



# DESIGNING ALIGNED SCHOOL MODELS

A Framework for  
School Improvement



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# INTRODUCTION

## A FOLLOW-UP TO THE SCIENCE OF SUMMIT

In 2017, we published *The Science of Summit*, a blueprint for Summit Public Schools' approach to teaching and learning.

The paper drew upon lessons learned from 15 years of refining our school model at Summit in both California and Washington State. *The Science of Summit* also described the research base behind Summit's personalized approach to teaching and learning and demonstrated how the science of learning and human development informs every choice we make.

In *The Science of Summit*, we introduced a multi-step framework for the development of an **aligned school model**, which represented our best recommendations for how a school community might engage in strategic improvements. After the paper's publication, we called upon teachers, school leaders, researchers, and policymakers to help us strengthen this framework, and we partnered with like-minded organizations like [Transcend](#), [NewSchools Venture Fund](#), and others who support communities engaging in new school designs to further develop our thinking. Since 2017, Summit has added an additional 200+ schools to our community, and we have learned with them as they develop their new school models as well.

Now, in *Designing Aligned School Models*, we share a revised version of the **Aligned School Model Framework** based on the feedback we have received from diverse communities across the country. Each time we work with a school community — whether rural, urban, or suburban — we use this framework to help structure our design work. This tool serves as the organizing backbone for professional development and school improvement efforts, and educators, parents, and other community members have recommended we share it more broadly.

This paper is meant to serve as a companion piece to *The Science of Summit*. In the pages that follow, we share our revised framework: specifically, we **articulate the challenge we are trying to address; introduce the revised, eight-step framework, describing each step of the framework in more detail; and share examples of aligned school models.**



# THE CHALLENGE:

## A GAP BETWEEN WHAT WE WANT FOR KIDS AND HOW SCHOOLS ARE DESIGNED

In our work with hundreds of school communities across the country, we have come to understand one critical reason why most school communities, despite the best of intentions, have a hard time achieving rigorous, graduation-level outcomes for all students: **In many public schools in America, there exists a gap between the stated purpose of the school and the methods employed to achieve that purpose.** Many schools are simply not set up to deliver the outcomes that most parents and teachers want — and that best serve kids — at the end of their K–12 education experience.

**This challenge is one of alignment rather than one of intent.** Educators work tirelessly on behalf of students, and in our travels, we are continuously inspired and humbled by the efforts that teachers, leaders, parents, and students make to ensure that young people succeed. Yet too often, industrious efforts are not aligned around common goals, and many schools do not have the time, resources, or funding to try out new ideas and engage in a process of continuous improvement.

School leaders, school board members, and other policymakers often bring important new ideas to the table. Rarely, however, do school leaders remove existing programs and other initiatives before introducing new ones. The result is layer upon layer of school programs, introduced over multiple generations, without a clear connection linking programs to one another.

Examples of such well-meaning initiatives include:

- A curricular program in reading, math, or another subject
- A magnet program
- A makerspace or STEM lab
- Advanced Placement classes
- A social-emotional learning program
- A technical assistance provider who champions a new framework

Hard-working, creative teachers make a difference in the lives of young people each day. However, without an aligned school model, even school districts and networks with the most successful specialized programs may not serve all students if those programs do not work in support of one another.



## EXAMPLES OF GAPS IN SCHOOL MODELS



A new superintendent arrives with an energetic focus on social-emotional learning. The local high school has recently spent a lot of money, time, and professional development implementing a school-wide adaptive software program for math. This change spurs questions: “Are we changing our priorities? What should be the focus of our limited professional development time?”



A large district is concerned about persistent achievement gaps. It begins tracking students by ability level as early as kindergarten and provides for a host of specialized magnet and Gifted and Talented Education (GTE) programs that give parents with higher levels of education and greater resources a clear advantage. By 4<sup>th</sup> grade, the GTE and magnet programs do not reflect a representative sample of the district’s demographics and serve predominantly higher-income students.



A principal’s main goal is to emphasize writing skills throughout her school’s curriculum. For nearly five years, she has made steady progress. Now, a new school board member wants the school to focus on preparing kids for work in the local healthcare industry instead.



A new project-based learning program is implemented across an entire school district in one year. There is no mechanism for piloting the complicated approach, and training for teachers is insufficient. At the end of the year, teachers are frustrated, feel unsuccessful, and vocally reject the approach. While teachers like project-based learning in theory, they believe it is unrealistic to create a new curriculum from scratch without usable tools and resources. Facing pressure from teachers, the district abandons the program.

**In this paper, we suggest that a *framework* for designing aligned school models will help ideas last beyond the initial excitement that often accompanies a new reform.**

A framework is not prescriptive; it is content-agnostic, providing a roadmap to the *how* of school improvement rather than dictating the *what*. Given the often political and contentious nature of school improvement efforts, a framework helps move the work forward in a logical, rational manner and creates a mechanism for iteration and continuous improvement. Without a clearly defined mechanism for continuous feedback, new school models will stagnate, fade, or become unsustainable.

In the next section, we share the eight-step framework that our colleagues across the country have found useful in their improvement efforts.



# THE ALIGNED SCHOOL MODEL FRAMEWORK

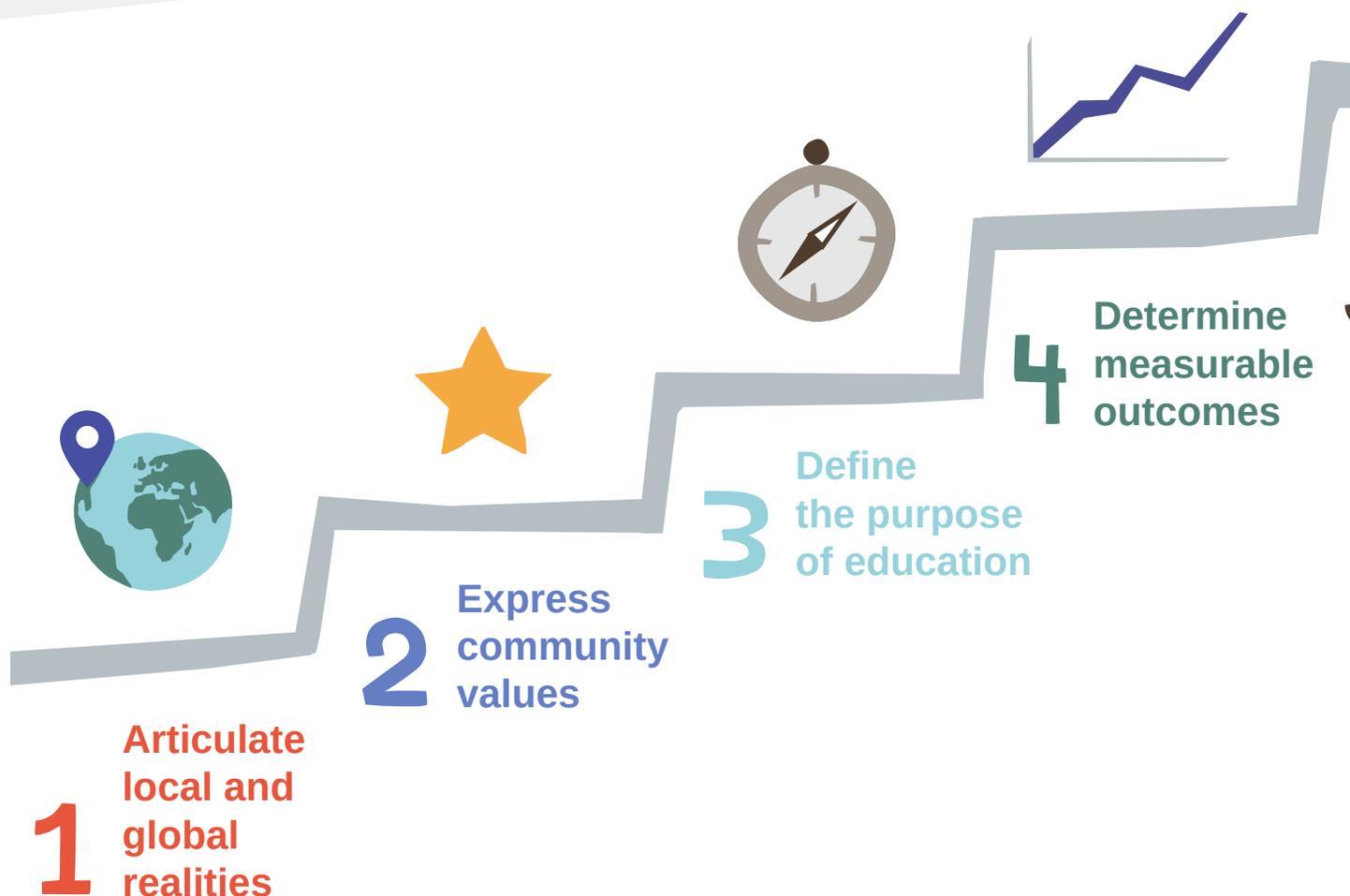
Educational institutions deliver the outcomes they are designed to produce. The **values** of a given society, coupled with **economic and political realities**, dictate a specific **purpose of education**. Educators can translate this purpose into a clear set of **desired student outcomes, evidence-based principles, and educator design choices**. Student assessment and program evaluation data measure individual progress and provide important **feedback** to educators. Such a framework exists on both the micro and macro levels — for an individual school as well as for an entire system of education.

In some communities, teams describe their work as *school redesign*. Other communities prefer *school improvement*. The underlying processes are similar regardless of terminology. In our travels, we have learned that the process of school redesign often involves eight common activities, which can occur separately or simultaneously. **For the sake of simplicity, we describe them sequentially here, although we recognize that most improvement journeys are iterative and cyclical, not linear.**

**The *Aligned School Model Framework* prompts school communities to articulate their existing school model, design an aspirational school model, and identify gaps between the two.**

# THE ALIGNED SCHOOL MODEL FRAMEWORK

Educators use the eight-step *Aligned School Model Framework* to articulate a school model that consistently and reliably predicts success for all students when implemented effectively — one that is aligned with the school’s articulated purpose of education and grounded in evidence.



**5**

Identify evidence-based principles



**6**

Describe teaching and learning environments



**7**

Create the handbook



**8**

Assess alignment and coherence of model



In order to develop an aligned school model, school teams engage in the following actions:

### 1. ARTICULATE LOCAL AND GLOBAL REALITIES

What local and global realities impact your community?

### 2. EXPRESS COMMUNITY VALUES

What does your community value most? What beliefs and ideals do you want to transmit to the next generation? What assumptions does your community hold about people as learners?

### 3. DEFINE THE PURPOSE OF EDUCATION

Given local and global realities, along with your community's specific values, what should be the goal of an education?

### 4. DETERMINE MEASURABLE OUTCOMES

What skills, knowledge, and habits should all students demonstrate in order to reach the goals you have set? Do the outcomes reflect high expectations for all while respecting individual differences?

### 5. IDENTIFY EVIDENCE-BASED PRINCIPLES

What principles, derived from learning science and human development research, align with the outcomes you have determined and the purpose you have defined?

### 6. DESCRIBE TEACHING AND LEARNING ENVIRONMENTS

How do your scientific principles translate into instructional practice? What design choices will or do you make about curriculum, teacher and learner roles, assessment, professional development, and other elements of the school environment?

### 7. CREATE THE HANDBOOK

Provide clearly documented and accessible materials for teachers, parents, students, and other stakeholders to understand their role in the school model. Ensure data is used for continuous improvement.

### 8. ASSESS ALIGNMENT AND COHERENCE OF MODEL

Is the school model aligned from steps one through seven, and does it represent a coherent hypothesis for how to consistently and reliably enable the expected student outcomes for all students?



## Using the eight-step Aligned School Model Framework, school teams can articulate their existing school model, design an aspirational school model, and identify gaps between the two.

In this section, we discuss the steps of the framework, along with example outcomes for each step. Beginning on page 20, four school model case studies provide guidance as to what an aligned school model looks like on paper using the framework.

# 1 ARTICULATE LOCAL AND GLOBAL REALITIES

### What local and global realities impact your community?

School models are inextricably linked to a given society's economic, political, and social realities. The need to train and prepare young people to engage in adult work has been one common practical concern throughout history. Often, educational models are developed to perpetuate the main method of subsistence — whether nomadic, agricultural, industrial, or technological.

Local and global realities can be both positive and negative forces. An example of a positive local

reality might be the opening of a new recreation center with a library, playground, and public pool: This new infrastructure can be a powerful resource in the lives of young people. A negative local reality might be political unrest or dangerous weather patterns such as hurricanes and flooding.

Whether positive or negative, factors outside the education system deeply impact what happens in schools.



### Examples of Local and Global Realities

- Once a thriving industrial center, the town's last factory has just shut down.
- The government has built a large military base in a rural community. The base brings new jobs, retail, and public spaces such as parks and libraries.
- A community is struggling with the opioid epidemic among its young people.
- A majority English-speaking city has recently welcomed an influx of Syrian refugees.
- A new technology park has opened, leading to an influx of young professionals who live far from extended family and relatives.



## 2 EXPRESS COMMUNITY VALUES

**What does your community value most? What beliefs and ideals do you want to transmit to the next generation? What assumptions does your community hold about people as learners?**

Every decision a community makes about a school is rooted in a specific set of values related to young people as learners. For example, for most of human history, girls were excluded from formal education based on prevailing beliefs on appropriate gender roles. Similarly, social class often dictated who would receive a formal education: schooling and tutoring has often been reserved for the male children of the elite.

Cultural norms related to child-rearing and family structure also heavily influence a community's values regarding young people. In some cultures, children are raised by large extended families, while others prize individualism and self-sufficiency.

In some modern American communities, the values of athleticism, sportsmanship, and team spirit are held in the highest esteem; Friday night football games are sacrosanct events that bring a town together and connect multiple generations. A different community might value the skill of financial independence and institute a formal course in financial literacy at the local high school. Values can differ across context, geography, and culture, and they are heavily influenced by local and global realities.



### Examples of Community Values

|              |             |            |                |
|--------------|-------------|------------|----------------|
| Authenticity | Cooperation | Friendship | Leadership     |
| Autonomy     | Equity      | Happiness  | Perseverance   |
| Competency   | Expertise   | Inclusions | Responsibility |
| Contribution | Freedom     | Innovation | Self-Reliance  |



# 3 DEFINE THE PURPOSE OF EDUCATION

Given local and global realities, along with a community's specific values, what should be the goal of an education?

In the 19<sup>th</sup> century, Horace Mann (1796–1859) called for a Common School to teach all children basic reading, writing, and arithmetic in order to prepare them to participate in the nascent American Democracy. Mann introduced the concept of a public school system funded by local taxes and employing professionally-trained teachers. The ultimate purpose of Mann's schools was to ensure the future of the new Republic (Kaestle, 1983).

Beginning in the late 19<sup>th</sup> century, a new social order compelled a group of industrial leaders to propose a new model of school. The transformation of the country from a primarily agrarian, rural society to an industrialized, urban one shifted the purpose of schooling. Schools were now required to prepare for a new type of worker — the factory worker— who needed a different set of skills and training than what was provided in the Common School (Cremin, 1980).

The Industrial period also witnessed sharp increases in the number of immigrants, who brought with them foreign languages, customs, and cultures when they arrived at the nation's city centers. For the school leaders of the day, public schools were an important vehicle of assimilation and acculturation. A critical purpose of education during the Industrial era was to create a common American identity in an increasingly diverse society (Cremin, 1963).

During the Cold War, yet another set of school designers proposed a new purpose for education: to increase American competitiveness in the face of foreign threats. The *Nation at Risk Report*, published in 1983, served as a call to arms for educators to put standards in place that

ensured that American students could compete internationally. The ideas behind the standards-based education model culminated in the passage of the No Child Left Behind Act of 2002 (Hamilton et al., 2008).

## Today's Purpose of Education

What is the purpose of education in today's American public schools? Since the 1960s, American beliefs around educational equity have undergone a slow change. The landmark *Brown v. Board of Education* (1954) case declared segregated schools unconstitutional and began a commitment to equality of opportunity. The passage of laws like Title IX regulations, which prevented gender discrimination in educational institutions (1972), and the Individuals with Disabilities Education Act (IDEA), originally passed in 1975 under a different name, have slowly inched American educational institutions toward equitable treatment for all learners. While new laws protect the rights of students, the real challenge remains changing the hearts and minds of educators and citizens.

The work is far from done, and both overt and covert discrimination still cripple the aspirations of equality. However, today's schools have a different mandate, which represents a radical change in the purpose of education (Tyack and Cuban, 1995). Aspiring to educate all students is a community value with deep consequences for the purpose of education.

Finally, the purpose of education has deepened over the years. Educators today see their job as developing the whole person rather than teaching a discrete set of skills, such as math or reading.



## 4 DETERMINE MEASURABLE OUTCOMES

**What skills, knowledge, and habits should all students demonstrate in order to reach the goals you have set? Do the outcomes reflect high expectations for all while respecting individual differences?**

A clear purpose of education will naturally dictate a set of measurable goals. For example, if the purpose of education is to prepare a young person for a skilled trade, then mastery of the trade is a clear measurable outcome.

In some cases, developing appropriate, valid, and reliable measurement tools is straightforward endeavor; in others, it can be complex, expensive, and time-consuming. Historically, educators have often latched onto the outcomes that are easiest to measure, rather than those they value most. In time- and resource-constrained environments, cheaper, standardized tools are often favored over other measurement systems.

In the Common School of the 19<sup>th</sup> century, basic fluency in writing, reading, and arithmetic were the desired outcomes, often measured by end-of-year recitations. In the Industrial era, the Progressives introduced the Carnegie Unit, a system that awarded academic credit based on how much time students spent in direct contact with a classroom teacher. The standard Carnegie Unit is defined as 120 hours of contact time with an instructor over the course of an academic year.

Today's schools still contend with the legacy of previous reforms. Most American public high schools determine course credits based on the 120-hour Carnegie Unit standard and require students to earn between 18 and 24 credits — with each credit representing one Carnegie Unit — to be eligible for a diploma (Shedd, 2003).

Meeting state and local standards for math, science, and literacy still serves as the preferred measurable outcomes, and schools and districts are often held accountable for ensuring average performance across school populations on standardized assessments. Such averages mask individual performance and achievement gaps among subgroups of students (Rose, 2016).

Student-centered schools spend critical time reflecting on the measurable outcomes they expect of all students, determining whether those outcomes are truly aligned with their community values, the realities around them, and their defined purpose of education.





## Alignment of Historical School Models

While the below historical school models do not align with the realities and needs of contemporary America, they are all examples of aligned school models given the realities, values, purpose of education, and desired outcomes of their respective eras.

|                                   | <b>Common School</b><br>19 <sup>th</sup> century                                                                                                                                                                                     | <b>Industrial School</b><br>Early to mid-<br>20 <sup>th</sup> century                                                                                                                                                                             | <b>Standards-<br/>Based School</b><br>Late 20 <sup>th</sup> century                                                                                                                                                                             |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Local and Global Realities</b> | <ul style="list-style-type: none"> <li>• Agrarian society with citizenship reserved for white landowning men</li> <li>• New Republic must unite 13 colonies with regional differences and a strong culture of regionalism</li> </ul> | <ul style="list-style-type: none"> <li>• Industrialization and urbanization</li> <li>• Rise of factories requires training for new roles</li> <li>• Influx of immigrants speaking new languages and bringing new customs and religions</li> </ul> | <ul style="list-style-type: none"> <li>• Cold War, Race to the Moon, and concerns about America's global competitiveness</li> <li>• New laws expand educational equality (women, minorities, students with disabilities, and others)</li> </ul> |
| <b>Community Values</b>           | <ul style="list-style-type: none"> <li>• Protestant values of self-reliance and individualism</li> <li>• Concerns for moral education of youth</li> <li>• Democratic citizenship for some</li> </ul>                                 | <ul style="list-style-type: none"> <li>• Assimilation</li> <li>• Americanization</li> <li>• Efficiency</li> <li>• Purpose</li> <li>• Mass production</li> <li>• Meritocracy</li> </ul>                                                            | <ul style="list-style-type: none"> <li>• Standardization</li> <li>• Equality of opportunity</li> <li>• Measurement</li> <li>• Scientific discovery</li> <li>• Global competitiveness</li> </ul>                                                 |
| <b>Purpose of Education</b>       | Prepare citizens with basic literacy skills and civic identity to participate in American democracy                                                                                                                                  | Efficiently sort workers for industrial America (workers, managers, elites); Americanize new immigrants; provide for social welfare of the poor                                                                                                   | Increase the absolute number of American students who are proficient in math, science, literacy, and other internationally comparable skills                                                                                                    |
| <b>Measurable Outcomes</b>        | Basic reading, writing, arithmetic (3 Rs) as determined by public recitation at the end of the year                                                                                                                                  | Small doses of every subject as determined by credit accumulation; standardized assessments and intelligence testing (SAT, ACT, etc.)                                                                                                             | Math, science, and reading state standards, national standards, and international standards (exams such as state assessment exams, NAEP, TIMSS, PISA, etc.)                                                                                     |



## 5 IDENTIFY EVIDENCE-BASED PRINCIPLES

**What principles, derived from learning science and human development research, align with the outcomes you have determined and the purpose you have defined?**

The past 25 years have seen a dramatic increase in our understanding of the science of learning. New brain-based imaging techniques allow for a wealth of information on how to best support the process of education, and exciting advances in the understanding of processes — such as executive function, the role of social-emotional learning, and other non-cognitive factors — provide important guidance to school designers.

Previous generations of school model designers had their own intellectual foundations. School designers in the Industrial era were heavily influenced by the prevailing philosophies of the time. Frederick Taylor developed a science of management to simplify jobs, increase efficiency, and maximize productivity through mass production, later known as Taylorism (Taylor, 1919). A new model of secondary school emulated many of the same management principles: The new comprehensive high school could serve hundreds of students by efficiently moving them through short periods that were punctuated by bells (a direct imitation of the bell schedules on the factory floor). The “factory school,” or industrial school, was a model of mass production.

The intellectual underpinnings of the Standards Movement of the 1980s, 1990s, and early 2000s were based on a cultural interest in data and measurement, fueled by the larger interest in scientific discovery (Hamilton et al., 2008).

Beginning in the late 20<sup>th</sup> century, a group of cognitive psychologists and neuroscientists began utilizing new methodologies to help answer questions related to how human beings learn. The burgeoning field of learning science can now, for the first time, provide practitioners with evidence-based principles to inform instructional practice (Brown, 2014).

At Summit, we have utilized the work of the Science of Learning and Development (SoLD) initiative, among other research, to guide our process for identifying evidence-based principles. We recommend educators use the “principles of practice” to guide their own articulations at this point in the framework exercise (Turnaround for Children, 2018).



## 6 DESCRIBE TEACHING AND LEARNING ENVIRONMENTS

**How do your scientific principles translate into instructional practice? What design choices will or do you make about curriculum, teacher and learner roles, assessment, professional development, and other elements of the school environment?**

Even the most advanced and up-to-date learning science can only provide a roadmap for educators. After identifying the relevant science, school leaders, teachers, and parents must then make critical design choices about teaching and learning environments. This stage involves traditional educational programmatic decisions involving elements like pedagogy, curriculum, and assessment. Each design choice must be coherently aligned with a well-developed purpose of education, measurable outcomes, and evidence-based principles.

Historically, bursting with creativity and excitement, educators have often jumped to the design stage after engaging with only a few — or without engaging in any — of the previous steps in the framework. Well-intended programs will not produce their desired outcomes unless they are carefully connected and logically aligned to other components of the framework.



### Examples of Design Choices

- Pedagogical methods (e.g., project-based learning, independent practice, peer-to-peer learning, small group work)
- Role of teachers and other adults (e.g., teacher as lecturer, facilitator, guide)
- Student groupings (e.g., size of class, age groupings, tracking)
- Curriculum (e.g., projects, materials, aligned assignments, pacing, cadence, sequence)
- Approaches to student behavior and discipline (e.g., restorative practices, positive reinforcement, decisive teacher action)
- Student mentoring, counseling, and/or advisory programs
- Health and wellness programs
- Assessment (e.g., formative, summative, open-ended, closed response)
- Professional development (e.g., personalized, group, content-oriented, skill-based)



## 7 create the HANDBOOK

**Provide clearly documented and accessible materials for teachers, parents, students, and other stakeholders to understand their role in the school model. Ensure data is used for continuous improvement.**

Most school buildings house countless memos, binders, professional development materials, and other resources that clearly document and explain elements of the school's model. However, often, these resources are located in disparate places and are not accessible to all.

In the absence of any formal articulation of the school model, the documents that educators create often become the main method of communicating the school model to teachers, students, and families. Since memos and professional development sessions are not *intended* to serve as institutional cornerstones of the school model, they are often not scrutinized for model consistency or intentional alignment. Though this gap is unintentional, recipients of such documents — mostly teachers, parents, and students — do not have a clear understanding of the aligned school model.

A critical step in any school model design is to create a hub for all stakeholders, including teachers, parents, and students, to access the materials that describe the school model. Even a simple platform can help curate all elements of a school's model into a coherent handbook. Ensuring that all stakeholders use the materials regularly and that they are updated on a continuous basis are also important components of making the handbook a living document.

Summit Public Schools, for example, created its handbook using the *Site-Level Playbook*, which was developed in partnership with the California Consortium for the Development and Dissemination of Personalized Learning. Summit, as well as all schools in the Summit Learning Program, have access to the Playbook on the Summit Learning Platform and can use it to develop their own handbooks.



## 8 ASSESS ALIGNMENT AND COHERENCE OF MODEL

**Is the school model aligned from steps one through seven, and does it represent a coherent hypothesis for how to consistently and reliably enable the expected student outcomes for all students?**

A critical and often neglected step in designing a school model is to assess the model using multiple measures of data and feedback from key stakeholders. Models should be sufficiently flexible such that it is possible to go back and adjust the model to ensure greater alignment and coherence.

Many well-meaning educators are perplexed when they do not see the outcomes they desire, and too often, school programs and designs do not align with the educational purpose and values set forth by the community. In our work with school partners, we ask school leaders and superintendents to reflect on the alignment and coherence of their models. If a school design does not match with a desired purpose, it will never deliver its intended results.

A common example of the importance of alignment is a school's daily schedule. The schedule is a clear articulation of what a school community values. However, in our work with hundreds of schools, we have seen that often, a school's schedule does not reflect the values that the community and school leadership say they care deeply about. Put simply: educators often do not allocate time to the things they say they value most.

Misalignment also often occurs between the stated purpose of education and school design choices. Most administrators at American public

schools state that their purpose is to educate all students, regardless of race, class, sex, language, or disability status. However, in many districts, the most experienced and skilled teachers do not work in the schools and classrooms serving students with the greatest needs. In other schools, students are tracked from an early age, and only the highest-achieving students are introduced to rich, creative, and inspired learning experiences. The students who are “behind grade level” often spend their days on more rote instruction in reading and math skills, which — unintentionally — might further hinder academic performance.

Some schools also experience an incongruity between their design and their communities' values. For example, if a given school community desires that its young people learn how to be self-directed, the school must intentionally develop programs to teach students how to manage their own deadlines, take responsibility for their belongings, and seek help when they need it. A school could institute a particular curriculum related to executive functioning to help students learn this competency, but simply stating that a community values something will not ultimately lead to its implementation.



## USING THE FRAMEWORK

The good news: many school communities already have strong elements of the framework in place, and engaging in honest conversations about where gaps might exist can facilitate adjustments to their aligned school model.

It is important to note that the framework we have introduced is not evaluative or normative in nature. Too often, stakeholders disagree about "school models" and jump to the evaluation stage when they are asserting an opinion on *components* of a school model rather than discussing an *aligned* school model. **Our collective conversation must shift from one where models are discussed and judged based on their *content* to a conversation where models are evaluated based on their *alignment*.**



# EXAMPLES OF ALIGNED SCHOOL MODELS

The ecosystem of education innovation is young, and educational innovators are just beginning to develop and pilot new school models. **Our organization is deeply invested in supporting multiple aligned school models.** In this section, we highlight a few examples of aligned school models.

We chose these exemplars based on the following criteria:

- The school model takes into account the current local and global realities of today's society and is, at the same time, oriented toward preparing students for a future that is both uncertain and unknown.
- The school model contains a carefully aligned design according to the eight-step framework referenced in this paper.
- The entire model reflects a careful reading and clear understanding of current research on learning and human development.
- The school model can be implemented at scale across diverse contexts and communities.
- The school model is flexible; it can be iterated upon and evolves over time. There is an internal mechanism for continuous improvement.

The models we highlight in this section are very much works in progress. However, taking our cue from colleagues in the education innovation space, we see many of these models as first prototypes and welcome input, feedback, and ideas for improvement.



# SUMMIT PUBLIC SCHOOLS

Case Study

## ARTICULATE LOCAL AND GLOBAL REALITIES

- The San Francisco Bay Area is home to many of the world's most successful and growing companies. It is an economic engine and continues to grow aggressively. Highly-skilled workers are needed.
- Traffic and congestion are a significant part of life in the Bay Area. They further compound living challenges, choice, and opportunity.
- The Bay Area is home to many of the industries that drive our changing economy and world (e.g., self-driving cars).
- The cost of housing and living in the Bay Area make it nearly impossible for low- and middle-income families to live there.
- The Bay Area is marked by extreme wealth and poverty, often in close proximity.
- Technology is a huge part of life in the Bay Area — inciting widespread discussion about whether its dominance causes people to miss or lose human connection.
- Politically, the Bay Area is very progressive, with a Democratic supermajority.
- The weather in the Bay Area is temperate, fostering a culture that prizes health, activity, the outdoors, and a real focus on the environment.
- Kids report high degrees of stress and pressure, and high suicide rates affect youth and families in the Bay Area.

## EXPRESS COMMUNITY VALUES

### **Summit seeks to transmit the following values to the next generation:**

- Compassion
- Curiosity
- Courage
- Diversity
- Integrity
- Respect
- Responsibility

## DEFINE THE PURPOSE OF EDUCATION

Our vision is that every student is equipped to lead a fulfilled life — one filled with purpose, financial independence, community, strong relationships, and health.



## DETERMINE MEASURABLE OUTCOMES

Upon graduation, our students will demonstrate mastery of:

- **Cognitive Skills:** Essential and transferable lifelong skills. Students achieve a level 6 or higher on every skill on the Cognitive Skills Rubric.
- **Content Knowledge:** Understanding and application of complex and challenging facts and concepts. Students will master all power focus areas.
- **Habits of Success:** Mindsets and behaviors that support academic achievement and well-being. Students will know and understand their individual strengths and areas for growth.

## IDENTIFY EVIDENCE-BASED PRINCIPLES

Our measurable outcomes are carefully mapped to 28 evidence-based principles. Download *The Science of Summit* at [summitlearning.org/research](https://summitlearning.org/research) for full details.

## DESCRIBE TEACHING AND LEARNING ENVIRONMENTS

From our 28 research-based principles stem 61 concrete design choices that describe our teaching and learning environments. Some key considerations for our design choices include:

- **Role of the Teacher:** Teachers develop close, personal relationships with students and their families, and all teachers mentor groups of students. Both students and parents like engaging with teachers and feel respected in their interactions.
- **Pedagogical Methods:** Pedagogical methods focus on vertically- and horizontally-aligned courses that are mapped backward from essential questions and focus heavily on project-based approaches.
- **Student Self-Direction:** Students have time at school to learn how to learn, learn in different ways, access multiple resources, and use all the tools they need to be successful.
- **Assessment:** Students are assessed on mastery. They are expected to master all appropriate skills, knowledge, and habits in order to earn a diploma.
- **Student Performance Reporting:** Parents and students have access to constant, accurate data on student performance.

For a full articulation of all 61 design choices, download *The Science of Summit* at [summitlearning.org/research](https://summitlearning.org/research).



## CREATE THE HANDBOOK

Summit Public Schools used the *Site-Level Playbook*, developed in partnership with the California Consortium for the Development and Dissemination of Personalized Learning, to develop its own handbook. The *Playbook* articulates look-fors specifically associated with the following site-level conditions:

- Shared vision and managing change
- Conducive culture
- Disciplined results monitoring and continuous improvement
- Flexible, student-centered curriculum and assessments
- Aligned mechanisms to recruit, onboard, and retain capable faculty
- Systemic tuning of instructional practice
- Purposeful use of time
- Empowered families and caregivers
- Varied opportunities beyond school walls
- Enabling technology
- Supportive facilities and operations
- Vision-aligned policies impacting the school site

## ASSESS ALIGNMENT AND COHERENCE OF MODEL

Over the course of our history, Summit has engaged in multiple processes to gather data on the alignment and coherence of the model. We have consulted multiple sources of data in assessing our model's alignment, including longitudinal data from Summit alumni who are in college and beyond.

## RECOMMENDED RESOURCES

Summit Public Schools \* [summitps.org](https://summitps.org)

Summit Learning \* [summitlearning.org](https://summitlearning.org)





# THE MONTESSORI METHOD

Case Study

## ARTICULATE LOCAL AND GLOBAL REALITIES

**Dr. Maria Montessori developed her educational method during the first half of the 20<sup>th</sup> century.** During her lifetime, the following local and global realities impacted her work:

- Europe faced widespread industrialization, changing migration patterns, and urbanization.
- The dominant model of school — the industrial school — was influenced by scientific management principles and prized efficiency, mass production, and a strict hierarchy among administrators, teachers, and students.
- Prominent educational researchers, such as Edward Thorndike, supported the idea that children were “empty vessels” awaiting adult instruction. Behaviorism was the commonly accepted theory of human motivation.
- World Wars I and II impacted Dr. Montessori’s view that a key goal of education is to prepare children to coexist peacefully in harmony with one another and with their natural environments.

## EXPRESS COMMUNITY VALUES

- Respect for childhood
- Independence
- Peace
- Choice
- Natural human development

## DEFINE THE PURPOSE OF EDUCATION

The Montessori Method emerges from the belief that **children are naturally good, peaceful, and curious** and that in the context of a supportive environment, **all children engage instinctively in the work of self-construction.** With appropriate freedoms and the right support, children follow their interests to create rich learning experiences, form peaceful communities, and support and learn from one another.



## DETERMINE MEASURABLE OUTCOMES

- Executive functioning skills
- Habits of mind
- Concentration
- Habits of initiative-taking and persisting through difficult tasks
- Mathematical reasoning and problem-solving
- Fluency in reading and writing
- Knowledge of culture, science, geography, history, language, and the arts
- Self-confidence
- Belonging
- A positive attitude toward learning and school

## IDENTIFY EVIDENCE-BASED PRINCIPLES

- Movement and cognition are closely entwined, and movement can enhance thinking and learning.
- Learning and well-being are improved when people have a sense of control over their lives.
- The development of executive functions is a key component of successful learning.
- People learn better when they are interested in what they are learning.
- Tying extrinsic rewards to an activity — such as offering monetary incentives for reading time or high grades — negatively impacts motivation to engage in that activity when that reward is withdrawn.
- Collaborative arrangements can be conducive to learning.
- Learning situated in meaningful contexts is often deeper and richer than learning in abstract contexts.
- Particular forms of adult interaction are associated with more optimal child outcomes.
- Order in the environment is beneficial to children.

## DESCRIBE TEACHING AND LEARNING ENVIRONMENTS

- Children choose their own work
- Uninterrupted work periods
- Multi-age groupings
- Specialized Montessori materials
- Emphasis on practical life
- Grace and courtesy
- Teacher as guide
- Specialized Montessori training for teachers
- “Going out” (expeditions, walks, and explorations outside the school) starting in elementary grades



## CREATE THE HANDBOOK

Montessori teachers must complete a specialized Montessori training program. The training departs from a traditional teacher preparation course of study. In addition, Montessori materials serve as a partial playbook.

## ASSESS ALIGNMENT AND COHERENCE OF MODEL

Organizations that represent Montessori schools are undertaking multiple efforts to conduct outcome studies of Montessori students. Overall, such studies point to success of both Montessori's own internal outcomes and more traditional measures of success, such as literacy and math scores.

## RECOMMENDED RESOURCES

*Montessori: The Science Behind the Genius*  
Angeline Lillard, 2016

Wildflower Schools \* [wildflowerschools.org](http://wildflowerschools.org)

National Center for Montessori in the  
Public Sector \* [public-montessori.org](http://public-montessori.org)

American Montessori International (AMI) \* [amiusa.org](http://amiusa.org)

American Montessori Society (AMS) \* [amshq.org](http://amshq.org)





# EL EDUCATION

Case Study

## ARTICULATE LOCAL AND GLOBAL REALITIES

- The knowledge economy requires creativity and entrepreneurial thinking.
- 21<sup>st</sup> century workforce needs are changing, and future jobs are unknown.
- Society is increasingly complex and diverse, requiring excellent interpersonal and collaboration skills.

## EXPRESS COMMUNITY VALUES

- Collaborative challenges
- Critical thinking
- Perseverance
- Curiosity
- Creativity
- Wonder
- The unknown
- Art and aesthetics

## DEFINE THE PURPOSE OF EDUCATION

When students and teachers are engaged in work that is **challenging, adventurous, and meaningful**, learning and achievement flourish. The mission of EL Education is to create classrooms where teachers can fulfill their highest aspirations and where students can achieve more than they think possible, becoming active contributors to building a better world.

## DETERMINE MEASURABLE OUTCOMES

- **Demonstrate proficiency and deeper understanding:** Show mastery in a body of knowledge and skills within each discipline.
- **Apply their learning:** Transfer knowledge and skills to novel, meaningful tasks.
- **Think critically:** Analyze, evaluate, and synthesize complex ideas and consider multiple perspectives.
- **Communicate clearly:** Write, speak, and present ideas effectively in a variety of media within and across disciplines.
- **Work to become effective learners:** Develop the mindsets and skills for success in college, career, and life.
- **Work to become ethical people:** Treat others well and stand up for what is right.
- **Contribute to a better world:** Put their learning to use to improve communities.



## DETERMINE MEASURABLE OUTCOMES (CONTINUED)

- **Create complex work:** Demonstrate higher-order thinking, multiple perspectives, and transfer of understanding.
- **Demonstrate craftsmanship:** Create work that is accurate and beautiful in conception and execution.
- **Create authentic work:** Demonstrate original thinking and voice; connect to real-world issues and formats; and, when possible, create work that is meaningful to the community beyond the school.

## IDENTIFY EVIDENCE-BASED PRINCIPLES

- Literacy Research (Chall, 1996)
- Social-Emotional Learning (Farrington, 2012)
- The Partnership for 21<sup>st</sup> Century Skills, Research Series (2017)

## DESCRIBE TEACHING AND LEARNING ENVIRONMENTS

- The primacy of self-discovery
- The having of wonderful ideas
- The responsibility for learning
- Empathy and caring
- Success and failure
- Collaboration and competition
- Diversity and inclusion
- The natural world
- Solitude and reflection
- Service and compassion

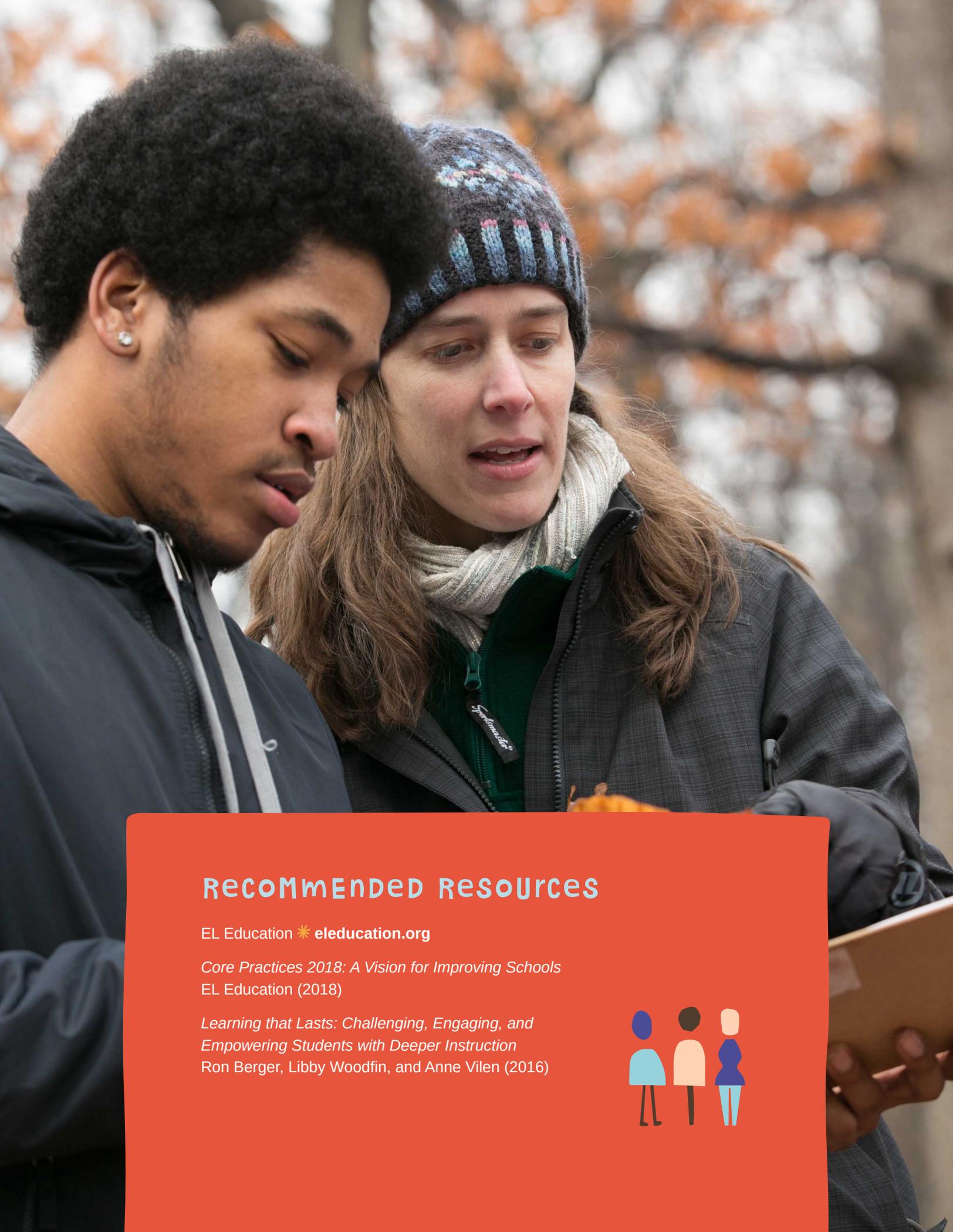
## CREATE THE HANDBOOK

EL Education has extensive online training and resource materials. In addition, participating in the EL Education Network involves in-person trainings and convenings, ongoing coaching, and in-person mentoring and support.

## ASSESS ALIGNMENT AND COHERENCE OF MODEL

EL Education has spent more than 20 years iterating on its school model and using data from multiple sources in order to improve the program. Teachers and leaders from EL schools participate in a process of continuous feedback to EL curriculum materials.





## RECOMMENDED RESOURCES

EL Education \* [eleducation.org](http://eleducation.org)

*Core Practices 2018: A Vision for Improving Schools*  
EL Education (2018)

*Learning that Lasts: Challenging, Engaging, and  
Empowering Students with Deeper Instruction*  
Ron Berger, Libby Woodfin, and Anne Vilen (2016)





# INTERNATIONAL BACCALAUREATE

Case Study

## ARTICULATE LOCAL AND GLOBAL REALITIES

In 1968, inspired by a spirit of hope in a time of instability and conflict after WWII, the IB pioneered a movement for international education. Founders saw a need for an international approach to education that would bring young people together with the skills, values and knowledge necessary to build a more peaceful future. IB's vision is to foster open and enlightened minds for all primary and secondary students, aged 3-19. In a world where we face an unprecedented pace of change, IB students use the skills they've developed to help make the world a better place. The IB founders' vision — of an education that can unite people, nations and cultures for a sustainable future — has never been more urgent.

## EXPRESS COMMUNITY VALUES

- Citizens of the world
- Inquiry
- Compassion
- Global interdependence
- Multilingualism
- Respect for difference and diversity

## DEFINE THE PURPOSE OF EDUCATION

The IB programs aim to develop inquiring, knowledgeable, and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. To this end, the organization works with schools, governments, and international organizations to develop challenging programs of international education and rigorous assessment. These programs encourage students across the world to become active, compassionate, and lifelong learners who understand and consider diverse perspectives.

## DETERMINE MEASURABLE OUTCOMES

Each of the programs — Diploma Program, Career Program, Middle Years Program, and Primary Years Program — require culminating exams and capstone projects. Projects may include an exhibition, a personal project, an extended essay, and/or a reflective project.

The aim of all IB programs is to develop internationally-minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world. **IB learners strive to be:**

- **Inquirers:** Learners nurture their curiosity, developing skills for inquiry and research. They know how to learn independently and with others. They learn with enthusiasm and sustain our love of learning throughout life.



## DETERMINE MEASURABLE OUTCOMES (CONTINUED)

- **Knowledgeable:** Learners develop and use conceptual understanding, exploring knowledge across a range of disciplines. They engage with issues and ideas that have local and global significance.
- **Thinkers:** Learners use critical and creative thinking skills to analyze and take responsible action on complex problems. They exercise initiative in making reasoned, ethical decisions.
- **Communicators:** Learners express themselves confidently and creatively in more than one language and in many ways. They collaborate effectively, listening carefully to the perspectives of other individuals and groups.
- **Principled:** Learners act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. They take responsibility for their actions and for the consequences of those actions.
- **Open-minded:** Learners critically appreciate their own cultures and personal histories, as well as the values and traditions of others. They seek and evaluate a range of points of view, and they are willing to grow from the experience.
- **Caring:** Learners show empathy, compassion, and respect. They have a commitment to service, and they act to make a positive difference in the lives of others and in the world around them.
- **Risk-takers:** Learners approach uncertainty with forethought and determination; they work independently and cooperatively to explore new ideas and innovative strategies. They are resourceful and resilient in the face of challenges and change.
- **Balanced:** Learners understand the importance of balancing different aspects of their lives — intellectual, physical, and emotional — to achieve well-being for themselves and others. They recognize their interdependence with other people and with the world in which they live.
- **Reflective:** Learners thoughtfully consider the world and their own ideas and experience. They work to understand their strengths and weaknesses in order to support their learning and personal development.

This IB learner profile represents 10 attributes valued by IB World Schools. IB believes these attributes, and others like them, can help individuals and groups become responsible members of local, national, and global communities.



## IDENTIFY EVIDENCE-BASED PRINCIPLES

- Constructivist thinking
- Conceptual understanding
- Understanding by design

## DESCRIBE TEACHING AND LEARNING ENVIRONMENTS

### IB Learner Cycle

- Inquiry
- Action
- Reflection

### Global Context for Education

- Multilingualism and cultural understanding
- Global engagement

### Significant Content

- Broad and balanced
- Conceptual
- Connected

## CREATE THE HANDBOOK

IB's three Global Centers are located in Singapore, The Hague, and Washington, D.C. The Global Centers maintain the standards, certifications, assessments, and curriculum materials to certify a school as an IB World School program. Official IB resources (subject guides, support materials, etc.) are provided for free to all authorized IB World Schools through the Program Resource Center. Other materials, such as example texts, can be purchased through approved vendors.

## ASSESS ALIGNMENT AND COHERENCE OF MODEL

The Global Centers ensure organizational quality/alignment of products, professional development, curriculum, assessment, etc. Staff at the Global Centers also work with applicants to ensure that schools in the program meet certain common criteria of excellence.

## Recommended Resources

International Baccalaureate \* [ibo.org](https://ibo.org)

*Educative Assessment: Designing Assessments to Inform and Improve Student Performance*  
Grant Wiggins (1998)



# LOOKING FORWARD

The Aligned School Model Framework came out of our own continuous improvement work at Summit Public Schools and has become an organizing backbone for professional development and school improvement efforts we've offered to the greater education community.

Every day, we meet superintendents, school board members, teachers, parents, and students striving to strengthen their schools. We engage them in reimagining their schools through an aligned school model lens. The revised, eight-step *Aligned School Model Framework* re-introduced in this paper was inspired by their hard work and feedback.

Now, we hope to use this framework to help other school communities ensure all learners have the opportunity to achieve meaningful and deliberate graduation-level outcomes. This vision begins with a concerted effort among each school community to articulate their existing school model, design an aspirational school model, and identify gaps between the two.

Having done this work ourselves and with other schools and districts nationwide, we encourage your school community to articulate and compare its existing and aspirational school models. **We also welcome you to take part in a formal *Designing Aligned School Models* professional development session**, where Summit educators facilitate your team through each step of the framework's articulation process.

We invite school and district leaders to connect with us to learn more.



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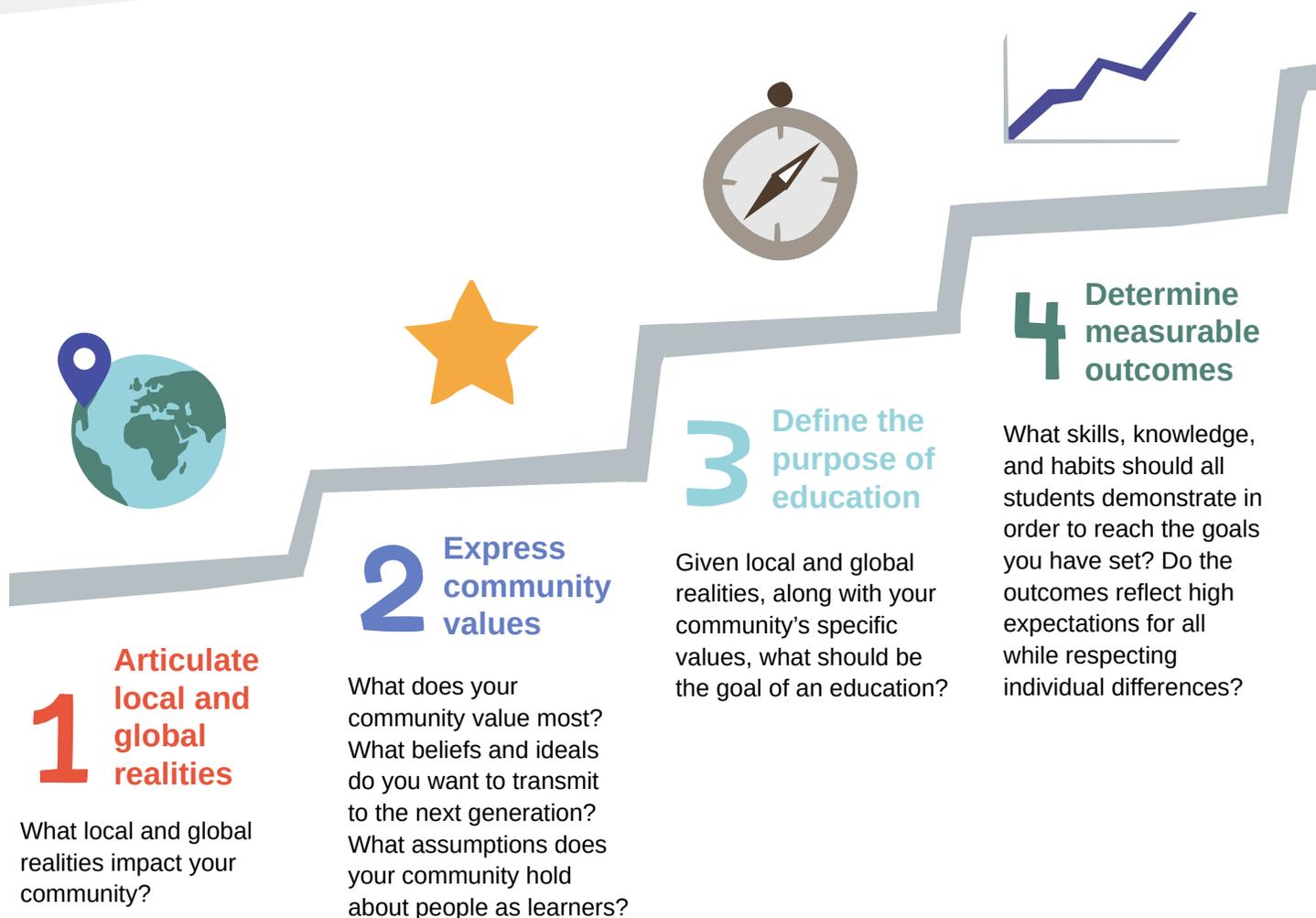


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# THE ALIGNED SCHOOL MODEL FRAMEWORK

Educators use the eight-step *Aligned School Model Framework* to articulate a school model that consistently and reliably predicts success for all students when implemented effectively — one that is aligned with the school’s articulated purpose of education and grounded in evidence.





## 5 Identify evidence-based principles

What principles, derived from learning science and human development research, align with the outcomes you have determined and the purpose you have defined?



## 6 Describe teaching and learning environments

How do your scientific principles translate into instructional practice? What design choices will you make about curriculum, teacher and learner roles, assessment, professional development, and other elements of the school environment?



## 7 Create the handbook

Provide clearly documented and accessible materials for teachers, parents, students, and other stakeholders to understand their roles in the school model. Ensure data is used for continuous improvement.



## 8 Assess alignment and coherence of model

Is the school model aligned from steps one through seven, and does it represent a coherent hypothesis for how to consistently and reliably enable the expected student outcomes for all students?