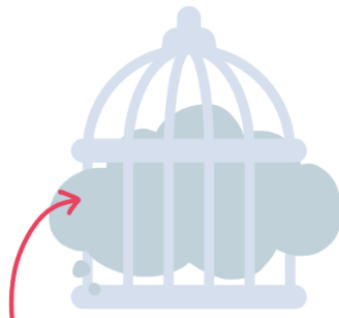


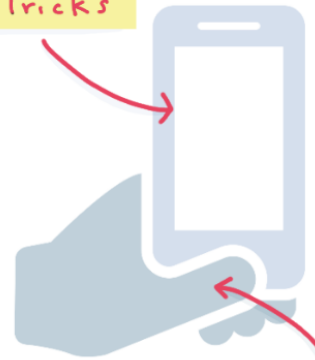


Tech + Values



Thinking Traps

Design Tricks



Tech Habits

TEACHING DIGITAL WELL-BEING: EVIDENCE-BASED RESOURCES TO HELP YOUTH **THRIVE**

BY

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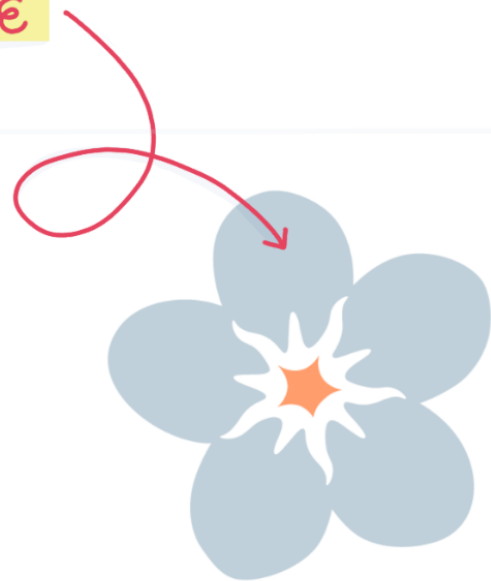
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ABOUT THE CENTER FOR DIGITAL THRIVING

The Center for Digital Thriving is a research and innovation center based at the Harvard Graduate School of Education. Our mission is to create knowledge and research-based resources that help people - especially youth - thrive in a tech-filled world.

We envision a world where young people thrive, however technology fits into their lives.

Digital technology is reshaping our lives and affecting young people in particular. It can enhance their well-being, learning, and social connections. It can also amplify the challenges that already exist for them during adolescence. And since youth are often the first to embrace new tech, they can encounter both its advantages and drawbacks more quickly and vividly. Young people's relationships with technology are multifaceted- so a one-sided perspective falls short. Respecting the complexity of life with technology is our best bet for making digital thriving a reality for all.

This is our work at the Center for Digital Thriving. We are making and holding space for conversations about tech that are both critical and optimistic. We are co-developing research and resources - with youth, educators, psychologists and experts from various domains - that lead us toward digital thriving. **To digitally thrive is to use technology in ways that improve the well-being of yourself, your community, and society.**

We know that no single study or resource is going to actualize digital thriving for everyone. This is ongoing, individual and collective work. Its meaning will change over time as technology changes, and as we do. What won't change, however, is our steadfast belief that thriving is possible, and that we all deserve technology that enables it.

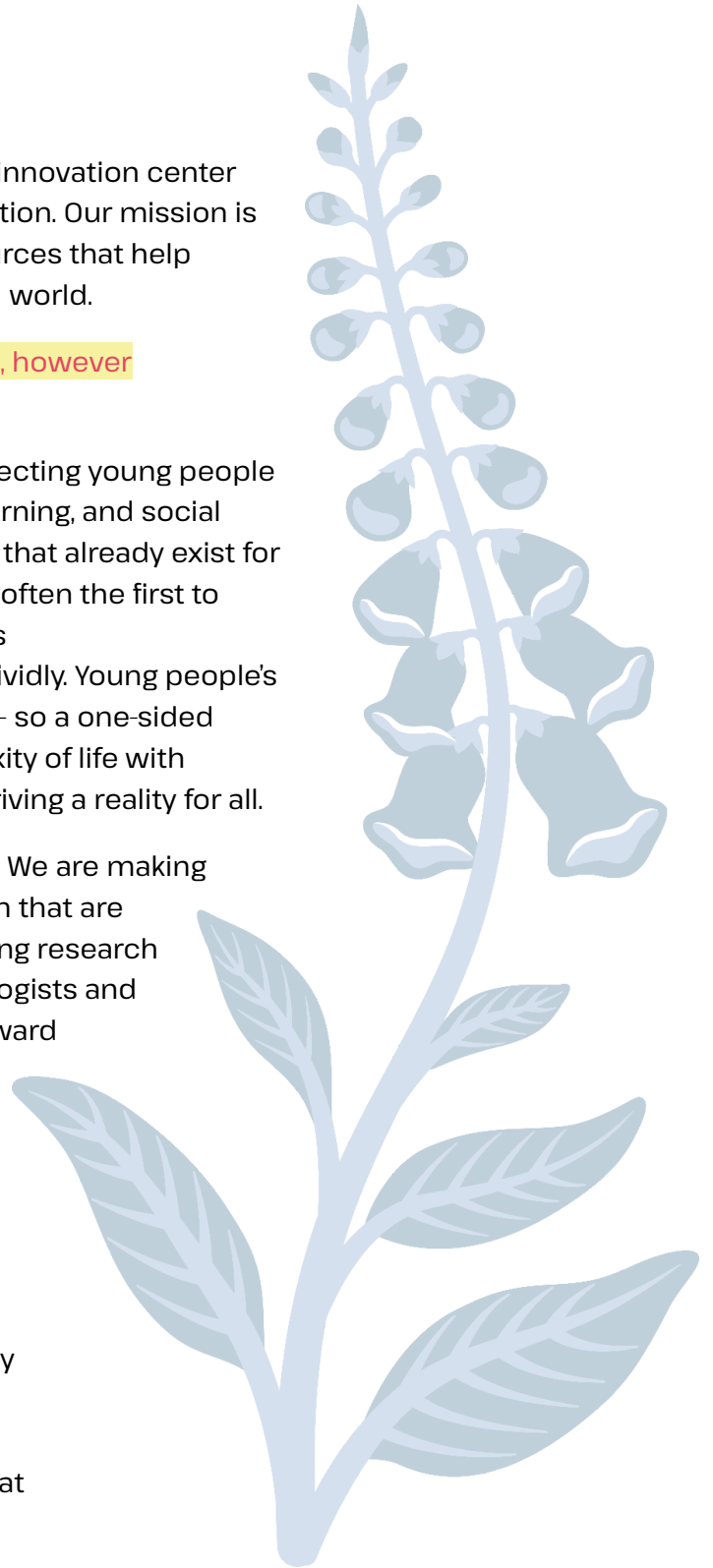


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FOREWORD

I have studied the impact of technology on childhood from a range of perspectives: as a content regulator at the British Board of Film Classification, as an advocate at the 5Rights Foundation, leading the European Safety Public Policy team at TikTok, and everyday as a parent.

I've had a front row seat to the concerns of parents, teachers, and other adults with caring or decision-making responsibilities. Many feel overwhelmed. They are the first-generation of "digital responders" and there is no blueprint on how to navigate this new responsibility.

Understandably, their primary concern is often safety. They are frustrated with technology companies whom they perceive as swift to profit from children's use of technology but slow to acknowledge – let alone address – risks created by their products. But their concerns go beyond safety; they also worry about well-being and whether young people's relationship with their devices will compromise their ability to thrive. They are right to be worried.

The Center for Digital Thriving seeks to address this concern. The Center is working to reframe how we think about and study digital well-being in three important ways.

First, rather than studying well-being exclusively through the lens of risk, its experts are curious about the complexity and nuance of children's digital lives. This is an area where we still have far more questions than answers, but it is clear that adult assumptions are a poor substitute for faithful reporting of children's lived experience.

Second, by committing to participatory design, the Center's work puts young people front and centre. When young people are given the opportunity and support to participate, they can reflect on technology's value and challenges, they are eloquent in describing their experiences, and they are enthusiastic co-creators of solutions. The value of their contribution is obvious in the resources launched with this report.



Third, the Center grounds young people's online experiences within the wider academic research literature on adolescent mental health and well-being. The digital environment may be new, but the feelings and challenges children experience when navigating it are not. The potential to translate and apply existing, tried and tested solutions to digital scenarios is hugely exciting.

Whilst education is an important part of the solution, it is not the whole answer. We can and should help our young people to be clear on their values and to think about their relevance to their digital lives. We should also expose persuasive design, help them spot negative thinking patterns, and encourage them to reclaim personal agency where possible. But there is only so much that a child can do. The technologies they use are designed to be compulsive. The basis upon which young people engage these services is almost entirely pre-determined and non-negotiable.

Beyond education, we need to radically rethink the principles that govern the design of services. A digital environment optimised for agency rather than engagement would look very different and would serve our young people better. Across the services young people use, there are examples of thoughtful application of agency by design principles, but there are too many instances where design undermines rather than supports agency and, by extension, well-being.

This is an area where policymakers can drive change and this is already happening in Europe. The European Commission's Digital Services Act (DSA) prohibits the use of manipulative design patterns defined in the DSA as "*practices that materially distort or impair, either on purpose or in effect, the ability of recipients of the service to make autonomous and informed choices or decisions.*" The risk assessment requirements in the UK's Online Safety Act 2023 (OSA) includes an obligation to assess "functionalities or other features of the service that affect how much children use the service". The DSA and OSA reflect a clear understanding that ensuring children's use of technology is compatible with their well-being is urgent and important work. In the US context, there are a number of current legislative initiatives that share similar intentions.

To be safe means to be protected from danger or risk. To thrive means to grow and develop well, to prosper and flourish. We must be ambitious in what we hope for children. Certainly they must be safe online, but they must also be able to flourish.

I welcome the creation of the Center for Digital Thriving. It will be determinative in shaping our understanding of digital well-being and childhood. I commend this innovative report and I look forward to following the Center's progress over the years to come.

Alexandra Evans | London, UK | October 2023

WHO SHOULD READ THIS?

This document provides useful ideas and insights for **anyone who is interested in what you can do, starting today, to support youth in thinking about their tech-filled lives** and how they can start building digital agency. In it:

- a) We make the case for why we should all focus on youth digital well-being;
- b) We describe several resources that can spark new kinds of conversations about tech - while leveraging insights from existing research and evidence-based practices; and
- c) We explain why it's important to all work together, including *with* youth, if we want to build resources that stand a chance of helping.

At this stage, the resources we've created are designed particularly with **classroom teachers and other school-based educators** in mind. We worked with our colleagues at Common Sense to co-create full lesson plans, slides, handouts, and facilitation guidance for how various resources can be used in the context of a ~45-minute class period. You can also find implementation guidance and a recommended sequencing of the resources on page 30 of this document.

Digital thriving is an all-hands-on-deck vision. Other relevant constituents include **AFTER-SCHOOL PROGRAM LEADERS, PEER-TO-PEER PROGRAM LEADERS, PEER MENTORS, and SCHOOL COUNSELORS**. Of course, we know a lot of essential groundwork is laid at home by **CAREGIVERS** and **PARENTS**, too.

There's a lot of context and background information in this report. If you're hoping to just dive right in, here are **a few ideas to get started**.



IF YOU'RE A...

TRY...

TEACHER¹

Teach the [My Values & Tech](#) lesson (45 mins), which is the first we recommend in [our sequence](#).

Watch the [Design Tricks video](#) (8 mins) and have students discuss [why our attention is so valuable](#) to tech companies.

PARENT, CAREGIVER

Watch the [Thinking Traps video](#) (8 mins). Then, ask which thinking traps they think are most common for kids their age.

Invite your kids to do a [Values Sort](#)! Ask them which values they think are made harder or easier by today's technologies.

PEER-TO-PEER PROGRAM LEADERS, PEER MENTORS

Have teens use the [Tech Check interview guide](#) to interview each other about their tech habits. Then, watch the [Design Tricks video](#), talk about building agency around tech habits, and have everyone work together to create individual tech [habit challenges](#).

SCHOOL SOCIAL WORKER, SCHOOL COUNSELOR²

Check out the [Thinking Traps glossary](#), which pairs cognitive distortions with tech-specific examples. Use it to invite conversation and reflection about young people's individual experiences.

COMMUNITY LEADER, ADMINISTRATOR

Get your group (of adults or teens!) to do a [Dot Vote](#) that connects values to conversations about tech: how are different values supported or undercut by tech?

¹For schools using Multi-Tiered System of Supports (MTSS), these lessons are designed for Tier 1 (universal or primary) support. Pacing guides for [middle](#) and [high school](#) settings highlight each lesson and their related SEL components. While the lessons are designed to work together, they can also be taught in any order or as one-offs. If you have limited time, think about what will connect most with other themes or topics you are exploring with your students and choose based on that.

²Down the line, we plan to co-create versions of resources that are better suited for clinical use. At present, though, the resources are *designed to serve as classroom resources; they are not designed as treatment resources* for adolescents experiencing clinically significant mental health diagnoses. School counselors and mental health providers working with adolescents may choose to use these resources as supplemental aids in the context of a broader toolbox of empirically-supported tools. These resources should not, however, serve as substitutes for clinical care.



INTRODUCTION

YOUNG PEOPLE ARE GROWING UP in a rapidly changing digital ecosystem. At the same time, teens are struggling with their mental health and wellbeing. While we still have much to learn about the relationship between use of technology and mental health, there is a clear need for evidence-based strategies to support teens to manage – and even thrive – online.

We are excited to share a new – and growing – collection of resources and lesson plans that are co-created to support the aim of digital thriving. Specifically, these resources help young people to better understand how the design of technologies may undermine personal agency; to consider their personal values and how tech impacts those values; to spot thinking traps that could negatively impact their mental health; and to develop strategies to facilitate more intentional uses that support well-being.

Two key principles underpin these resources and everything we do at the Center for Digital Thriving:

1. **Young people are critical partners in understanding the problems and designing solutions.** We lean into principles of Participatory Design. We create space so that young people can reflect on and share their experiences. We listen intently to what they say – doing our best to set aside adult assumptions and build on what they tell us, not what we wanted or expected to hear.
2. **There is huge and untapped potential to apply evidence-based behavioral and mental health practices to better support young people in their uses of technology.** Treating digital spaces as separate from “real life” does not align with young people’s use of technology; for them, connectivity is ubiquitous and integrated throughout different facets of their lives. What’s more, negative online experiences are often manifestations or amplifications of issues that have familiar roots in age-old developmental or psychological struggles. This is important because it means we can leverage tried and tested strategies and,

We are a team of psychologists, sociologists, social media scientists, and learning designers, alongside our colleagues at Common Sense Education – and in collaboration with youth and educators.

crucially, can do so with a reasonable level of confidence that the interventions are constructive.

This paper explains the intentions and aims of a growing collection of resources. We outline the practices and research-based insights that inform them, as well as the logic behind our suggested sequencing. We hope this context supports your thoughtful use of the resources, and allows for critical consideration of their goals.

We have seen firsthand¹ that teens are extremely capable of reflecting on their digital lives in nuanced ways. Adolescents benefit from developing skills and mindsets that build digital agency.

¹ Weinstein & James, 2022

We know, too, that many adults want to support youth in the context of tech-related challenges, yet struggle to start these conversations and keep them going in helpful directions. Asking only questions like, “Is tech good or bad?,” “How do we minimize screen time?,” and “How do we avoid risks?” is limiting at a moment when **young people experience tech as both/and:** both beneficial and challenging, energizing and exhausting, sources of connectedness and feelings of loneliness. We hope that these resources will facilitate better conversations about the nuanced ways technology fits into all of our lives.

An important caveat: Although our primary aim with these resources is to support teens' digital well-being, such resources should not supplant concurrent efforts to mobilize broader policy changes directed at technology companies. Individual youth (and their teachers, parents, and healthcare providers) should not be asked to shoulder the burden of correcting problems that are created and reinforced by the very design of these technologies. And yet, we believe there *is* value in bolstering young people's awareness of their relationships with technology, and their agency toward practices that may support well-being.

CONTEXT: TECHNOLOGY AND ADOLESCENT MENTAL HEALTH

THERE IS CLEAR EVIDENCE that many young people are struggling with their mental health. In 2021, nationally representative U.S. data revealed that 44% of adolescents had experienced persistent sadness or hopelessness in the prior year, and nearly one in five seriously considered attempting suicide.² In a notable public advisory in December 2021, the U.S. Surgeon General described such trends as “alarming increases,” and acknowledged that “mental health challenges in children, adolescents, and young people are real, and they are widespread.”³

In 2023, the American Psychological Association (APA) issued its first-ever health advisory, which focused on adolescent social media use.⁴ The U.S. Surgeon General followed with a landmark federal advisory also focused specifically on youth and social media.⁵ The Surgeon General’s report included an oft-cited statement that social media can have “a profound risk of harm to the mental health and well-being of children and adolescents.”⁵ There is indeed evidence that social media may contribute to issues like depression, anxiety, toxic social comparison, sleep problems, body image issues, and disordered eating.^{6, 7, 8, 9} There are legitimate reasons to worry about how persuasive design can lead to habits that undermine youth well-being, too.¹⁰

However, the relationship between technology use and adolescent mental health is more complicated than alarmist headlines tend to suggest. Both the Surgeon General’s and the American Psychological Association’s statements emphasize important benefits social media can have for adolescents – and particularly for marginalized youth. For example: among adolescent girls of color who use TikTok or Instagram, more than 70% report that they encounter positive or identity-affirming content related to race on at least a monthly basis.¹¹ Participating in digital spaces that celebrate Black joy and laughter is a documented means of coping and healing for Black girls.¹² Additionally, emerging evidence suggests that many LGBTQ youth benefit in real ways from the peer connection, identity exploration and management, and social support aspects of

² Jones, et al., 2022

³ Office of the U.S. Surgeon General, 2021

⁴ American Psychological Association, 2023

⁵ Office of the U.S. Surgeon General, 2023

⁶ Alonzo et al., 2021

⁷ Padin et al., 2021

⁸ Fioravanti et al., 2021

⁹ Choukas-Bradley et al., 2023

¹⁰ 5Rights Foundation, 2023

¹¹ Nesi, et al., 2023

¹² Tanksley, 2020

social media.¹³ This may be one reason why social media use appears to be associated with lower mental health problems for transgender and gender non-binary adolescents.¹⁴ These differences – and the meaningful positive benefits accessed by some of our most marginalized youth – are not simply “side notes” in research on youth, technology, and mental health; rather, they are a critical part of the story.

¹³ Berger et al., 2022

¹⁴ Coyne et al., 2023

Meanwhile, there are tech-amplified challenges that impact many youth. And debate continues about whether or not technology is actually to blame for the overarching trends in adolescent mental health. As researchers, we continue to engage with this debate, and with questions about what existing evidence can – and cannot – confirm when so much of the data remains limited by correlational analyses. To be clear: at the Center for Digital Thriving, we recognize both the legitimacy of concerns about social media, as well as the strengths and limitations of available evidence. At the same time, **we do not believe any further evidence is needed to justify better and more intentional efforts to support youth related to the intersections of technology and well-being.**

It is clear that:

- (a) improving adolescent well-being is an essential aim in the current moment,
- (b) technology is a relevant dimension of young people's lives,
- (c) technology can amplify challenges that impact teens' well-being, and
- (d) what is already known about supporting mental health is a pertinent and useful foundation for digital well-being.



TEENS ARE NOT MONOLITHIC

WE KNOW THAT THE RISKS AND OPPORTUNITIES of technology are neither equitably distributed nor always in balance. And the pace of technological change means that we won't fully understand or know all of the risks, even as we are responding to them.¹⁵ Young people also bring to their screen time quite different strengths and vulnerabilities, and their vulnerabilities are amplified by tech – or in some cases mitigated – in a variety of ways. It is likely that risk factors also compound, such that pre-existing vulnerabilities (like a tendency to engage in social comparison) lead to specific social media behaviors that can increase mental health risks (e.g., depression, body image concerns).^{16,17} And yet, it is not simply the case that all vulnerable youth are harmed by technology use, nor that their mental health is made worse by it.¹⁸ Thus, resources designed to support adolescents in their technology use should not assume that young people have a single, universal, or negative experience of “screen time.” And they must create space for the reality that different strategies will be more or less relevant for different youth in different contexts.¹⁹

We are designing with and for these realities: building resources that are seeded by close work with teens and iterated based on their input and feedback – with a core recognition that teens' tech experiences are not monolithic.

Adolescent mental health concerns are complex. Nationally representative data from the U.S. Centers for Disease Control and Prevention (CDC) indicate that more than a third of high school students reported experiencing poor mental health during the COVID-19 pandemic.²⁰ In any classroom setting in which our resources are used, it is likely that some students will be experiencing mental health concerns. Our resources have been co-designed with and for adolescents who may experience a range of mental health concerns, such as depressed mood and anxiety. But the resources are designed (at present) to serve as classroom resources; they are not designed to serve as treatment resources for adolescents experiencing clinically significant mental health diagnoses, such as major depressive disorder.

¹⁵ Vallor, 2016

¹⁶ Kleemans et al., 2018

¹⁷ Nesi & Prinstein, 2015

¹⁸ Valkenburg & Peter, 2013

¹⁹ Hamilton et al., 2022

²⁰ Centers for Disease Control and Prevention, 2022

LEVERAGING WELL-ESTABLISHED PRACTICES FOR NEW CHALLENGES

A KEY PREMISE OF THE NEW RESOURCES and corresponding lesson plans is that there is a genuine opportunity to connect evidence-based behavioral and mental health practices to tech-relevant pain points experienced by youth.

Some researchers have already urged the integration of tech-related issues into well-established, evidence-based programs. Sociologist David Finkelhor and his colleagues²¹ wrote specifically about internet safety programs: rather than constantly “reinventing the wheel” and creating wholly new programs or approaches, they argued there is value in identifying existing evidence-based interventions (e.g., related to bullying or sexual abuse prevention) and considering how they might be adapted to incorporate issues raised by new technologies.

²¹ Finkelhor et al., 2020

We see considerable potential in adapting this same concept for digital well-being. And connections between tech-related challenges and existing, evidence-based interventions are not hard to find. TO PROVIDE JUST ONE EXAMPLE: in our own research, we repeatedly heard youth describe how technology can amplify feelings of anxiety in social situations – like when they are left “on Read” and they know their text message has been delivered and seen, but their friend has not yet replied.¹ We started to see how the path to anxious feelings was often paved by unhelpful, automatic thoughts like, “she must be mad at me” or “he must not want to be my friend anymore.”

¹ Weinstein & James, 2022

In **COGNITIVE BEHAVIORAL THERAPY** (CBT), this kind of negative, automatic thought pattern is called a **COGNITIVE DISTORTION** – and the patterns of problematic thinking that give rise to these thoughts are sometimes called **THINKING TRAPS**. “She must be mad at me” exemplifies a specific thinking trap – **MINDREADING** – where we assume we know what someone else is thinking and that it is negative. Other thinking traps are similarly relevant to teens’ tech-related stresses. “Everyone I follow on Instagram is happier than me” is an example of the **ALL OR NOTHING** thinking

trap, and “I should get more likes” is an example of **SHOULD**s, which are unhelpful beliefs about what we “should” or “should not” feel or be like.

Our **THINKING TRAPS** resources thus apply CBT strategies to help youth identify and avoid thinking traps relevant to digital scenarios. These are practices that have demonstrated impact for reducing anxiety, depressive symptoms, and other mental health concerns common during adolescence.^{22, 23, 24, 25, 26}

The aim of digital thriving requires that we focus on minimizing tech experiences that contribute to ill-being *as well as* maximizing those that support well-being.

Below we describe the intentions behind and methodology used to develop an initial set of resources, all of which follow the same core approach: **looking to existing practices within the realm of mental and behavioral health and connecting them directly to technology-related issues.**

Our **CENTERING VALUES** resources feature values sorting, which encourages positive self-understanding and clarification of one's core values. We build on values exploration with critical consideration of how tech supports and/or undercuts different values. Our **NOTICING DESIGN TRICKS** lay a foundation for informed and conscious tech use by making visible people's psychological tendencies, but also the broader system of economic incentives that motivate tech companies to exploit those tendencies. Our **TACKLING TECH HABITS** resources draw on insights from habit science to help teens take stock of their tech habits and design personal challenges that disrupt unwanted habits and create new ones. The habits resources reflect a recognition that teens *can* use technology in ways that fundamentally support their well-being.

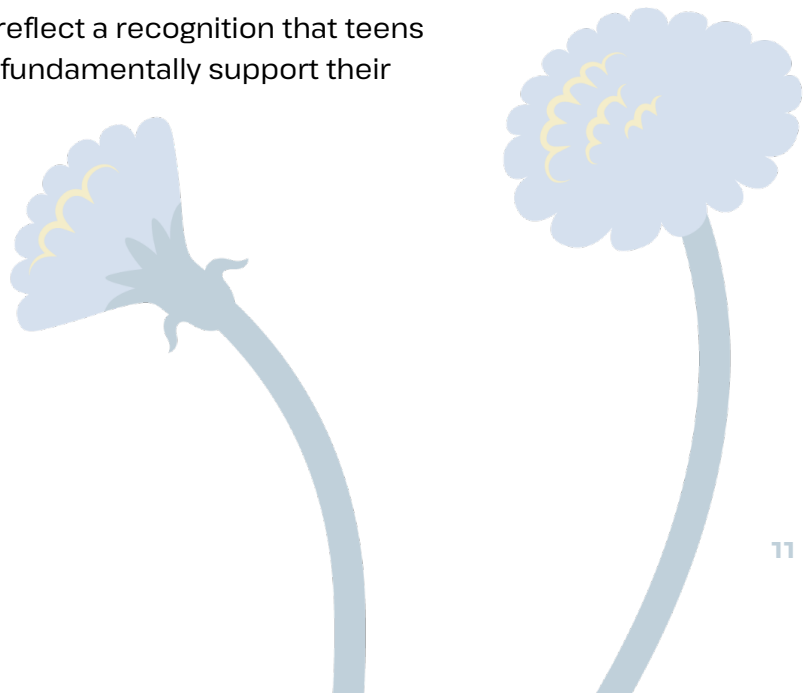
22 Blake et al., 2017

23 Oud et al., 2019

24 Spirito et al., 2011

25 Christ et al., 2020

26 Wickersham et al., 2022



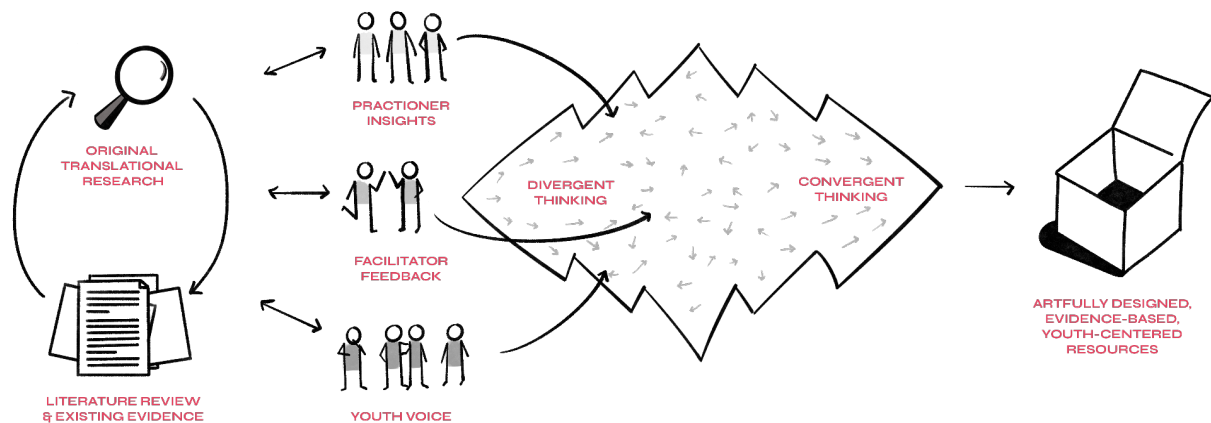
CO-DESIGNING RESOURCES: A PARTICIPATORY APPROACH

OUR RESOURCE DEVELOPMENT PROCESS is guided by the methods of **PARTICIPATORY DESIGN**, which actively includes the intended users as key partners and drivers of the design process.²⁷ Participatory design aligns with our values and the overall spirit of our research: providing a way for us to partner with teens and support them in having greater agency over their digital lives.

²⁷ Bødker & Kyng, 2018

Figure No. 1

A sketch of our design process.



Practically, our design process follows four main phases: **INSPIRATION, IDEATION, ITERATION, and INTEGRATION.**²⁸ These phases are cyclical and ongoing. Inspiration, in our case, comes from listening closely to youth.²⁹ The initial versions of these resources were co-designed and piloted across three different youth advisory boards, seven classrooms, and an out-of-school program. These youth were aged 12-18, predominantly from minoritized populations, and located in states across the US. We run surveys, conduct interviews, and convene participatory design workshops that engage teens in conversations and design activities about their digital well-being. We engage in ideation by responding to teens' perspectives with low-fidelity prototypes of activities and resources and then inviting them to tinker with or wholly re-imagine the prototypes. In tandem, we draw on existing literature to deepen and expand ideas. Iteration typically involves co-design work over several sessions until, together, we have a

²⁸ IDEO, 2015

²⁹ We strive to reach a diverse group of youth in our surveys, youth advisory council, interviews, and school pilot studies.

MINIMUM VIABLE PRODUCT (MVP) to vet further. In the integration phase, we collect input from educators, psychologists, and learning design experts. We extend the resources for preliminary piloting in classrooms and other youth programs. Finally, we publish resources so they can be freely used (and – as needed – changed!) by people in different communities and contexts.

Even after resources are published, our design process remains “open.” We assess, iterate, and revise resources as we learn more about how a given resource is used and how it could be improved.

ABOUT THE APPROACHES

BROADLY, THE RESOURCES co-created by our teams at the Center of Digital Thriving and Common Sense Education are all intended to:

- * facilitate better connections and conversations between caring adults and youth, as well as youth and their peers;
- * motivate and facilitate opportunities to think critically about current technologies;
- * build agency and mindfulness about tech habits and patterns;
- * support well-being and reduce unhelpful and anxious thoughts that can be activated or amplified by tech use

The following sections describe how we draw on evidence-based insights and practices from clinical science and behavioral health in resources for **CENTERING VALUES**, **NOTICING DESIGN TRICKS**, **STEERING CLEAR OF THINKING TRAPS**, and **TACKLING TECH HABITS**.

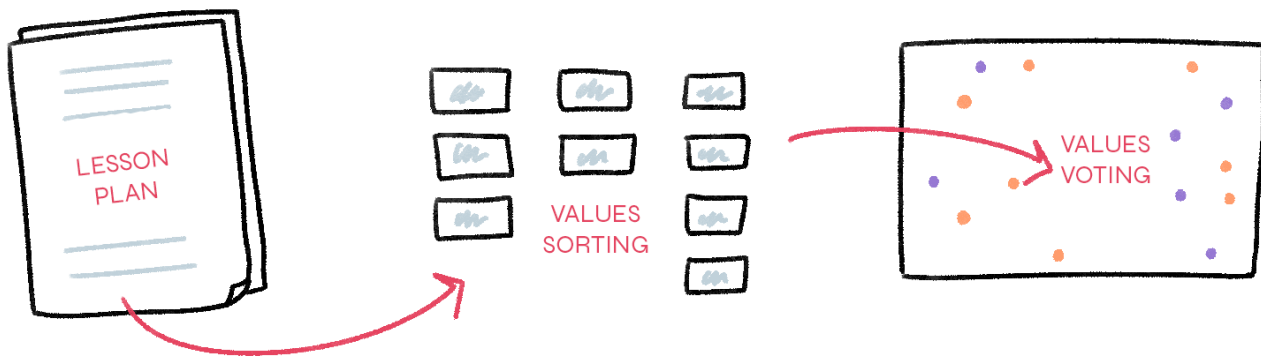


CENTERING VALUES

INTENTIONS

We designed the **CENTERING VALUES** resources to:

- (1) help adolescents consider, clarify, and affirm their values;
- (2) facilitate critical reflection on how values can be supported or undercut by today's technologies; and
- (3) begin motivating values-aligned behavior change related to tech use.



RESOURCES

The **CENTERING VALUES** resources start with a signature [VALUES SORTING](#) activity that invites youth to reflect on their own values and identify values that are most important to them right now. We suggest sorting values individually as a precursor to thinking with others about how technologies support and/or comprise different values. For those in a group setting, we suggest [VALUES VOTING](#) as an engaging way to visualize collective wisdom and spark discussion about connections to tech.

The [MY VALUES & TECH LESSON PLAN](#) integrates these resources in a 45-minute classroom sequence designed for use in middle and high school settings. The lesson plan includes teaching facilitation notes, a link to readily usable slides, and printable handouts.

INSPIRATION

Our **VALUES SORTING** activity is designed to facilitate **VALUES AFFIRMATION**, a robust, evidence-based intervention that helps individuals actively reflect on their core values. Values affirmation is linked to a multitude of positive outcomes across personal health, education, and social relationships.³⁰ These methods are used in evidence-based therapies like **ACCEPTANCE AND COMMITMENT THERAPY** and **MOTIVATIONAL INTERVIEWING**. They help people identify their most important values (for example: **CONNECTION, BALANCE, JUSTICE**) and support values-aligned choices in their own lives, as well as empathetic and prosocial behavior toward others.³⁰

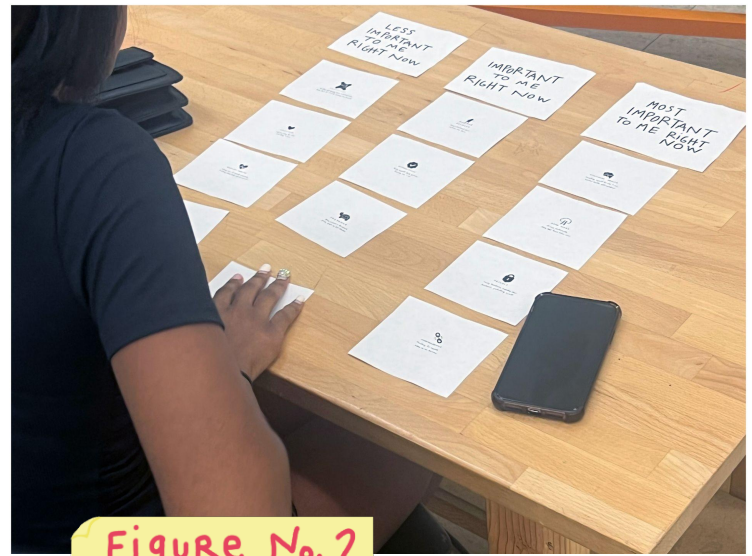


Figure No. 2
An example of values sorting in a 2022 workshop with youth.

³⁰ Cohen & Sherman, 2014

We expect our values sorting activity to help adolescents to (1) clarify their most important values and (2) reflect on how digital tech positively and negatively impacts those values, thereby (3) encouraging self-reflection and discussion that will help increase agency around tech.

Values sorts can be done with many different collections of values. Ours was compiled through a review of existing values activities^{31, 32, 33, 34, 35} and then edited and adapted in consultation with youth, psychologists, educators, and learning designers to align with social, developmental, and technological experiences.

³¹ Miller et al., 2001

³² Miller et al., 2011

³³ DNAV.international, 2023

³⁴ Harris, 2010

³⁵ Harris, 2021

Our values sort currently includes the following 14 values:

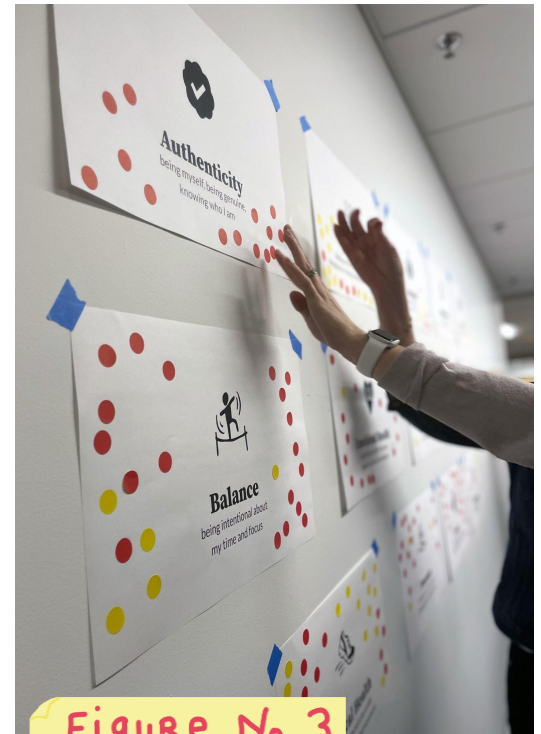
- | | |
|----------------------|----------------------|
| (1) AUTHENTICITY | (8) JUSTICE |
| (2) BALANCE | (9) KINDNESS |
| (3) CONNECTION | (10) OPEN-MINDEDNESS |
| (4) EMOTIONAL HEALTH | (11) PHYSICAL HEALTH |
| (5) GRATITUDE | (12) PRESENCE |
| (6) HARD WORK | (13) PRIVACY |
| (7) INDEPENDENCE | (14) SPIRITUALITY |

We designed the **VALUES VOTING** activity using the approach of dot voting (a method where participants place dots on preferred options to showcase collective preferences).³⁶ We ask teens to visualize their answers to the following two questions:

- * What values does tech *help* you live?
- * What values does tech make *harder* to live?

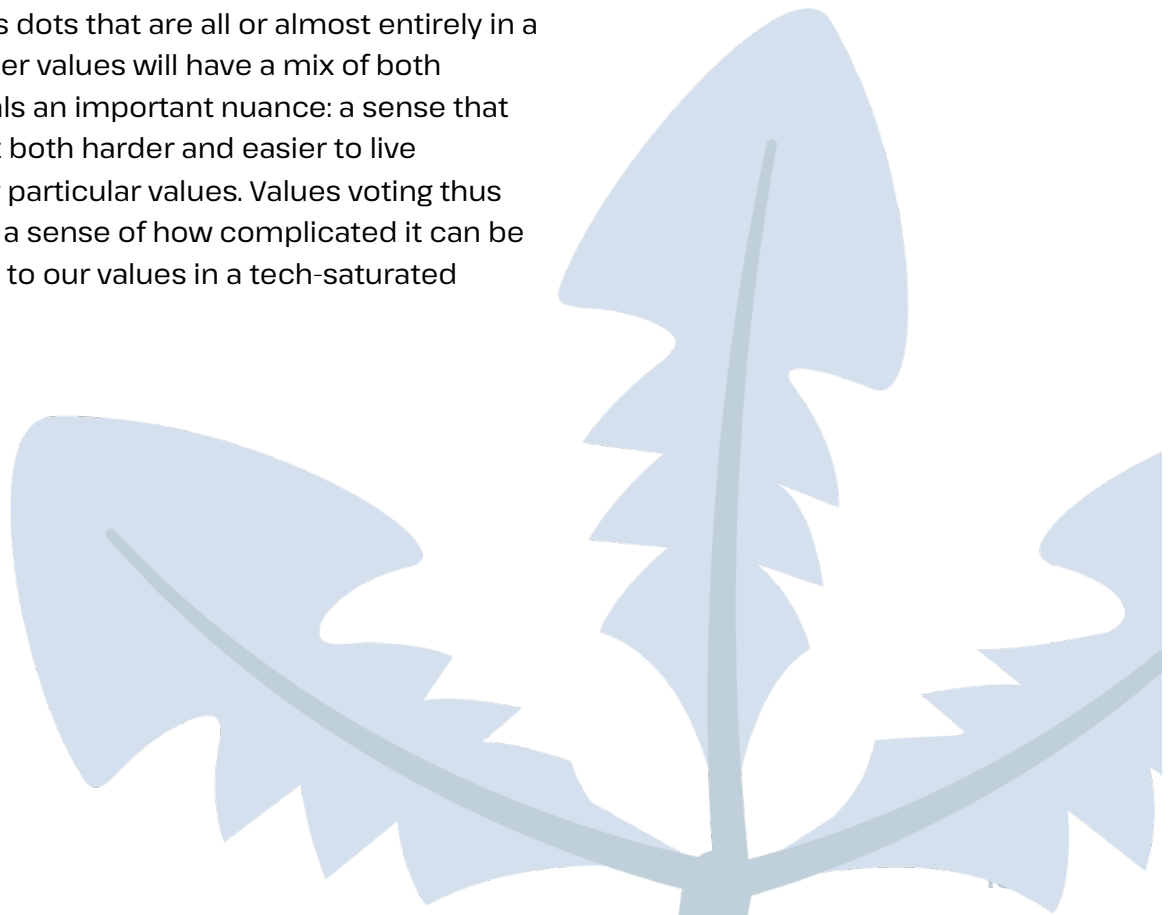
Each teen places on the values posters five “dots” in response to the first question and then five dots *of a different color* in response to the second question. These dots can be applied with markers, though we especially like using stickers (which you can see in Figure No. 3).

Dot voting is an efficient and engaging method for visualizing the collective preferences and inclinations of a group. Some values will have a majority of “technology helps” dots, while others will receive a majority of “technology hurts” dots (this is evident when a value has dots that are all or almost entirely in a single color). Other values will have a mix of both colors. This signals an important nuance: a sense that tech can make it both harder and easier to live according to our particular values. Values voting thus quickly provides a sense of how complicated it can be to live according to our values in a tech-saturated world.



Values voting in a 2023 workshop with educators.

³⁶ Gray, 2010



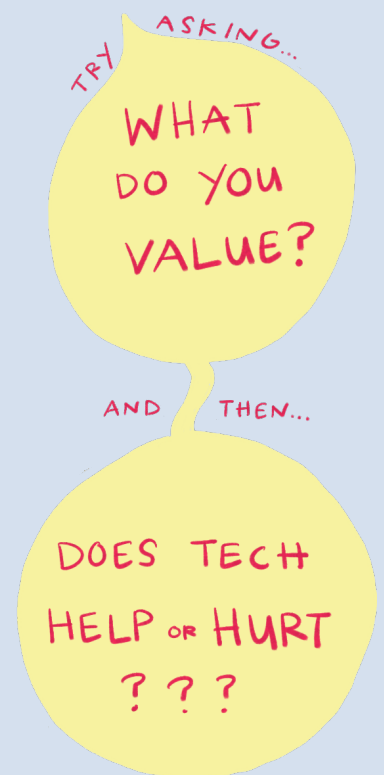
OUR PROCESS IN PRACTICE

TO OFFER MORE INSIGHT into how our resource development process plays out, here is a description of the co-creation process for the **MY VALUES & TECH** lesson and related resources.

Why did our team decide to include resources with a focus on values? Adults often have an impulse to start conversations about “digital well-being” with a focus on the *technology*. Such conversations center questions like: What is TikTok doing to teens’ mental health? Why are teens using Instagram in a particular way? How much screen time is okay versus problematic?

But in our team’s work with youth, we’ve found that some of the most interesting conversations about technology and well-being begin with a more general focus: on what they value, who they are, and what they’re facing – and *then* how tech intersects.³⁷ We also know from decades of existing research on youth development that identity formation is a core focus for adolescents. Emphasizing positive aspects of one’s identities and values supports this key developmental task. And, there is compelling evidence from a recent randomized controlled trial with 2,733 U.S. high school students: Anchoring conversations about technology use in **VALUES** (e.g., **JUSTICE, AUTONOMY**) appears to significantly motivate behavioral change related to tech use – above and beyond traditional approaches like focusing on long-term risks of digital tech, listing the benefits of reduced screen time, and providing related self-control strategies.³⁸

We examined existing “values sort” resources and compiled a starting list of 140+ potential values. We then worked to prune the list for our own values sort. Our goal was to create a manageable collection of 10-15 values that are (1) developmentally appropriate for adolescents, (2) linked with well-being, (3) relevant to digital tech use, and (4) likely to spark interesting reflection and discussion appropriate for a classroom context. From preexisting sets of values card sorts, we avoided including values that were geared toward adults (e.g., values related to marriage and monogamy), as well as values potentially linked with poor well-being (e.g., we decided not to include values related to fame, as the desire for fame has previously been linked with unstable self-esteem³⁹ among young adults and we did not want this particular



³⁷ Weinstein, E., Davis, K., & James, C. (Forthcoming)

³⁸ Galla et al., 2021

³⁹ Noser & Zeigler-Hill, 2014

activity to scaffold self-identification with it).

We went on to develop and refine definitions and illustrations for each value in consultation with youth and educators. As we piloted the activity, we also modified the values further based on feedback. For example: **SPIRITUALITY** was not in our initial values sort collection, but a group of teens from the Digital Harbor Foundation in Baltimore championed its inclusion. Several educators who were part of the co-design process also highlighted the importance of adding a **BLANK** card so that teens can add any values they want to sort that aren't already included.

We also experimented alongside youth with different sorting methods – for example: organizing an equal number of values into “most important to me,” “important to me,” and “least important to me” categories; organizing values as a pyramid; selecting one’s top three values. We learned that adding the phrase “right now” (as in: “most important to me *right now*”) was key because it signaled that values can ebb and flow in their importance at different points in time.

We then worked closely with our colleagues at [Common Sense Education](#) – experts in digital citizenship education and curriculum development – to co-develop a full lesson plan that integrates these resources. Our Common Sense colleagues brought expertise on making resources relevant and useful across a range of learning contexts. Together, we iterated instructions and sequencing to support implementation. We also streamlined the lesson and tinkered further with the values sort, adding **KINDNESS** as a featured value and refining illustrations of the fourteen values to be more universally recognizable.

We are certain that we will continue to learn how we can improve the **MY VALUES & TECH** lesson, and the resources it features (particularly **VALUES SORTING** and **VALUES VOTING**). This is true of other resources described below, too.

At the same time, we are excited to share our current working versions of resources with the public **in the spirit of catalyzing conversations about tech that help adults move beyond a limited focus on screen time and toward effectively supporting youths' digital thriving**.



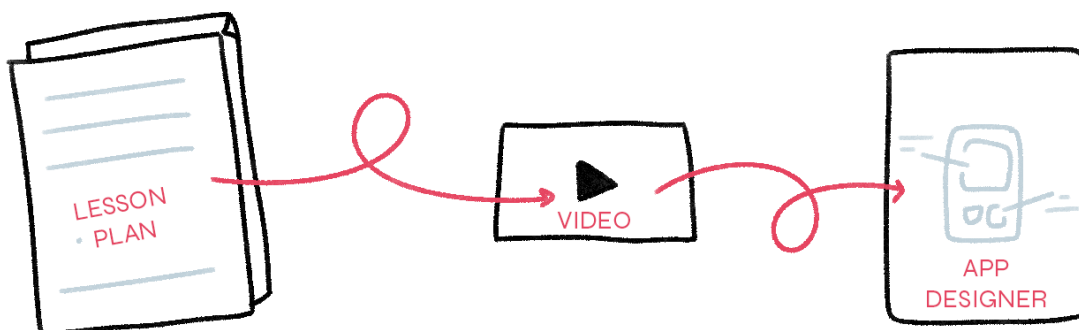


NOTICING DESIGN TRICKS

INTENTIONS

We developed the **DESIGN TRICKS** resources to support adolescents' digital literacy and help teens:

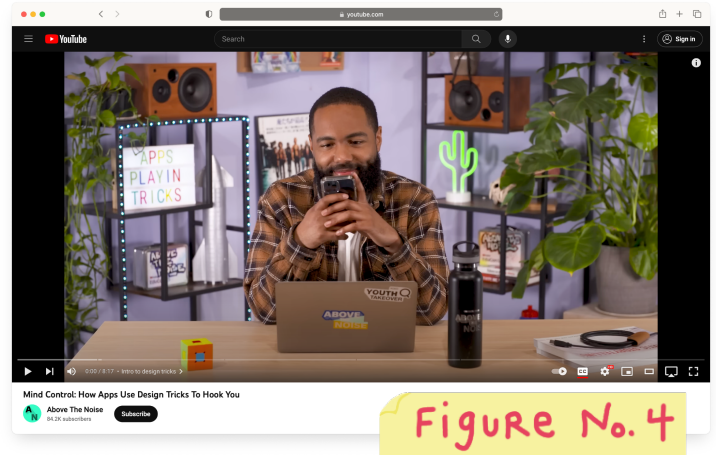
- (1) understand that technologies are *designed*, and design choices are not neutral,
- (2) recognize that many technologies are designed to capture and sustain our attention to generate revenue as part of the "attention economy,"
- (3) identify common design tricks and how they attract and hold attention, and
- (4) motivate teens to re-examine their personal tech habits.



RESOURCES

The **DESIGN TRICKS** resources engage teens in thinking about how technologies are *products* designed to capture our interest, hold our attention, and keep us coming back for more. The [MIND CONTROL VIDEO](#), co-created and produced by the education team at KQED with Common Sense, highlights examples of some common design tricks used by tech companies.

In **APP DESIGNER**, teens put themselves in the shoes of a tech designer as they consider how different aims – for example, designing for engagement vs. designing for well-being – can lead to different decisions. For example, a designer focused on users' well-being might remove features such as likes, auto-play, and infinite scroll. Yet the designer may see these same features as essential if their aim was to optimize for users' attention.



A screenshot of the “Mind Control” video with Above the Noise host, Myles Best.

The [DESIGN TRICKS LESSON PLAN](#) integrates the aforementioned resources in a 45-minute classroom sequence for use in high school settings. The lesson plan documents include facilitation notes, a video viewing guide, slides, and printable handouts.

INSPIRATION

The **ATTENTION ECONOMY** is a core idea in these resources: many tech companies make money based on how much time and attention people spend using their products.^{40, 41} This motivates companies to use design features that are geared toward encouraging users to keep scrolling, tapping, and posting.^{42, 43} Children and teens can be especially susceptible to such designs.

THE RIGHT TO INFORMED AND CONSCIOUS USE – one of five distinct rights delineated in the [5Rights Framework](#)⁴⁴ – means that young people have a fundamental right to know that the internet is actively designed to hold their attention. And, they have a right to know that their attention is a currency. The **MIND CONTROL VIDEO** introduces students to the attention economy, and to design tricks that are commonly used to attract and sustain attention. Students learn about how tech companies exploit psychological vulnerabilities through the power of **VARIABLE REWARDS** (unpredictable rewards that encourage repeated behaviors)⁴⁵ and by systematically removing natural **STOPPING CUES** (signals or triggers that naturally invite a pause-point or end to an activity).⁴⁶

- 40** Thorngate, 1988
- 41** Davenport & Beck, 2000
- 42** Fogg 2002
- 43** Eyal 2014

- 44** The 5Rights Framework:
 - The Right to **Remove**
 - The Right to **Know**
 - The Right to **Safety and Support**
 - The Right to **Informed and Conscious Use**
 - The Right to **Digital Literacy**

- 45** Ferster & Skinner, 1957
- 46** Alter, 2017

In the **APP DESIGNER** activity, teens first create an app to be as engaging as possible. This puts them in the mindset of a tech designer who is working hard to capture attention – as so many tech designers really are. Then, after learning about design tricks, they are tasked with redesigning the app with a focus on well-being.

The **DESIGN TRICKS** resources are designed to leverage the desire for autonomy and free will (which is especially salient during adolescence). They expose how and why tech companies want people to keep spending time using their products. The resources are grounded in evidence from a study which found that adolescents felt more motivated to regulate their social media habits after a brief exposé on the tactics tech companies use to hook teen users.³⁸

38 Galla et al., 2021

The design tricks resources (as well as the **MY TECH + VALUES** resources) also tap into a psychological phenomenon called cognitive dissonance, which is at play when a behavior (e.g., mindless scrolling) does not align with our attitudes or values (e.g., wanting to be intentional and autonomous over one's time and decisions). Noticing cognitive dissonance is uncomfortable, but because it raises awareness about mismatches between our behaviors and values, it can motivate behavior change.⁴⁷

47 Brehm, 2007

More broadly, these resources are keyed to longstanding aims of media literacy education, which focuses on equipping young people with skills and knowledge to engage with media in ways that protect them from risks while empowering them to leverage benefits.⁴⁸ Building literacy about attention and design tricks is a relevant focus in today's digital world.

48 Hobbs, 2017



STEERING CLEAR OF THINKING TRAPS

INTENTIONS

We created resources on **THINKING TRAPS** to help students:

- (1) learn about thinking traps and how they can impact us while using tech,
- (2) identify and label common thinking traps,
- (3) challenge negative thoughts, and
- (4) practice coming up with alternative ways of thinking that can help support more positive self-talk and, in turn, more protective reactions and behaviors.

RESOURCES

The **THINKING TRAPS** resources directly target unhelpful and/or anxious thoughts that can be amplified for teens as they interact through texting and social media.⁴⁹ Our [THINKING TRAPS GLOSSARY](#) ⁴⁹ provides an overview of **THINKING TRAPS** – otherwise known as “thinking errors” or “cognitive distortions” – alongside examples that showcase how each trap can come up in the context of tech use. The [HOW YOUR BRAIN TRICKS YOU VIDEO](#) ⁴⁹, co-created and produced by the education team at KQED, showcases several traps alongside insights from a clinical psychologist who explains how thinking traps can contribute to negative emotions. The [THINKING TRAPS DOT VOTE](#) ⁴⁹ facilitates direct connections to technology use. And the [MINDSHIFT GAME](#) ⁴⁹ walks teens through naming a thinking trap, identifying an example thought, and actively practicing skills for cognitive restructuring (i.e., challenging the negative thought).

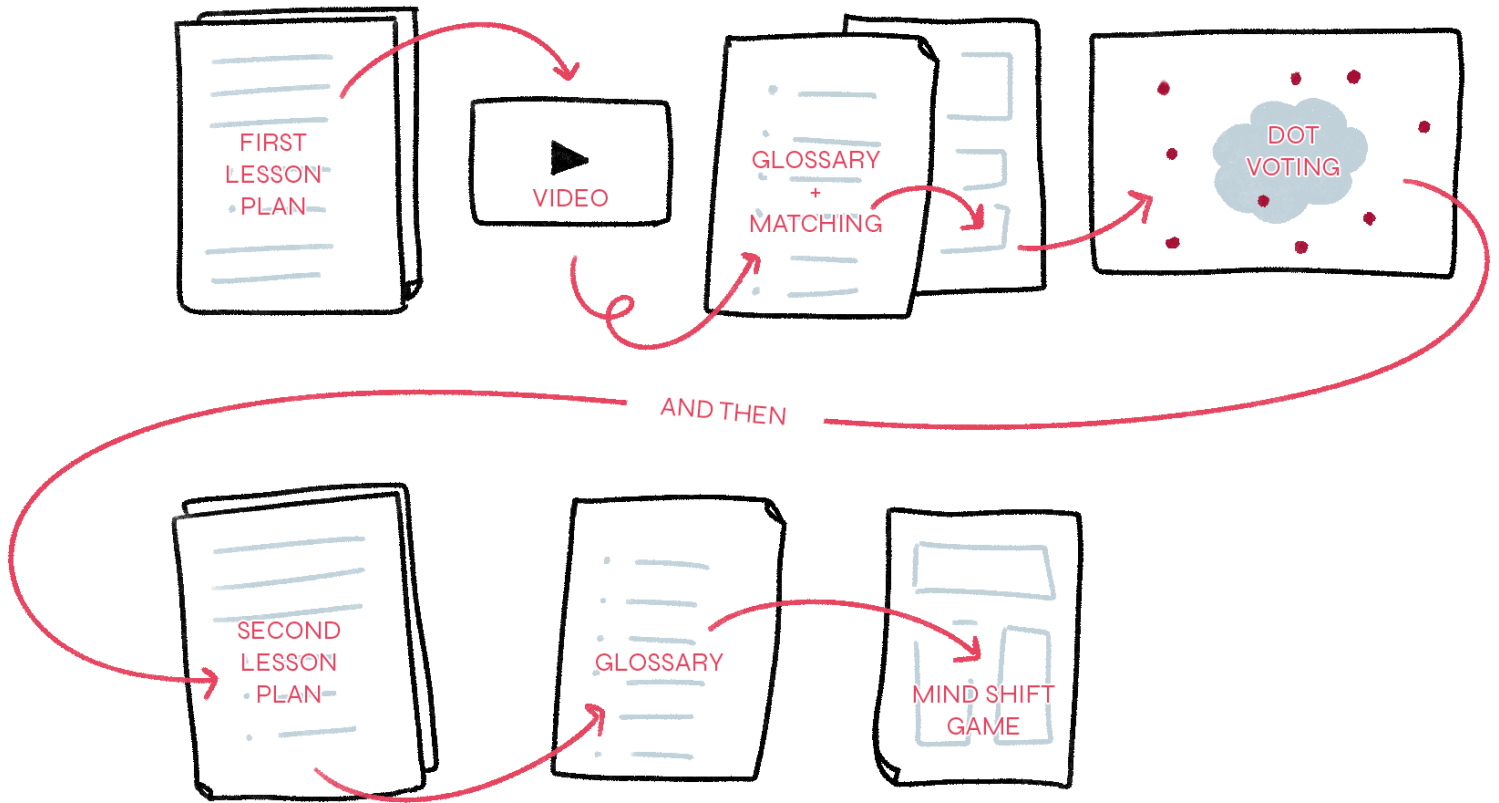
Two lessons – [IDENTIFYING THINKING TRAPS](#) ⁴⁹ and **CHALLENGING NEGATIVE THOUGHTS**⁵⁰ – integrate the aforementioned resources

49 A BRIEF, BUT IMPORTANT ASIDE:

It bears mentioning that structural issues in clinical science are important to consider in the context of the evidence-based psychotherapy approaches (e.g., CBT, ACT) we discuss here. For example, there are legitimate concerns about insufficient diversity (e.g., racial, ethnic diversity) among research participants in studies that contribute to the evidence base, as well as among psychological scientists themselves. (Bernard et al., 2023; Buchanan & Wiklund, 2020; Shedler, 2018)

50 To be released late 2023.

into two 45-minute classroom sequences designed for use in middle and high school settings. These lesson plans include facilitation notes, a video viewing guide, slides, and printable handouts.



INSPIRATION

Thinking traps are common but distorted patterns of thinking that can influence self-talk and impact behavior. The ways we use social media and digital technologies are ripe for pulling us into thinking traps.

Learning to identify thinking traps is a core component of **COGNITIVE BEHAVIORAL THERAPY** (CBT). Spotting thinking errors when they occur – and, eventually, knowing how to challenge them – can help to reduce negative emotions (e.g., sadness and anxiety) and prevent problematic behaviors.^{51, 23, 52}

Thinking errors can lead to **NEGATIVE AUTOMATIC THOUGHTS**: thoughts that pop up in our minds throughout the day, which may not be true and/or may not be helpful to us.⁵³ According to

⁵¹ Fortune & Goodie, 2012

²³ Oud et al., 2019

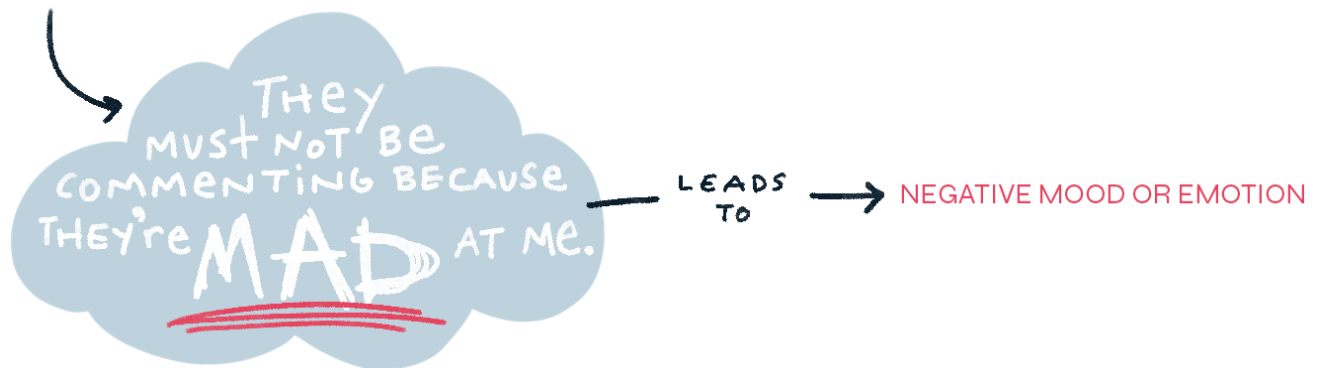
⁵² Shirk et al., 2013

⁵³ Beck, 2020

cognitive models of depression and anxiety, negative automatic thoughts are a key contributor to unpleasant emotions and, in turn, maladaptive behaviors.⁵³ For example, an adolescent who is waiting for a friend to comment on their social media post might have the thought, “They must not be commenting because they’re mad at me,” which can lead to feeling *upset* or *anxious*.

53 Beck, 2020

NEGATIVE AUTOMATIC THOUGHT



These feelings can in turn fuel behaviors like withdrawing, ruminating, or even repeatedly reaching out to friends for reassurance (which can lead to a “self-fulfilling prophecy” in which friends indeed become annoyed)!

During adolescence, key social-cognitive developments create conditions ripe for sensitivity to thinking traps: Peers are extremely important for adolescents' self-esteem, well-being, and mental health, and evidence from developmental neuroscience indicates that adolescents' brains are *especially* sensitive to peer feedback and social rewards.^{54, 55, 56} Many adolescents also experience the **IMAGINARY AUDIENCE**, believing they are the unique focus of their peers' attention.⁵⁷ In today's social media-infused world, the imaginary audience isn't always imaginary.⁵⁸ What's more, the **FEATURES OF SOCIAL MEDIA**, such as its absence of interpersonal cues, its publicness, and its 24/7 availability, may create a perfect storm for thinking traps. The ways people share on many social media apps likely contribute, as well, since the skew toward positive self-presentation can contribute to a sense that “everyone is happier than me.”

54 Kilford et al., 2016

55 Sherman et al., 2016

56 Albert et al., 2013

57 Elkind, 1967

58 Choukas-Bradley et al., 2019

Indeed, many of the unhelpful thoughts teens describe related to using social media exemplify common thinking traps (e.g., “all my friends on social media have cooler lives”; “I should get more likes”; “everyone is more attractive than me”; “if I’m left ‘on Read,’ I must have done something wrong”).¹ There is also a fairly robust evidence base that suggests negative comparison-related thoughts (e.g., “everyone is happier than me”; “everyone has more friends”) pave the way to negative emotions and other unwanted outcomes from social media use, like depressive symptoms and body image concerns.^{59, 60}

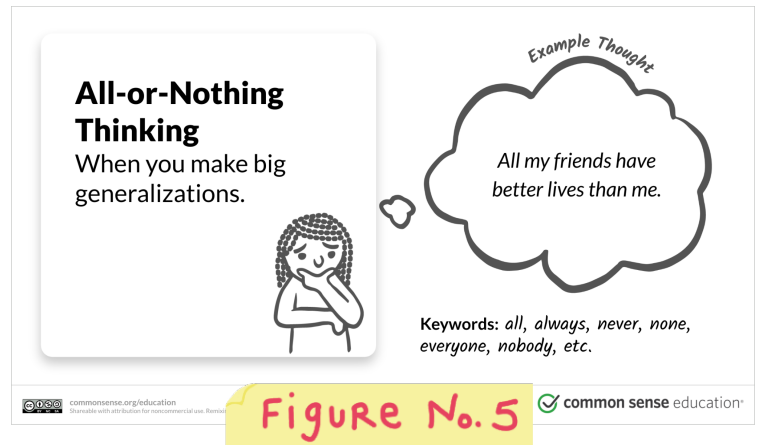
¹ Weinstein & James, 2022

⁵⁹ Choukas-Bradley et al., 2022

⁶⁰ Verduyn et al., 2020

Our thinking traps resources are designed to help teens learn to identify and disrupt negative automatic thought patterns. The specific traps included in our **THINKING TRAPS GLOSSARY** have been adapted from various CBT lists in circulation. We emphasize thinking errors that adolescents may find especially relevant to their experiences with technology and social media:

- (1) **MIND-READING**
- (2) **LABELING**
- (3) **ALL OR NOTHING THINKING**
- (4) **PERSONALIZING**
- (5) **NEGATIVE FILTER**
- (6) **FORTUNE-TELLING**
- (7) **SHOULD**S



A classroom poster featuring the trap, “All or Nothing Thinking.”

Depending on the developmental and cultural needs of specific groups of students, some of these traps may be more or less relevant.

The **MINDSHIFT GAME** helps teens practice generating positive and/or neutral alternative thoughts. This is a method clinicians use to challenge cognitive distortions,⁵³ and it is adapted in our resources for broader use.

⁵³ Beck, 2020

In the **CHALLENGING NEGATIVE THOUGHTS LESSON PLAN**,⁵⁰ teens also practice coming up with **ALTERNATIVE WAYS OF THINKING**. This practice can support more positive self-talk, emotions, and behaviors. Examples of commonly used questions to help generate more balanced thoughts include:

50 To be released late 2023.

- * "What would I tell a friend who's having this thought?"
- * "Even if the thought is true, will this situation still matter a month from now? How about a year from now?"
- * "If I imagine myself a month from now looking back on this situation, what would I say to myself?"
- * "Even if there's some evidence for my thought, is there an alternative thought that's more helpful (in improving my mood and/or guiding me toward positive action)?"

By teaching teens to ask themselves these kinds of questions, we aim to support their digital well-being and directly address the toll of negative automatic thought patterns that may be reinforced or amplified by tech use.



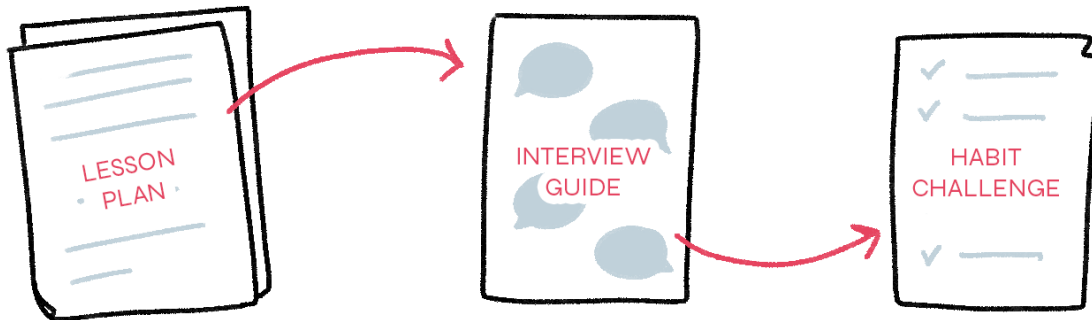
INTENTIONS

We designed the **TECH HABITS** resources to help students:

- (1) think about tech use through the lens of "habits";
- (2) reflect on their own tech habits (both positive and negative) and build motivation for making positive changes;
- (3) recognize that tech habits can be changed – and develop a personal challenge that allows them to experiment with doing so.

The **INTERVIEW** approach is also intended to help students:

- (4) connect with others through conversations that can foster a sense of support and validation, while allowing them to practice active listening skills.



RESOURCES

The **TECH HABITS** resources invite teens to critically examine their tech habits, and then to design an individual challenge so they can experiment with personally meaningful changes. The [TECH CHECK: INTERVIEW GUIDE](#) structures peer-to-peer conversations where students reflect together on tech use and current habits, including those that serve them well and those they might want to change. The [TECH CHECK: HABIT CHALLENGE](#) then helps teens formalize a plan for habit changes. If the learning context allows, we encourage educators to have students track their experience trying out a personal challenge over a week or even a few days. Brief daily reflections can be shared aloud with a peer or through class discussion; written as “journal entries” posted to a course site or submitted via online survey; or documented as a mini vlog or video (e.g., using an app like Flipgrid).

The [TECH HABITS LESSON PLAN](#) integrates the aforementioned resources into a classroom sequence (designed for use in a 45-minute high school setting, or in a modified 40-minute version for middle school). The lesson plan documents include teaching facilitation notes, readily usable slides, and printable handouts.

INSPIRATION

Research increasingly supports the necessity of expanding conversations about tech use beyond a simplistic focus on “screen time” alone.^{61,62,19} By adopting the frame of **TECH HABITS**, we set teens up to consider their everyday uses of technology, and especially how different tech habits support or undercut their well-being and personal goals. Framing conversations around tech habits also naturally tees up conversations about habit *change*.

HABITS are like automatic routines.⁶³ They matter because they guide what we do every day, and together they shape who we are and how we live. Current theoretical models in habit science propose that strong habits are more powerful than motivation; in other words, even if we *want* to do something differently, we are inclined toward our existing habit because strong habits happen without conscious thought.^{64,65} This is not to say that motivation doesn't matter, but rather that **our habits shape our everyday actions**, even if we intend to act differently.

In the case of tech habits, we may *want* to spend less time on our phones before bed, but fail to realize this intention because our habit is triggered by a **CUE** like plugging in our phone within arm's reach, climbing into bed, and reaching for the phone to turn on a morning alarm. Consider that months (or even years) of repeatedly going from *setting the alarm* to, say, *opening a social media app* has reinforced this association. Thus, the path to scrolling social media in bed is actually initiated as soon as our usual pre-bed routine begins.

Of course, habits can also be changed. In health sciences, **HABIT-FOCUSED INTERVENTIONS** can be especially valuable for health outcomes that depend on *repeating* a particular behavior rather than doing it just once (i.e., the benefits of exercising stem from doing it regularly, rather than going on a run one single time).⁶⁵ Because screens are such an ingrained component of everyday life, this same logic is important when we think about tech behaviors. Many of today's apps and devices are designed for **FRICTIONLESS** experiences that encourage mindless use;¹⁰ with the tech habits resources, we scaffold a shift to mindful digital engagement by helping teens *recognize* and *think critically* about these frictionless experiences and how they shape personal tech

61 Charmaraman et al., 2021

62 Granic et al., 2020

19 Hamilton et al., 2022

63 Rüniger & Wood, 2015

64 Gardner, 2015

65 Gardner et al., 2019

10 5Rights Foundation, 2023

habits. We want teens to learn that they can make changes to recurring tech habits that aren't serving their well-being.

The **TECH HABIT: INTERVIEW GUIDE** invites teens to think with a peer about tech use through the lens of “habits,” to reflect on their own tech habits, and to build motivation for making adaptive changes. The design of the interview guide is loosely based on **MOTIVATIONAL INTERVIEWING**.⁶⁶ In motivational interviewing, the interviewer asks questions that are designed to help the individual identify specific behaviors they'd like to change, and then build motivation to make that change by elaborating on reasons for doing so.

66 Miller & Rose, 2009

The peer-to-peer interview approach is inspired by evidence that peer interventions can be especially impactful during adolescence.^{67,68,69} We also see this resource as an opportunity to build some of the “face-to-face” active listening skills that adults often worry are undercut by frequent digital interactions. As a bonus, we've found that teens can feel validated by hearing that others also struggle with various aspects of digital life. It may seem obvious that managing the pull of the screen can be challenging, but it isn't always – especially when social media apps tend to skew toward positive sharing. The interview format can afford these benefits.

67 McHale et al., 2022

68 Naar-King et al., 2009

69 Prinstein & Dodge, 2008

The **TECH CHECK: HABIT CHALLENGE** then walks students through the process of formalizing a personal challenge to change something about their tech habits. Evidence from research on health behaviors suggests the power of a two-pronged approach: (1) breaking unhelpful habits *while also* (2) establishing new, helpful habits.⁷⁰ Furthermore, evidence from Motivational Interviewing suggests that creating a specific change plan can be beneficial for changing habits and anticipating barriers to change.⁷¹ The Habit Challenge thus invites students to identify an existing tech habit they want to change *and then* to envision the details of a new “substitute” habit. Prompts leverage the idea of **ENVIRONMENTAL REENGINEERING** (i.e., changing our physical settings in ways that support desired behaviors) by inviting students to think about adding or removing **FRICTION** to support habit changes.⁷⁰

70 Wood & Neal, 2016

71 Lundahl & Burke, 2009

The **TECH HABITS** resources specifically leverage a number of insights from habit research, including the value of:

- **INTENTION:** Setting a clear goal
- **IMPORTANCE:** Defining for one's self why a particular habit change is important and/or how it would be personally meaningful to make a change
- **CUES:** Knowing what prompts the typical habit and triggers one's usual habit "loop" or process
- **ALTERNATIVES/SUBSTITUTION:** Making an explicit plan for what one will do *instead* of their usual habit
- **BARRIERS:** Identifying barriers to change and creating a plan to address them;
- **FRICTION:** Identifying "tricks" that can help add or remove friction so that unwanted habits are harder (and done less automatically), while wanted habits are easier
- **COMMITMENT:** strengthening commitment to change through elaboration on reasons and motivations for doing so
- And **ACCOUNTABILITY:** Sharing plans with others - and involving others as helpers to stay accountable



INSIGHTS

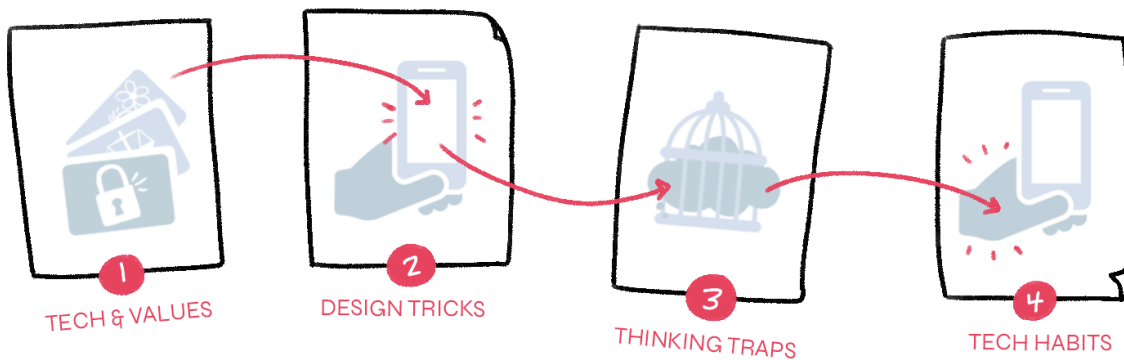
It can be hard to change habits unless we're intentional about it. Our tech habits resources aim to support students in reimagining their digital habits and experimenting with "personal challenges" to build intentional habits and a broader sense of agency.

IMPLEMENTATION GUIDANCE

THESE RESOURCES CAN BE USED in a variety of ways. Educators and administrators have shared that the lesson plans align well with their social-emotional learning (SEL) programs, and they can fit smoothly into advisory and homeroom periods, as well as courses on Health, Social Studies, English, Computer Science, Psychology, and/or school library programs. We also recommend

that schools consider how these topics can align with school-wide initiatives and programs that are already in place.

If you are an educator and you have the time to teach all four lessons, we recommend teaching them in a relatively short time period to facilitate connection(s) from one lesson to the next. For schools using Multi-Tiered System of Supports (MTSS), **these lessons are designed for Tier 1 (universal or primary) support.** Pacing guides for [middle](#) and [high school](#) settings highlight each lesson and their related SEL components. While the lessons are designed to work together, they can also be taught in any order or as one-offs. If you have limited time, think about what will connect most with other themes or topics you are exploring with your students and choose based on that.



RECOMMENDED SEQUENCE

Start with **MY VALUES & TECH**, which facilitates self-reflection and bridges personal values with tech use. Once teens have reflected on their own values, use the **DESIGN TRICKS** lesson to talk about what many tech companies value, especially money and profit, and how the attention economy motivates those companies to use design tricks that encourage continued tech use, even at the expense of a user's well-being. The design tricks lesson segues nicely into **THINKING TRAPS** because technologies are also designed in ways that can amplify negative thoughts. Learning how to identify and challenge such thinking traps can therefore be especially relevant in the age of social media. With values, tricks, and traps in tow, teens are well-poised to do the higher-level work of **TECH HABITS**: reflecting on their personal habits and hatching a plan to reimagine habits in ways that support their well-being.

CONCLUSION

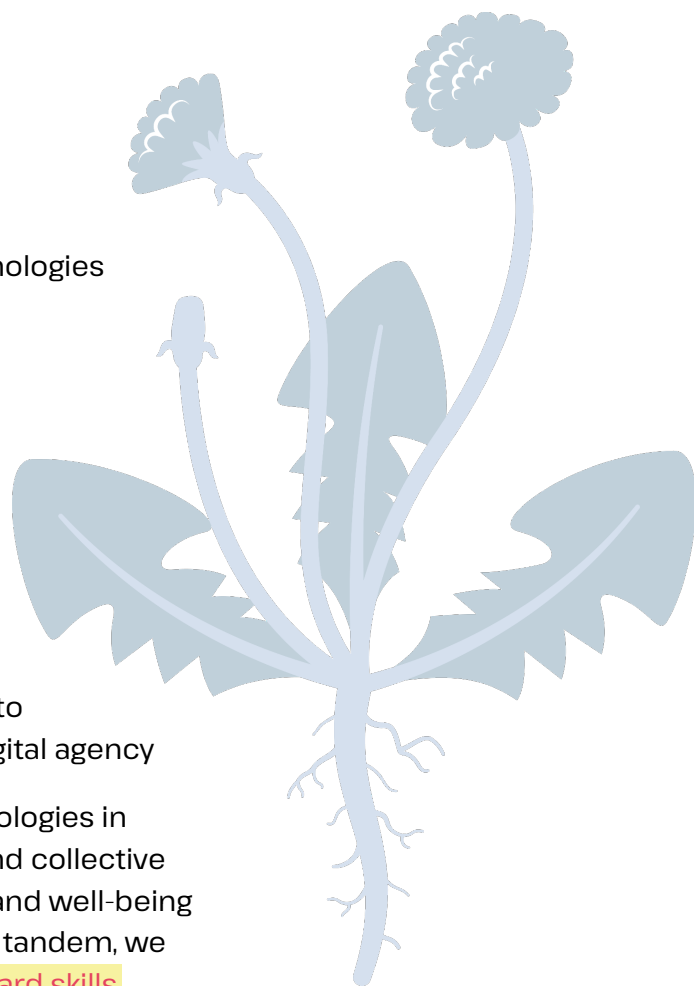
Thriving with today's technologies – and the technologies of tomorrow – is unlikely to happen by accident.

- * It's easy to use our devices for longer than we intend
- * Social media can intersect with and amplify personal vulnerabilities
- * There are genuine benefits of today's digital technologies
- * Youth need skills, strategies, and literacies to overcome challenges and support their digital agency

Technology companies can, and do, design technologies in ways that either support or undercut individual and collective thriving. Pushing for designs that support agency and well-being – especially for young people – is essential. But in tandem, we must advocate for an immediate public **pivot toward skills, inclinations, and conditions that support digital thriving**. We must ask: How can we enhance well-being in a technology-filled era? How can we double-down on relevant curricula and activities that support youth well-being?

We know that exposure to a single lesson on values or thinking traps can't possibly "fix" all that is hard for teens about growing up in today's radically connected world. Even multiple lessons, artfully taught, won't be a panacea. But we believe deeply in the value of teaching for digital thriving. That's why we are co-creating resources to productively reframe essential conversations about living with contemporary technologies. We're excited about leveraging evidence-based insights to bolster skills that support well-being at a time when teen mental health is in peril.

We believe that it's possible to make meaningful strides for youth digital well-being by leveraging established practices from mental health and behavioral science: practices that have demonstrated impact for reducing anxious thoughts, increasing mindfulness,



and improving everyday habits, as well as bolstering a positive sense of self and well-being. Adapting and transforming such practices into widely-usable resources and classroom-friendly lessons also represents a concerted effort to support the democratization of mental health supports that we believe all students deserve. We're encouraged by research on the positive potential of single-session interventions for youth mental health.^{72,73}

72 Schleider & Weisz, 2017

WHAT'S NEXT? We hope you will explore these resources and approaches with young people and experience a new kind of conversation about tech – one that is simultaneously critical and optimistic. We also hope you'll try out future resources as we co-create them, and learn alongside us as we strive together toward digital thriving.

73 Our resources already include several of "B.E.S.T." elements outlined for clinical single-session interventions (see Schleider et al., 2020 for elaboration), e.g., insights from psychological science to help normalize concepts, empowering and positioning youth as experts in a variety of ways, and creating occasions for youth to be in the role of advice-givers to solidify their learning. And we're working on how to integrate and bolster additional elements in classroom settings, too.

For our team, this work is nowhere near done. In the immediate future, we're focused on expanding our resource offerings to include other promising approaches, as well as evaluating and revising the approaches described above. We're already working on adaptations for family engagement, too. Though we draw on a number of evidence-based practices, there are so many more that hold promise for supporting digital well-being. We also recognize the need for further evidence about what supports digital well-being and what doesn't, when, why, how, and for whom.

We are excited to contribute to this needed body of work in the coming years. Above all, we believe deeply in young people – and we believe that thriving *is possible in a tech-filled world*. We hope you do, too.



ABOUT THE AUTHORS

EMILY WEINSTEIN, Ed.D., is co-founder and Executive Director of the Center for Digital Thriving at the Harvard Graduate School of Education. She is a psychologist, a Principal Investigator at Project Zero, and a lecturer at the Harvard Graduate School of Education where she teaches about the intersection of adolescence and social technologies. With Carrie James, she wrote the book *Behind Their Screens: What Teens Are Facing (And Adults are Missing)*. Her research appears in a range of academic journals, including *New Media & Society*, *Journal of Adolescence*, and *JAMA*. She is also a mom of two young children.

BECK TENCH, Ph.D., is a wife, daughter, friend, dog mom, kind stranger, designer, and researcher at the Center for Digital Thriving. Her work focuses on helping us live better lives with technology, and she uses participatory design to co-create resources that foster connection, cultivate wisdom, and support digital agency. Beck graduated with her Ph.D. in Information Science at the University of Washington. Before graduate school, she was an experience designer in science museums.

SOPHIA CHOUKAS-BRADLEY, Ph.D., is the Clinical Psychology Lead at the Center for Digital Thriving and an Assistant Professor of Psychology at the University of Pittsburgh. She is the director of the Teen and Young Adult Lab, which conducts research on adolescent development and mental health, with an emphasis on social media use. As a researcher, licensed clinical psychologist, and educator, she teaches undergraduate and graduate courses on adolescent development, provides clinical supervision, and regularly speaks and writes about adolescent social media use and mental health.

CARRIE JAMES, Ph.D. is co-founder and Managing Director of the Center for Digital Thriving. Carrie is a sociologist and longtime researcher; she is also currently Co-Director of Project Zero. Carrie's work focuses on young people's digital experiences, including opportunities and challenges for their well-being, social connections, and civic lives. With Emily Weinstein, Carrie is co-author of the book, *Behind Their Screens: What Teens are Facing (and Adults are Missing)*, which details compelling insights from thousands of teens. She also wrote *Disconnected: Youth, New Media, and the Ethics Gap*. Carrie is a parent to two technology-loving children, ages 13 and 18.

EISHA BUCH is an educator and curriculum developer, focused on helping young people thrive in a digital world. She is the Director of Education Programs at Common Sense, overseeing their K-12 Digital Citizenship Program. Eisha is one of the principal architects of the Curriculum and brings deep experience in crafting research-based educational content, interactive games, and comprehensive programs to ensure the digital well-being of all students.

JACQUELINE NESI, Ph.D. is an Assistant Professor at Brown University and a clinical psychologist who studies the role of social media in adolescents' mental health and development. Jackie's widely-cited research has been funded by organizations like the National Institute for Mental Health (NIMH), the National Institute of Child Health and Human Development (NICHD), the National Science Foundation (NSF), and the American Foundation for Suicide Prevention (AFSP). She writes the popular newsletter *Techno Sapiens*.

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Digital thriving is an all hands on deck vision. We need:

- * **FAMILIES** having conversations about tech that are rooted in empathy for young people, that are grounded in our values, and that are calibrated around coaching (versus just refereeing screen time);
- * **TEACHERS** bringing into every classroom lessons that build digital agency and prepare youth to thrive in a tech-filled world. Equipping students to think critically and align their tech habits with their values and well-being;
- * **POLICYMAKERS** making decisions that are anchored in research and youth voice. And creating policies that account for both the upsides and downsides of tech, as well as the unique experiences of different youth;
- * **HEALTHCARE PROVIDERS** understanding how tech can intersect with different health challenges. Attending directly to the ways tech can amplify different challenges or provide meaningful supports;
- * **TECH CREATORS** designing with youth well-being at the fore of design decisions; partnering with researchers to understand more, and committing to action that prioritizes thriving over clicks and profits.

Thank you to everyone who is already doing this work in earnest; we know we are not the only ones.

Those who are excited about the ideas in this report might also be interested in exploring:

- * [Design it for Us](#) ↘
- * [The Connected Well-being Initiative](#) ↘
- * [Cooney Center Sandbox](#) ↘
- * [GoodforMEdia](#) ↘
- * [ySKILLS consortium](#) ↘
- * [TechnoSapiens](#) ↘
- * [Wellesley's Digital Well-Being Workshops](#) ↘
- * [American Academy of Pediatrics Center of Excellence on Social Media and Youth Mental Health](#) ↘

(We know this list is incomplete; please feel free to share other ideas for inclusion in future versions of this report. You can reach us at digitalthriving@gse.harvard.edu.)

Make no mistake: every reader of this report is positioned to support digital thriving. And we are all needed for its success. Thank you for reading.

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