HIAS Moodle+ resource

Teach

- Define precisely what all students must understand.
- Anything that is about establishing this precise idea in understanding is *teaching*.
- This can include instruction or pupil investigation

Desired outcome

All understand (right answer essential)

In order to

Problem Solve

- Apply understood precise learning rigorously and logically to new context.
- This includes planning investigations, predictions, hypothesising from evidence; but must involve uncertainty

Desired outcome

Logical application (right answer not essential)

Hampshire Services
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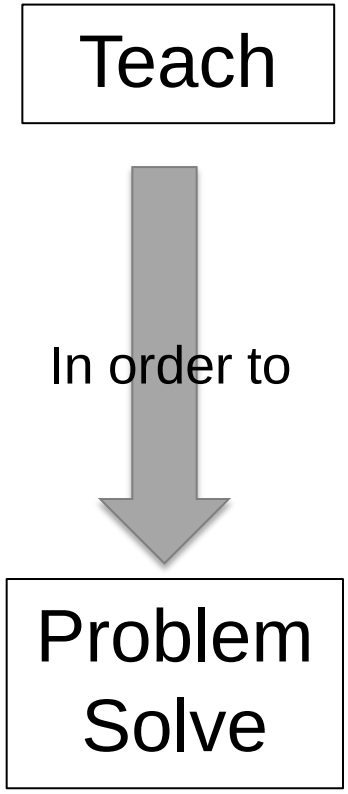

This could represent a single lesson a sequence of learning or even a part of a lesson.

A topic should be constructed of a series of these smaller teach and apply sessions.

When planning the lesson I need to decide:

- How each of these will be taught
- How it will be checked if all pupils have learned.

- Speed = distance ÷ time
- Speed is gradient on distance v time graph

Which maggot is the fastest sprinter?
Each group has own maggot which they trace path and plot distance time graph and calculate average speed and which was capable of fastest sprint

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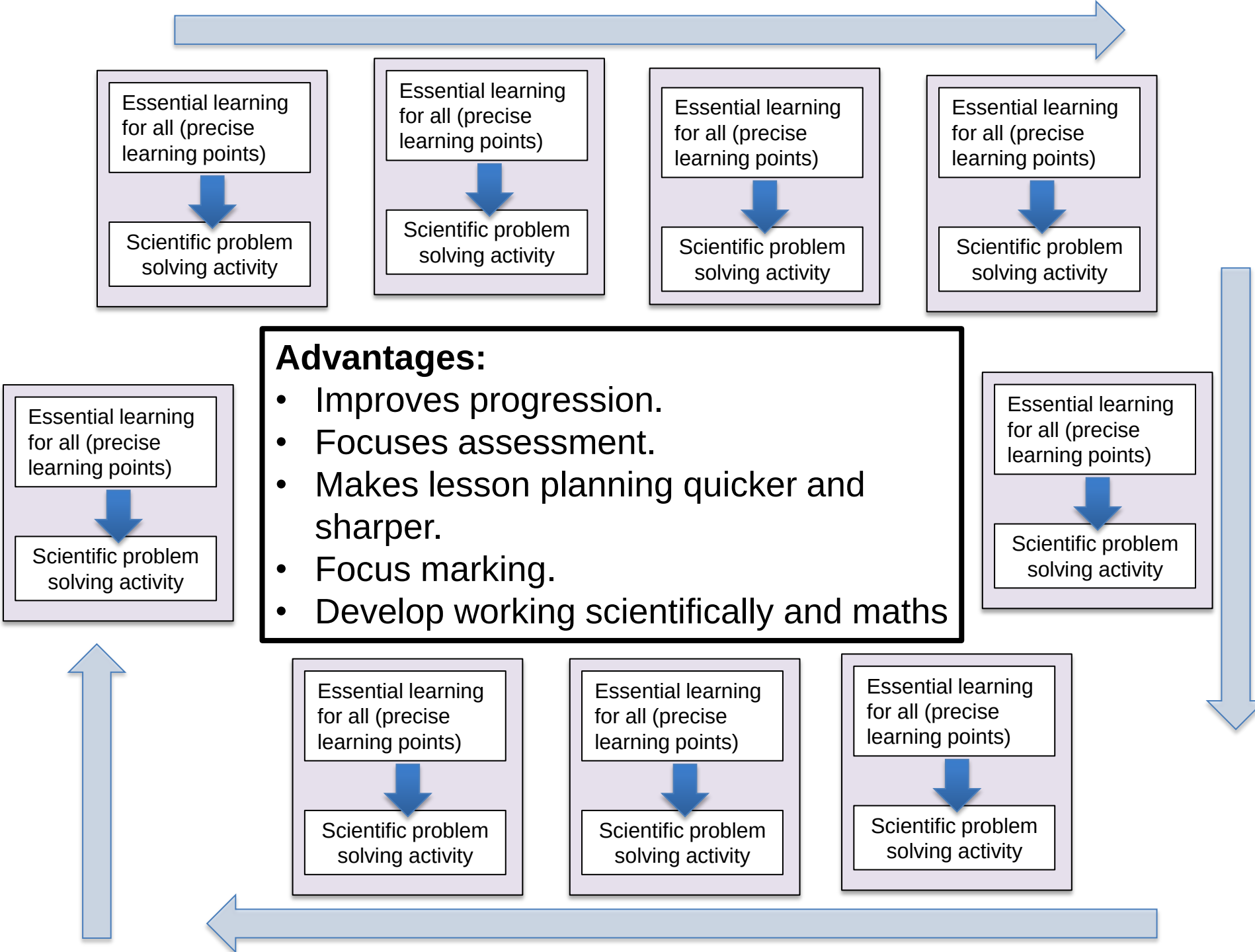
Precise learning:

1. Defining exactly what ***all*** should understand.
2. Planning to ensure that ***all*** do.
3. Providing meaningful scientific problems to tackle with the new understanding.
4. Plan a topic in outline before planning lessons


Essential learning for all (precise learning points)
Scientific problem solving activity
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Advantages:
• Improves progression.
• Focuses assessment.
• Makes lesson planning quicker and sharper.
• Focus marking.
• Develop working scientifically and maths
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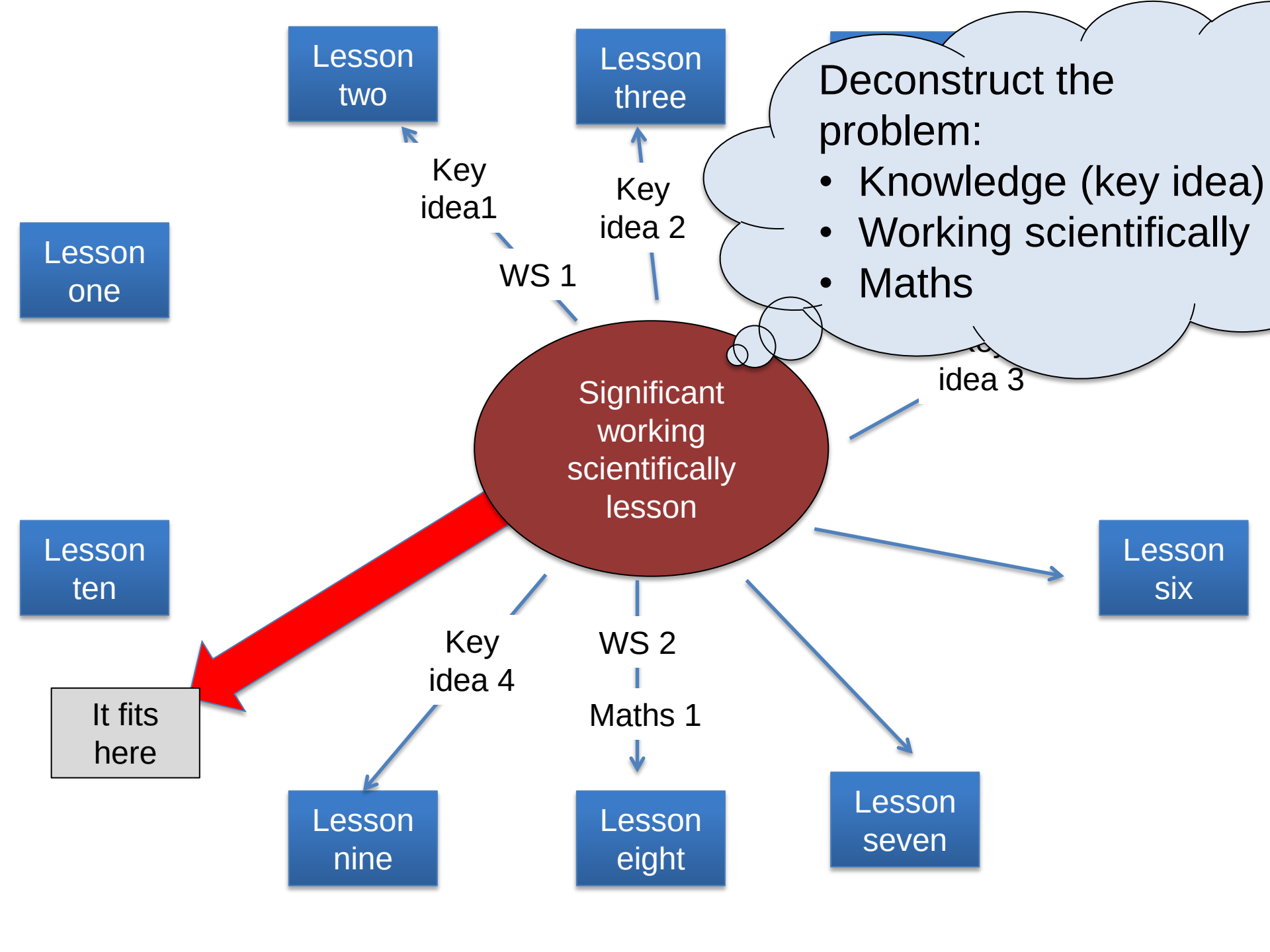
Scientific problem solving activity

Adding in major bits of problem solving

- I now know what precise learning will be taught at each stage in order for pupils to tackle related problems.
- If we now devise a significant problem for pupils to tackle we could work out exactly where it should fit and where key bits of knowledge and skill would be taught in order for pupils to succeed.


Lesson two
Lesson three
Deconstruct the problem:
• Knowledge (key idea)
• Working scientifically
• Maths
Key idea1
Key idea 2
Lesson one
WS 1
Significant working scientifically lesson
idea 3
Lesson ten
Lesson six
It fits here
Key idea 4
WS 2
Maths 1
Lesson nine
Lesson eight
Lesson seven