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Deeply-Digital, Standards-Aligned, OER Curricula for Your K-5, Generation Alphas: Engaging and Effective!

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The COVID-19 disruption, where at times students learned at their desks in school, or at their kitchen tables at home – and sometimes both, caused schools to realize that *digital curricula* could make learning continuous, seamless, regardless of place. And, while returning to the classroom is the plan for 2021-2022, will classrooms return to paper-based curricula? The [consensus](#) is: “Digital Curriculum is Here to Stay!”

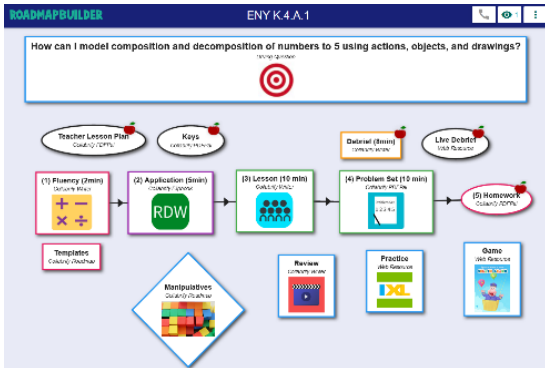
Why? Because your K-5 learners are the first “digital-first” generation. Indeed, research says that even the brains of these Generation Alphas are wired differently. Thus, to *effectively* serve these *deeply-digital children*, we need to put *deeply-digital curricula* into their classrooms and onto their computing devices.

Just such resources are available from the [Center for Digital Curricula](#), College of Engineering, University of Michigan. Come here to find high-quality, OER (Open Education Resources), [deeply-digital curricula](#) for K-5, for English, math, social studies and science – all aligned to common-core standards (e.g., Michigan) and the TEKS (Texas). These year-long curricula are meant to be used as *core* curricula – not just as supplemental resources. The Center also provides teachers with professional learning webinars and resources – “how do I use deeply-digital curricula in my classroom?” – and the Center provides schools/teachers/students and their parents with highly-available, technical support services.

The Center’s *deeply-digital* curricula take advantage of all the affordances of digital technology. For example, lessons – content and learning activities – are comprised of 2D, graphical icons, arranged in a visual, flow-chart-like display – just like the video game world inhabited daily by our Alpha Generation! These “Roadmaps” use a suite of productivity tools, developed by the Center, expressly for K-5 student. The tools enable students to express themselves in multiple media (e.g., pictures, animations, video, text). And, the deeply-digital lessons support synchronous, student-student collaboration – sharing screens and talking to each other – whether the students are in the classroom, at their homes, or some of both. Still further, a 2D, graphical lesson aggregates all the content and learning activities *in one place*, making it easy for students - and their parents - to understand what’s been done and what’s coming next. (A Roadmap example from EngageNY/Eureka math for kindergarten is shown at the top of the page; notice the phone icon – so small groups of learners (or teachers at night!) can talk to each other *through* the computer to collaborate.)

The Roadmap lessons are supported by the Collablify Roadmap Platform, a device-independent, browser-based, comprehensive learning environment. With initial funding in 2014 from Lucas Education Research, Collablify, under Center management, continues to grow based on input from its users – thousands of teachers and students all across the U.S. Collablify enables teachers to manage their Roadmaps and monitor their students’ work on Roadmaps in real-time. The Platform plays friendly with Google Classroom, Canvas, Schoology, etc. And, the Platform accepts Google and Microsoft logins. Teachers and students need to only learn *one interface*; Roadmaps for English look and work the same as Roadmaps for science, or math, or social studies.

As we believe that teachers should have control over the curricula used in their classrooms, we intentionally have created an *open* Platform so that teachers can easily add to or delete from the provided, core curricula. And, as a teacher’s time is paramount, the Platform makes it easy to edit lesson Roadmaps in order to differentiate them for struggling learners or accelerated learners, or to localize the lessons to feature local factors (e.g., geographical, historical factors).



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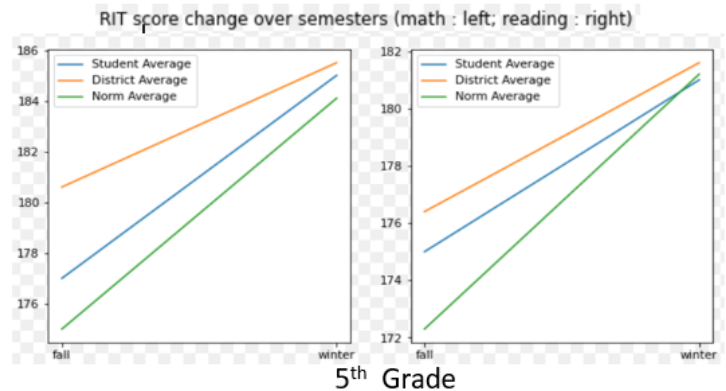
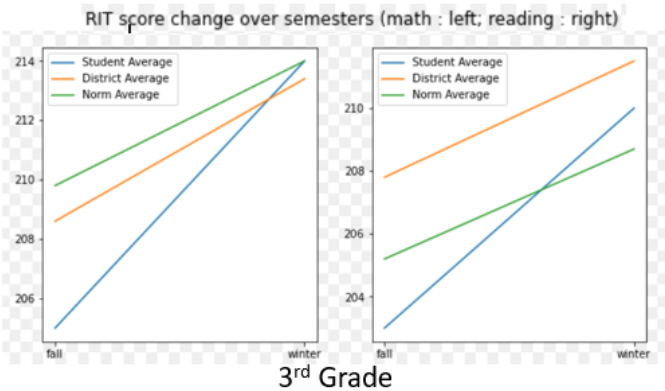
In the 2020-2021 school year, 5,000+ K-5 students have been using the Collabify Roadmap Platform and the Center's deeply-digital curricula daily! A recent survey of the participating teachers found that 94% report that their students “are engaged” and 96% report that “things are going well.” And, here is a comment from a Principal of an elementary school in Michigan that uses Collabify:

- “Our relationship with U of M has really changed how successful we were able to be this year--I believe that this tool helped us be flexible. The feedback from parents was very positive.”

Most importantly, the high NWEA scores in reading and math (see examples below) from classrooms where teachers use the UMich.CDC’s deeply-digital curricula, are a testament to the effectiveness of the resources.

Representative NWEA Scores from Classrooms (3rd and 5th Grade) Using UMich.CDC Deeply-Digital Curricula During 2020-21 –

For each pair, the left chart are the scores for math and the right chart are the scores for reading. The “Student Average” are the scores for the specific classroom; the “District Average” are the average scores for that grade from a high-scoring district in the U.S. and the “Norm Average” are the average scores for that grade from all the districts in the U.S.



Frequent-Asked Questions:

Q: How much do the deeply-digital, Roadmap curricula cost?

A: The Center for Digital Curricula’s mission is to provide K-12 with deeply-digital, standards aligned curricula. We



wanted to make *everything* free. But, as we scaled from 50 students to 500 students to 5000 students, we have seen that there are real costs involved in providing teachers and students with Roadmap curricula and the Collabify Roadmap Platform. As it is essential that the UMich Center for Digital Curricula

be self-sustaining, the Center needs to adopt the a “cost-recovery” policy. The Center will provide the Roadmaps for the K-5 curricula at no charge via the creative commons license CC-BY-NC-SA. However, there are two primary costs involved in supporting the *use* of the Roadmap curricula and/or the *use* of teacher-created Roadmaps on the Collabify Roadmap Platform:

- During “run-time” – when students use Roadmap lessons or when teachers create new Roadmaps or, more often, modify existing Roadmaps – the Roadmap lessons use the Google Cloud Platform (GCP) for storage and for computation. Google charges the Center for the use of the GCP’s resources.
- The Collabify Roadmap Platform needs ongoing maintenance – from the open-source code upon which it relies, and which literally changes on a weekly basis – to updating features at the request of educators.

Currently in the Deeply-Digital Curricula Library there are 4 deeply-digital, year-long curricula (English, social studies, math, science) for each grade level, K-5 – but, stay tuned, more year-long curricula are coming! Have we piqued your interest? Please contact us – d2curricula@umich.edu – to talk about how these deeply-digital resources can fit into your district’s plans!