



# COMPETENCY-BASED EDUCATION

## Building 21

Building 21's competency-based education model replaces traditional time-based, age-based, and course-based structures with those that focus on readiness, growth, and demonstrations of learning through authentic performance-based assessments.

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## OVERVIEW

Building 21's competency-based education (CBE) model is an equitable, student-centered approach to learning that allows students to earn credit at their own pace and across contexts through authentic, performance-based assessments. CBE takes traditional structures of the factory design model (e.g., age and grade-based groupings; credits based on seat-time) and replaces them with structures that privilege feedback, growth, and multiple opportunities to demonstrate learning. In this model, students engage with problem- and project-based learning in Studios that allow them to pursue their interests and passions, while progressing at their own pace along a competency-based learning continuum.

Building 21 currently partners with 44 schools and programs across 15 states to support them in their journey toward creating a personalized and competency-based model that meets the needs of their unique learners and local context. Over the past 8 years, thousands of users have accessed their free resources. They also offer week-long design institutes and personalized coaching.



[▶ Building 21: Learning What Matters](#)

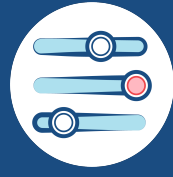
[▶ Getting Started with Competency-based Education](#)

## What Makes This Model Innovative?



### Relevance

Building 21's CBE model implements Studios, which are investigations that allow students to grapple with real-world problems. Studios culminate in the opportunity for students to make an impact in their community by applying their learning in an authentic way (e.g., publishing an editorial, building a design, or presenting at a town hall).



### Customization

CBE provides instruction, support, and feedback that is personalized to each student. While all students work toward the same set of competencies, they do so at their own pace and have choice in how they demonstrate their learning. Students often have choice in the activities they complete, allowing them to pursue their interests and passions.



### Active Self-Direction

Each student manages a Personalized Learning Plan containing data related to their progress within the competency areas. Students use this data to make informed decisions about what they will work on and when and how they plan to do so, making them the drivers of their learning.

# DESIGN

## Goals

The ultimate goal of Building 21’s competency-based education model is for students to achieve the qualities, skills, and mindsets defined by their Portrait of a Graduate. While the portrait detailed here is unique to their two Lab Schools, Building 21 works with partner schools and districts to create their own based on their vision for student success. [Building 21’s Portrait of a Graduate](#)

Students work toward achieving this Portrait through the Competency Framework. This framework serves as the foundation of Building 21’s CBE model, outlining each competency and its associated continuum of performance levels that are used to measure student progress toward college and career readiness. Competencies are organized into five primary areas that map onto Building 21’s Portrait of a Graduate. When working with partners, Building 21 provides direct support to align competencies to their custom-designed Portrait.



[Competencies and Continua for Students](#)

<b>Core Content Areas</b>	Aligned to national standards, these competencies define the key skills that students must master within core academic content areas, including ELA, math, science, social studies, physical education, visual arts, health and wellness, and world language.
<b>Habits of Success</b>	These competencies include Manage My Work and Set Goals, Build Networks, and Navigate My Setting.
<b>Wayfinding Experiences</b>	These competencies and experiences guide students to explore, choose, and plan to enact a postsecondary pathway. Students also learn how to use data to lead a Personalized Learning Pathway conference where they explain their progress, goals, challenges, and successes.
<b>NextGen Essentials</b>	These competencies include Design Solutions, Present to an Audience, and Collaborate Effectively.
<b>Personal Development</b>	These competencies include Effective Effort, Make Informed Decisions, and Demonstrate Social Skills and Awareness.

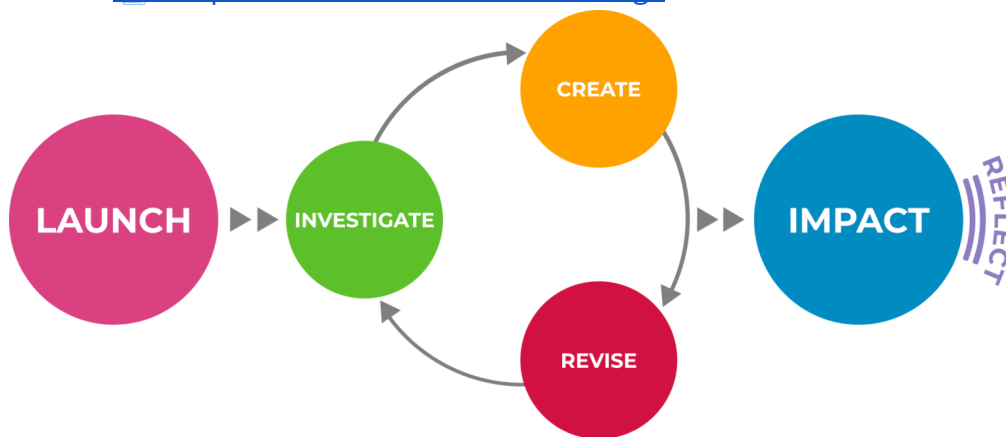
## Experience

Students build knowledge and skills across competency areas through studios and foundational coursework, earn credits by demonstrating mastery through portfolios, and engage in goal setting and reflection to support their growth.

## Studios

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Studios are learning experiences designed to provide students with opportunities to demonstrate mastery of a set of competencies in engaging and authentic ways that align to real-world careers. [Sample Studio Guide: Climate Change](#)



Each Studio follows the same basic process:

- **Launch** - The launch introduces students to the problem that they will address. In this stage, students prepare for deep engagement by exploring the “why” behind their learning; by exploring the competencies that they will address and the culminating performance task that they will work towards; and by building necessary background knowledge.
  - **Investigate** - In this stage, students explore the problem and related content, while building the skills that they will need to complete the culminating performance task.
  - **Create** - In this stage, students have multiple opportunities to select and complete performance tasks that demonstrate both their mastery of competencies and their understanding of essential content.
  - **Revise** - Throughout the Create stage, students have multiple opportunities to revise their work based on competency-based self-assessments, as well as on teacher and peer feedback.
  - **Impact** - In this stage, students apply their learning in authentic contexts, both to demonstrate their learning for a broader audience and to have real-world impact.
  - **Reflect** - At the end of every Studio, students reflect on their learning and growth. They also have an opportunity to share feedback with the teacher to improve future Studios.
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## Foundational Coursework

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In Building 21's CBE model, students also develop foundational skills and behaviors outside of studios. Elementary and middle schools implement a reading, writing, and math workshop model, and they have systems and tools to track foundational skills and behaviors (e.g., Letter naming, HFW, math skills, Fountas and Pinnell guided reading behaviors). Building 21 also works with high schools to track math concepts specific to how they organize math instruction (e.g., Alg 1, Geo, Alg 2, Integrated Math 1, Integrated Math 2).

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## Portfolios

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A portfolio is a body of work organized by competency that demonstrates students' mastery of that competency. Each competency has its own portfolio structure that includes a set of skills, each with its own evidence requirement that outlines the number of times students must demonstrate a certain performance level in order to reach mastery. When students master all skills within a competency, they have completed that portfolio and earn a credit. Then, students progress to a higher level of the portfolio that includes the same competencies and skills, but increases the amount of evidence required for demonstrating mastery.

This portfolio model allows students to measure growth over long periods of time because the competencies remain the same across all levels. Another benefit is that competencies can be measured across multiple teachers, giving students ample opportunities to demonstrate mastery through diverse learning experiences. [▶ Portfolio Model](#)

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## Goal Setting & Reflection

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Student learning is guided by a Personalized Learning Plan, which is displayed on a student-facing dashboard along with relevant data on their progress. Students use the dashboard to set goals and reflect on their progress toward these goals. Students present these goals and reflections in a culminating student-led conference called a PLP Conference. These occur when students complete each Studio project. [Example PLP](#)

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## Supporting Structures

Building 21 offers direct support to partners as they embark on their journey toward personalized and competency-based learning. This takes time and looks different for every site depending on their existing mindsets, systems, and practices, as well as on their local context.

**Building 21's CBE model requires schools to norm on a set of competencies and then to design Studios through which students work toward mastering them.**

For many schools, implementing Building 21's CBE model requires robust shifts in their approach to curriculum, instruction, and assessment. These shifts take significant time and intentional planning.



**CURRICULUM,  
INSTRUCTION, &  
ASSESSMENT**

First, schools must identify a set of competencies that cover not only standards-aligned academic content, but also key mindsets, skills, and habits. They must then articulate a continuum of mastery for each competency in student-friendly language that will be used to measure progress over time.

Once competencies have been defined, teachers can begin to plan curriculum, instruction, and assessment. Building 21 recommends starting small by planning a single performance-based assessment aligned to one competency. Over time, teachers can be supported to design more involved student-centered learning experiences—what they call Studios—that give students multiple authentic opportunities to engage with content and receive competency-aligned feedback as they work towards a culminating performance assessment. [Studio Planner](#) [Studio Design Template](#)



**To prepare students for the cultural shifts necessary for CBE, schools must create an environment that fosters risk-taking for students and adults.**

Strong relationships are the foundation of personalized learning.

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## SCHOOL COMMUNITY & CULTURE

Fundamentally, students must feel known and valued for CBE to work well. Competency-based education requires students to try things, fail, and then try them again using what they learned the first time. This cycle of attempt, feedback, and revision may be unusual for students with more traditional learning experiences. Schools can nurture a culture of continuous improvement by normalizing feedback across all areas of the school (e.g., student-to-student, teacher-to-student, student-to-teacher) and by celebrating growth and success.

This is also true for adults as they learn how to design problem-based learning experiences that center on the student instead of the content or the instructor. To achieve this, adults can provide students with opportunities to share feedback on how Studios felt for them and what they might encourage the teacher to do differently the next time.

In competency-based education, relationships must be fostered among adults, families, and the greater community, as well as between teachers and students, because learning happens everywhere, not only within the school walls.

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### **Building 21 has created both Leader Competencies and Teacher Competencies to capture the knowledge and skills adults need to facilitate CBE.**

To support adult professional growth and development as they learn to implement CBE, Building 21 has created one set of competencies for teachers and another set for leaders. Teachers and leaders use their respective competencies and associated continua to self-assess their progress, identify areas for growth and improvement, and set goals. They can also work with peers and coaches to implement new strategies and ideas, get feedback, and reflect on their progress toward individual goals.

[Competencies and Continua for Teachers](#) [Competencies and Continua for Leaders](#)

Successful implementation of the CBE model requires teachers to have significant time allocated for professional development, collaboration, and coaching. For example, in Building 21's lab schools, students are released two hours early once each week for professional development and have collaboration time built into their master schedule.



### ADULT ROLES, HIRING, & LEARNING



### SCHEDULE & USE OF

### **CBE supports additional scheduling flexibility, but the specific design of a school's master schedule should be guided by its unique goals and priorities for teaching and learning.**

Since CBE organizes teaching and learning around progression-based competencies, schools employing this model do not need to uphold

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## TIME

traditional course-based, grade-based, age-based, and time-based structures. As one example, CBE allows schools to mix students across grades, since they can be working on the same competencies but at different levels. How schools choose to use time will vary based on their specific priorities and goals. [Blog: Rethinking the Master Schedule in Competency-Based Schools](#)

A few examples of schedule adaptations include:

- **Interdisciplinary blocks** - Breaking down traditional course structures in favor of interdisciplinary blocks, where teams of teachers across content areas co-design projects that give students multiple opportunities to demonstrate learning across competency areas.
- **Mixed-grade learning & choice** - Creating a schedule that allows for mixed-grade learning for part or all of a day so students can choose or rotate through activities based on both their interest and on the competencies they still need to work on.
- **Teacher professional learning** - Ensuring teachers have collaborative planning time built into their schedules, as well as personal and professional development time.
- **External partnerships** - Partnering with community businesses and organizations to allow half-day, credit-bearing learning experiences each week such as job shadowing, internships, and community service.

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**Schools should involve family and community stakeholders in the planning and implementation of CBE to help meet student needs both within and outside of school.**



### FAMILY & COMMUNITY PARTNERSHIPS

When a school decides to make the shift to CBE, Building 21 recommends that they establish an advisory council that includes a variety of stakeholders, including students' family members and local community members. In addition to providing input about the transition, family and community members establish lasting partnerships with the school that influence what and how students learn. For instance, in CBE, students engage in learning experiences outside of the classroom, sometimes in local businesses and organizations. This level of partnership requires investment from the local community in the students, in their learning, and in the mission of CBE.

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## Competency-based education benefits from the use of flexible classroom arrangements.

Schools should think through the type of furniture and classroom orientation that would best meet the needs of student-centered, problem-based learning. For instance, many problem-based activities will be conducted in groups, so schools may want to invest in tables or orient desks in pods. Ideally, classrooms should be rearranged easily to meet the needs of current investigations. [Learning Space Design Principles](#)

## Tracking dashboards and platforms that CBE schools use need to reflect the unique characteristics of a school's model, such as rating and tracking progress on their specific competencies.

Building 21 has created dashboards that make data transparent, actionable, and user-friendly for students, families, teachers, and leaders using personalized competency-based models. A few examples are below.

**Competency Tracking Platform** - Some schools use the open-source platform called Slate, which helps schools track students progress and growth across all learning experiences both within and outside of school.



SLATE Dashboard Search Courses Tools Manage Slate Thomas

Students' Progress RUBRIC Science STUDENTS SCI-001

	Alysha Abernathy	Antoine Abernathy	Alfonso Albert	Bev Banta	Clarisa Cross	Edmund Ebel	Jenise
<b>Lead Scientific Investigations</b>	57%	79% 7.5	29%	29%	19%	19%	0%
Ask a scientific question	10 9	8 7 8		10	9	11	M
Formulate a hypothesis	10	9 6 8		9	9	11	M
Define and analyze variables	10	9 8 8		7	10	11	M
Plan and organize an investiga...	10	9 8 8		6	11	12	M
Organize & strengthen plan	10	6					
Carry out the experiment	10	7					
Iterate using results	10	6					
<b>Analyze and Interpret Data</b>	100% 9	0%	50% 8	0%	33%	33%	0%
<b>Develop and Use Models</b>	0%	50% 4.7	17%	100% 7.2	0%	0%	0%
<b>Technical Writing</b>	100% 7.8	50% 7	33%	0%	0%	0%	0%
Construct evidence-based ex...	7 8	7	9				
Identify and use appropriate t...	8 8 8	8	8				
Follow writing conventions	8 8 6		M				

Portfolios: Y1 Y2 Y3 Y4

**Personalized Learning Plan** - Building 21 has designed a suite of student dashboards that serve the following primary functions:

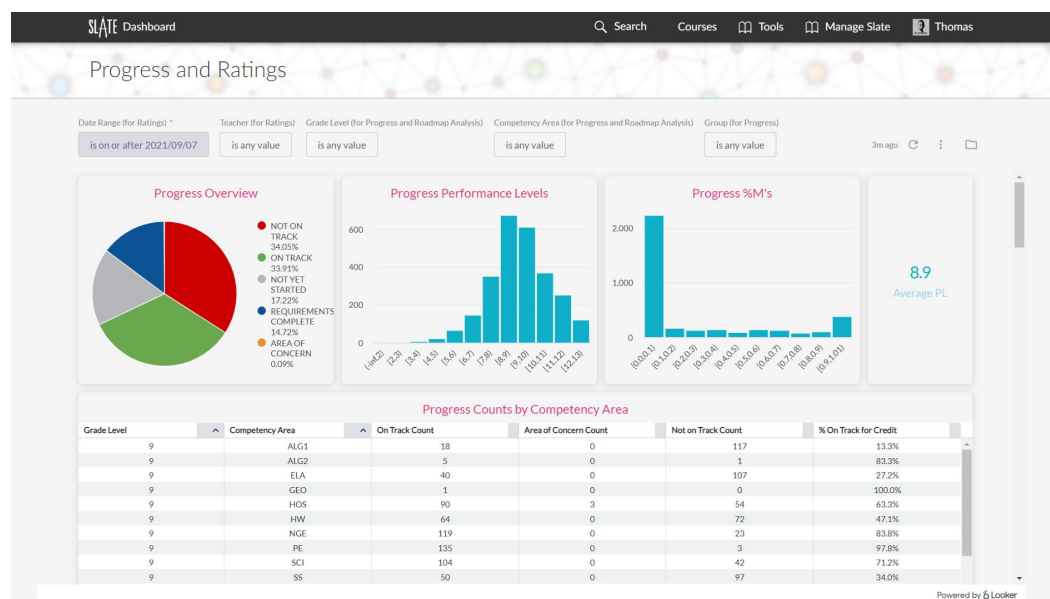
- Dashboards show real-time student progress and growth.
- Students can set goals and reflect on progress.

- Advisors can help students plan their post-secondary pathway.

These dashboards make data transparent and comprehensible to students, families, and school staff.

**Data Warehouse and Analytics** - Building 21 helps schools unlock the power of their data. Schools often struggle with data spread across many systems that have no ability to talk to each other. They also struggle with being able to communicate this data with various stakeholders and to analyze this data for continuous improvement. Using what they learned from their Lab Schools, Building 21 works with schools and districts to create powerful dashboards to track, monitor, analyze, and communicate data relevant to their personalized and competency-based model.

[Example Dashboards](#)



## Ongoing data analysis, self-reflection, and feedback cycles help schools make intentional changes to improve their implementation of CBE.



From the outset, Building 21 recommends that schools determine how to measure success, defining metrics that will help inform future adjustments to the model. Schools then determine when and how often to share progress with stakeholders to solicit their feedback and brainstorm solutions to challenges.

In addition, Building 21 believes that all people, from leaders to teachers, should receive coaching and ongoing feedback as they individually and collectively learn to transition to competency-based education. Leaders and teachers are guided by their own sets of competencies to self-reflect and to

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give and receive feedback.

Teachers can also choose to solicit feedback from students. For instance, students have an opportunity to share input on their experience at the end of each Studio. Teachers then use this feedback to improve their planning and facilitation so their instruction is truly personalized for all students.

## IMPLEMENTATION

### Supports Offered

Building 21 works with schools, districts, and programs on their journey towards a personalized and competency-based teaching and learning model by providing different levels of support for implementation and ongoing operations. Based on their needs, Building 21 offers a competency-based framework, intensive leadership coaching, professional development and change management support, their studio instructional model, and technology and systems uniquely designed for competency-based education.

#### Learning Innovation Network Membership

Free



The Learning Innovation Network is designed to bring together and support a community of educators who work hard to transform teaching and learning through a competency-based approach. The basic membership includes access to a free, open-source library that contains resources to help schools launch or enhance competency-based education.

[Sign Up](#)

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#### Problem of Practice Participants

Cost Associated



Schools interested in receiving personalized support while solving a specific problem related to CBE can participate in Problem of Practice coaching.

The first level of engagement with schools is usually around a specific problem of practice related to transitioning to a personalized and competency-based learning model. The problem or practice is a shorter engagement with specific deliverables that either help schools get started with their transition to CBE or help schools solve

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a problem they have encountered on their CBE journey. Some common problems of practice are related to:

- Development of a Portrait of a Graduate (Profile of a Learner)
- Alignment of a progression-based competencies to the portrait/profile
- Studio design workshops
- Systems to track, monitor, and communicate progress and growth in a CBE model

### [Express Interest](#)

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## **Learning Innovation Site**

Cost Associated



Schools interested in piloting one or more CBE initiatives can become a Learning Innovation Site, where they will receive:

- Year-long personalized coaching support
- Professional development workshops
- Competency tracking tools, including platforms, data dashboards, and analytics

### [Express Interest](#)

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## **Learning Innovation Hub**

Cost Associated



Schools interested in a full transformation to CBE can become Learning Innovation Hubs, receiving multi-year personalized coaching, platform, dashboard, and analytics support from Building 21. Learning Innovation Hubs become leaders in Building 21's network.

### [Express Interest](#)

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## Reach

5,000+

Open  
Resource  
Users

44

Schools

13,000+

Students  
Impacted

17

States, DC,  
and Montreal

## Impact

- Graduates in Building 21's lab schools are two times more likely to attend college after their senior year of high school than students from comparable schools in Pennsylvania.
- Building 21's lab schools have a 90% graduation rate within 5 years.
- Early research shows that Building 21's average competency performance levels predict college persistence about twice as well as SAT scores and Keystone exams do. This has led the Building 21 team to believe that a strong performance (Level 10 or higher on their continua) on all of their competencies, both academic and nonacademic, may be a better predictor of post-secondary success for their schools than other traditional measures.

## Contact

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## | RESOURCES



## [Building 21: Learning What Matters](#)

A video overview of Building 21's innovative competency-based model.



## [Getting Started with Competency-based Education](#)

A blog post describing the shifts necessary to implement competency-based education.



## [Building 21's Portrait of a Graduate](#)

The list of qualities, skills, and mindsets that comprise Building 21's Portrait of a Graduate from their Lab Schools.

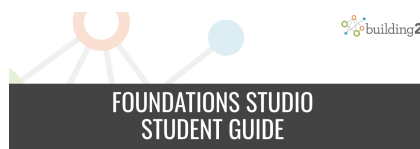
To access this resource and many more, sign up for a free membership [here](#).



## [Competencies and Continua for Students](#)

Building 21's student competencies, including detailed learning progressions for the skills and mindsets that align to their Portrait of a Graduate.

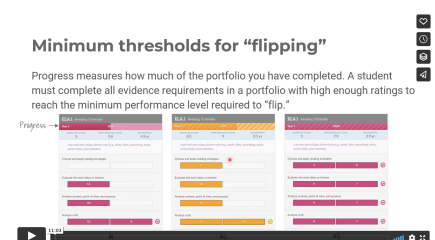
To access this resource and many more, sign up for a free membership [here](#).



## [Sample Studio Guide: Climate Change](#)

Student-facing slides guiding them through a Studio learning experience that explores the question: How dangerous is our changing climate for the planet?

To access this resource and many more, sign up for a free membership [here](#).



## [Portfolio Model](#)

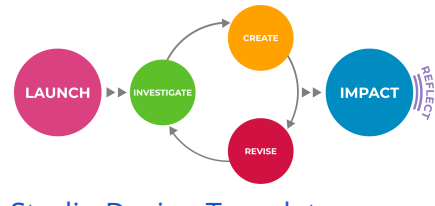
A video describing how Building 21 replaces traditional time-based crediting with competency-based portfolios.

Edmund Ebel Grade Level 12 Advisor: Thomas Gaffey		PROGRESS REPORT		building21			
Competency Portfolio Progress							
PERFORMANCE/GROWTH: You need to earn an overall performance level of 7 for Year 1, 8 for Year 2, 9 for Year 3 and 10 for Year 4 OR you need to show an overall growth of 1 year for each competency area.							
Competency Area	Portfolio	Progress	Level	Growth	Skill Opportunities	On Track	Assessment
English Language Arts	P4	30%	11.7	2.1	11 out of 11	ON TRACK	View your performance on a level of 11.7 which will convert to an honors B. You will earn credit with this performance level and you will complete your entire portfolio. You will need a growth rating for all opportunities as for Year 4 or Year 5 of every "off" you have completed!

## [Example PLP](#)

Studio Title	LAUNCH	INVESTIGATE	CREATE	IMPACT
STEP 1	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)
STEP 2	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)
Career Connections	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)
Real World Experience	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)	What are the problem frame, progress or challenge? (What is the need?)

## [Studio Planner](#)



## [Studio Design Template](#)

An example of a Personalized Learning Plan, which is a dashboard that gives students access to their relevant data and allows them to take action by creating goals or reflecting on their progress.

To access this resource and many more, sign up for a free membership [here](#).

A planning document teachers can use to brainstorm ideas at the start of the Studio design process.

To access this resource and many more, sign up for a free membership [here](#).

Another template that teachers can use to backwards plan their Studios.

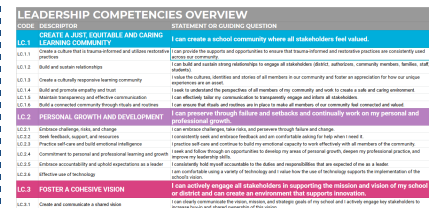
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### [Building 21 Competencies and Continua for Teachers](#)

An example of teacher-facing competencies and aligned continua that can be adapted for use by school partners.

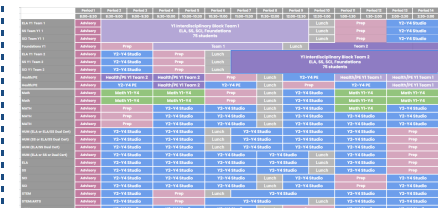
To access this resource and many more, sign up for a free membership [here](#).



### [Building 21 Competencies and Continua for Leaders](#)

An example of leader-facing competencies and aligned continua that can be adapted for use by school partners.

To access this resource and many more, sign up for a free membership [here](#).



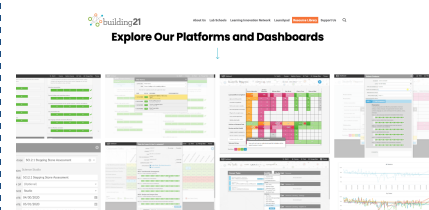
### [Blog: Rethinking the Master Schedule in Competency-Based Schools](#)

A blog post describing ways to shift mindsets and schedules to make room for competency-based education.



### [Learning Space Design Principles](#)

An overview of Building 21's design principles for learning spaces.



### [Explore Example Dashboards](#)

A page of sample dashboards that Building 21 uses to track, monitor, analyze, and communicate data relevant to their personalized and competency-based model.