

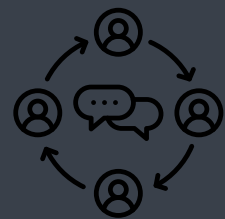
'Teaching to the top, when the top means the most difficult concepts and skills is at the heart of one of our whole-school T&L priorities. Megan Mansworth asserts the foundation for teaching at the highest level must begin with a strong grounding in subject knowledge. This Spotlight explores this theme

What does the research say: Why is Subject Knowledge so important?



- Coe et al. found that a teacher's subject knowledge, and their understanding of how pupils handle this subject, has the strongest evidence of impact on student outcomes.
- Rosenshine's Principles of Instruction states that effective teachers are able to provide detailed explanations of the material they were teaching. We can't lecture, demonstrate, question and provide worked examples of the most complex content and skills unless our knowledge is sufficient for us to do so.

Subject Knowledge should be a communal endeavour



- Ellis (2007) describes subject knowledge development as a "collective knowledge" that can be nurtured within departments through collaboration.
- Mansworth suggests subject knowledge should not be viewed as fixed but rather as an ongoing process of growth that is supported and shared.

Three Trusted Techniques for developing high level subject knowledge

Careful lesson planning

- Preparation needs to go not only into what you need to cover in your explanation but also into how you are going to explain it. What are the high level concepts? What analogies or examples could you use?
- What questions are you going to ask to really test their understanding?
- Do you ever have notes for your lessons?



Peer-to-peer collaboration and teaching:

- Engage in departmental discussions where teachers share new subject knowledge or interesting developments in your subject.
- Work with colleagues to accumulate and refine a collection of powerful analogies, illustrations, examples, explanations and demonstrations for the most difficult concepts
- Think about the common misconceptions and discuss with colleagues how to help pupils master important complex concepts.
- Discuss how you support pupils to build increasingly complex mental models
- Revisit together the big ideas of the subject over time
- Discuss how you draw explicit links between new complex content and the core concepts and principles in the subject.

Subject knowledge audits:

- Regularly assess areas for development in your knowledge. Do this as a department

Reflection questions

- How confident are you in your subject knowledge when teaching the most challenging content and skills in your curriculum?
- Do you see your own subject knowledge as continually developing or as inert and fixed
- How has your own subject knowledge enabled or limited your ability to teach to the top?
- In your departments, what practices could foster this collaborative development of subject knowledge?

