

# **Real-World LEARNING FRAMEWORK**

**FOR SECONDARY SCHOOLS**

**Digital Tools and Practical Strategies  
for Successful Implementation**

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*Reproducible pages are in italics.*

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# Introduction

*Samuel walks into his middle school science class at the beginning of the year, excited to be entering a new grade level with more intensive science. However, he finds that “science” is packets of worksheets, outdated movies, and old textbooks. Samuel has never had an opportunity to perform an experiment or use the scientific process other than by memorizing the steps of the process from a simplistic experiment—one for which he already knew the conclusion before he started. He sees no connection to mathematics and technology that could help science come to life. Samuel now equates science to a reading comprehension exercise, and he thinks that technology is used only for taking quizzes, practicing mathematics skills, locating information, and typing papers. He watches the teacher use the interactive board to show a PowerPoint presentation or to have students come to the board one at a time to circle an answer. He had hoped to experience more real-world science such as his cousin at another school talks about. Instead, he finds science as dull and rote.*

Students need to be excited about learning! Students naturally crave meaning when they have the opportunity to be inspired in a school that cultivates a real-world learning environment. Students desire assignments with dimensions and substance that make them crave more on the topic. Often, classrooms are riddled with worksheets that do not create authentic-learning connections for students. As an educator, planning quality curriculum may have left you considering the following questions.

- Have my students shown me what topics interest them? Have I incorporated their interests into my instruction and lesson planning?
- Do I find it difficult to incorporate curriculum standards in real-world activities?
- Do I find it difficult to challenge students with provocative questions?
- Are my students working on teacher-directed tasks and projects in isolation?
- Do my students work on technology that does not enrich their learning nor expand on the content?

This book helps you answer these questions and address the concerns they may reveal.

In a real-world environment, creation is not a formulaic set of steps but rather is a messy process. Often, creation of important work involves starting and stopping—revising all the while. If we consider an artist designing a masterpiece, we can envision the artist beginning with personal inspiration, addressing questions he or she asks him- or herself, working from a blank canvas, and then problem solving to come up with a pathway to brilliance. The masterpiece is the result of many experiences, revisions, and failures the artist experiences. The term *create* means bringing something unique into being that did not previously exist and would not evolve on its own. Based on this concept, the instructional framework this book introduces is termed the Create Excellence Framework. With this framework, teachers and students have the opportunity to plan

project-based instruction that is comprehensive, pulling from the real world by utilizing cognitive complexity, student engagement, and technology integration.

As we consider the real world's meaningful impact on education, teachers and students need a tool to achieve the best-designed project. Teachers must be open to meaningful learning, remembering also that the learning will be a messy process, as it is in the complex and often chaotic real-world environment. What students produce will be personalized and unique. This requires teachers to have flexibility and focus as they plan, keeping in mind the ultimate goal is to support learning that leads to brilliance!

## The Create Excellence Framework for Real-World Learning

Researcher Christopher M. Moersch (2002) developed the H.E.A.T Framework (higher-order thinking, engaged learning, authentic learning, and technology integration), and we have adapted it to further define each component, emphasizing the teacher's need to *create* an experience for the students (Maxwell, Constant, Stobaugh, & Tassell, 2011). The resulting Create Excellence Framework is a research-based, lesson-plan framework that can guide students, parents, and teachers in thinking about learning in a different, yet comprehensive, way (Tassell, Maxwell, & Stobaugh, 2013). The foundation of the Create Excellence Framework and chapter structure of this book provide readers a deep understanding of how real-world learning, supported by cognitive complexity, student engagement, and technology integration, can support student learning (see figure I.1). The purpose of this book is to help teachers improve instruction for students by designing instructional tasks that include these four key components. This framework gives us a new lens to look at how to plan instruction as well as helps teachers balance the needs of the new demands of rigorous standards. It incorporates the key components necessary to create engaging and meaningful lessons for student learning. The Create Excellence Framework is intended to be a tool to help with enhancing your current curriculum. Throughout the school year, teachers can utilize the framework to design tasks and projects at various levels. Throughout the book, we provide tangible examples of sample tasks and projects.

All the components important for adding depth to learning and planning comprehensive lessons are addressed through this framework. Each component covers the same five levels of increasing complexity to help the teacher target growth in his or her instructional development of tasks and projects: (1) Knowing, (2) Practicing, (3) Investigating, (4) Integrating, and (5) Specializing. The cognitive-complexity component also incorporates the revised Bloom's taxonomy higher-order thinking skills: Remember, Understand, Apply, Analyze, Evaluate, and Create. Table I.1 (pages 4–5) highlights this structure, clarifies the role of each component, and illustrates how all the pieces of the framework fit together. Chapter 1 explains these levels in depth. Levels 1–3 involve tasks while levels 4–5 involve projects. *Tasks* are small classroom activities while *projects* are more complex and use several instructional strategies, have open-ended solutions, involve more student choice and decision making, and take longer to complete. The lower levels of the framework are teacher directed (levels 1–3), whereas higher levels are more student directed (levels 4–5) with the teacher partnering with students to design projects and assignments (Tassell et al., 2013). The target levels for consistent student learning are levels 3 and 4, which are shaded in tables depicting the framework levels throughout the book. While level 3 is still teacher directed, students are engaging in higher cognitively complex tasks and

<b>Real-World Learning</b> Students learn from, interact with, and have an impact on the real world.		
<b>Cognitive Complexity</b> Level of critical thinking required by students for an instructional task or project	<b>Student Engagement</b> Level at which students take responsibility for their own learning, instruction is differentiated, and students partner or collaborate with the teacher, other students, or outside experts to guide their own learning	<b>Technology Integration</b> Level at which students use technology as a research tool, collaboration tool, design tool, and presentation tool; student-directed technology use is seamlessly integrated into real-world content; students' critical thinking with technology use is at Bloom's Analyze, Evaluate, or Create levels

Figure I.1: Structure of Create Excellence Framework and book.

projects. Students are beginning to take more responsibility for their learning in level 4. Level 5 is attained after consistent learning at levels 3 and 4 and could be accomplished a few times a year.

## Real-World Learning

Real-world learning is where the student learns from, interacts with, and has an impact on the real world. The goal is for students to experience real-world, authentic learning by interacting with the real world to complete tasks and solve problems. The real-world learning component is the foundation for the other three components (cognitive complexity, student engagement, and technology integration), as it establishes an authentic context for learning.

## Cognitive Complexity

The student's level of thinking with the real-world content is vital to creating a quality task. The cognitive-complexity component within the Create Excellence Framework is based on the revised Bloom's taxonomy (Anderson & Krathwohl, 2001). At the teacher-directed level of the framework, learners are engaged in learning experiences that the revised Bloom's taxonomy would classify as Remember, Understand, and Apply. The student-directed levels of the Create Excellence Framework embrace Bloom's top three cognitive processes (Analyze, Evaluate, and Create). At these top levels the students, instead of the teachers, are identifying the real-world questions, and generating projects while thinking like an expert focused on an open-ended, global learning emphasis. Chapter 2 provides an in-depth discussion of these levels and Bloom's cognitive processes.

## Student Engagement

The student-engagement component of the Create Excellence Framework offers guidance in the degree to which learners (1) take responsibility for their own real-world learning, (2) partner or collaborate with the teacher, other students, or outside experts, and (3) use resources such as teachers and experts in the discipline. Teachers can help the students differentiate their interests and make choices in how they approach the task or project. Teachers can also support the students by helping them identify resources and collaboration opportunities.

**Table I.3: Highlights of How the Create Excellence Framework Connects to Student Content Standards**

CONTENT-AREA STANDARDS	STANDARD SAMPLE	CREATE EXCELLENCE FRAMEWORK COMPONENT
Common Core English language arts standards	SL.8.1 “ <i>Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others’ ideas and expressing their own clearly</i> ” (NGA & CCSSO, 2010a).	Student engagement
Common Core mathematics standards	Mathematics Practice 4: “Model With Mathematics—Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. . . . They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose” (NGA & CCSSO, 2010a).	Real-world learning Student engagement Technology integration Cognitive complexity
Next Generation Science Standards	HS-ETS1-3 “ <i>Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts</i> ” (Achieve, 2013).	Real-world learning
College, Career, and Civic Life (C3) Framework	D4.3.9-12 “Present adaptations of arguments and explanations that feature evocative ideas and perspectives on issues and topics to reach a range of audiences and venues outside the classroom using print and <i>oral technologies</i> (e.g., posters, essays, letters, debates, speeches, reports, maps) and <i>digital technologies</i> (e.g., Internet, social media, digital documentary)” (National Council for the Social Studies [NCSS], 2013, p. 60).	Technology integration

## Structure of This Book

This book is presented in two parts. In part I, the chapters provide an in-depth look at each of the components of the Create Excellence Framework, highlighting how to classify levels within the framework and how they align with the standards. We provide descriptions of each component of the framework in chapters 1–4. Chapter 5 gives guidance for how to use the Create Excellence Framework in your classroom, school, and district. Examples of lessons covering a variety of subjects and framework levels for grades 6–12 are interwoven throughout the chapters in part I. Each chapter also includes discussion questions for readers to consider. Another section in each chapter, Take Action, provides readers with more in-depth activities and tasks, often including reproducibles.



In part II, we include several sample lesson plans from different content areas and spotlight real-world learning, cognitive complexity, student engagement, and technology integration. The projects specify grade levels, but they could be modified for higher or lower grades. Each project description includes the following.

- An assignment overview, including learning objectives, the standards they address, and resources, including technology, needed for the project
- A task or project description and scoring rubric, which can be copied and distributed to students to guide their creation of the project
- Sample student work is provided to show how a typical student might complete the project; the teacher may or may not decide to share this with students
- Create Excellence Framework rating that explains how closely the lesson fulfills the levels of the framework, with justification provided for the rating

You may also visit <http://create-excellence.com> to access many additional resources featuring web 2.0 tools and applications highlighted in the projects in this book as well as other resources that we have found to be outstanding in our work with teachers.

## Conclusion

At a time when education is looking for answers, this book is needed! The Create Excellence Framework is a tool to design instruction with a research base. With the challenging environment of the new standards in many content areas requiring engaging and higher-level inquiry, the Create Excellence Framework can help you fill this need. The Danielson Framework for Teaching (2014) also reveals the importance of students driving instruction and making decisions involving their own learning. These manifestations drive and support the timely nature and need for the Create Excellence Framework—it can provide a guide and a target for student learning, encouraging students such as Samuel, the eager science student, who are hoping to experience deeper learning. Teachers can use the concepts from the Create Excellence Framework to inspire and reinforce their students' self-directed learning. While advocating for this type of real-world learning in the classroom, teachers can promote a vision for higher cognitive complexity, technology integration, and student engagement. In this type of learning environment, Samuel can realize his dreams and potential.

## Discussion Questions

1. How can the Create Excellence Framework help you plan lessons that tap in to real-world and relevant learning?
2. Are there any components of the Create Excellence Framework in your current teaching?
3. How do you see the framework components embedded in the teaching standards for your school?
4. What has been missing from your instructional-planning tools? What struggles have you been having? How would the Create Excellence Framework help you with these struggles?
5. Are the tasks and projects you design more teacher driven or student driven?

## Take Action

1. Consider a student in your classroom or school who wants to engage in higher levels of real-world learning than he or she currently has the opportunity to do. Have a discussion with the student about aspects of the current curriculum's cognitive complexity, student engagement, and technology integration as related to real-world learning in the Create Excellence Framework. Ask the student to share specific topics or issues that affect him or her that can be explored in class projects.
2. Have your class complete the survey provided in the "Personal Learning Survey" reproducible. What did you learn about your class that you did not know before? How can you use this information to design better learning experiences for your students?
3. Examine the content standards for your discipline. Find the elements within the Create Excellence Framework components that you want to develop in your classroom instruction. Discuss this with a colleague.

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