Preparation for lab classes to maximise learning

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Background
Student body 450
Varied backgrounds
Lab classes compulsory

Requirements of Prelab
- In eLearning - student tracking
Use virtual activities, texts and calculations in Lab space scene
- Authentic equipment representation
- Molecular scale representations
- Techniques demonstrated
- Calculations

Individual, instant feedback in question and calculation results

The Prelab activity
Aimed to achieve any of:
- Highlight principle
- Develop lab technique
- Lead to a mathematical relationship
- Lead through calculation
- Look at molecular events (visualised)
- Flow diagram summarising process of the actual practical

Activity includes transfer of notes to lab manual

End result in lab
- Improve uptake of lab skills
- Improved calculations
- Techniques familiar, avoiding working memory overload
- More confidence less stress

Analysis so far
Feedback for further development:
“Prelabs generally helped me prepare for the practical class.”
“Doing a virtual titration with the calculations carried out in my lab manual (eg Vitamin) was helpful.”
“Entering numbers was straightforward.”
“Filling in the flow diagram helped me summarise what was to be done in the lab.”