

MOTORS + MOTOR CONTROL LEARNING MAP



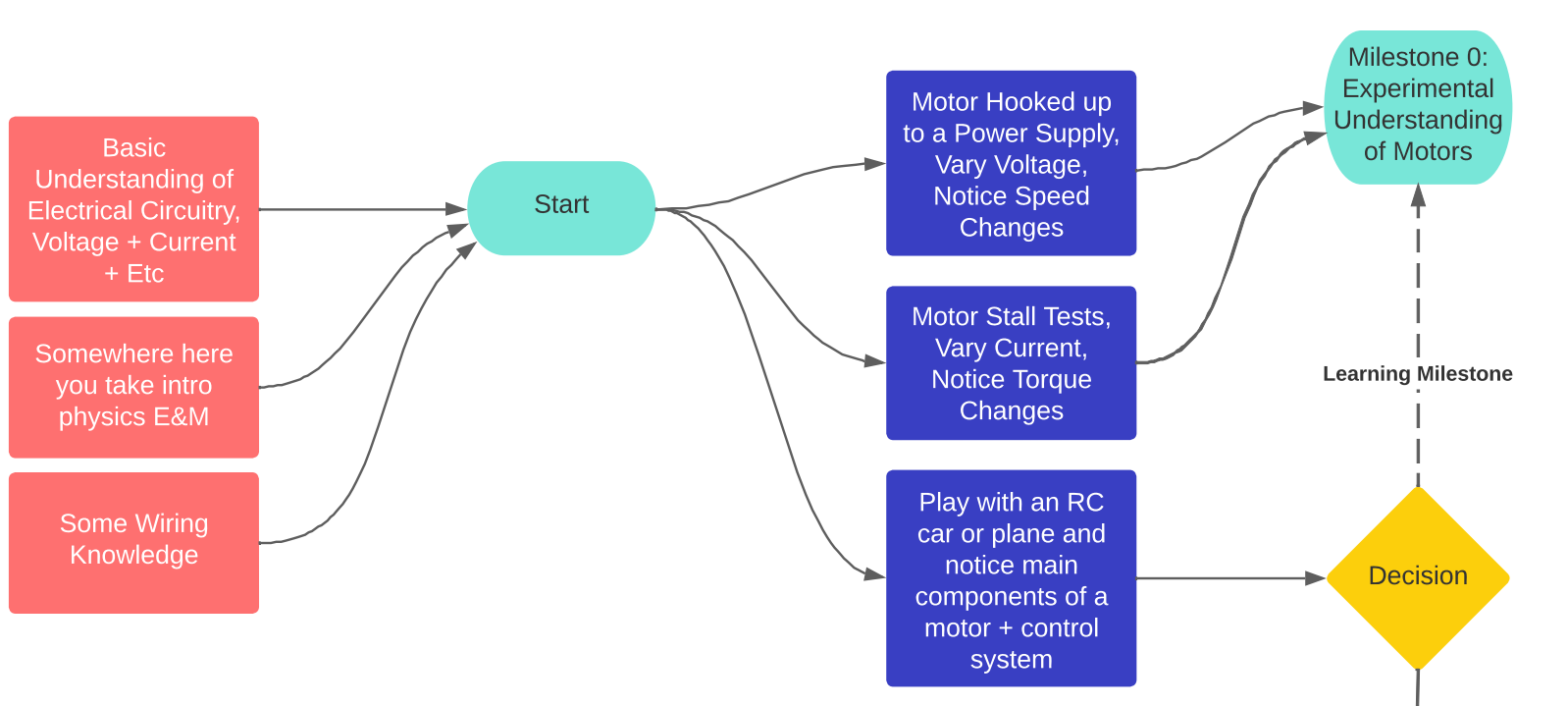
WHY DID WE BUILD THIS MAP?

As a group, we've also been looking a lot into the science of learning. That is how we learn, and how we can teach so students can learn better. A lot of this comes from applying psychological research to engineering education which is actually less common than you might think. One of our takeaways from this was sometimes teachers struggle to understand which concepts students are struggling with because as we achieved mastery of a subject, our brain forgets where we were while learning those very concepts. Our brains fill in previous memories assuming we knew information we now know today, even if we did not. This is a Metacognitive Error commonly called, "the Curse of Knowledge" or the "knew-it-all-along" effect.

Therefore we slowly, and carefully built this map so we could remember how we got where we are, and so you can understand why we are teaching things in a certain order or in a specific way.



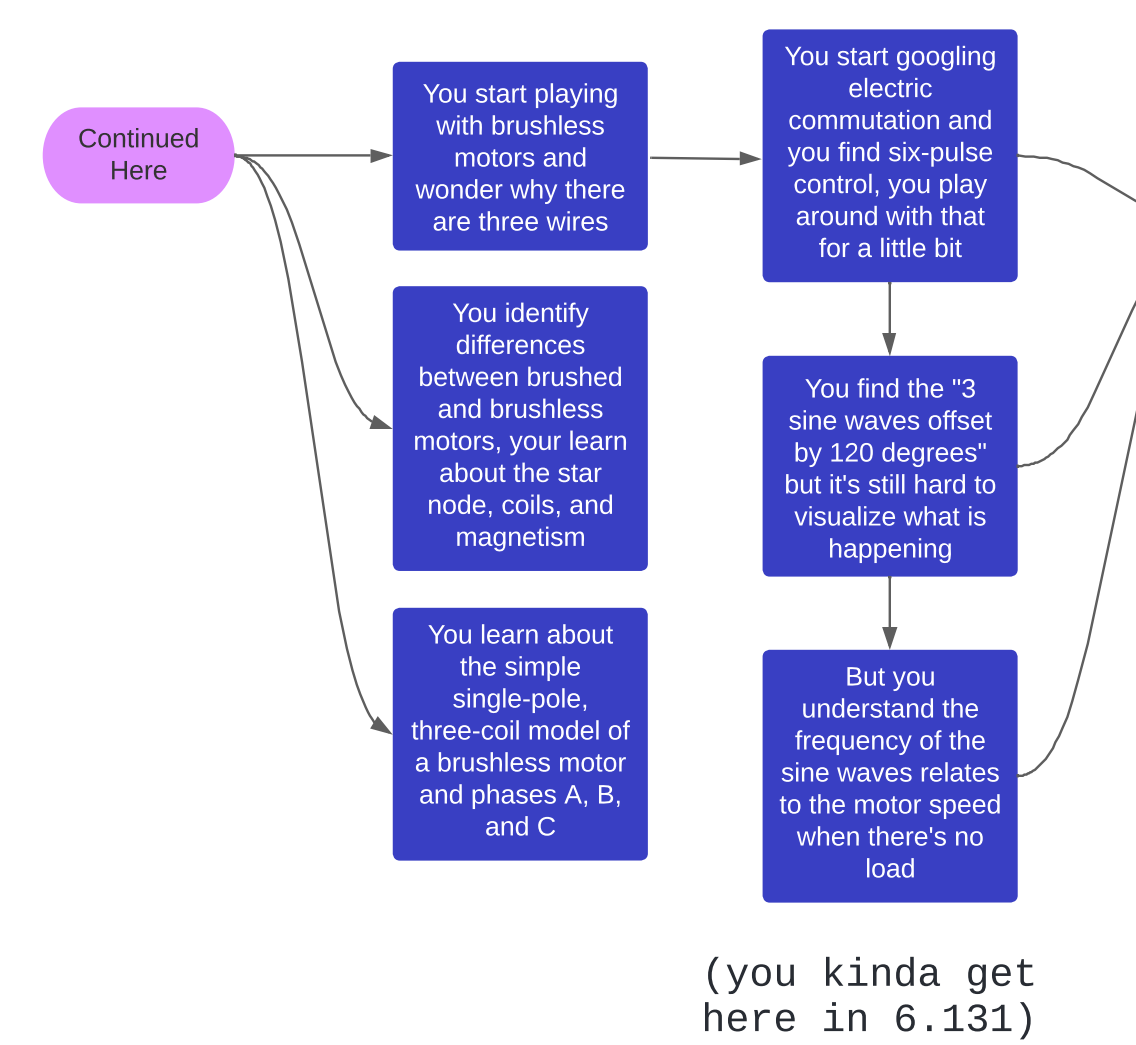
GREAT BOOK WOULD RECOMMEND TO ANY EDUCATOR OR STUDENT



IDENTIFY WHERE YOU ARE ON THIS LEARNING MAP, THAT WILL BETTER AID YOUR LEARNING. WE PROMISE!

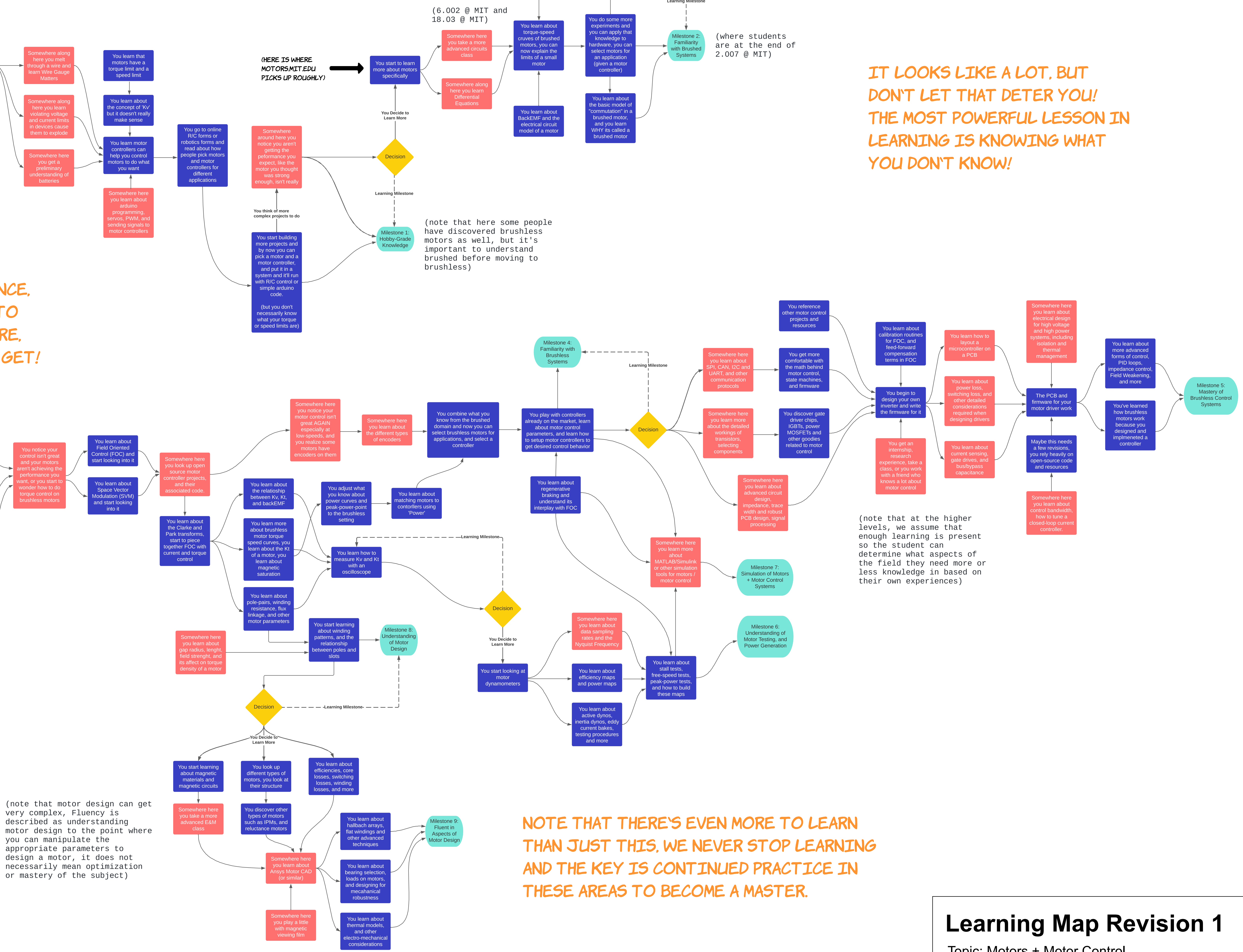
(note that this part involves a lot of experimenting, playing, and innate curiosity.)

ANY YOU DON'T NEED TO LEARN EVERYTHING ON THIS MAP ALL AT ONCE, IT TOOK US YEARS, BUT IT'S HERE TO GIVE YOU AN IDEA OF WHERE YOU ARE, COMPARED TO WHERE YOU WANT TO GET!



(you kinda get here in 6.131)

(note that motor design can get very complex. Fluency is described as understanding motor design to the point where you can manipulate the appropriate parameters to design a motor, it does not necessarily mean optimization or mastery of the subject)



IT LOOKS LIKE A LOT, BUT DON'T LET THAT DETER YOU! THE MOST POWERFUL LESSON IN LEARNING IS KNOWING WHAT YOU DON'T KNOW!

NOTE THAT THERE'S EVEN MORE TO LEARN THAN JUST THIS. WE NEVER STOP LEARNING AND THE KEY IS CONTINUED PRACTICE IN THESE AREAS TO BECOME A MASTER.

Learning Map Revision 1

Topic: Motors + Motor Control

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