# A Simple Plan for engaging students and accelerating their learning

Re-sequencing learning tasks can have a huge impact on student engagement and performance. The key to the Simple Plan is the tactical placement of new information, traditionally introduced via reading assignments and lectures.

**Background Theory**

In traditional learning sequences the instructor’s presentation (or a substantial reading) is the typical lead-off activity. For novice learners in particular, this can be problematic: there is often no adequate framework in students’ brains where large amounts of new information can take hold. Daunted by seemingly random and undifferentiated concepts and facts, many students resort to transcribing the lecture without processing it (or highlighting sentences in a reading) and then memorizing the information in rote fashion for short-term use on a test. This practice inhibits real understanding and transferability of learning. It also creates a classroom where students, overwhelmed by information, are reluctant to participate: they fear that they might be wrong in the face of so much expert information.

**Enter the “Simple Plan”**

The Simple Plan has been around for decades under many guises of active learning. More recent research in Cognitive Science has helped us understand why its specific sequence of learning tasks works better than others. Efficacy of learning is a function of how the brain senses new data, transforms it into conceptual information, then puts it immediately to use or stores it for easy retrieval.

For instructors wanting to structure learning consistent with brain functionality, the essential question is *“To what extent are my students in need of and actively “waiting for” the specific new stuff I what them to learn?”* Are they confronted with a situation where this new information would be useful? Are they puzzling on something and looking for a helpful clue that might be provided in the new information? If students are primed to see in advance exactly how the new information might help them with an immediate problem or challenge, they will seize it and quickly transform it into usable and memorable structures of understanding and memory.

***The Simple Plan has five sequential steps:***

1. Experience

2. Reflect

3. Abstract (Conceptualize)

4. Receive (new information)

5. Apply

**1*. Active Experience*** (decision-based): This will be a “naïve” action in that students are asked to act without complete awareness of content or other formal information. *The task will look just like a decision that a more informed, expert person might confront.* Tonally playful, but substantively serious, this required action is just beyond their ability: a case requiring a diagnosis or other judgment; a data set requiring inference or inviting hypotheses; or a research scenario requiring a prediction (i.e., Decide something by predicting, choosing, producing, etc.).

**2. *Reflection:*** Students are asked to explain/justify why they did what they did in #1. The purpose of this discussion is to uncover existing thought processes and knowledge. Students need to become aware of their problem-solving process and their dead ends, in order to be able to recognize the utility of new information.

**3. *Abstract an idea from the reflection:***This is the hardest move—students are asked to draw conclusions from what they just did, in order to bring conceptual order to their understanding. The purpose is to get students to begin forming concepts (inductively) on their own.

**4. *Receive new information***: This is where traditional practices kick in. Now that their thinking has been directed toward key ideas, as a result of #’s 1,2 and 3, they are ready to read or listen to new information, and they are ready to process that information actively. When they read a relevant chapter or listen to your lecture they will be actively testing their own, earlier naïve thinking.

**5. *Apply new information in new situations***: Students now are asked to integrate their new information with what they learned in their earlier experience and reflection, in order to carry out a new action (Predict something; define something; decide something; choose something; produce something; explain something; etc.). This step will also serve as an assessment of student progress.

*Sample sequence from a beginning Geology course:*

1. *Active Experience* (decision)

Look at the following un-named rocks. Based on your observation, make a judgment about the likely creation process for each one.

2. *Reflect on the experience*

How did you come to your conclusions? Explain exactly how you decided on the probable origin of each rock?

3. *Abstract an idea from the reflection*

What qualities seem to be associated with rocks from different origins? Make a list of these crucial qualities or characteristics that you think would be essential in determining the origin of a given rock.

4. *Receive new information*

Here are formal descriptions of different types of rocks, with their labels, and explanations of their qualities as associated with their formation/origin. Compare your own thinking with this information. To what extent did you see the same things? How were your observations and judgments in conflict with research?

5. *Apply new information in a new situation*

Here is another group of rocks that you have probably never seen before. Use your own observations and new understanding of rock formation to categorize these rocks. Be prepared to explain your thinking, justify your judgments.