



Advanced Mathematics
Support Programme®

Continuing Professional
Development
Standard

National Centre
for Excellence in the
Teaching of Mathematics



Mathematical Thinking for Problem Solving

Online

24th November 2021

Overview

Mathematical thinking for problem solving requires students to have strategies that enable them to link concepts, consider their thought processes and to make mistakes.

In this PD session we will look at AMSP resources, and the research behind them. We discuss current practice, and examine resources which allow teachers to make these strategies explicit to students; to help them develop as problem solvers, and to progress onto Maths post 16.

Aims

- To explore AMSP Problem Solving Resources
- To consider research on developing students' mathematical thinking for problem solving
- To consider the strategies students will need in order to develop their mathematical thinking for problem solving

Who will benefit from attending?

This event is primarily aimed at teachers who teach KS3 and KS4 and are interested in developing their understanding of how to support students to become better prepared for problem solving. As these ideas are transferable to older students teachers of other key stages will also benefit from the discussion and resources

Content

This session will look at some generic approaches to problem-solving and the steps needed to support students' thinking when problem solving. We will discuss some of the different approaches that teachers currently use and compare these with the findings of the research, and how they link to current practice. We will consider some examples of the resources developed by the AMSP, and how they can be used to enhance students' problem-solving abilities.

Materials and Equipment

Pen/pencil and paper will be useful for this session

This meeting will be held on Zoom, which is an online conferencing system that allows participants to collaborate in real time. An invitation will be sent to you around 20 minutes before we start. Please do not share this link with anyone else.

You are advised to use a headset or headphones with an inline microphone to provide the best sound quality and to prevent audio issues for other users. A laptop with a built-in webcam and microphone may be sufficient if you're in a quiet area but please take the time to check this before the session.

Discussion will be both via audio and chat boxes. Please join with a microphone if possible. Joining with your camera on would be most welcome but, of course, not compulsory.

As part of our safeguarding procedures please note the following: (i) It is important that you log in with the names you used when you registered for the course otherwise you may not be allowed into the room. If you prefer to use a shortened/alternative name, then do let us/your course tutor know via email in advance of the session. (ii) You must not pass on any of the registration or Zoom meeting details to anyone else.

Key Facts

Event ref:	#8674
Audience:	Teachers
Curriculum focus:	11-16 maths
Event format:	Live Online Professional Development
Event length:	1.5 hours
Online sessions:	1
Region:	Yorkshire and the Humber
Date:	Wed 24th Nov 2021
Course times:	16:30 - 18:00

Registration

For more information, or to register for this event, please visit <https://amsp.org.uk/events/details/8674>