Forgetting curves

One of the least surprising results in learning science is that we retain knowledge much more effectively if we use it or repeat it. A study by David Pritchard at MIT compared student exam results in freshman physics between students who continued to use physics in future coursework, and ones who did not. The difference was tremendous.

This is closely related to the concept of spaced repetition (a concept which another group is looking at), but with different timescales. For example, spaced repetition is useful for looking over factoids on flash cards. Here, we're concerned about complex concepts, and practice over semesters and years. Forgetting curves (http://en.wikipedia.org/wiki/Forgetting_curve) show how information decays over time, and ideally, we'd like to reinforce it before it has fully decaded. The particular curve is very specific to the type of knowledge.

What are some ways we can make sure that students continue to use and reinforce skills they picked up weeks, months, or years ago?