

USING WORKED EXAMPLES TO SUPPORT HIGH QUALITY TEACHING

The FAME approach

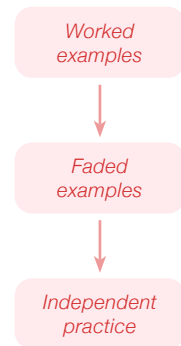
Worked examples are a form of modelling, providing pupils with a step-by-step demonstration of a given task, such as tackling a complex problem in science. They can support learning by reducing the burden on pupils' working memory, increasing the likelihood that they will be able to remember the strategy and tackle future problems.

F FADING

Fading describes the process of gradually reducing and removing elements of full worked examples.

Research suggests that removing the steps in the solution in reverse order (backwards fading) provides greater support for novice pupils.

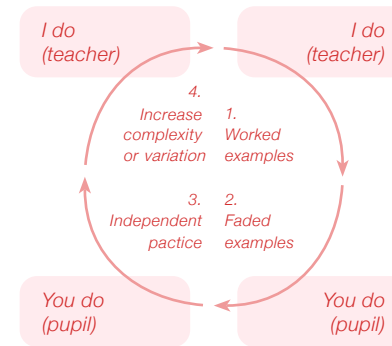
An awareness of the prior knowledge of your pupils is vital; removing the scaffold too quickly or providing it when it's no longer needed, can hinder learning.



A ALTERNATION

Rather than using a collection of worked examples together at the beginning of a lesson, alternate these with opportunities for pupils to complete a similar problem using an 'I do, you do' format.

Once they have developed confidence, add variation or additional complexity to the examples, then repeat the cycle.

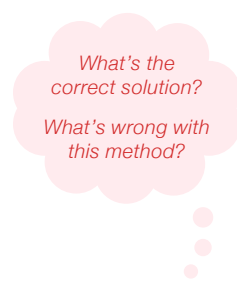


M MISTAKES

Once pupils have developed a good understanding of the topic, including mistakes in the worked examples can provide further challenge.

Supporting pupils to explain why incorrect solutions are wrong can help them to develop a deeper understanding than when they solely consider correct solutions.

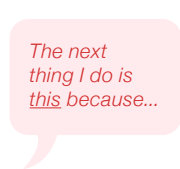
An awareness of the confidence and competency of your pupils is vital. Introducing incorrect worked examples too early can embed misconceptions.



E EXPLANATION

To help pupils understand how and why the worked example has been used, initially, teachers should model their thinking using a 'Think Aloud' process. This can involve completing the worked example verbally, describing how and why they are tackling each stage of the problem.

Pupils should also be encouraged to reflect on the worked example and explain to themselves why each step has been used, helping them make sense of the modelled solution. Explanation prompts or peer-to-peer explanation can facilitate this.



FURTHER READING

- [EEF: Guidance Report: Metacognition and self regulated learning.](#) Recommendations 2, 3 and 4
- [EEF Guidance Report: Improving Secondary Science.](#) Recommendations 2 and 4
- [EEF Review of the evidence: Cognitive Science approaches in the classroom.](#) Aspect 4: managing cognitive load
- Sweller (2006). [The worked example effect and human cognition.](#)



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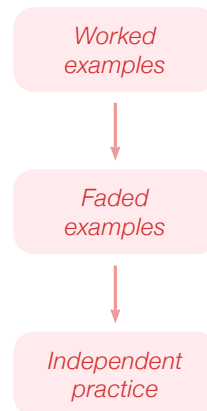
The FAME approach planning template

F FADING

How many worked examples will you share? Why?

How much fading do you think will be required to support your least confident pupil?

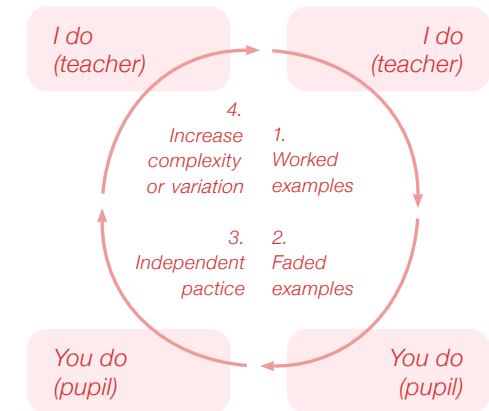
Which parts of the process will you fade out first? Why?



A ALTERNATION

Think of the most difficult example of this process that you want your pupils to solve. How can you build up to this with more simple problems?

What variation/complexity will you introduce at each stage in the cycle? What are the similarities and differences with the previous cycle? How will you highlight them to pupils?

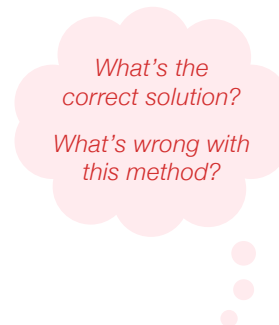


M MISTAKES

At what stage will pupils be confident and experienced enough to tackle incorrect worked examples and spot mistakes?

How will you be able to tell?

What are common misconceptions/mistakes that pupils make? Can you use this as an opportunity to highlight them?



E EXPLANATION

How will you model the Think Aloud process whilst sharing the worked examples?

How will you encourage pupils to Think Aloud?

What prompts/questions will you use?

Who will they Think Aloud to? Themselves? You? Each other? In what format?

The next thing I do is this because...

The strategy I used was...