



The Education & Training Foundation



Appendix A: Signposting

This guide is one of a series aimed at practitioners from a wide range of providers, including colleges, independent learning providers and those working in the Secure Estate, who support post-16 vocational learners to develop their maths skills up to and including level 2.

Each signpost is a link to a resource that is relevant to the learning objectives of the unit. The signposts are:

Green arrow: For an interesting website
Folder icon: For an interesting document
Image icon: For an interesting image

The signposts are arranged in a grid. The signposts are arranged in a grid. The signposts are arranged in a grid.



For an interesting website



For an interesting document



For an interesting image

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Construction and the Built Environment

Health and Social Care

Hospitality and Catering

Hairdressing and Beauty Therapy

Unlocking Maths

The signposts are arranged in a grid. The signposts are arranged in a grid. The signposts are arranged in a grid.

Why should I be concerned about developing my learners' maths skills?

Here are four good reasons:

Developing your learners' maths skills can help them progress in their vocational course

Improving your learners' maths skills increases the employment opportunities open to them.

Maths errors can be costly to any business

Enhancing your professionalism

"Address the mathematics and English needs of learners and work creatively to overcome individual barriers to learning."

Why use a vocational lesson to develop maths skills?

- ▶ **Context** – Vocational lessons are often used to teach maths skills in a way that is relevant to the students' future careers. This can help to motivate students and make the learning more meaningful.
- ▶ **Application** – Vocational lessons often involve practical tasks that require the use of maths skills. This can help students to see how the skills they are learning are used in the real world.
- ▶ **Engagement** – Vocational lessons can be more engaging than traditional classroom lessons. This is because they often involve hands-on activities and real-world examples.
- ▶ **Transfer of Learning** – Vocational lessons can help students to transfer their learning to other contexts. This is because they often teach skills that are used in a variety of different jobs.
- ▶ **Problem Solving** – Vocational lessons often involve solving real-world problems. This can help students to develop their problem-solving skills and learn how to apply maths to solve problems.
- ▶ **Communication** – Vocational lessons often involve working in groups. This can help students to develop their communication skills and learn how to work with others.
- ▶ **Self-Esteem** – Vocational lessons can help students to build their self-esteem. This is because they often involve tasks that are challenging and require the use of maths skills.
- ▶ **Employability** – Vocational lessons can help students to develop the skills and knowledge they need to be successful in the workplace. This can include skills such as communication, problem-solving, and teamwork.

- **1/2** – The first part of the lesson is a warm-up activity. This involves solving a simple problem that requires the use of basic maths skills.

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Maths which underpins one of these tasks: Cutting

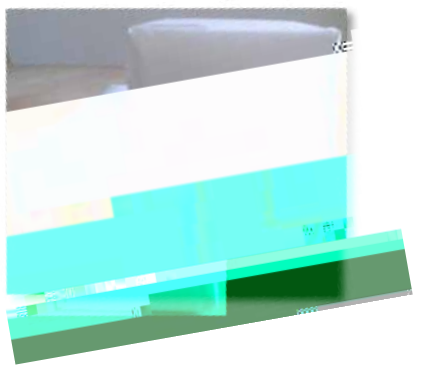
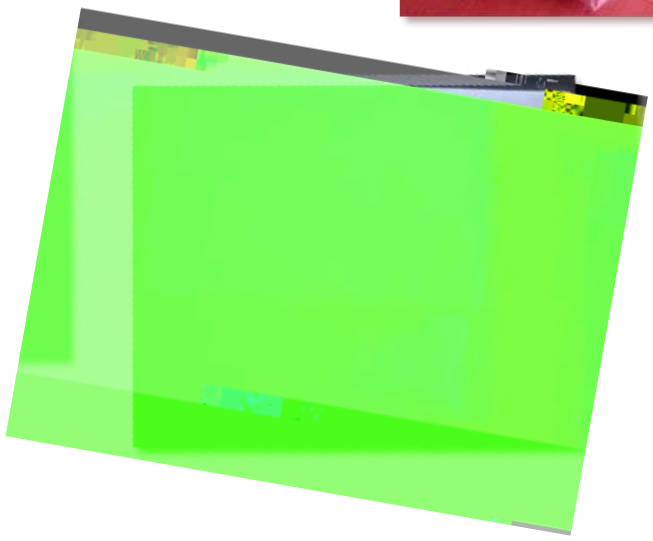
Isometric drawing is a 3D representation of an object. It is a type of pictorial drawing that uses a 30-degree angle to represent the object's depth. This allows the object to be shown in a way that is easy to understand and visualize.

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Isometric and Orthographic Projection

1.1.1. The following figure shows a 3D object. The object is a rectangular prism with a white top surface and a pink bottom surface. The object is shown from a perspective view. The top surface is white and the bottom surface is pink. The object is shown from a perspective view.



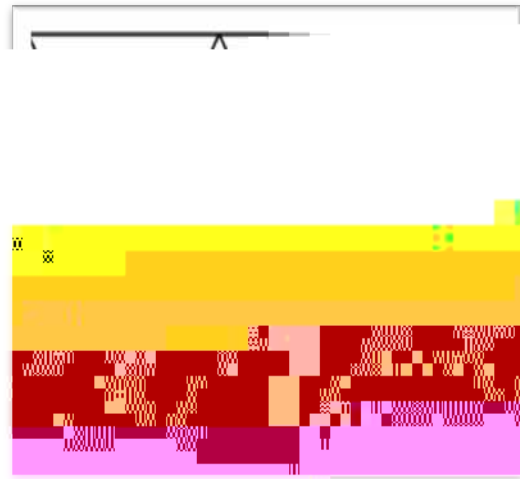
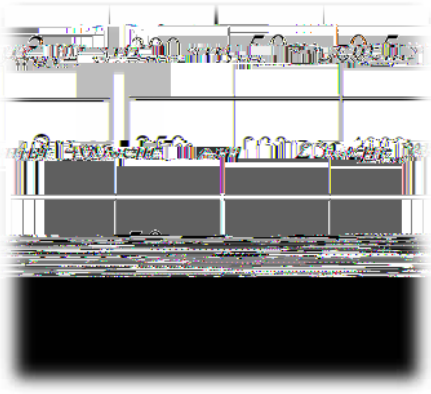
Other learning activities related to your vocational area



Examples of active learning activities that you could use or adapt with learners

Tarsia

Tarsia is a fun activity that can be used to review or introduce a topic. It involves creating a large, colorful shape (usually a square or rectangle) made of smaller pieces. Each piece contains a question or a fact related to the topic. Learners work together to match the pieces based on the information they contain.



Tarsia is a great activity for reviewing or introducing a topic. It is a fun and interactive way for learners to learn and remember information. It can be used for a variety of subjects and topics.

Sometimes true, always true, never true

Sometimes true, always true, never true is a fun activity that can be used to review or introduce a topic. It involves creating a large, colorful shape (usually a square or rectangle) made of smaller pieces. Each piece contains a statement related to the topic. Learners work together to match the pieces based on whether the statement is sometimes true, always true, or never true.



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Handwritten text with red and blue markings, possibly a diagram or list.

Top Trumps

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- List of handwritten items or notes.

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Other resources to help learners understand key mathematical ideas

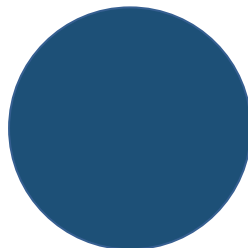


[Mathematical Literacy: A Guide for Teachers](#) provides a range of resources to help learners understand key mathematical ideas.



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The following sections of this Guide describe and respond to some challenges you



What challenges am I likely to face?

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Engaging learners

Some learners may find it difficult to engage with the course. They may find it difficult to understand the content, or they may find it difficult to participate in the activities. It is important to identify these learners early and provide them with the support they need to succeed.



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Some learners may need to improve their confidence with basic maths

Some learners may need to improve their confidence with basic maths. This can be a challenge for many learners, and it is important to provide them with the support they need to succeed. This may include additional practice, one-to-one support, or access to resources that can help them build their confidence.

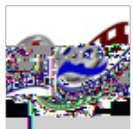


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Working in the Secure Estate

- Functional skills are a key part of the curriculum for all learners in the secure estate. This is because functional skills are essential for all learners to be able to work in the secure estate.

“At HMP Wakefield, teachers provide contextualised learning within prison industries on a one-to-one basis to help learners who are in the separation unit and/or those who struggle with functional skills or have additional learning needs. This type of support is proven to be less disruptive to the prison day and effective at engaging those furthest away from learning and skills.”



Functional skills are a key part of the curriculum for all learners in the secure estate. This is because functional skills are essential for all learners to be able to work in the secure estate.



Meeting the challenges

Working together with maths practitioners

Working together with maths practitioners is a key challenge for all those involved in the implementation of the new curriculum. This involves a range of activities, including:

Examples of active learning

Examples of active learning activities that you could use or adapt with learners

Tarsia

Sometimes true, always true, never true

Top Trumps

Other resources to help learners understand key mathematical ideas

What challenges am I likely to face?

Engaging learners

Some learners may need to improve their confidence with basic maths

Difficult topics

The curriculum framework for mathematics is designed to provide a comprehensive and coherent learning experience for students. It outlines the key concepts, skills, and attitudes that students should develop over the course of their education. The framework is structured to ensure that students build a strong foundation in mathematics, which will enable them to apply their knowledge and skills in various contexts.

Meeting the challenges

Working together with maths practitioners

Collaboration between mathematics practitioners is essential for the effective implementation of the curriculum framework. Teachers, subject specialists, and other professionals should work together to share best practices, develop resources, and address any challenges that may arise. This collaborative approach ensures that the curriculum is delivered in a way that is tailored to the needs of the students and the school.

Teaching and learning strategies: embedding and contextualising

Embedding and contextualising mathematical concepts are key strategies for enhancing student learning. Teachers should integrate mathematics into other subjects and real-world situations to make it more relevant and meaningful for students. This approach helps students to see the practical applications of mathematics and to develop a deeper understanding of the concepts.

Teaching and learning strategies: developing deep understanding of key mathematical ideas

Developing a deep understanding of key mathematical ideas is a primary goal of the curriculum framework. Teachers should use a variety of teaching and learning strategies to ensure that students not only know the facts but also understand the underlying principles and can apply them in different contexts. This includes encouraging students to explore, question, and solve problems, as well as providing opportunities for reflection and discussion.