

ETF Maths Pipeline Programme: Supporting maths in the post-16 sector

These short clips show post-16 practitioners and learners in a range of settings engaged in active learning activities. The main aim is to support practitioners to reflect on and develop their practice; several of the clips could also be used to engage relatively reluctant learners. The set of clips below focuses on vocational provision; other sets focus on GCSE maths and on maths in the Secure Sector.

Supporting maths in post-16 vocational provision

[An introduction to the video resources](#)

These clips show practitioners and learners engaged in active learning activities in four vocational areas:

Construction and the Built Environment
Hairdressing and Beauty Therapy
Health and Social Care
Hospitality and Catering.

The clips in different vocational areas focus on different aspects of teaching and learning;

so you may find it useful to view clips from outside as well as inside your vocational specialism.

Construction and the Built Environment

Teaching maths in the workshop: Pythagoras - using the 3-4-5 method

In this clip we see learners using maths in a practical construction lesson. As you are viewing the clip, think about a lesson you are about to teach and consider the questions below.

- What maths are the learners likely to encounter?
- How can the maths be made a feature of the lesson?
- What opportunities will this present to teach and assess maths?
- Could you show this clip to learners and discuss with them how maths is used in Construction?

Bringing maths to life: Using scale drawing when working on a quote

In this clip we see how maths can be brought to life for learners by emphasising it in a vocational project. As you are viewing the clip, reflect on the points below.

- Where does maths feature in your project work?

- How can this be brought to life?
- Are there opportunities to work together with a maths specialist to enhance learning in both areas?

Developing a sense of number: Using estimation and calculation in costing a hot water system

In this clip learners are encouraged to develop a sense of number and measurements in a plumbing activity. As you are viewing the clip, consider the questions below.

- Are there opportunities within your sessions to develop the learners' sense of number?
- Which key measurements (e.g. 1 litre of water has a mass of 1 kilogram) are useful to have as reference points in your vocational area?
- Could you use this clip as part of a lesson with your learners?

Hairdressing and Beauty Therapy

Why teach maths in a vocational setting? Practitioner and learners reflect on the relevance of maths to running a hairdressing business

In this clip learners and their practitioner discuss some aspects of maths and why they are needed in hairdressing. As you are

viewing the clip, think about the questions below.

- What maths topics do your learners need?
- How are they used in your vocational area?
- How can you emphasise the importance of maths?
- Could you use this clip in a discussion with learners?

Planning to practise and assess maths in the workplace: A working day in the salon

In this clip the practitioner uses moments within a busy session to practise and assess maths. As you are viewing the clip, think about the questions below.

- Where are the opportunities for practising and assessing within your practical sessions?
- How can you make the most of these?
- How could you follow up any mathematical misunderstandings?
- Can you work with maths practitioners to anticipate and deal with difficulties that learners might have?

Using the vocational setting to build mathematical confidence: A practitioner and learners reflect on their experiences of maths

In this clip learners and a practitioner reflect on how learning maths in a vocational setting has helped them improve

their understanding of some mathematical topics. As you are viewing the clip, think about the questions below.

- How can you work to build your learners confidence with maths? Could you use this clip to support a discussion with learners about their knowledge and confidence?
- Where can your sessions provide purposeful, practical opportunities for learners to develop their understanding of maths?
- How can you provide opportunities for learners to work together and support each other?

Health and Social Care

Developing mathematical understanding to help learners progress: Interpreting and using published health data

In this clip we see learners using maths as an integral part of a Health and Social Care lesson. As you are viewing the clip, think about the questions below.

- How could you incorporate some maths learning into a lesson?
- How can group work help students to develop mathematically?
- How could you follow up topics which proved challenging?

Embedding maths in Health and Social Care: Practitioners and learners reflect on the maths they need

In this clip practitioners and learners talk about the benefits of embedding maths and some of the approaches they use. As you are viewing the clip, think about the questions below.

- How could you embed maths into your vocational area?
- What structures are in place to help you?
- How could you work with a maths practitioner to enrich learners' maths and vocational sessions?

Contextualising maths: Using maths to plan a fundraising event

This clip shows learners talking with a practitioner about a maths session with a childcare theme. As you are viewing the clip, think about the questions below.

- Are there themes in your vocational area which could motivate and support learners mathematically?
- How much structured support would your learners need when tackling such a task?
- How would learners benefit from a themed maths session?

Hospitality and Catering

Vocational and maths practitioners working together: Practitioners discuss the challenges that learners may encounter when using maths in a restaurant

In this clip a vocational practitioner and a maths practitioner talk about working together to support learners with maths. As you are viewing the clip, think about the questions below.

- What maths topics do your learners need?
- How are they used in your vocational area?
- How can you emphasise the importance of maths?

Where is the maths? A maths practitioner describes some of the ways in which maths is used in Hospitality and Catering

In this clip a maths practitioner linked to catering describes how maths is used in hospitality and catering and shares her experiences of working with vocational practitioners. As you are viewing the clip, think about the questions below.

- Where can your sessions provide purposeful, practical opportunities for learners to develop their understanding of maths? Could you use this clip to stimulate discussion with learners about the relevance of maths to their vocational area?

- Can you work with maths teachers to anticipate and deal with difficulties that learners might have?
- How can you work to build your learners confidence with maths?

Teaching and learning maths in a work based setting: Targeting practitioner support to meet apprentices' individual needs

In this clip a maths practitioner works with two learners to improve their understanding of specific aspects of maths which have been identified in a previous assessment. As you are viewing the clip, think about the questions below.

- How can you gain an understanding of your learners' specific maths needs?
- What measures are in place to help learners improve with specific aspects of maths?

What opportunities are there for learners to work together to develop their understanding