

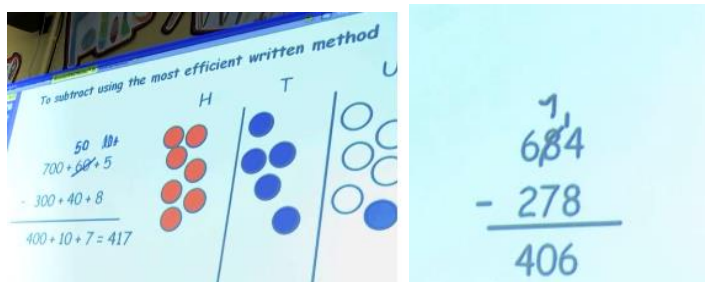
Big Ideas in Mastery: Mathematical Thinking

Messages

1. Mathematical thinking is central to deep and sustainable learning of mathematics.
2. Taught ideas that are understood deeply are not just 'received' passively but worked on by the learner. They need to be thought about, reasoned with and discussed.
3. Mathematical thinking involves:
 - o looking for pattern in order to discern structure;
 - o looking for relationships and connecting ideas;
 - o reasoning logically, explaining, conjecturing and proving.

For example:

Asking "what's the same and what's different?" in a range of situations prompts and promotes mathematical thinking



Asking pupils to explain, convince, draw diagrams to illustrate an idea or strategy, reason and conjecture as a natural part of all activity in the mathematics classroom supports deep and sustainable learning.

What I have tried

What I found: