Retrieval practice. The number one tool for improving long term memory is retrieval practice: the act of forcing yourself to actively retrieve something from memory. Simply answering a question is retrieval practice, so instead of recapping previous lessons, ask students questions on them. Find out more in this article.

Spaced practice. All too often we teach a unit and then move on from it. Sometimes students can go years before seeing some material again (often in a GCSE!). Instead, make sure that you are regularly revisiting past topics and engaging your students in retrieval of those topics. Find out more in this article.

Interleaving. As well as just revisiting old topics try and expose the links between the different topics that you teach. This allows your students to make connections between different ideas and dig into the wider concepts that underlie them.

Little and often. The most important part of retrieval practice is doing it regularly. Build up a bank of questions for each topic and plan a short slot in every lesson. There are a range of suitable quizzes and other resources on Teachit Science. Find more ideas, such as 'retrieval roulette', in this article for simple ways to help you make retrieval practice part of every lesson.

Lower the stakes. When you are doing retrieval practice, keep the stakes low. Doing things like asking students to call out their scores or giving them too hard a time for getting things wrong is likely to make them anxious and reduce performance. As with all things, a careful balance must be struck.

Cumulative assessments. All too often the assessment at the end of a unit only has material from that unit. Try and modify your assessments to include all material students have learnt up until that point, and make sure they know that this will happen.

Hold the grades. Giving out grades immediately can stop your students focussing on anything meaningful in their assessment feedback. If you want them to learn from their mistakes, give grades out after they have reviewed their feedback.

Inform planning. If responses to mini-quizzes show that there is material your students don't know from six months ago, be prepared to respond flexibly in your planning to revisit that topic as soon as possible. You should also make sure your resources for next year go over that point more thoroughly.

Self testing. Students will often engage in revision activities that are not particularly effective, you can explicitly train them in retrieval practice in class. For example, encourage students to make flashcards during a topic so by the end they have a readymade revision resource to test themselves.

Give practical tips. Some teachers say things like 'There is no best way to revise, you need to find things that work for you.' This probably isn't helpful, because students aren't good judges of how well they learn. As above, share concrete ideas for revision techniques.

Sequencing is key. Think really carefully about how you are going to explain your material. Establish the knowledge needed to understand a particular concept and make sure that knowledge has been thoroughly covered.

Segment your explanation. Don't give students too much information at once. Break apart your explanation into segments that are much smaller and more manageable. Allow for practice and review in between segments.

Take advantage of dual coding. When explaining, use visual images to explain the material as well as language-based ones (whether spoken or written). This takes advantage of dual coding, which is when the brain processes visuals and language in parallel.

Avoid split attention. When using a diagram, make sure your students' attention is exactly where you want it. Ways to do this include pointing, saying 'look here,' and making sure diagrams have labels on top of them rather than in a key (stops students having to pay attention to two separate areas).

Avoid redundancy. If you have a written explanation on the board, don't also read it out. This provides students with sensory data they do not need (i.e. it is redundant) and can overload them.

Worked examples and models. For calculations and procedures (like working out an ionic equation) model the steps involved and give students worked examples (find out more in this article). For more word-based concepts (like explaining properties based on structure) make sure you give model answers – both good ones and bad.

Guided practice. Your students will need support as they move towards practising independently, so you should guide them either by circulating and offering support or by building supports into the work like partially completed answers.

Independent SLOP. In order to fully internalise the material your students have just been taught, they need extensive independent practice. Practice should build up in difficulty. The end of a problem set should start to link to material from other topics. SLOP simply stands for an approach that incorporates 'shed loads of practice' – find out more in this blog article.

Get sloppier. Provide students with plenty of opportunities to practice. As a department build up banks of resources (worksheets, booklets) for each topic that have lots of practice in them. Help students start to take responsibility for their own learning by allowing them to choose the most appropriate resources for them.

Whole class review. Make sure you go over all student work in some form. Doing this verbally is particularly effective, especially if you sample a few answers from each question. This will help your students to develop the habit of self-reflection and improving their work.