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Riverdale's R&D Studio

**At Riverdale, we believe that all community members should learn and thrive in order to change our world for the good. Towards this end, we are working to align our programs, practices, and systems with our core educational outcomes focused on curiosity, purpose, and belonging.**

**These booklets are an invitation to delve into some of the latest research on how curiosity, purpose, and belonging can support learning and thriving for all.**

**While there are different perspectives on thriving, it has been described as a dynamic, complex, and context-specific process of development that enables individuals and communities to be their best. Thriving is multi-dimensional, and often characterized by academic, physical, psychological, civic, social — and even spiritual — well-being and engagement. Thriving can entail a range of emotions and states, such as struggle, power, and joy. Increasingly, thriving is understood as interdisciplinary in nature and in relation to equitable and sustainable growth.**

**Our hope is that these booklets will support future dialogue, including collaborative research to generate shared definitions and test hypotheses about thriving at Riverdale and beyond.**

These booklets were developed by PLUSSED, Riverdale's R&D studio, which exists to support, enhance and amplify the process of teaching and learning. PLUSSED would like to thank the Riverdale Country School community for inspiring and shaping this research effort; the Riverdale administrators and faculty—especially Kelley Nicholson-Flynn, Tom Taylor, James Duval, Milton Sipp, Jenna King, Shelby Stokes, Kevin Bailey, Phyllis Dugan, Julie Choi, Mike Sclafani, and Teresa DiMauro—for their incisive feedback and willingness to collaborate; the PLUSSED team—Jazmin Rogers, Kevin Mattingly, Lindsey Nelson, Todd Sutler, Alex McCarthy, Elon Collins, and Anna Hall—for continuous content, revision, and production efforts; the PLUSSED interns—Garrett Chafin, Emerson Cassidy, Matthew Liu, Nathaniel Liu, Sophie Brandman, and Tati Divilek—for heroic research support; Angela Duckworth, Anne Johnstone, David Levin, Marc Sternberg, and Veronica Boix-Mansilla for candid and instructive guidance; Dominic Randolph for his deep and abiding commitment to building a world in which every one of us can thrive; Ellen Sitkin for seeing beauty, order, and possibility in oceans of text; and finally, Karena Cronin, lead researcher and writer of the Thrive Project, for thoughtfully navigating expansive, emergent, and often contradictory literature, in order to surface insights we can actually use.

DRAFT

# BE LONG ING



How can we harness the power of belonging, curiosity, and purpose to catalyze equity, learning, and thriving?

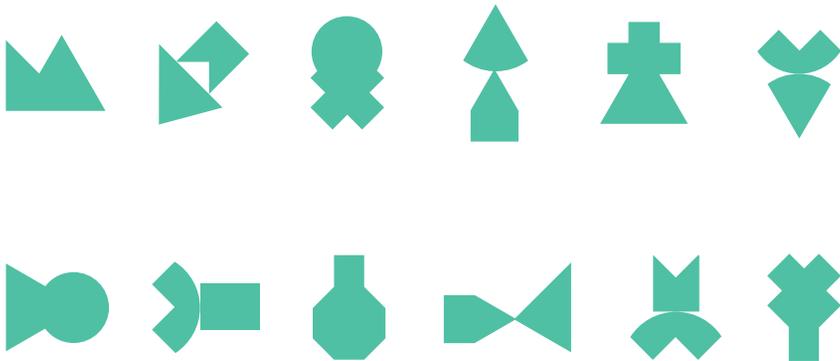
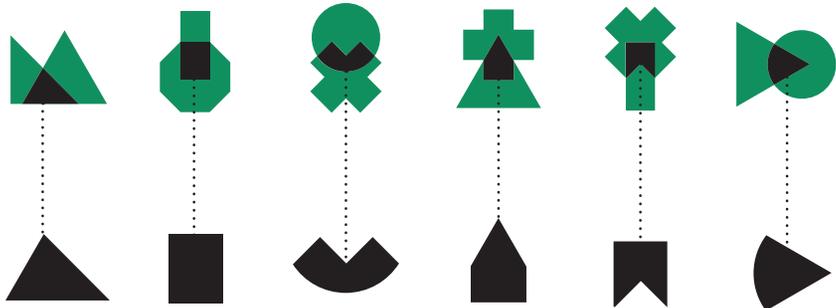
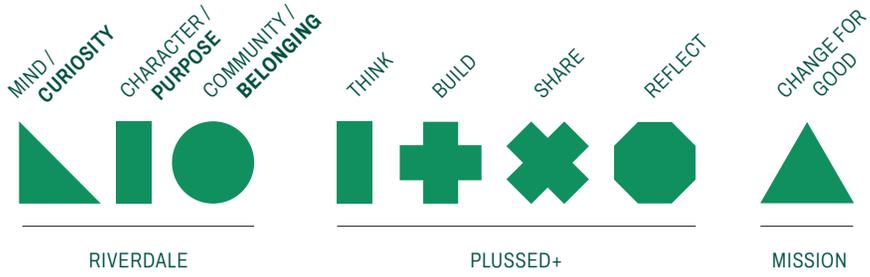
Riverdale has a long history of reflective practice, guided by research-based methods from a range of fields and disciplines. This year, PLUSSED and Riverdale initiated a multi-year, collaborative R&D project focused on student learning and thriving. We began this work with a literature review — delving into the growing body of research related to belonging, purpose, and curiosity.

Our research to date has yielded important insights and a foundational working hypothesis: We believe that layered, ecosystem-wide, articulated interventions — focused on multiple aspects of thriving — will be more impactful on learning + growth than serial, singularly-focused interventions.

As we embark on more study and exploration in these areas, we wanted to share the preliminary findings from our literature review. Here is our summary report on Belonging.

# RIVERDALE'S ALCHEMY OF THRIVING

Riverdale thrives when insight and experience inform and shape each other—  
offering infinite possibilities for learning, growth, and evolution.



# I THRIVE WHEN...

USE THIS SPACE TO SKETCH WHAT YOUR PATH TO THRIVING INCLUDES BEFORE YOU READ, AND RETURN TO ADD / ADAPT / REFINE IT WHEN YOU FINISH



## Belonging is a sense of being a fully visible and valued member of a community.

**Belonging is context-specific, dynamic, and shaped by relationships among individuals, institutions, as well as broader cultures and histories. It is understood differently by individuals across a range of human experiences. Everyone has a role to play in co-creating a sense of belonging for themselves and others.**

Belonging is strongly correlated to happiness, well-being, physical health, motivation, and academic achievement, as well as our ability to engage with others to make lasting and transformative change. In the educational context, belonging is particularly important because it contributes to both “immediate and long-term positive consequences for [students’] academic performance and well-being.” Intentional efforts to cultivate a sense of belonging have been shown to advance equity in education.

## DEFINING BELONGING

Definitions of belonging vary depending on context and disciplinary lens. However, the majority of definitions focus on the need to feel part of something beyond self, while also affirming the self. A research synthesis by the Student Experience Research Networks defines belonging as “an individual’s experience of feeling that they are, or are likely to be accepted, and respected as a valued contributor in a specific environment” (Healey and Stroman, 2021). This definition emphasizes personal agency and authentic participation. Dominant definitions of belonging tend to erroneously overemphasize the role of individuals in shaping belonging. While individuals derive their sense of belonging from cues in the environment and the inferences made from these, broader socio-political, cultural, and historical factors also shape a person’s sense of belonging (Walton and Brady, 2017). The Othering and Belonging Institute puts forth a conceptualization of belonging that encompasses individual and systemic aspects of belonging (Powell, 2020). In addition, their approach emphasizes that people require a sense of belonging with nature, not just with other people. Prevailing definitions also tend to deemphasize the need for individuals to experience what is termed “self-belonging”, which refers to awareness about one’s own intrinsic and unique value (Sharehold, 2020; Young, personal communication, February, 6, 2022). Ultimately elements of self, group, and environmental belonging contribute to one’s overall sense of belonging.

## WHY BELONGING MATTERS

All humans share a need to belong, both to each other and to nature. This need profoundly shapes our lived experience and is fundamental to our evolution and survival as a species. Countless empirical studies have found that a person’s sense of belonging is strongly correlated to well-being, health, and academic achievement, as well as the ability to engage with others to make positive change (Healey and

Stroman, 2021; McKim, 2022; Powell, 2019b, Suttie, 2021). According to the World Happiness Report, published since 2012, a happy country is one where people feel a sense of belonging, and where there are high levels of trust and equality (World Happiness Report, 2020). At the individual level, belonging yields psychological, physical, and socio-emotional benefits. Having a sense of belonging and connection keeps people healthy, optimistic, and empathetic, and can even lengthen one’s life. Social isolation and loneliness are the two strongest predictors of poor health and well-being. Studies also show that people fare better psychologically and physically when they are connected to nature, in addition to other people (Williams, 2017; Nigro, n.d.). At work, belonging is one of the top three determinants of employee well-being and contributes to employee retention and innovation. Belonging is also a pathway to civic participation, enabling individuals to explore their identities and engage with purpose in their communities.

## THE DANGERS OF OTHERING

Othering is a process that undermines belonging at the societal and individual levels, by “engendering marginality and inequality across... human difference” (Bioneers, 2021; Powell, 2019a). Othering manifests as oppression, such as patriarchy and racism, and in its most extreme form can result in violence and other human rights violations. In the education space, othering provides a framework for understanding the history of exclusion of non-dominant groups from education in the United States. Othering also helps to explain why today, students of color, first-generation students, and students from families experiencing poverty learn in environments that are “materially inferior to dominant groups” (Healey and Stroman, 2021) and continue to experience oppression at school vis-a-vis relationships, the curriculum, school policy, as well as school culture. Members of non-dominant groups are most likely to experience what is called

belonging uncertainty, which can arise from social identity threat, stereotype threat, or stereotype management, as well as institutional betrayal (Walton and Brady, 2017).

### **BELONGING AND LEARNING**

Just as in life, belonging is also fundamental to learning. Studies find that having a sense of belonging has “immediate and long-term positive consequences for academic performance and well-being” (Healey and Stroman, 2021, p. 5). However, not all individuals experience a positive sense of belonging. This can have devastating effects on a person’s academic performance as well as their psychosocial and physical health, which is why a focus on creating belonging is necessary. The growing body of evidence powerfully demonstrates how belonging can reduce disparities in student outcomes and in well-being, particularly in relation to students of color, women, and underserved communities. Numerous studies find that, among marginalized students, belonging interventions increase academic engagement and grades; improve academic persistence, career outcomes, and health; expand access to academic disciplines that have been historically exclusionary to that group; and decrease disciplinary measures. In one seminal study, high-achieving, low-income students who were believed to be on track to fail and who participated in a belonging intervention involving a new and smaller-sized course had exactly the same grades as students in the larger course and had graduate rates above the university’s average three years later (Healey and Stroman, 2021, Murphy and Sabrin, 2015; Tough, 2014; Walton and Brady, 2017).

### **CO-CREATING BELONGING**

Program-, practice-, and system-level approaches to building belonging that are recommended in the literature focus overwhelmingly

on students and are geared towards the classroom. Three high-level recommendations emerged for cultivating belonging: (1) respect and affirm students’ identity; (2) affirm students’ capacity to succeed; (3) recognize students’ agency. A broader set of strategies are ultimately needed to address belonging among educators, the school community, and in relation to the United States’ inequitable education system (Healey and Stroman, 2021).

**Programs:** Opportunities for student engagement and leadership hold great potential for co-creating new and expanded spaces for belonging in schools. This might involve soliciting student feedback on school policies and practices, co-developing new courses and initiatives with students, and community-based learning. A number of psychological interventions such as targeted messaging (ideally transmitted by students), as well as self-affirmation exercises, have resulted in an increased and sustained sense of belonging. Non-oppressive disciplinary measures like restorative justice and Positive Behavior Interventions and Supports have also been found to foster belonging, especially among marginalized and vulnerable students. Curricular and co-curricular efforts that foster bonding (e.g. affinity groups) and bridging (e.g. campus discourse) at school are also important tools for belonging. This might comprise exploring individual and shared identities and developing global competence in students, including through storytelling. Providing students with opportunities to learn outdoors and through nature should also be pursued, especially now that the COVID-19 pandemic has helped educators to experience how this can support student well-being and learning (Healey and Stroman, 2021; Kumashiro, 2020; Osta and Kannan, n.d.; Tough, 2014; Walton and Brady, 2017).

**Practices:** A critical step in building belonging is developing a shared understanding of belonging among students, teachers, administra-

tors and parents that encompasses the full breadth of what it means to belong. There are existing resources that can help with this process. At the same time, educators should be supported to develop a critical consciousness, since this will enable them to more effectively identify strategies for cultivating belonging. Any effort in this regard should focus on undoing othering and the privileging of dominant groups. Educators should also be equipped with the skills and support to teach a culturally responsive curriculum, given its role in fostering belonging among marginalized and diverse groups. Student belonging can also be enhanced by educators becoming more intentional about developing supportive relationships with students, modeling and teaching a growth mindset, incorporating wise feedback, and normalizing challenges. Committing to measuring and assessing belonging is also critical for building belonging, and there are existing tools that schools can leverage to do this. Other strategies, which can foster greater belonging with nature, might include educators taking an interdisciplinary and experiential approach to teaching about climate change and the ways in which individuals can work together to address these challenges through frameworks like the United Nations Sustainable Development Goals (Dweck, 2015; Gray et al., 2017; Healey and Stroman, 2021; Mindset Kit, n.d.; Mindset Works, 2017; Matthews, 2021; Murphy et al., 2021; Stroman, 2020; Tomaloff, n.d.).

**Systems:** Ultimately, a whole-school approach to fostering belonging is needed and should be grounded in an anti-oppressive approach to education as well as a comprehensive effort to advance diversity, equity, inclusion (and belonging), or DEI(B), in school culture. These initiatives should lead to the creation of separate and integrated supportive spaces for those who are seen as the other, as well as spaces to explore and address how dominant groups and structures are privileged. A good place to start is a DEI(B) audit, which helps to

surface gaps and opportunities for this work in schools. While hiring diverse teachers and communicating a commitment to diversity are important, they are not sufficient for sustained change with respect to belonging. Ultimately, efforts to advance belonging should happen during moments of transition, since this is when people are most at risk of disengaging (Healey and Stroman, 2021; Kumashiro, 2000; Walton and Brady 2017). Lastly, schools should integrate a commitment to sustainable development in their strategy and operations, so that sustainability is embraced at all levels and in all facets of an institution.

### GAPS IN THE RESEARCH

While the literature on belonging is rich, there are still only a small number of tried and tested belonging interventions for grades K-12, and little to no discussion about interventions' appropriate alignment to developmental stages, differences due to contextual factors, or their impact on health (Walton and Brady, 2019). There is a need to better understand what constitutes sufficient belonging and to explore instances where not belonging is in fact a healthy and positive choice. Though the research does address some harmful approaches to belonging, like stereotype management, it would be helpful to understand how societal and psychological pressure impact belonging. Additionally, very few recommendations in the literature focus on teachers, administrators, parents, institutional culture, or policy issues. It would be beneficial to look at subjective measures of belonging alongside more objective measures, such as resource allocation, rights violations, histories of exclusion, and current policies in the education space.

## CONCLUSION

Belonging shapes our lives in myriad and profound ways. The importance of belonging to student well-being and academic outcomes is well-documented, as is the devastating impact of not belonging. Individuals from historically marginalized groups are most at risk of not belonging in the learning environment and stand to gain the most from cultures of belonging in schools. There is clearly a need to work with students to co-create new and expanded belonging spaces and to support educators and staff with the skills, knowledge, and tools they need to contribute to a belonging culture. Any approach to belonging, whether at the programmatic, practice, or system-level, should incorporate a focus on creating belonging during transitions. This is because moments of transition are when students—as well as, presumably, teachers and administrators—are most at risk of disengaging in the learning environment. Lastly, while the studies reviewed do not directly address the symbiotic relationship among belonging, curiosity, and purpose, some possible areas where each of these strengths could combine in powerful ways include bonding and bridging activities, community engagement, affinity groups, and culturally-responsive teaching.

### EMERGING INSIGHTS

Educational institutions can explicitly and implicitly undermine a sense of belonging among students, especially among students who have been systematically and historically denied access to equitable education.

Students can thrive and learn, especially those students likely to struggle academically, when their capacity to succeed is affirmed by combining high expectations, feedback, and support to achieve those expectations.

Power and agency generally, and in relation to one's identities, are essential to co-creating belonging in the school environment.

Teachers can enhance or diminish a learner's sense of belonging in intentional and unintentional ways.



### EMERGING RECOMMENDATIONS

Schools should undertake DEI efforts—which help surface institutional programs, practices, and policies that undermine belonging and remedy this by adopting alternative approaches.

Psychological interventions (e.g. self-affirmation) combined with innovative programming, which supports students towards achieving their full potential, have been shown to be effective approaches for academic success and equity.

Students' agency should be cultivated and enabled, for example through soliciting feedback from students and community engagement.

Professional development for teachers is needed in culturally relevant teaching, trauma-informed teaching, critical consciousness, identity development of children, and building empathy.



## EMERGING QUESTIONS

What are some foundational aspects of belonging that need to be fostered in children?

How can these be built upon as students develop?

Is belonging always desirable? If not, when and how can educators mitigate against this?

How do different contexts determine the best strategies for co-creating belonging?

What's the organizational equivalent to the "real curriculum" for belonging?



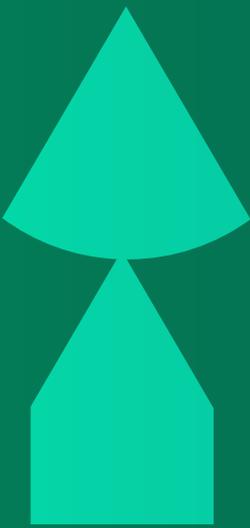
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# CUR IOS ITY



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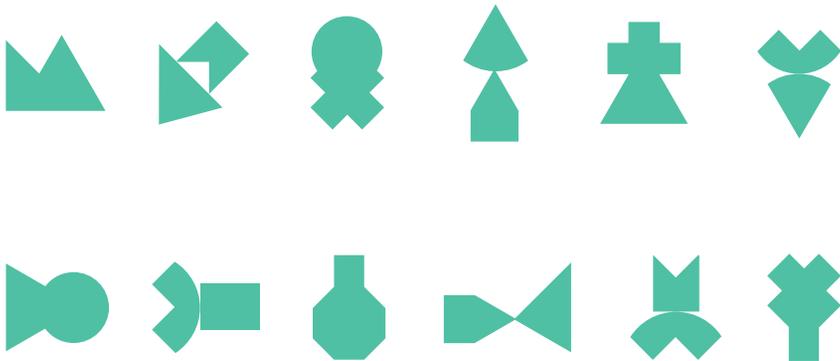
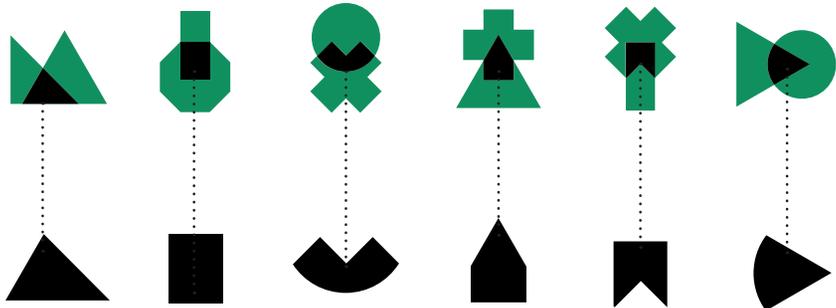
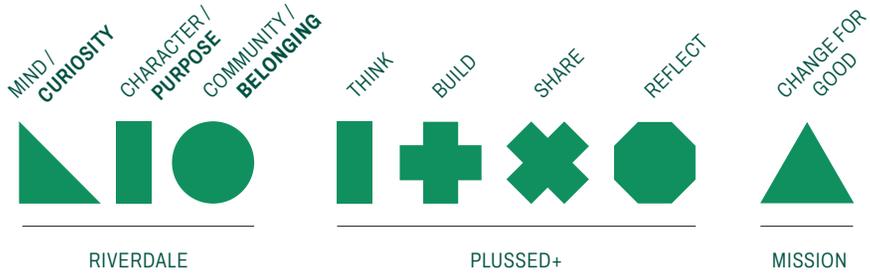
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As we embark on more study and exploration in these areas, we wanted to share the preliminary findings from our literature review. Here is our summary report on Curiosity.

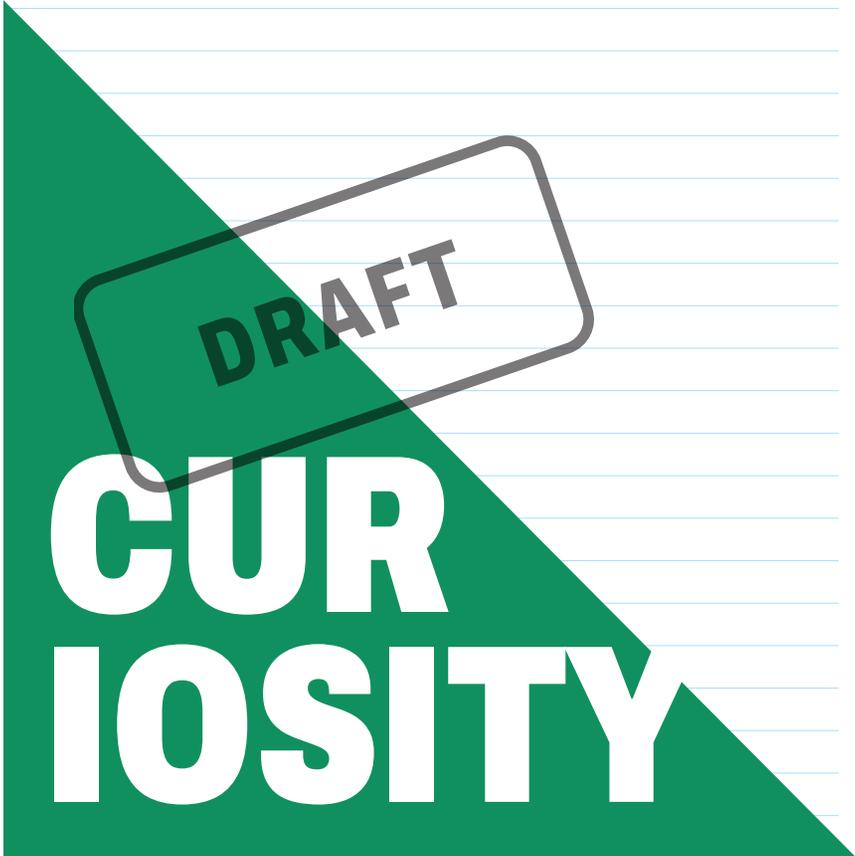
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# CUR IOSITY

## Curiosity is an urge to explore, question, or learn more about the world and ourselves.

Curiosity is a trait and a state, which arises from intrinsic motivation and external stimuli. It is driven by a range of emotions, from joy and wonder to restlessness and uncertainty. It shifts over time, but tends to wane and narrow with age.

Research suggests that curiosity supports exploratory behavior, learning, academic performance, and well-being. Neuroscientists have found that our brains like curiosity. However, most ‘traditional’ schools lack a culture of curiosity, where questioning and risk-taking are encouraged. More scientific research in schools is needed to better understand the causal relationships among curiosity, learning, and well-being, which goes beyond self-reporting.

## DEFINING CURIOSITY

The definition of curiosity continues to be a topic of debate, yet it is widely understood to be a multi-dimensional, multifactorial construct (Jirout et al., 2018, Engel, 2015, Mattingly, personal communication, February 8, 2022). Susan Engel describes curiosity as “the expression of the urge to know more, an urge sparked when expectations are violated” (Engel, 2015). American academic George Lowenstein understood curiosity as a gap in one’s knowledge, a framing that continues to influence research today (Jirout and Klahr, 2012). Some academics have identified different dimensions of curiosity such as diversive curiosity, which is often the short-lived focus on novelty, versus specific curiosity, which has to do with reducing uncertainty about a particular piece of information (Engel, 2015; Gruber et al., 2019; Berger and Foster, 2022). Culture profoundly shapes curiosity, yet receives little attention in the literature.

Curiosity is also considered a trait as well as a state. The focus on curiosity as a trait has been particularly pronounced in the character strengths movement, which sees curiosity as a core strength supporting wisdom (CharacterLAB, n.d.; VIA Character, n.d.). Tom Kashdan has done pioneering research to surface different types of trait curiosity, such as joyous exploration and social curiosity (Kashdan et al., 2018). More attention is now being paid to state curiosity—a condition that exists and can be created—since some researchers believe it is key to optimizing states of curiosity in the classroom (Fandakova and Gruber, 2019). Associate Professor Jamie Jirout, who is currently leading a multi-year study to better understand state curiosity, defines curiosity as “the threshold of desired uncertainty in the environment that leads to exploratory behavior” (Jirout and Klahr, 2012).

## WHY CURIOSITY MATTERS

Curiosity is inherent to all humans and is widely believed to be a pro-

pellent force in life. As babies we try to understand our world through our bodies. Next, we ask questions. A child asks about 40,000 questions between the ages of two and five (Engel, 2015; Berger, 2016). While the nature and intensity of curiosity shifts over time, often waning, curiosity can be cultivated throughout one’s life. While it is true that some people are more innately curious than others, it is also true that curiosity is not equitably fostered, nor are its diverse forms fully appreciated.

A wealth of studies have documented the value of curiosity, demonstrating its relationship with well-being, happiness, greater life satisfaction, positive emotions, hope, and purpose (Kashdan n.d.; Eva 2018; Kaufman, 2017; Jirout et al., 2018). Having curiosity helps individuals to understand and control their emotions, build agency, and to be more self-compassionate and less defensive (Eva, 2018; Brenner, 2020; Kashdan, 2013; Kashdan n.d.). Curiosity—and specifically question asking—has been identified as the common denominator among business’ most successful innovators and inventors in numerous best-selling books (Berger, 2015, Simon & Schuster, n.d.; Gino, 2018). In the world of work, curiosity leads to fewer decision making errors, higher performing teams, innovation, and greater employee retention, and can foster the development of global competencies (Gino, 2018; Hamilton, 2020; OECD, n.d.).

Curiosity also benefits democracy. The questions we ask inform political and civic agendas and determine what and how issues are addressed. Without curiosity—and specifically scientific curiosity—we can not develop shared understandings and govern effectively (Otap, 2020; Rosenfeld, 2022). The Right Question Institute exists precisely to support the building of democracy through inquiry (Right Questions Institute, n.d.). Curiosity also supports democracy through its connection to empathy, diversity, and inclusion. Research

suggests that curiosity is a precondition for empathy while some studies show that curious people have more diverse networks, show less bias, and engage in difficult conversations across divides (Cairo, 2015; Harvard Business Review, 2021 Lurie, 2019).

While there is mounting evidence of curiosity's merit, it does have its drawbacks. Curiosity can cause people to take risks or make decisions that are awkward or even painful. This is due to a person's diminished capacity for cost-benefit analysis in a state of curiosity (Bergland, 2016; Misirlisoy, 2018). While often unintended, unchecked curiosity can also harm others, resulting in culturally offensive remarks and microaggressions, for example, due to racism or sexism (Smith, 2017).

### **CURIOSITY AND LEARNING**

Studies in the 1950's showed that curiosity among adults leads to exploratory behavior and greater learning. More recent studies have established the same in children; curious children learn more and better and have better academic outcomes (Jirout and Klahr, 2012; Jirout et al., 2018; Engel, 2015; Vonstumm et al., 2011). In short, "kids who are habitually curious learn more and when a child is momentarily curious, their learning is optimized at that time" (Engel, 2015; Gotlib, 2015). Longitudinal studies have found that learners with curiosity outperform their peers on math and reading, SAT scores, and college attainment. One of these studies found that disadvantaged students had the strongest connection between curiosity and performance. This indicates that the cultivation of curiosity at a young age might advance equity in education (Kaufman, 2017; Eva, 2018; Berliner, 2020, Michigan Medicine, University of Michigan, 2018). The data is not all entirely consistent, however. At least one study has found that curious children that performed well in challenging environments performed less well in less challenging environments (Gruber et al., 2019).

Difficulty, complexity, and struggle fuel curiosity and learning in children, although too much of these can cause negative emotions in relation to curiosity (Engel, 2015; Mattingly, personal communication, February 8, 2022). An intriguing question can enhance learning, while recent research shows that children are more likely to remember information when it is more interesting than their initial state of curiosity (FrandaKova and Gruber, 2019; Duckworth, 2021). Neuroscience has further confirmed the benefits of curiosity to learning. Curiosity causes serotonin to be released, which facilitates problem solving, while curiosity is also associated with reward anticipation that depends on the dopaminergic circuit, supporting learning and memory (Gruber et al., 2019; Asmus, 2017; The CharacterLAB, n.d.).

While culture and family (mothers and caretakers in particular) are the most powerful influencers of curiosity in children, schools also have a key role to play. Yet researchers and practitioners find a "paucity of curiosity" in American schools (Engel, 2015). One study in kindergarten found that there were only 2.36 episodes of curiosity in any two-hour stretch whereas there were only .48 episodes in a fifth-grade classroom. The reasons for this are manifold. While teachers regularly report a desire to cultivate curiosity in students, some may feel constrained in their ability to incorporate curiosity in the classroom, while others may not know how to enable curiosity. Others still may lack awareness about its importance (Engel, 2015; Berger, 2016). Some students may suppress their curiosity, seeing it as inefficient for achieving their academic goals, while others may not feel safe or supported to express their authentic curiosity (Berliner, 2020; Jirout et al., 2018; Kim, 2017).

### **CO-CREATING CURIOSITY**

Enabling curiosity in schools requires strategies that resonate in diverse cultural contexts and across the developmental phases of

learners. While more research is needed to determine what strategies are most effective, for whom, and when, the literature highlighted the following strategies: (1) design for curiosity in schools; (2) integrate and celebrate uncertainty; (3) engage students in stimulating and challenging lessons; (4) enable students to pursue their interests; (5) support students to ask good questions; (6) model curiosity; (7) assess curiosity.

**Programs:** Evoking wonder through the physical environment at school is one way to excite curiosity in learners, especially younger learners. There are good practices in the Montessori, Outdoor Education, and Waldorf traditions. Identity work can also be leveraged to foster students' curiosity about themselves and others. Existing materials in the character development, social emotional, and diversity, inclusion, and equity (DEI) spaces could be harnessed for this. Literacy should be prioritized, since reading allows children to pursue their interests in a self-guided, self-paced way (Engel, 2015). Makerspaces support learners to explore their interests and engage their curiosity within a community of peers, while unstructured solitary time has also been found to support curiosity (Cassidy, personal communication, February 11, 2022; Berger, 2016). Structured after-school and summer programs also foster curiosity and have the potential to influence curiosity during the school year, when planned and executed in partnership with public school educators and administrators from the academic year (Caballero, personal communication, February 7, 2022)..

**Practices:** Educators can cultivate curiosity in students by using encouraging language, praising curiosity, and introducing uncertainty into the classroom (Engel, 2015; Jirout et al., 2018). Supporting young people to craft, ask, and pursue questions is also essential for fostering curiosity (Engel, 2015). The “Question Formulation Tech-

nique” is one method for doing this, but teachers can also employ self-directed, inquiry-based and experiential learning pedagogies (Berger, 2016). All of these approaches help to cultivate students to explore their interests and engage curiosity. Fostering global competencies by incorporating a focus on intercultural relations, human rights, and sustainability, for example, is another important but underused strategy. Interdisciplinary studies are a natural fit for curiosity and resonate with the diverse interests of students. Lastly, teachers can model all aspects of curiosity they hope to see in their students, although ideally in an environment that also values curiosity (CharacterLAB, n.d.; Jirout et al., 2018; Engel, 2015; Berger, 2016).

**Systems:** Educational institutions should be designed to cultivate curiosity. While this is easier to do at independent and charter schools than public schools, it should be a goal for all schools and incorporated into education policy. At the school level, this might involve mainstreaming a focus on curiosity from hiring practices through to evaluation, and ultimately creating a culture where curiosity is celebrated (Engel, 2015). In many institutions, this would require revamping strategy, aligning operations, and overhauling expectations and approaches to assessment in particular (Lucas and Spencer, 2020). Acton Academies is one example of a school which prioritizes curiosity in its design. Integrating expanded learning programming with formal schooling through stronger partnerships could be a pathway to greater curiosity during the academic year (Caballero, personal communication, February 7, 2022).

### GAPS IN THE RESEARCH

Efforts to enhance curiosity in American schools would benefit from more research into what curiosity looks like in children of different ages, and what teaching practices help to create a state of curiosity among learners in school (Fandakova and Gruber, 2020; Chapde-

laine, 2019). Beyond this, we need to better understand what teaching practices resonate with what ages and in what contexts with a view towards equity. Should teachers focus on specific types of trait curiosity at specific stages of a learner's development? Should social curiosity be engaged more so in some grades than in others? What about diversive curiosity versus specific curiosity? Or, should teachers also be seeking to create a state of curiosity in classrooms? If so, when does anxiety and struggle undermine curiosity? We also need to know more about how these interventions impact curiosity in the long-term. Currently, the majority of assessments of student well-being and learning do not center curiosity, and thus there is also a need to develop new assessment tools. Lastly, the drawbacks of curiosity also require greater investigation. How can we ensure that curiosity does not harm others?

## CONCLUSION

Curiosity is an innate and enduring human quality, which we start to develop early on. Decades of research show that there is in fact a positive relationship among curiosity, well-being, and learning. Curiosity has been linked to positive emotions like hope and empathy as well as exploratory behavior and greater learning in adults and children. Yet, curiosity does not predominate in the American classroom. To change this, teachers can model curiosity in the classroom, introduce uncertainty using a range of different pedagogies (e.g. experiential learning), and support students to explore their interests through question asking and expanded learning opportunities. Ultimately, cultivating an institutional culture of curiosity appears to be the most comprehensive approach to fostering curiosity. Tom Kashdan's research has identified a correlation between curiosity and purpose while other researchers suggest that curiosity relies on belonging (Kashdan, n.d.). While there is little research on curiosity, belonging, and purpose, conceptually it follows that some of the same strate-

gies for enabling belonging and purpose could also be employed for curiosity such as intentional school design, identity work, social-emotional learning, culturally-responsive and interdisciplinary teaching, and new approaches to assessment.

## EMERGING INSIGHTS

Schools should advance a culture of curiosity by celebrating questions, normalizing and modeling uncertainty, developing question-asking skills, as well as rewarding curiosity among all members of the school community.

Anxiety can both inhibit and enable curiosity. It is unclear what the optimal level of anxiety is needed for effective learning.

Research suggests that curiosity could support improved student well-being through identity work. This might be particularly important during adolescence.

Equity and curiosity seem to be relatively unexplored, however some studies suggest that curiosity can advance “equitable education.”



## EMERGING RECOMMENDATIONS

Best practices from ‘nontraditional’ and innovative educational approaches (e.g. Waldorf, “maker spaces”) can be adopted to promote cultures of curiosity. Integrating opportunities for student-directed learning holds potential.

More experimental and neuroscience research is needed to further understand the role of anxiety in curiosity. A person’s ‘sense of belonging’ may play a role here.

Social-emotional learning programming could be leveraged to engage students’ inter- and intra-social curiosity and support well-being.

The ways in which culture, power, and privilege shape curiosity as both a trait and a state requires more investigation. This should include inquiry into curiosity and culturally responsive pedagogy.



## EMERGING QUESTIONS

What can neuroscience tell us about the long-term impact of cultivating curiosity?

Does the existing research support the claim that curious children perform better academically?

Is being curious correlated with enhanced learning because it enables student engagement?

Should early learning prioritize habituating curiosity? If yes, what strategies should be employed?

How might curiosity in schools be fostered through stronger linkages with expanded learning programs?



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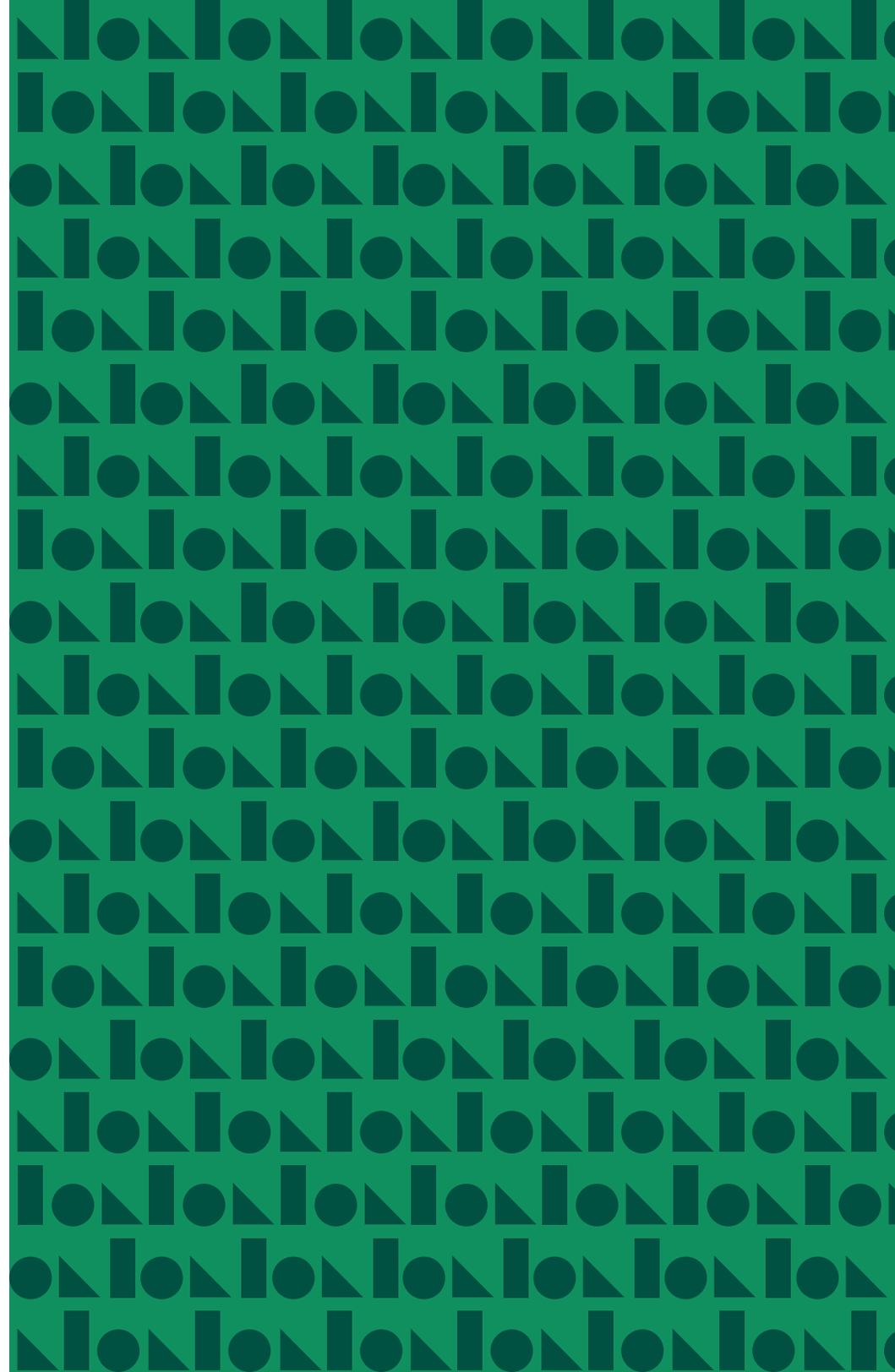
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PURPOSE

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**DRAFT**

# **PUR POSE**



How can we harness the power of belonging, curiosity, and purpose to catalyze equity, learning, and thriving?

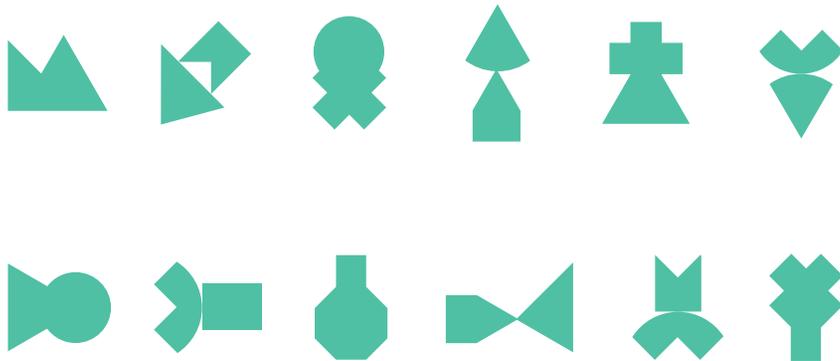
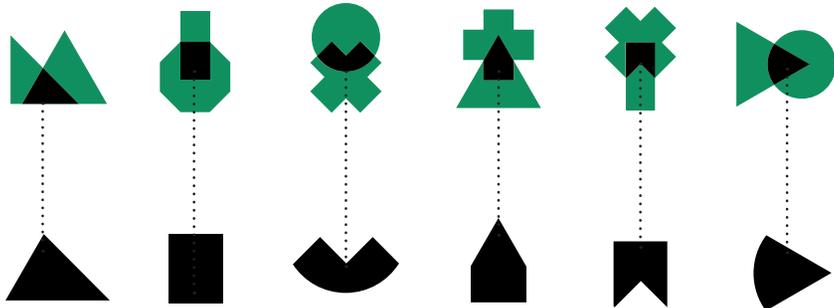
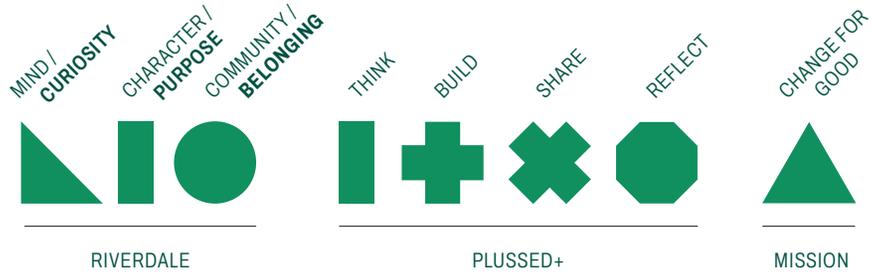
Riverdale has a long history of reflective practice, guided by research-based methods from a range of fields and disciplines. This year, PLUSSED and Riverdale initiated a multi-year, collaborative R&D project focused on student learning and thriving. We began this work with a literature review — delving into the growing body of research related to belonging, purpose, and curiosity.

Our research to date has yielded important insights and a foundational working hypothesis: We believe that layered, ecosystem-wide, articulated interventions — focused on multiple aspects of thriving — will be more impactful on learning + growth than serial, singularly-focused interventions.

As we embark on more study and exploration in these areas, we wanted to share the preliminary findings from our literature review. Here is our summary report on Purpose.

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# PURPOSE

**Purpose is the forward-looking intention to accomplish something or act in ways that are consequential for the self and the world beyond self.**

**Purpose is the WHY that drives a person's intentions, goals, and actions. People can have multiple purposes relating to one or more domains of their life and purposes can shift throughout one's life.**

Research suggests that people with purpose — and specifically a pro-social purpose — are well-positioned to thrive physically, psychologically, socially, economically, and academically. While only a small percentage of young people aged 12-22 report finding purpose, a majority of young people are exploring purpose in some way. These young learners stand to benefit from intentional efforts at schools to support and strengthen their abilities to pursue purpose(s) throughout their lives.

## DEFINING PURPOSE

Victor Frankl, an Austrian academic and survivor of the Holocaust, was the first to popularize the concept of purpose, arguing that purpose could provide “protective benefits” and influence a person’s decisions and motivations. With the rise of positive psychology, purpose became embraced as “motivator of good deeds and a galvanizer of character growth” (Damon et al., 2003). Purpose features prominently in different theories on human flourishing, such as Martin Seligman’s PERMA theory (Positive Emotion, Engagement, Relationships, Meaning and Purpose, and Accomplishment) (Beale, 2021).

Purpose is widely regarded as “a stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond the self” (Damon et al., 2003, p. 121). This definition emphasizes three criteria for purpose: (1) It must involve a future-oriented goal; (2) It must have internal and external components; (3) It must be something that can be accomplished.

In this conceptualization, purpose is not necessarily ethical—it can be both pro and anti-social (Damon, 2021). Noting this, Damon and others contend that educators should only be concerned with fostering a pro-social purpose, since that is what arguably leads one to thrive.

A robust debate has developed concerning what constitutes a pro-social and worthy purpose. Damon and Bronk have suggested that purposes that relate to vocation, civic leadership, or the environment, or that address injustice, are uniquely worthy (Bronk and Damon, 2021; Damon, 2009). Burrow et al., suggest that a worthy purpose might be one that aligns with one’s community and cultural context and is readily attainable. However, there are instances in which this kind of purpose might actually further unworthy structures like

patriarchy or racism (Bronk and Damon, 2021). In a more recent article, Hill and Burrow highlight that a person’s values and biases inevitably shape what one sees as worthy or unworthy purposes. Researchers and practitioners should be mindful of this and work to ensure that definitions do not inadvertently exclude certain groups, especially those that have been marginalized (Hill and Burrow, 2021).

In addition to contemplating the ethics of purpose, Hill and Burrow argue that researchers should also distinguish between purpose and a sense of purpose. They define having a sense of purpose as “the perceptible feeling that one’s life is directed and significant”. Purpose is defined in terms of “both purpose content—the aspirational substance of one’s life aims—and purpose articulation—the ability to name and explain one’s aims in life” (Hill and Burrow, 2021, p. 281). They argue that research with youth has focused primarily on purpose rather than sense of purpose, which has concealed the true connection of young people to purpose.

## WHY PURPOSE MATTERS

Every person has the capacity, and, typically, the need, to connect with purpose in life. Throughout time, people have often grappled to understand their purpose, or purposes, in the face of great adversity. While the particular meaning of purpose varies across cultures, it is nonetheless a unifying theme among humans. Contemporary scientific studies confirm the importance of purpose to multiple domains of life, including education. These studies indicate that people who are guided by purpose—and, arguably, pro-social purpose—are well-positioned to thrive (Bronk and Damon, 2021). In particular, having a sense of purpose in life is strongly correlated with living a happier, healthier, wealthier, and longer life with greater cognitive capacities than peers who report less sense of purpose in life (Hill and Burrow, 2021).

Individuals with purpose report better sleep and better health, enjoy better cardiovascular function, and have been shown to have a 15% lower risk of death compared to others who report being aimless (Bronk and Damon, 2021; Greater Good Magazine, n.d; Fotuhi, 2015; Neighmond, 2014). Psychosocially, purpose is associated with an abundance of positive states and capabilities such as greater life satisfaction, happiness and resilience, among others. Having purpose, or merely searching for it, is associated with greater life satisfaction among adolescents and emerging adults (Bronk, 2009). Purpose has also been shown to support resilience in children and to enable students to remain “emotionally even-keeled” in stressful situations (Damon, 2009; National Public Radio (NPR), 2014; Swift, n.d.).

The benefits of purpose also extend outward, beyond the individual. Purposeful individuals “tend to be more engaged with their families, colleagues, and neighbors, enjoying more satisfying relationships” (Melin, n.d. para. 8). White Americans who report having purpose are more comfortable with ethnic diversity than those who do not (Jacobs, 2015). Higher scores on the Purpose in Life test correlate to higher levels of altruism and social and political engagement (Bronk, 2009). At work, having a sense of purpose drives employee well-being, productivity, and loyalty, benefiting individual workers, as well as a company’s bottom line (Brooker, 2019; Sinek, n.d.).

### **PURPOSE AND LEARNING**

A wealth of studies show that students perform better academically when purpose and the relevance of school activities are fostered in school. In particular, their academic engagement, persistence, resilience, and grit improves. One study conducted with the New York 4-H organization found that the simple act of reflecting on purpose can help young people to be engaged with programming (Swift, n.d.).

Student academic achievement has also improved in studies where researchers briefly introduced a pro-social and self-transcendent purpose mindset to learning. Studies show that by helping students understand how school can help them reach long-term goals that benefit themselves and others, students’ self-regulation, college persistence, grade point average, and the amount of time they are willing to study improves. A randomized field experiment on the role of promoting interest in academic performance found that by providing students with an opportunity to connect their schoolwork to their life and aspirations, student interest and performance increased (Hulleman and Harackiewicz, 2009). A later study showed again how this intervention is particularly helpful for lower-performing students (Hulleman et al., 2016). Another study with middle and high school students found that those who possessed purposeful work goals that were motivated by the opportunity to contribute to others, viewed studying and doing homework as more meaningful (Burrow et al., 2014).

Despite these known benefits, a seminal study by Bill Damon (2009) found that only about 20% of young people between the ages of 12-22 are fully purposeful, while about 80% have not yet connected to purpose, although to varying degrees. When this data is considered through a more youth-positive development lens, it can be argued that a majority of young people (60%) aged 12-22 either have purpose or are searching for it. This presents an opportunity to support young people to connect with purpose, during a time of profound growth and development. Researchers Hill and Burrow (2021) argue that educators should focus on cultivating a sense of purpose among young people, since this is more appropriate developmentally, while empirically, it has been shown to be the “demonstrative factor in determining lifespan outcomes” (p. 282). While interest in purpose is growing in education, educators are still grappling with how best to

incorporate a focus on purpose in schools. Some of these challenges relate to the way in which purpose has been defined by researchers.

### CO-CREATING PURPOSE

The program-, practice-, and system-level approaches to creating purpose—specifically, a pro-social purpose—summarized below consider how to foster having purpose and a sense of purpose, as well as making school activities more relevant to student lives. These recommendations reflect the idea that there are three pathways towards purpose. First, individuals proactively explore their purpose. Secondly, they reactively explore purpose, following a formative experience. And third, people explore purpose by mimicking the kinds of behaviors done by purposeful others (Burrow et al., 2014).

**Programs:** Guided reflection emerged as one of the most effective and practical strategies for fostering purpose. Numerous resources exist for adolescents, emerging adults, and adults, such as the Fostering Purpose Project Toolkit, the Character Lab’s Playbook for Purpose, Cornell University’s Purpose and Identity Lab’s Pioneer app, as well as discrete reflection exercises in books such as *Finding Your Own North Star* and *Thriving Women, Thriving World*. Gratitude reflection exercises are particularly appropriate for pre-adolescent students and support purpose development later on. Reflection on identity as well as purpose can be approached together during adolescence when young people are forming a sense of both, using tools like the identity wheel. Psychological interventions, such as the utility value intervention and the introduction of self-transcendent purpose to learning, can be leveraged to increase academic interest and performance, including among low-performing students. Visionary programs like the Motivate Lab and NxU are putting these findings into practice. Establishing curricular and co-curricular opportunities for civic engagement, such as the Purpose Project,

is another avenue for cultivating both purpose and identity (Beck, 2001; Bronk 2017a; Cassidy, personal communication, December 16, 2021; Hulleman et al., 2016; John Templeton Foundation, 2018; Malin and Damon, 2022; Whitney et al., 2019; Yeager et al., 2014; Zhu and Burrow, 2022).

**Practices:** Role-modeling purpose and mentoring for purpose are both key to enabling young people to connect with a sense of purpose. Educators are well-placed to play this role for adolescents, who respond better to people outside of the family. Educators may need to be supported to connect with their own purpose or purposes in life, so that they can be effective role-models and mentors. Helping young people to explore their interests in a sustained manner is also essential to this approach. Teachers might benefit from learning methodologies like motivational interviewing, appreciative inquiry, culturally responsive teaching, and participating in training aimed at cultivating critical consciousness. These can be incorporated into advising programs as well as in the classroom (Beale, 2021; Damon, 2009; John Templeton Foundation, 2018; Malin, 2018; S. Rakosi, personal communication, January 5, 2022; Spaciousness Words, 2022).

**Systems:** The most effective approach in this area has to do with designing educational institutions and experiences in relation to purpose. K-12 institutions like High Tech High in San Diego as well as EL Education schools across the country are doing just this. Their commitment is evident in missions of these schools as well as in their practices such as project-based and experiential learning. Higher education institutions such as Drew University in New Jersey are integrating purpose in their marketing, curriculum, and student services. A major study on fostering purpose in higher education is underway, and preliminary findings are expected in 2022 (EL Education, n.d.; High Tech High, n.d.; Mellon Foundation, 2017; Romero, 2019).

## GAPS IN THE RESEARCH

Further research into purpose should seek to understand what strategies work best for what ages. While the majority of research on youth and purpose has focused on the “aspirational substance of one’s aims” as well as their ability to articulate this, future research should also explore young people’s sense of purpose—the feeling that one’s life is directed and significant (Hill and Burrow, 2021, p. 281). This would allow for the identification of new approaches to fostering purpose among young people, and would also provide a more comprehensive picture of how purpose operates as a developmental asset (Hill and Burrow, 2021). Reorienting in this way may lift up issues that ignite a young person’s sense of purpose, and which have not been adequately explored in the research, such as being responsible environmental stewards. New research should also explore which strategies are best-suited for implementation in real world settings, noting the resource limitations that characterize the majority of American schools. Additionally, the potential risks of introducing purpose should be explored since some research does suggest that purpose can negatively impact individuals, especially when it involves struggle and difficulty. Future research might also explore the ways in which purpose can be advanced in schools through a focus on professional development and organizational culture. The literature reviewed does not focus on the role of parents and families in inculcating a purpose-mindset and could be explored more. Lastly, more research is needed into culturally expansive and youth-centric definitions of purpose.

## CONCLUSION

Not only is purpose part of what makes us human, but it also yields academic, psycho-social, and physical benefits for young people. There is an abundance of evidence that links purpose to innumerable benefits in life, democracy, work, and education. Within

the school setting, educators have an opportunity to support students to connect with purpose, and particularly a sense of purpose, as they explore their identities during adolescence. Young people’s exploration of purpose, which ideally supports them to connect with a sense of purpose, should not be limited by context incongruity or their idea of what is feasible since this will prevent them from fulfilling their fullest potential. While the studies reviewed do not directly address the symbiotic relationship among purpose, curiosity and belonging, some possible areas where each of these strengths could combine in powerful ways include identity work, civic engagement, culturally responsive teaching, and school design.

### EMERGING INSIGHTS

Academic perseverance and resilience are enhanced when learning is connected to a student's sense of purpose and has relevance to a student's life.

A healthy sense of purpose develops in and with community (defined in various ways) and involves observation, practice, and reflection.

Guided, intentional, and ongoing reflection, which is evaluated for impact, is integral to the pursuit of purpose.

Understanding how identity relates to purpose and vice-versa can help educators to more effectively cultivate purpose.



### EMERGING RECOMMENDATIONS

Student-centered and community-based service learning are key strategies for fostering relevance and purpose. Psychological interventions have also been shown to be effective.

Educators should be equipped with practical tools and supported to model and mentor for purpose.

There is a need to reflection activities and exercises, which can be easily integrated into classrooms and in schools, as well as evaluated.

Research and practice in the areas of identity formation, identity work, and culturally responsive teaching, can provide further insights into how best to cultivate purpose in K-12 schools.



### EMERGING QUESTIONS

What are the most appropriate approaches, tools, and activities for cultivating purpose based on a student's age or stage in their pursuit of purpose?

What are the risks of cultivating purpose, and how can those risks be mitigated?

Which educational institutions have successfully and intentionally designed for purpose?

What are their best practices at the programmatic, practice, and system levels?



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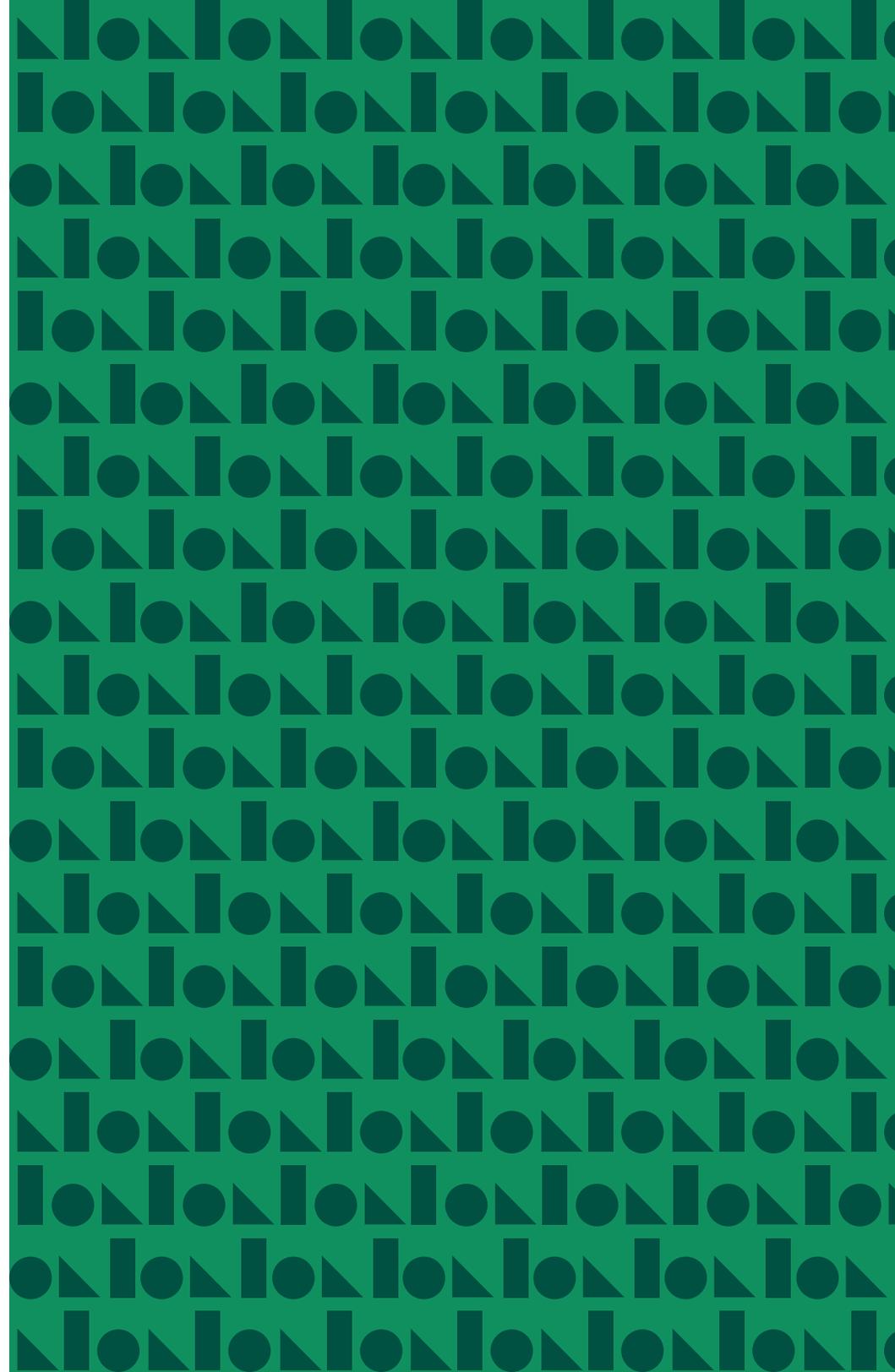
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