Simple Activities that Encourage Student Metacognition

At the Beginning of the Semester:
- Give a pre-assessment tied to learning outcomes so students are aware of what they don't know
- Ask students to reflect about the strategies they've used in the past to learn similar material. Were those strategies effective? How might they change those strategies for your class?
- Share the learning strategies that typically lead to success in your class and help your students reflect on how they might use them.
- Use specifications grading (Nilson, 2014) to allow student choices in planning

Before Class Time:
- Ask students to spend 10 minutes previewing the assigned reading and to generate 2-3 questions they have about the reading. Direct them to think about these questions during class. Then, after class, direct them to read the assigned reading, continuing to keep those questions in mind.

During Class Time:
- Use think-pair-share reflections, in which students reflect on their own learning individually before sharing in smaller, and then larger groups
- Assign minute papers, where students reflect on a prompt in a stream-of-consciousness fashion. These are especially good to use at the beginning of class as a "check" for class preparation or to prompt discussion. They can also be used at the end of class to help students reflect on topics that may require more review.
- As you're teaching content, frequently ask students "How are you trying to learn this? What will you do to make sure you remember this?" Most of them have never considered learning as a process, or their own role in it.
- Discuss explicit content connections and ask students to do so
- Connect course content to other fields of study and to real-life applications
- Model your thought and decision process when planning for solving a problem, and model the process that you go through when making sense of what a problem is asking

Before a Test:
- Have them create a practice test and answer the questions as a homework assignment. Use some of the most well-crafted questions on the actual test.
- Use guided reading questions as a homework assignment to supplement textbook reading (see http://www.improvewithmetacognition.com/developing_student_metacognition_draeger/ and http://www.curriculum.org/secretariat/files/Oct25Metacognition.pdf for examples)
- Have students place topics on a chart as you are reviewing for a test, with headings like "I understand this topic well," "I recognize this topic but need to review more," and "I have never heard of this before." (see http://www.improvewithmetacognition.com/student_metacognition_development_melone for an example).
- Encourage students to use the study cycle (McGuire, 2015) to guide their studying
- Teach students how to make a good study guide, have them do so and share their study guides with each other

During Tests or Quizzes (great for an early-in-semester low-stakes test or quiz):
- Ask for a judgement of their confidence in the answer they chose. Counsel them that when confidence is low, they should consider changing their answer. When the test is returned, have them reflect on how their confidence judgements are related to their performance (Couchman et al., 2016).
- Use IF-ATs (Epstein et al., 2002). For multiple choice tests, give immediate feedback by letting students scratch off the answer they think is correct, revealing whether or not they chose

correctly. Choosing the answer correctly on the first try earns full credit. Choosing it on subsequent tries earns successively less partial credit. This method may also be used in groups (distributed cognition), where the first guess is done individually, then the reasoning for the guesses are talked about in the group.

After a Test:
- Have students complete an exam wrapper, where they reflect on their performance, analyzing how they'll change their strategies next time (for examples, see: https://www.cmu.edu/teaching/designteach/teach/examwrappers/)
- Have students compare the grade they predicted they'd earn with the grade they actually earned. A large mismatch may indicate poor metacognition.

More Intensive Activities:
- Engage students in a strategy project (Steiner, 2016), which involves choosing, using, and reflecting upon metacognitive study and self-regulation strategies to prepare for a test in a content-area course.
- Assign Stephen Chew's "How to Study" video series for discussion and reflection (https://www.samford.edu/departments/academic-success-center/how-to-study).
- Have students reflect on the results of a self-assessment like the MSLQ (Pintrich, Smith, Garcia, & McKeachie, 1991) or MAI (Schraw & Dennison, 1994)

References

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