 4

HMP Haverigg
Cold Smoking Bacon

JOB SHEET
A. Order the procedure from step 1 to step 6:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hard chill, set up slicer as per instructions.</td>
</tr>
<tr>
<td>2</td>
<td>Wash off Brine, pat dry.</td>
</tr>
<tr>
<td>3</td>
<td>Slice, required amounts in packs.</td>
</tr>
<tr>
<td>4</td>
<td>Vac pack, label and store.</td>
</tr>
<tr>
<td>5</td>
<td>Into kiln for up to 36 hours (1 drawer).</td>
</tr>
<tr>
<td>6</td>
<td>Tray up rind side down.</td>
</tr>
</tbody>
</table>

B. Why do we decant the product from the packaging? *Explain in your own words.*

C. When checking the products what are you looking for? *Explain in your own words.*
D. Why is the weight checked?

E. What is the percentage of salt in the brine bath and how do you check?

F. Explain why there is a raw product sheet.

Employer’s feedback comments

Signature:

Employee’s feedback comments

Signature:

Finished to the required standard: ❑
Door and Frame
(doors hinged on the left)

JOB SHEET
Door and Frame
(door hinged on the right)

JOB SHEET
KEY
A = height of frame to fit the hole
B = width of frame to fit the hole.

Size of door = A for height, C for width.
Minus ½ inch off C the width.

Materials
1. 4 x 2 par
2. T & G boards 125mm x 25mm
Door hinged on the left from the inside:

1. Fit middle brace after top and bottom braces are fitted
2. Fit the three braces 1 inch from the edge of each side of the door.
3. Fit the angled braces with two screws through each board.

\[ D = 5 \text{ inches} \quad E = 7 \text{ inches} \]
Door hinged on the right from the inside:

4. Fit middle brace after top and bottom braces are fitted
5. Fit the three braces 1 inch from the edge of each side of the door.
6. Fit the angled braces with two screws through each board.

D = 5 inches  E = 7 inches
Explain in your own words how you made the door and frame. *Show any calculations and working out.*

Employer’s feedback comments

Employee’s feedback comments

Finished to the required standard: [ ]
Painting a Cell/ Room (1)

JOB SHEET
EACH SQUARE IS = TO 1 SQUARE FOOT (ft\(^2\))

1 LITRE OF PAINT COVERS 86 square feet

THE ROOM IS 9.8 feet high

The size and cost of each tin of paint is shown below:

<table>
<thead>
<tr>
<th>Size</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 litre</td>
<td>£4.55</td>
</tr>
<tr>
<td>2.5 litre</td>
<td>£8.88</td>
</tr>
<tr>
<td>5 litre</td>
<td>£15.25</td>
</tr>
<tr>
<td>10 litres</td>
<td>£27.49</td>
</tr>
</tbody>
</table>

You need to work out how much paint will be needed for you to complete this job.
1. Calculate the total area of the walls to be painted? *Show your workings.*

2. How much paint is needed for one coat of paint? *Show your workings.*

3. The room will need two coats of paint. What is the cheapest way to do this? *Show your workings.*
4. How do you apply the paint? Describe the instructions on the tin.

5. What are the health and safety considerations for using the paint?

Employer’s feedback comments

Employee’s feedback comments

Finished to the required standard: [ ]
Painting a Cell/ Room (2)

JOB SHEET
Follow the tips below:

To calculate how much paint is needed:
Measure the wall height and length.
Then multiply the measurements
3m x 5m = 15m²

Remember!
It’s better to have too much paint than too little.

There are 1000 millimetres in a metre. Divide by 1000 to convert from millimetres to metres

- e.g. 1150mm = 1.15m
- 2356mm = 2.356m

The size and cost of each tin of paint is shown below

<table>
<thead>
<tr>
<th>Size</th>
<th>Cost</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 litre</td>
<td>£4.55</td>
<td>8m²</td>
</tr>
<tr>
<td>2.5 litre</td>
<td>£8.88</td>
<td>20m²</td>
</tr>
<tr>
<td>5 litre</td>
<td>£15.25</td>
<td>40m²</td>
</tr>
<tr>
<td>10 litres</td>
<td>£27.49</td>
<td>80m²</td>
</tr>
</tbody>
</table>
1. Measure your work area. Draw your room layout. Scale your drawing.

When measuring rooms to estimate materials and cost

**Metres** are the most useful units because the coverage of most coating materials is given in **square metres**

It is usual to round up to the next **0.25 metre**, e.g.:

- 1.15m will round up to 1.25
- 3.45m will round up to 3.50m
1. What is the total area to be painted? *Show your workings.*

2. How much paint is needed to paint the room with one coat? *Show your workings.*

3. How much paint is needed to paint the room with two coats? What is the cheapest cost?
4. Explain how you prepared the room for painting (in your own words).

5. Explain the drying time for the paint you’re using.

Employer's feedback comments

Employee's feedback comments

Finished to the required standard: [ ]
Sandbags: Cutting Hessian

JOB SHEET
1. Order the procedure to cut the hessian from step 1 to step 6

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Check measurement is correct to specification</td>
</tr>
<tr>
<td>2</td>
<td>Clamp raw edge at the end of the table</td>
</tr>
<tr>
<td>3</td>
<td>Ensure lay cutters are set 78cm apart</td>
</tr>
<tr>
<td>4</td>
<td>Check fabric is free from faults, damage or stains</td>
</tr>
<tr>
<td>5</td>
<td>Lay up 2 runs of hessian parallel down the length of the table</td>
</tr>
<tr>
<td>6</td>
<td>Use cutters to cut material length a tolerance of -1cm, +1cm</td>
</tr>
</tbody>
</table>

2. If a roll of hessian is 3 metres how many sandbags can be cut?
3. Explain health and safety on the use of the lay end cutter.

4. How many meters of hessian are needed to cut 190 sandbags?
Making sandbags

JOB SHEET
General Information

Sandbag to be made in Hessian woven
Finished size: 38cm x 84cm
With tie fastening

Stitches & Seams

Stitches should not be less than 14 per 10cm.
Side seam should be 7.5cm from side with folded edge.
Bottom selvedge seams should be 1cm from edge.
Stitch type 301 Thread is NS30.
Tying string 80cm long made of twine, secured enclosed through the side seam 2, .5cm in from the edge.
10cm from top of sandbag

1. List the materials and equipment used to make the sandbag.
2. Explain how you make the sandbags. Drawings can be used to illustrate.

3. Explain in your own words how you finish the stitching on each seam.

4. There are 14 stitches in 10cm. How many stitches are there in 84cm?
5. The dimensions of a complete sandbag are: 84cm x 36cm x 84cm. How many stitches are there in a complete sandbag?

6. Explain what you are looking for in the final inspection (the specification).

7. You have made 650 sandbags, there are 50 in a box and each box earns 75p. How much have you earned?
### Employer's feedback comments

| Signature: |

### Employee’s feedback comments

| Signature: |

Finished to the required standard: [ ]
Sandbags: Packing

JOB SHEET
1. Explain in your own words the procedure of packing the completed sandbags.

2. How many boxes are needed for 16,500 sandbags?
3. If the order was for 24,000 sandbags, how many bundles are needed?

4. Name four possible faults on a finished handbag.

---

**Employer’s feedback comments**

---

**Employee’s feedback comments**

---

Finished to the required standard: [ ]
Shed floor: 8ft x 6ft

JOB SHEET
How the framework for the floor should look (not to scale):

Diagram A

Section 1

8mm x 90mm Bolts

Section 2

Noggins
The Specification:

- The floor will be in 2 sections.
- Timber (3 x 2 CLS) - cost timber £1.10 per metre
- Ply wood sheet (8 foot x 4 foot).
- The sections are bolted together with (8mm x 90mm bolts).
- Ply wood sheets cut into 3 sections (as shown by the dotted lines).
- Don’t forget a space at the joining to take the sections apart. (ply wood not screwed down)
- The scale of each large box on the diagram = square 1m.

1. Using the graph paper, work out the floor for an 8foot x 6foot shed
2. Write down a cutting list for the floor framework

3. What is the reason for making the floor in sections?

4. Work out the amount of materials needed to build the 8ft x 6ft floor. Show your workings.
d. What is the total cost of materials to build the 8 x 6 floor (show your calculations)?

Employer’s feedback comments

Employee’s feedback comments

Finished to the required standard: [ ]

Signatures:
Shed Side Panel: 4ft

JOB SHEET
**Ship lap board**

(General Information)

- 3 x 2 CLS in 5m lengths
- Shiplap boards 0.125m wide
- 2 screws in each butt joint
- 3 galvanised oval brad nails in shiplap boards on each upright. *(See diagram B).*
- The first shiplap board is nailed to the frame with a 20mm overhang. *(See diagram C).*

---

**Diagram C**

![Diagram C](image_url)

**CUTTING LIST**

- 4 @ 1.9m
- 2 @ 1.2m
- 6 @ 0.36m
**Task:** Using the Diagrams and information, build a shed side panel

1. From the cutting list what is the total length of 3x2 CLS that is needed?

2. How many 5m lengths of 3 x 2 CLS needed to build the frame?

3. If each butt joint has two screws, how many screws are needed to build the frame?

4. How many shiplap boards are needed to cover the frame (explain how you came to that answer).
5. What tools are needed to build the panel? List each tool and explain which part of the construction each tool would be used for.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Part of Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Now construct the panel

Employer's feedback comments

Employee’s feedback comments

Finished to the required standard: ☐
Shed Side Panel: 4ft (2)

JOB SHEET
**Ship lap board**

(General Information)

- 3 x 2 CLS in 5m lengths
- Shiplap boards 125mm wide
- 2 screws in each butt joint
- 3 galvanised oval brad nails in shiplap boards on each upright. *(See diagram B).*
- The first shiplap board is nailed to the frame with a 20mm overhang. *(See diagram C).*

### CUTTING LIST

- 4 @ 1905mm
- 2 @ 1219mm
- 6 @ 355mm

---

**Diagram C**

```
Frame   shiplap board   Position of first shiplap board

20mm overhang
```
**Task:** Using the Diagrams and information, build a shed side panel

6. From the cutting list what is the total length of 3x2 CLS that is needed?

7. How many 5m lengths of 3 x 2 CLS needed to build the frame?

8. If each butt joint has two screws, how many screws are needed to build the frame?

9. How many shiplap boards are needed to cover the frame (explain how you came to that answer).
10. What tools are needed to build the panel? List each tool and explain which part of the construction each tool would be used for.

Now construct the panel

Employer’s feedback comments

Employee’s feedback comments

Finished to the required standard:   

Signature:
Template

Most prisons have a laundry. See if you can develop a job sheet for one, working with laundry instructors (if you are not one yourself).

Laundry

JOB SHEET
Task Sheets in Progress – HMP Liverpool

The final section of this guide has been included to show how the work carried out at HMP Kirklevington Grange and HMP Haverigg inspired teams in other prisons to develop similar approaches. As part of a training session, Claire Collins took the ‘nest box project’ and early versions of the ‘job sheets’ to several prisons for sharing and peer review. In the examples shown below, a team of instructional officers (HMPPS staff) and vocational trainers (employed by the education provider, Novus) from HMP Liverpool created their own plans and ideas during one such training session. The drawings below illustrate how the development of task-based learning approaches stems from an in-depth understanding of work/ training and, therefore, how this must be led by instructors/ trainers. It also shows how people working in prison workshops can be inspired to think about developing embedded maths/ English in a non-threatening way; not by showing them all that they need to learn personally before they can support prisoners’ maths/ English development but by showing them that embedded maths/ English learning builds naturally on vocational / workplace knowledge and skills.

By reviewing the drawings from the training session at HMP Liverpool to follow, you might feel inspired to create your own task based learning activities.
Multi-Skill Construction Area: Garden

Design a small garden:
- Brickwork
- Rendering
- Joinery
- Plumbing
- Painting & Decorating
- Gardening.

A Multi Skill Construction Cert
## Leather Workshop

<table>
<thead>
<tr>
<th>Product</th>
<th>Amount</th>
<th>Reorder</th>
<th>Target</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leather Pouches</td>
<td>250</td>
<td></td>
<td>250</td>
<td>500</td>
</tr>
<tr>
<td>Round Handbags</td>
<td>150</td>
<td></td>
<td>200</td>
<td>350</td>
</tr>
<tr>
<td>Men's Belts</td>
<td>600</td>
<td></td>
<td>800</td>
<td>1400</td>
</tr>
<tr>
<td>Women's Belts</td>
<td>600</td>
<td></td>
<td>600</td>
<td>1200</td>
</tr>
<tr>
<td>Men's Pouches</td>
<td>350</td>
<td></td>
<td>500</td>
<td>850</td>
</tr>
<tr>
<td>Loops</td>
<td>500</td>
<td></td>
<td>500</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Leather Products Completed**

1. Hide rolled out 10 hides to a reel
2. Hide cut length and width for product
3. Hide cut length and width for product
4. Holes made, holes put on belt to
5. Belts packed into bags 10 to a bag
6. Belts put on and put on shelf
7. All work for a day is logged by staff
8. Feedback provided on the product
9. The product was made by the prisoners
10. Control and knowledge on figures.
## APPENDIX

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Mentor Role Profile</td>
<td>87</td>
</tr>
<tr>
<td>Peer Mentor Policy</td>
<td>89</td>
</tr>
<tr>
<td>Functional Skills English</td>
<td>93</td>
</tr>
<tr>
<td>Functional Skills maths</td>
<td>103</td>
</tr>
</tbody>
</table>
Role Profile

Peer Mentor

Purpose
As directed by a Tutor/Trainer/Instructor, to support Novus/Work Area staff in delivering high quality, employee focused support in line with appropriate policies and procedures.

Key Responsibilities
- As directed by a Tutor/Trainer/Instructor, develop learning materials to ensure compliance with best practice and appropriate targets.
- Contribute to and support Vocational Training/Qualifications, Job Sheets, English and Maths.
- Contribute to ensuring the safeguarding of learners
- Contribute to ensuring compliance with NOVUS & HMPS policies and procedures.
- Provide high quality support to employees.
- Undertake continuing professional development as required by the role.
- Be willing to undertake an appropriate qualification to become a fully accredited Mentor.
- Contribute to ensuring compliance with Health & Safety legislation.
- Attend mentor meetings as required.

Key Result Areas
- Achievement of quality and performance targets.
- Positive team working.

Personal Attributes
Flexible.
Pragmatic.
Learner Focused.
Non-judgemental.
Trustworthy.
Qualifications, Skills, Experience

- Must have a relevant subject specialist qualification at Level 2 (Education).
- Must have suitable experience/knowledge (Work Areas).
- Hold at least a Level 2 qualification in Literacy and Numeracy or be willing to commit to gaining the outstanding qualification(s) within 1 year.
Peer Mentor Policy
(Education and Industrial areas)

HMP Haverigg

N. Holmes 2018
Our Mission Statement:
At HMP Haverigg we are committed to supporting all employees to achieve their potential educationally, socially and emotionally. We believe that minimising the impact of barriers to learning enables our learners to develop confidence in their own ability to succeed. Peer Mentors are a valuable resource to aid learning and our Peer Mentor scheme aims to:

- Promote best practice.
- Foster effective supportive relationships between prisoners.
- Help individuals generate coping strategies for the workplace and future employment on release.
- Widen participation in learning.
- Enhance the learning experience for all.
- Provide social, emotional and practical support.
- Cater for individual learning needs.
- Promote a culture of respect where individuals feel valued.

From Selection to Implementation – the policy in practice.

Marketing:
In order to encourage a broad spectrum of applications, Peer Mentor vacancies are advertised widely throughout the prison. Advertisements provide an overview of the role profile, key responsibilities and personal attributes required.

Eligibility:
Prospective Mentors need to have achieved Functional Skills Maths and English at Level 2. If required hold a level 2 subject specialism, qualification. Or be working towards Level 2 in English and Maths.

Work area Mentors must hold suitable experience and knowledge in relation to the work area that they are applying for.

The Application Process:
Prospective Mentors are required to apply in writing by completing the application form available through ELS (Education Learning Support) and the Workshops. All applicants are interviewed by one member of staff from the Education team, and one member of the relevant work area team. Successful applicants will be put forward for Security clearance at this stage and if successful will be placed on the peer mentoring waiting list.

N. Holmes 2018
Allocation:

Education Mentors are allocated according to learner needs in all areas of the Education Department. Work area Mentors will be allocated according to employee needs in the relevant area. Any employees with a barrier to learning, which will have been identified through the Learning Support process, are offered mentor support. Ideally the support will be specific to the subject/work area if possible and will maintain the continuity of the mentor/mentee relationship.

**The Role of the Mentor**

All Mentors will be expected to:

- Support the mentee as directed by staff.
- Initiate a mentor/mentee agreement.
- Keep a log of all mentoring duties undertaken – this log should be completed at the end of each session and kept in the Mentor profile.
- Adhere to the Peer Mentor Code of Conduct. (see attached).
- Attend meetings as required.
- Undertake appropriate Continual Professional Development.

**Competence**

The mentor will:

- Maintain a relationship with the relevant staff who will regularly assess the mentor’s competence and support their development.
- Always act within the scope of their own competence ie. Ensuring that their level of experience and knowledge is sufficient to meet the needs of the mentee.

**Boundary Management**

The mentor will:

- Refer the mentee to the tutor for further support if the mentee requires help outside of the workplace setting.
- Be aware of the potential for conflicts of interest in the mentoring relationship, especially where the mentor holds other roles ie. Listeners.
- Ensure that the mentor/mentee relationship remains professional and focused on learning needs only at all times.
- Staff have a responsibility to ensure that Boundary Management is adhered to.
**Integrity and Professionalism**

The mentor will:

- Act with integrity and honesty and behave responsibly at all times.
- Maintain confidentiality at all times except where there is a safeguarding issue. In this case, the tutor or another appropriate member of staff must be informed.
- Avoid making any promises that they may not be able to fulfil, remembering that they are a representative of the Education Department/Work area.

**Code of Conduct for Peer Mentors:**

- This Code of Conduct has been agreed to promote best practice and to ensure that the highest standards are maintained in the mentor/mentee relationship. It covers three key areas – competence, boundary management, integrity and professionalism.
Functional Skills Subject Content (English)

This 2018 document can be accessed here:

Subject Content: Entry Level 1

Speaking, Listening and Communicating

Scope of study

Text: this should include simple narratives, information and instructions, and short statements, explanations, discussions, questions and exchanges.

1. Say the names of the letters of the alphabet
2. Identify and extract the main information from short statements and explanations
3. Follow single-step instructions, asking for them to be repeated if necessary
4. Make requests and ask straightforward questions using appropriate terms and registers
5. Respond to questions about specific information
6. Make clear statements about basic information and communicate feelings and opinions on straightforward topics
7. Understand and participate in simple discussions or exchanges with another person about a straightforward topic

Reading

Scope of study

Text: this should include short, simple texts that inform, describe and narrate.

8. Read correctly words designated for Entry Level 1 (see Appendix)
9. Read simple sentences containing one clause
10. Understand a short piece of text on a simple subject
Writing

Scope of study

Text: this should include short simple texts such as messages and notes.

Spelling, punctuation and grammar

| 11. Punctuate simple sentences with a capital letter and a full stop |
| 12. Use a capital letter for the personal pronoun ‘I’ and the first letter of proper nouns |
| 13. Use lower-case letters when there is no reason to use capital letters |
| 14. Write the letters of the alphabet in sequence and in both upper and lower case |
| 15. Spell correctly words designated for Entry Level 1 (see Appendix) |

Writing composition

| 16. Communicate information in words, phrases and simple sentences |
Subject Content: Entry Level 2

Speaking, Listening and Communicating

Scope of study

Text: this should include short narratives and explanations and instructions, discussions and straightforward information and instructions.

1. Identify and extract the main information and detail from short explanations
2. Make requests and ask clear questions appropriately in different contexts
3. Respond appropriately to straightforward questions
4. Follow the gist of discussions
5. Clearly express straightforward information and communicate feelings and opinions on a range of straightforward topics
6. Make appropriate contributions to simple group discussions with others about a straightforward topic

Reading

Scope of study

Text: this should include short, straightforward texts that instruct, inform, describe and narrate.

7. Read correctly words designated for Entry Level 2 (see Appendix)
8. Understand the main points in texts
9. Understand organisational markers in short, straightforward texts
10. Use effective strategies to find the meaning of words and check their spelling (e.g. a simple dictionary, spell-checker)
11. Read and understand sentences with more than one clause
12. Use illustrations, images and captions to locate information
Writing

Scope of study

Text: this should include short, straightforward texts such as letters, e-mails and simple narratives.

Spelling, punctuation and grammar

| 13. Use basic punctuation correctly (e.g. full stops, capital letters, question and exclamation marks) |
| 14. Form regular plurals |

| 15. Use the first and second letters to sequence words in alphabetical order |
| 16. Spell correctly words designated for Entry Level 2 (see Appendix) |

Writing composition

| 17. Communicate information using words and phrases appropriate to audience and purpose |
| 18. Complete a form asking for personal information (e.g. first name, surname, address, postcode, age, date of birth) |
| 19. Write in compound sentences, using common conjunctions (e.g. or, and, but) to connect clauses |
| 20. Use adjectives and simple linking words in the appropriate way |
Subject Content: Entry Level 3

Speaking, Listening and Communicating

Scope of study

**Text:** this should include straightforward narratives, accounts, explanations, discussions, instructions, information and descriptions.

| 1. Identify and extract relevant information and detail in straightforward explanations |
| 2. Make requests and ask concise questions using appropriate language in different contexts |
| 3. Communicate information and opinions clearly on a range of topics |
| 4. Respond appropriately to questions on a range of straightforward topics |
| 5. Follow and understand the main points of discussions |
| 6. Make relevant contributions to group discussions about straightforward topics |
| 7. Listen to and respond appropriately to other points of view, respecting conventions of turn-taking |

Reading

Scope of study

**Text:** this should include a range of straightforward texts on a range of topics and of varying lengths that instruct, describe, explain and persuade.

| 9. Identify and understand the main points, ideas and details in texts |
| 10. Compare information, ideas and opinions in different texts |
| 11. Identify meanings in texts and distinguish between fact and opinion |
| 12. Recognise that language and other textual features can be varied to suit different audiences and purposes |
| 13. Use reference materials and appropriate strategies (e.g. using knowledge of different word types) for a range of purposes, including to find the meaning of words |
| 14. Understand organisational and structural features and use them to locate relevant information (e.g. index, menus, subheadings, paragraphs) in a range of straightforward texts |
| 15. Infer from images meanings not explicit in the accompanying text |
| 16. Recognise vocabulary typically associated with specific types and purposes of texts (e.g. formal, informal, instructional, descriptive, explanatory and persuasive) |
| 17. Read and understand a range of specialist words in context |
Reading

Scope of study

Text: this should include straightforward texts that instruct, describe, narrate and explain.

8. Read correctly words designated for Entry Level 3 (see Appendix)
9. Identify, understand and extract the main points and ideas in and from texts
10. Identify different purposes of straightforward texts
11. Use effective strategies to find the meaning of words (e.g. a dictionary, working out meaning from context; using knowledge of different word types)
12. Understand organisational features and use them to locate relevant information (e.g. contents, index, menus, tabs and links)

Writing

Scope of study

Text: this should include straightforward texts such as narratives, instructions, explanations and reports.

Spelling, punctuation and grammar

13. Use a range of punctuation correctly (e.g. full stops, question marks, exclamation marks, commas)
14. Form irregular plurals
15. Use mostly correct grammar (e.g. subject-verb agreement, consistent use of tense, definite and indefinite articles)
16. Use the first, second and third place letters to sequence words in alphabetical order
17. Spell correctly words designated for Entry Level 3 (see Appendix)

Writing composition

18. Communicate information, ideas and opinions clearly and in a logical sequence (e.g. chronologically, by task)
19. Write text of an appropriate level of detail and of appropriate length (including where this is specified)
20. Use appropriate format and structure when writing straightforward texts, including the appropriate use of headings and bullet points
21. Write in compound sentences and paragraphs where appropriate
22. Use language appropriate for purpose and audience
Subject Content: Level 1

Speaking, Listening and Communicating

Scope of study

Text: this should include narratives, explanations, discussions, instructions, information, descriptions and presentations all of varying lengths.

1. Identify relevant information and lines of argument in explanations or presentations
2. Make requests and ask relevant questions to obtain specific information in different contexts
3. Respond effectively to detailed questions
4. Communicate information, ideas and opinions clearly and accurately on a range of topics
5. Express opinions and arguments and support them with evidence
6. Follow and understand discussions and make contributions relevant to the situation and the subject
7. Use appropriate phrases, registers and adapt contributions to take account of audience, purpose and medium
8. Respect the turn-taking rights of others during discussions, using appropriate language for interjection

Reading

Scope of study

Text: this should include a range of straightforward texts on a range of topics and of varying lengths that instruct, describe, explain and persuade.

9. Identify and understand the main points, ideas and details in texts
10. Compare information, ideas and opinions in different texts
11. Identify meanings in texts and distinguish between fact and opinion
12. Recognise that language and other textual features can be varied to suit different audiences and purposes
13. Use reference materials and appropriate strategies (e.g. using knowledge of different word types) for a range of purposes, including to find the meaning of words
14. Understand organisational and structural features and use them to locate relevant information (e.g. index, menus, subheadings, paragraphs) in a range of straightforward texts
15. Infer from images meanings not explicit in the accompanying text
16. Recognise vocabulary typically associated with specific types and purposes of texts (e.g. formal, informal, instructional, descriptive, explanatory and persuasive)
17. Read and understand a range of specialist words in context
18. Use knowledge of punctuation to aid understanding of straightforward texts

Writing

Scope of study

**Text:** this should include straightforward texts such as narratives, instructions, explanations and reports of varying lengths.

Spelling, punctuation and grammar

| 19. Use a range of punctuation correctly (e.g. full stops, question marks, exclamation marks, commas, possessive apostrophes) |
| 20. Use correct grammar (e.g. subject-verb agreement, consistent use of different tenses, definite and indefinite articles) |
| 21. Spell words used most often in work, study and daily life, including specialist words |

Writing composition

| 22. Communicate information, ideas and opinions clearly, coherently and accurately |
| 23. Write text of an appropriate level of detail and of appropriate length (including where this is specified) to meet the needs of purpose and audience |
| 24. Use format, structure and language appropriate for audience and purpose |
| 25. Write consistently and accurately in complex sentences, using paragraphs where appropriate |
Subject Content: Level 2

Speaking, Listening and Communicating

Scope of study

Text: this should include extended narratives and information (information may be on technical, concrete or abstract topics), discussions, detailed explanations and presentations, all of varying lengths.

1. Identify relevant information from extended explanations or presentations
2. Follow narratives and lines of argument
3. Respond effectively to detailed or extended questions and feedback
4. Make requests and ask detailed and pertinent questions to obtain specific information in a range of contexts
5. Communicate information, ideas and opinions clearly and effectively, providing further detail and development if required
6. Express opinions and arguments and support them with relevant and persuasive evidence
7. Use language that is effective, accurate and appropriate to context and situation
8. Make relevant and constructive contributions to move discussion forward
9. Adapt contributions to discussions to suit audience, purpose and medium
10. Interject and redirect discussion using appropriate language and register

Reading

Scope of study

Text: this should include a range of straightforward and complex texts on a range of topics and of varying lengths that instruct, describe, explain and persuade.

11. Identify the different situations when the main points are sufficient and when it is important to have specific details
12. Compare information, ideas and opinions in different texts, including how they are conveyed
13. Identify implicit and inferred meaning in texts
14. Understand the relationship between textual features and devices, and how they can be used to shape meaning for different audiences and purposes
15. Use a range of reference materials and appropriate resources (e.g. glossaries, legends/keys) for different purposes, including to find the meanings of words in straightforward and complex sources
16. Understand organisational features and use them to locate relevant information in a range of straightforward and complex sources
17. Analyse texts, of different levels of complexity, recognising their use of vocabulary and identifying levels of formality and bias
18. Follow an argument, identifying different points of view and distinguishing fact from opinion

19. Identify different styles of writing and writer’s voice

Writing

Scope of study

Text: this should include straightforward and complex texts such as articles, narratives, explanations and reports of varying lengths.

Spelling, punctuation and grammar

20. Punctuate writing correctly using a wide range of punctuation markers (e.g. colons, commas, inverted commas, apostrophes and quotation marks)

21. Use correct grammar (e.g. subject-verb agreement, consistent use of a range of tenses, definite and indefinite articles) and modality devices (e.g. to express probability or desirability)

22. Spell words used in work, study and daily life, including a range of specialist words

Writing composition

23. Communicate information, ideas and opinions clearly, coherently and effectively

24. Write text of an appropriate level of detail and of appropriate length (including where this is specified) to meet the needs of purpose and audience

25. Organise writing for different purposes using appropriate format and structure (e.g. standard templates, paragraphs, bullet points, tables)

26. Convey clear meaning and establish cohesion using organisational markers effectively

27. Use different language and register (e.g. persuasive techniques, supporting evidence, specialist words), suited to audience and purpose.

28. Construct complex sentences consistently and accurately, using paragraphs where appropriate
Functional Skills Subject Content (maths)

This 2018 document can be accessed here:

Subject Content: Entry Level 1

**Entry Level 1 - 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
3. Add numbers which total up to 20, and subtract numbers from numbers up to 20
4. Recognise and interpret the symbols +, – and = appropriately

**Entry Level 1 - 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
6. Read 12 hour digital and analogue clocks in hours
7. Know the number of days in a week, months, and seasons in a year. Be able to name and sequence
8. Describe and make comparisons in words between measures of items including size, length, width, height, weight and capacity
9. Identify and recognise common 2-D and 3-D shapes including circle, cube, rectangle (incl. square) and triangle
10. Use everyday positional vocabulary to describe position and direction including left, right, in front, behind, under and above

**Entry Level 1 - handling information and data**

11. Read numerical information from lists
12. Sort and classify objects using a single criterion
13. Read and draw simple charts and diagrams including a tally chart, block diagram/graph

At Entry Level 1 it is expected that students will be able to address individual problems each of which draw upon knowledge and/or skills from one mathematical content area (i.e. number and the number system; common measures, shape and space; information and data).

**Entry Level 1 - solving mathematical problems and decision making**

**Entry Level 1 students 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; and
• Provide a simple explanation for those results.

The context for simple problems at this level should be familiar to all students and easily described.
Subject Content: Entry Level 2

Entry Level 2 - using numbers and the number system – whole numbers, fractions and decimals

1. Count reliably up to 100 items
2. Read, write, order and compare numbers up to 200
3. Recognise and sequence odd and even numbers up to 100
4. Recognise and interpret the symbols +, −, ×, ÷, and = appropriately
5. Add and subtract two-digit numbers
6. Multiply whole numbers in the range 0x0 to 12x12 (times tables)
7. Know the number of hours in a day and weeks in a year. Be able to name and sequence
8. Divide two-digit whole numbers by single-digit whole numbers and express remainders
9. Approximate by rounding to the nearest 10, and use this rounded answer to check results
10. Recognise simple fractions (halves, quarters and tenths) of whole numbers and shapes
11. Read, write and use decimals to one decimal place

Entry Level 2 - using common measures, shape and space

12. Calculate money with pence up to one pound and in whole pounds of multiple items and write with the correct symbols (£ or p)
13. Read and record time in common date formats, and read time displayed on analogue clocks in hours, half hours and quarter hours, and understand hours from a 24-hour digital clock
14. Use metric measures of length including millimetres, centimetres, metres and kilometres
15. Use measures of weight including grams and kilograms
16. Use measures of capacity including millilitres and litres
17. Read and compare positive temperatures
18. Read and use simple scales to the nearest labelled division
19. Recognise and name 2-D and 3-D shapes including pentagons, hexagons, cylinders, cuboids, pyramids and spheres
20. Describe the properties of common 2-D and 3-D shapes including numbers of sides, corners, edges, faces, angles and base
21. Use appropriate positional vocabulary to describe position and direction including between, inside, outside, middle, below, on top, forwards and backwards

Entry Level 2 - handling information and data

22. Extract information from lists, tables, diagrams and bar charts
23. Make numerical comparisons from bar charts
24. Sort and classify objects using two criteria
25. Take information from one format and represent the information in another format including use of bar charts
Solving mathematical problems and decision making: Entry Level 2 students are expected to be able to use the knowledge and skills listed above to recognise a simple problem and obtain a solution. A simple problem is one which requires working through one step or process.

At Entry Level 2 it is expected that students will be able to address individual problems each of which draw upon knowledge and/or skills from one mathematical content area (i.e. number and the number system; common measures, shape and space; information and data).

<table>
<thead>
<tr>
<th>Entry Level 2 - solving mathematical problems and decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entry Level 2 students are expected to be able to:</strong></td>
</tr>
<tr>
<td>• Use given mathematical information including numbers, symbols, simple diagrams and charts;</td>
</tr>
<tr>
<td>• Recognise, understand and use simple mathematical terms appropriate to Entry Level 2;</td>
</tr>
<tr>
<td>• Use the methods given above to produce, check and present results that make sense; and</td>
</tr>
<tr>
<td>• Present appropriate explanations using numbers, measures, simple diagrams, simple charts and symbols appropriate to Entry Level 2.</td>
</tr>
</tbody>
</table>

The context for simple problems at this level should be familiar to all students and easily described.
**Subject Content: Entry Level 3**

**Entry Level 3 - using numbers and the number system – whole numbers, fractions and decimals**

| 1. Count, read, write, order and compare numbers up to 1000 |
| 2. Add and subtract using three-digit whole numbers |
| 3. Divide three-digit whole numbers by single and double digit whole numbers and express remainders |
| 4. Multiply two-digit whole numbers by single and double digit whole numbers |
| 5. Approximate by rounding numbers less than 1000 to the nearest 10 or 100 and use this rounded answer to check results |
| 6. Recognise and continue linear sequences of numbers up to 100 |
| 7. Read, write and understand thirds, quarters, fifths and tenths including equivalent forms |
| 8. Read, write and use decimals up to two decimal places |
| 9. Recognise and continue sequences that involve decimals |

**Entry Level 3 - using common measures, shape and space**

| 10. Calculate with money using decimal notation and express money correctly in writing in pounds and pence |
| 11. Round amounts of money to the nearest £1 or 10p |
| 12. Read, measure and record time using am and pm |
| 13. Read time from analogue and 24 hour digital clocks in hours and minutes |
| 14. Use and compare measures of length, capacity, weight and temperature using metric or imperial units to the nearest labelled or unlabelled division |
| 15. Compare metric measures of length including millimetres, centimetres, metres and kilometres |
| 16. Compare measures of weight including grams and kilograms |
| 17. Compare measures of capacity including millilitres and litres |
| 18. Use a suitable instrument to measure mass and length |
| 19. Sort 2-D and 3-D shapes using properties including lines of symmetry, length, right angles, angles including in rectangles and triangles |
| 20. Use appropriate positional vocabulary to describe position and direction including eight compass points and including full/half/quarter turns |

**Entry Level 3 - handling information and data**

| 21. Extract information from lists, tables, diagrams and charts and create frequency tables |
| 22. Interpret information, to make comparisons and record changes, from different formats including bar charts and simple line graphs |
| 23. Organise and represent information in appropriate ways including tables, diagrams, simple line graphs and bar charts |
Solving mathematical problems and decision making: Entry Level 3 students are expected to be able to use the knowledge and skills listed above to recognise a simple problem and obtain a solution. A simple problem is one which requires working through one step or process.

At Entry Level 3 it is expected that students will be able to address individual problems each of which draw upon knowledge and/or skills from one mathematical content area (i.e. number and the number system; common measures, shape and space; information and data).

<table>
<thead>
<tr>
<th>Entry Level 3 - solving mathematical problems and decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Level 3 students are expected to be able to:</td>
</tr>
<tr>
<td>• Use given mathematical information including numbers, symbols, simple diagrams and charts;</td>
</tr>
<tr>
<td>• Recognise, understand and use simple mathematical terms appropriate to Entry Level 3;</td>
</tr>
<tr>
<td>• Use the methods given above to produce, check and present results that make sense to an appropriate level of accuracy; and</td>
</tr>
<tr>
<td>• Present results with appropriate and reasoned explanation using numbers, measures, simple diagrams, charts and symbols appropriate to Entry Level 3.</td>
</tr>
</tbody>
</table>

The context for simple problems at this level should be familiar to all students.
Subject Content: Level 1

Use of number and the number system: students at Level 1 are expected to be able to count in steps of various sizes, including negative numbers; read, write and understand positive whole numbers to one million. They can order and compare whole numbers of any size, and fractions, ratios and decimals and recognise the effect of multiplying and dividing by powers of 10, 100 and 1000. They can identify, compare and extend a range of numerical and spatial patterns, use, understand and calculate with fractions, decimals and percentages and calculate simple interest. For specific content on numbers and the number system see below.

<table>
<thead>
<tr>
<th>Level 1 - using numbers and the number system – whole numbers, fractions, decimals and percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Read, write, order and compare large numbers (up to one million)</td>
</tr>
<tr>
<td>2. Recognise and use positive and negative numbers</td>
</tr>
<tr>
<td>3. Multiply and divide whole numbers and decimals by 10, 100, 1000</td>
</tr>
<tr>
<td>4. Use multiplication facts and make connections with division facts</td>
</tr>
<tr>
<td>5. Use simple formulae expressed in words for one or two-step operations</td>
</tr>
<tr>
<td>6. Calculate the squares of one-digit and two-digit numbers</td>
</tr>
<tr>
<td>7. Follow the order of precedence of operators</td>
</tr>
<tr>
<td>8. Read, write, order and compare common fractions and mixed numbers</td>
</tr>
<tr>
<td>9. Find fractions of whole number quantities or measurements</td>
</tr>
<tr>
<td>10. Read, write, order and compare decimals up to three decimal places</td>
</tr>
<tr>
<td>11. Add, subtract, multiply and divide decimals up to two decimal places</td>
</tr>
<tr>
<td>12. Approximate by rounding to a whole number or to one or two decimal places</td>
</tr>
<tr>
<td>13. Read, write, order and compare percentages in whole numbers</td>
</tr>
<tr>
<td>14. Calculate percentages of quantities, including simple percentage increases and decreases by 5% and multiples thereof</td>
</tr>
<tr>
<td>15. Estimate answers to calculations using fractions and decimals</td>
</tr>
<tr>
<td>16. Recognise and calculate equivalences between common fractions, percentages and decimals</td>
</tr>
<tr>
<td>17. Work with simple ratio and direct proportions</td>
</tr>
</tbody>
</table>

Use of common measures, shape and space: students at Level 1 are expected to be able to work out simple relationships between common units of measurement to define quantities, also involving mathematical terms for position and direction. They can apply and use calculations with common measures including money, time, length, weight and capacity. They can visualise, draw and describe 2-D and 3-D shapes and use properties of 2-D shapes in calculations. For specific content on common measures, shape and space – see below.

<table>
<thead>
<tr>
<th>Level 1 - using common measures, shape and space</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Calculate simple interest in multiples of 5% on amounts of money</td>
</tr>
<tr>
<td>19. Calculate discounts in multiples of 5% on amounts of money</td>
</tr>
</tbody>
</table>
20. Convert between units of length, weight, capacity, money and time, in the same system
21. Recognise and make use of simple scales on maps and drawings
22. Calculate the area and perimeter of simple shapes including those that are made up of a combination of rectangles
23. Calculate the volumes of cubes and cuboids
24. Draw 2-D shapes and demonstrate an understanding of line symmetry and knowledge of the relative size of angles
25. Interpret plans, elevations and nets of simple 3-D shapes
26. Use angles when describing position and direction, and measure angles in degrees

**Handle information and data:** students at Level 1 are expected to be able to select, construct and interpret a range of statistical diagrams in various contexts; select and use methods and forms to present and describe outcomes. They can extract and interpret information from tables, diagrams, charts and graphs; apply simple statistics and recognise features of charts to summarise and compare sets of data; recognise and use the probability scale and interpret probabilities. For specific content on information and data – see below.

**Level 1 - handling information and data**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>27. Represent discrete data in tables, diagrams and charts including pie charts, bar charts and line graphs</td>
<td></td>
</tr>
<tr>
<td>28. Group discrete data and represent grouped data graphically</td>
<td></td>
</tr>
<tr>
<td>29. Find the mean and range of a set of quantities</td>
<td></td>
</tr>
<tr>
<td>30. Understand probability on a scale from 0 (impossible) to 1 (certain) and use probabilities to compare the likelihood of events</td>
<td></td>
</tr>
<tr>
<td>31. Use equally likely outcomes to find the probabilities of simple events and express them as fractions</td>
<td></td>
</tr>
</tbody>
</table>

**Solving mathematical problems and decision making:** students at Level 1 are expected to be able to use the knowledge and skills listed above to recognise and obtain a solution or solutions to a straightforward problem. A straightforward problem is one that requires students to either work through one step or process or to work through more than one connected step or process.

Individual problems are based on the knowledge and/or skills in the mathematical content areas (number and the number system; common measures, shape and space; information and data). At Level 1 it is expected that the student will be able to address individual problems, some of which draw upon a combination of any two of the mathematical content areas and require students to make connections between those content areas.

**Level 1 - solving mathematical problems and decision making**

Students at Level 1 are expected to be able to:
• Read, understand and use mathematical information and mathematical terms used at this level;
• Address individual problems as described above;
• Use knowledge and understanding to a required level of accuracy;
• Analyse and interpret answers in the context of the original problem;
• Check the sense, and reasonableness, of answers; and
• Present results with appropriate explanation and interpretation demonstrating simple reasoning to support the process and show consistency with the evidence presented.

The context of individual problems at this level will require some comprehension in order for the student to be able independently to identify and carry out an appropriate mathematical approach.
Subject Content: Level 2

Use of numbers and the number system: students at Level 2 are expected to be able to use numbers of any size; read, write and make use of positive and negative integers of any size; use, order and compare integers, fractions, decimals, percentages and ratios as well as recognise the value of a digit in any whole or decimal number. They can use numerical and spatial patterns for a purpose and calculate with, and convert between, numbers written as fractions, decimals, percentages and ratios. For specific content on numbers and the number system – see below.

<table>
<thead>
<tr>
<th>Level 2 - using numbers and the number system – whole numbers, fractions, decimals and percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Read, write, order and compare positive and negative numbers of any size</td>
</tr>
<tr>
<td>2. Carry out calculations with numbers up to one million including strategies to check answers including estimation and approximation</td>
</tr>
<tr>
<td>3. Evaluate expressions and make substitutions in given formulae in words and symbols</td>
</tr>
<tr>
<td>4. Identify and know the equivalence between fractions, decimals and percentages</td>
</tr>
<tr>
<td>5. Work out percentages of amounts and express one amount as a percentage of another</td>
</tr>
<tr>
<td>6. Calculate percentage change (any size increase and decrease), and original value after percentage change</td>
</tr>
<tr>
<td>7. Order, add, subtract and compare amounts or quantities using proper and improper fractions and mixed numbers</td>
</tr>
<tr>
<td>8. Express one number as a fraction of another</td>
</tr>
<tr>
<td>9. Order, approximate and compare decimals</td>
</tr>
<tr>
<td>10. Add, subtract, multiply and divide decimals up to three decimal places</td>
</tr>
<tr>
<td>11. Understand and calculate using ratios, direct proportion and inverse proportion</td>
</tr>
<tr>
<td>12. Follow the order of precedence of operators, including indices</td>
</tr>
</tbody>
</table>
Use of measures, shape and space: students at Level 2 are expected to be able to handle relationships between measurements of various kinds, use angles and coordinates when involving position and direction and make use of geometric properties in calculations with 2-D and 3-D shapes and understand the relationships between them. For specific content on measures, shape and space – see below.

<table>
<thead>
<tr>
<th>Level 2 - measures, shape and space</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Calculate amounts of money, compound interest, percentage increases, decreases and discounts including tax and simple budgeting</td>
</tr>
<tr>
<td>14. Convert between metric and imperial units of length, weight and capacity using a) a conversion factor and b) a conversion graph</td>
</tr>
<tr>
<td>15. Calculate using compound measures including speed, density and rates of pay</td>
</tr>
</tbody>
</table>

| 16. Calculate perimeters and areas of 2-D shapes including triangles and circles and composite shapes including non-rectangular shapes (formulae given except for triangles and circles) |
| 17. Use formulae to find volumes and surface areas of 3-D shapes including cylinders (formulae to be given for 3-D shapes other than cylinders) |
| 18. Calculate actual dimensions from scale drawings and create a scale diagram given actual measurements |
| 19. Use coordinates in 2-D, positive and negative, to specify the positions of points |
| 20. Understand and use common 2-D representations of 3-D objects |
| 21. Draw 3-D shapes to include plans and elevations |
| 22. Calculate values of angles and/or coordinates with 2-D and 3-D shapes |

Handle information and data: students at Level 2 are expected to be able to construct, interpret and evaluate a range of statistical diagrams. They can calculate and interpret probabilities. They can calculate, analyse, compare and interpret appropriate data sets, tables, diagrams and statistical measures such as common averages (mean, median, mode) and spread (range), and use statistics to compare sets of data. They can identify patterns and trends from data as well as recognise simple correlation. For specific content on information and data see below.
Level 2 - handling information and data

23. Calculate the median and mode of a set of quantities
24. Estimate the mean of a grouped frequency distribution from discrete data
25. Use the mean, median, mode and range to compare two sets of data
26. Work out the probability of combined events including the use of diagrams and tables, including two-way tables
27. Express probabilities as fractions, decimals and percentages
28. Draw and interpret scatter diagrams and recognise positive and negative correlation

Solving mathematical problems and decision making: students at Level 2 are expected to be able to use the knowledge and skills listed above to recognise and obtain a solution or solutions to a complex problem. A complex problem is one which requires a multistep process, typically requiring planning and working through at least two connected steps or processes.

Individual problems are based on a combination of the knowledge and/or skills from the mathematical content areas (number and the number system; measures, shape and space; information and data). At Level 2 it is expected that the student will be able to address individual problems some of which draw upon a combination of all three mathematical areas and require students to make connections between those content areas.

Level 2 - solving mathematical problems and decision making

Students at Level 2 are expected to be able to:

- Read, understand, and use mathematical information and mathematical terms;
- Address individual problems as described above;
- Use knowledge and understanding to a required level of accuracy;
- Identify suitable operations and calculations to generate results;
- Analyse and interpret answers in the context of the original problem;
- Check the sense and reasonableness of answers; and
- Present and explain results clearly and accurately demonstrating reasoning to support the process and show consistency with the evidence presented.

The context of individual problems at this level will require interpretation and analysis in order for the student to be able independently to identify and carry out an appropriate mathematical process or processes.