Some instructors rely on a particularly engaging personality to teach. Others appeal to students through their empathetic nature and caring attitude. If you are an instructor who has not been successful with either of these approaches (many of us are not!), you may be more likely to find success with a specific method that has a solid track record of success—no matter your personality. The “Simple Plan” was developed for just this purpose. With a bit of imagination, any instructor can use this strategy to ensure that students get traction with any content on any given day.

Defining the Problem
The mere re-sequencing of classroom tasks, lectures, assignments and other activities can have a huge impact on student engagement and performance. In traditional lecture courses where the instructor’s presentation is the lead-off activity, there is often little or no framework in students’ brains in which large amounts of new information can land and take hold. For survival purposes students resort to transcribing the lecture without processing it, a first step toward an assumed goal of memorizing information in rote fashion for short-term use. This practice actually inhibits both memory and real understanding. 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. As result, we see students who appear uninterested in learning, when in fact they are struggling to figure out how what they are learning matters.

Theory Behind the Simple Plan
Recent research in cognition and neuroscience helps us understand why some sequences of learning activities work better than others. Contrary to what was promoted by earlier literature on learning styles or preferences, we now know that efficacy of learning is a question of how the brain senses new data, transforms it into conceptual information, then stores it or puts it to use. For instructors, the essential question is “To what extent are my students attitudinally and cognitively primed for new stuff?” Are they ready to respond to it actively and critically, so that it moves quickly into usable and memorable formats? Or is it coming in as just more undifferentiated data? If the latter, then it’s a total waste of time.

Putting the Simple Plan into Action
The key to the Simple Plan is the strategic placement of target information, whether delivered via reading assignments, lectures, pictures, multimedia, or other formats. The basic sequence is as follows:
1. Action: Students do something in the form of a “naïve” or “pre-knowing” decision or choice.
2. Reflection: Students are asked to explain their decision.
3. Abstraction: Students are asked to generalize from the specific decision to broader concepts and other situations.
4. Reception: Students get access to formal information, which includes concepts that students were working with (unnamed) or were trying to find in step 3.
5. Application: Students struggle with another action (a more challenging decision) using both formal information and their newly acquired awareness of its utility.

Step 1. Action—a Counter-intuitive Starting Point. For most professors the hardest notion of the Simple Plan to accept is the first one: students need to ACT in some significant, relevant way before they are provided enough information to be confident of that action. Tonally playful, but substantively serious, this action takes the form of an ungraded decision-making task: an application problem that 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.

This naïve “pre-flection” or “pre-informed” attempt to act will have three important effects. 1) It will surface students’ existing assumptions about the concepts in play, which gives you an indication of their starting point. 2) It will focus student thinking on the as-yet-unnamed concepts or unidentified information, so that when formal information arrives there will be a place for it to land. And 3) it will prompt the student to act in uncertainty will provoke student curiosity. Some typical “pre-flection” decision-making formats are as follows:
- What will probably happen as a consequence of X?
- If you alter A, what will probably happen to B?
- What should X do in this situation?
- What’s the matter here? What’s the cause? (Diagnose the problem in this scenario.)
- What’s a reasonable interpretation of these phenomena/data?
- Which of the following is the best / worst / most / least _____?

(continued on back)
These questions do not ask students to define or re-state information. Instead, they require students to act as though they already had enough information. Students have to assume the role of (proto-) expert, and this attitudinal rehearsal is key to their engagement in the content. They now have something (pride!) at stake in the classroom.

Step 2. Reflection: the power of WHY. The question “Why” is most powerful when it follows a decision made in uncertainty. Having acted and now facing “Why?” the student has to search his/her own thinking to construct a coherent line of reasoning. In a typical classroom the Why question is often used to confirm understanding of pre-existing reasoning (e.g., “Tell me how the book explains/argues this point”). The instructor’s intent in this case is to provoke authentic analysis, but the response quickly degrades into a basic test of recall. In the Simple Plan, the student has to search for his/her own, “original” reasons that are not based in familiar content. In order to justify his Step 1 decision, he has to begin identifying suppositions and forming “proto-concepts” that become the basis for an argument. These preliminary attempts at conceptualization and argumentation, whether completely accurate and competent or not, create the framework for formal information when it eventually arrives.

Step 3. Abstract an idea from the reflection. This is another hard move, but one that cannot be skipped if we want our students to become critical thinkers—students are asked to draw conclusions, generalizations, and concepts from their experience and their reflection, to bring order and transferability to their understanding of what they did and reflected upon.

- Based on your first conclusions, what is the principle that seems to be driving your decision?
- Given your decision in this first instance, how would it work in this new instance?
- What are you assuming has to be true in order for your original argument to always be valid?

Step 4. Receive new information. This is where traditional practices kick in. Now that students’ thinking has been activated and directed toward key concepts as a result of steps 1, 2 and 3, they are primed to pay attention to and process new information. They are no longer passively waiting for someone to tell them what they need to know: they are now actively looking for information that will clarify, confirm, enhance or correct what they have begun to construct for themselves.

5. Apply new information in new situations. The completion of the cycle also serves as an assessment of progress. Students are now given a new, harder or more complex scenario, case, data set, problem, etc., and are asked to integrate their new information in a new challenge in the form of a new action: Explain or predict something; decide something; choose something; produce something; etc. Students who have mastered the targeted content will experience the advantages immediately in their capacity for and confidence in new actions. Students who have not mastered the targeted information will gain useful (and immediate) feedback via their authentic frustration at not being able to act with more confidence.

Sample sequence from a first-year Geology course

1. Action (by students)
Look at the following (un-named) rocks. Compare them, and based on your observations, sort them into groups, and construct hypotheses explaining how each group might have been formed.

2. Reflection (led by instructor)
Why did you sort them this way? How did you come to your conclusions? Explain exactly how you decided on the probable origin of each rock? What evidence did you use when you compared the rocks?

3. Abstract an idea from the reflection (via questioning, NOT via lecture)
Based on your hypotheses, what qualities seem to correlate with rocks from different origins or locations? Make a list of qualities or characteristics that you think would be relevant in determining the origin of any given rock.

4. Receive new information (any traditional or non-traditional delivery format: lecture, reading, video, web search, etc.)
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? How do you need to alter your working theory (from step #1) about which characteristics indicate which origins?

5. Apply new understanding in a new situation
Here is another group of rocks that you have probably never seen before. Use your observations and new understanding of rock formation to categorize these rocks. Be prepared to explain your thinking, justify your judgments using the concepts you encountered earlier.