Planning a Think Aloud
Integrating evidence into mathematics teaching

These steps model the metacognitive cycle of ‘plan, monitor and evaluate’. Modelling this aloud for students demonstrates how you—as an ‘expert’ learner—continually monitor the impact of the approach you have adopted during the problem-solving process itself, and then evaluate the effectiveness of this in order to inform future learning.

Planning my approach
- What is the problem asking me to do?
- Have I seen problems before that look like this one?
- What mathematics might help me to solve this problem?
- What information in the problem is important?
- What information is less important?
- What might I need to work out?
- Would drawing a diagram help?

Monitoring my progress
- Is my chosen strategy working?
- Are there different ways to solve this problem?
- Should I think about solving this problem in a different way, or should I stick with my plan?
- Has my teacher shown me anything which might help me here?
- Would it help if I asked another student to check my work so far?
- Look back: have I made any obvious mistakes?

Evaluating my success
- Does my answer make sense? How do I know?
- Is there any way that I can check my answer?
- Am I sure I have answered the question? Re-read the problem and your solution to make sure!
- Does my answer need units?
- Would another student understand my working out? You could ask a friend to check.
- Can I explain to someone else what I did and why I did it?
- Would a different way of solving this problem have been quicker?
- Would I solve the problem in a different way if I tried it again?
- Could I share and discuss these different approaches with another student?


This resource supports Recommendation 5 in E4L’s Guidance Report on Improving mathematics in upper primary and lower secondary.

Recommendation 5:
Develop students’ independence and motivation (including supporting students to develop metacognition by independently planning, monitoring and evaluating their own thinking).

At the end of your learning
- Can you explain to someone else at home how you planned, monitored, and evaluated your maths learning today?
- What might you do differently next time?

This resource is based on the Education Endowment Foundation’s resource of the same name.