Cover image by Dharmendra Rai from Pixabay By Althea Need Kaminske While we talk about the benefits of retrieval practice a lot here at the Learning Scientists, we usually talk about the benefits of retrieval practice for already learned information. However, retrieval practice has also been shown to be beneficial for learning new information. That is, retrieving already-learned material not only helps you to remember that material (1), it also helps you to learn new material (2). While this effect (called the forward testing effect or test potentiated learning or retrieval potentiated learning) has been well established (2), what is less well-understood is how retrieval facilitates new learning. In a review of studies on retrieval potentiated learning, Chan, Meissner, and Davis (2018) four theoretical perspectives on how retrieval improves new learning: resource theories, metacognitive theories, context theories, and integration theories. Resource theories state that retrieval is beneficial for new learning because it frees up cognitive resources. Retrieval acts as a way for you to set aside already learned material and focus on the to-be-learned material. Pretend you are asked to remember two lists of words. According to this theory, you will remember more from the second list of words if you have been tested over the first list because you’re not still thinking about that first list. Chan et al. (2018) that this is consistent with the literature on expressive writing that people have fewer intrusive thoughts during a learning task if they are able to write about them before hand (see this post from Cindy about expressive writing an math anxiety). Research on mind-wandering is also consistent with this set of theories. Szpunar and colleagues have found that testing between video lectures reduced or changed mind wandering during subsequent lectures (3, 4). Interestingly, in one study when participants were tested intermittently, they reported more lecture-relevant mind wandering than participants who were not tested (4). Theories in this category theorize that retrieval practice helps learners to optimize their encoding strategies. That is, after taking a test on information they might change the way they approach learning new information. One way this may happen is that retrieval practice may change how much time or effort learners spend on items that they think are more difficult or more important to learn (2)