

**SCREEN TECHNOLOGIES CHANGE,
CHILDREN'S DEVELOPMENTAL NEEDS DO NOT:**

***Tools and Strategies
for Prioritizing Healthy Development
Across Early Learning Environments***



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GOALS

- Consider our current screenscape and identify common screen myths.
- Define screen awareness and examine the Screen Aware Framework and four foundational principles for screen aware practices and decision making.
- Explore key screen aware topics in relation to child developmental needs and outcomes.
- Introduce research-based resources to identify strategies for practicing and promoting screen awareness across a variety of early learning environments including home, classroom, child care, and public settings.

**Recognize technology as
tool and reality in daily
lives and educational
practices**

**Screen technology in and
of itself is not good or bad**

No judgment zone

**No guilt, shaming or
blaming**





NAVIGATING THE SCREENSCAPE



NAVIGATING THE SCREENSCAPE

When preparing for baby, parents consider how to feed and bathe them, how to create healthy sleep patterns, how to sense when their child might be ill.



Screen use and impacts rarely arise despite the fact that...

...a full 80% of brain development occurs in the first 3 years of life.



Serve & Return

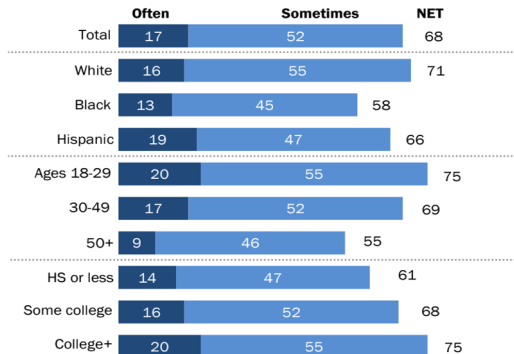
Relationships with
caring adults
literally build a
child's brain
architecture.



68 % of parents shared that they sometimes feel distracted by their phone when spending time with their kids, with 17 % saying this happens often.

68% of parents say they at least sometimes feel distracted by their phone when spending time with their kids

% of U.S. parents who say they ___ feel distracted by their smartphone while they are spending time with their children ...



Note: Based on parents who have at least one child under the age of 18 but may also have an adult child or children. This item was only asked among those who use a smartphone but is presented here among all parents. White and Black adults include those who report being only one race and are not Hispanic. Hispanics are of any race. Those who did not give an answer or who gave other responses are not shown.

Source: Survey of U.S. adults conducted March 2-15, 2020.

"Parenting Children in the Age of Screens"

PEW RESEARCH CENTER



NAVIGATING THE SCREENSCAPE

Two-thirds of parents in the U.S. say parenting is harder today than it was 20 years ago, citing digital technology and social media as the reason.

A majority of parents today say parenting is harder today than two decades ago, with many citing technology as a reason why

% of U.S. parents who say that for most parents, parenting is ...



NAVIGATING THE SCREENSCAPE

Parents get their screen time advice from doctors, peers, **and teachers.**

They ever get **parenting advice or information** about screen time from ...



*Pew Research Center, July 2020

NAVIGATING THE SCREENSCAPE

- **Early childhood practitioners are essential**
- **Trusted professionals**
- **In relationship with both parents and children**





NAVIGATING THE SCREENSCAPE

Common Questions:

How do we prepare children to understand and navigate screen technologies?

How do we know what is beneficial and what is not?

How do we keep screen use manageable, useful, and safe?

How do we stay informed of the possibilities and potential harms?

How do we engage and educate others?

How do we address conflicting messages and competing priorities?

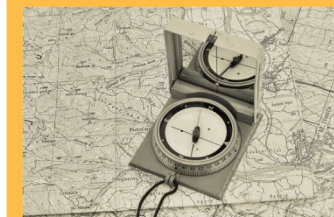
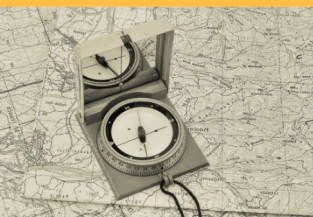
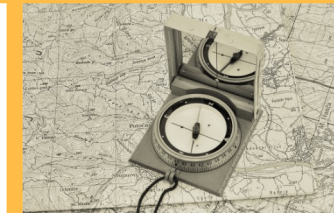
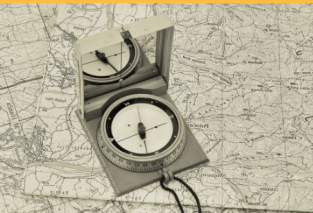
WHY SCREEN AWARE?



THE SCREEN AWARE FRAMEWORK



THE SCREEN AWARE FRAMEWORK



DEVELOPMENTALLY-CENTERED

STRENGTHS-BASED

RESEARCH-INFORMED



PROTECTIVE



GUIDING PRINCIPLE # 1

DEVELOPMENTALLY-CENTERED

THE SCREEN AWARE FRAMEWORK

DEVELOPMENTALLY-CENTERED

- ❖ Draw from existing expertise
- ❖ Prioritize the hands-on experiences and complex relationships that are central to early learning and development
- ❖ Limit the use of screens for outsourcing important tasks and activities related to teaching and learning



THE SCREEN AWARE FRAMEWORK



THE SCREEN AWARE FRAMEWORK

DEVELOPMENTALLY-CENTERED

- ➔ Is a screen really required for this activity?
- ➔ Does screen use achieve an outcome that would not be possible without it?
- ➔ Could this task or activity be better carried out with concrete objects or materials?
- ➔ Which is more active, the technology or the child?
- ➔ Which is more active, the technology or the educator?
- ➔ Could this choice make children more dependent on screens or introduce other vulnerabilities?

THE SCREEN AWARE FRAMEWORK





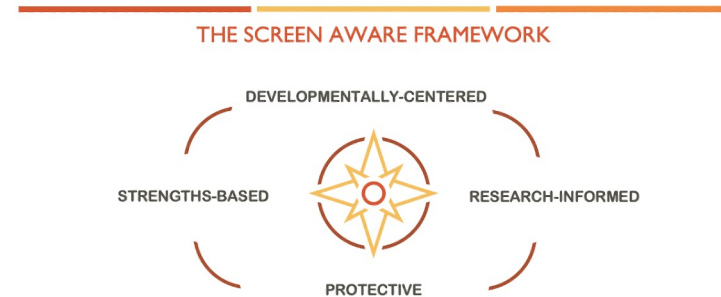
GUIDING PRINCIPLE # 2

RESEARCH-INFORMED

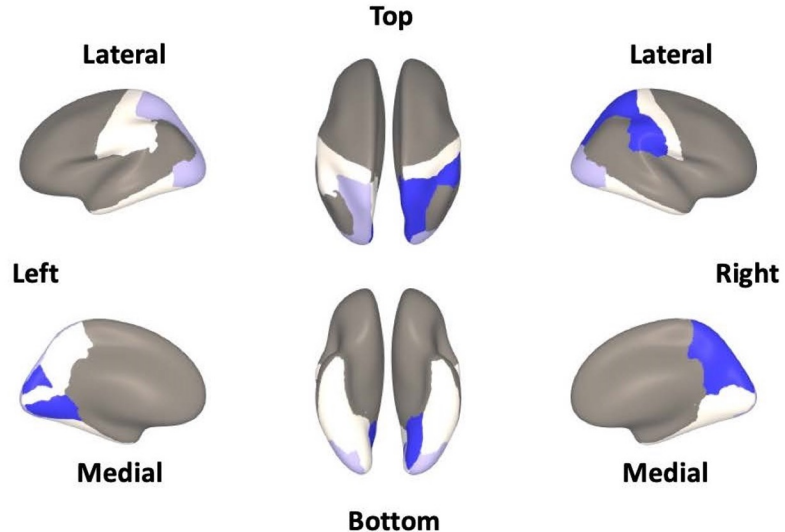
THE SCREEN AWARE FRAMEWORK

RESEARCH-INFORMED

- Understand vulnerabilities
- Identify protective factors
- Promote healthy outcomes
- Implement effective practices



Study of children ages 3 to 5 suggests that digital media use (“screen time”) impacts development of brain areas responsible for visual processing, empathy, attention, complex memory and early reading skills



Lower cortical thickness (blue) associated with higher ScreenQ score

Dr. John S. Hutton, MD, MS; Cincinnati Children’s Hospital

Hutton, J.S., Dudley, J., DeWitt, T. *et al.* Associations between digital media use and brain surface structural measures in preschool-aged children. *Sci Rep* **12**, 19095 (2022). <https://doi.org/10.1038/s41598-022-20922-0>

THE SCREEN AWARE FRAMEWORK RESEARCH-INFORMED

Screen Aware Early Childhood Action Kit References

Sheet 1: Learning and Development

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2. Center on the Developing Child at Harvard University. (2015, March). Executive function and self-regulation. <https://developingchild.harvard.edu/science/key-concepts/executive-function/>.
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Sheet 2: Impacts

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2. Barr, R., McClure, E., & Paklarian, R. (2018). Screen sense: What the research says about the impact of media on children aged 0-3 years old. *Zero to Three*. <https://www.zerotothree.org/resources/screen-sense-what-the-research-says-about-the-impact-of-media-on-children-aged-0-3-years-old/>.
3. Center on the Developing Child at Harvard University. (2011). Building the brain's "air traffic control" system: How early experiences shape the development of executive function. Working Paper No. 11. <https://developingchild.harvard.edu/resources/building-the-brains-air-traffic-control-system-how-early-experiences-shape-the-development-of-executive-function/>.
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GUIDING PRINCIPLE # 3

PROTECTIVE

THE SCREEN AWARE FRAMEWORK

PROTECTIVE

- Establish policies on screen use
- Communicate and model use
- Set boundaries for children
- Promote play and outdoor time



THE SCREEN AWARE FRAMEWORK



THE SCREEN AWARE FRAMEWORK

PROTECTIVE

Establish boundaries for use:

Why is it used?

When is it used?

How is it used?

Build screen awareness with children:

Who made this message?

What purpose was it made for?

How was it made?

Who was it made for?



GUIDING PRINCIPLE # 4

STRENGTHS-BASED

THE SCREEN AWARE FRAMEWORK

STRENGTHS-BASED

- Shift away from focusing on deficits.
- Move towards building new understandings and growth.
- Use existing strengths to develop new skills.



THE SCREEN AWARE FRAMEWORK



THE SCREEN AWARE FRAMEWORK

STRENGTHS-BASED

Screen awareness acknowledges the diverse strengths, perspectives, experiences, and understandings that individuals, families, and colleagues bring to their engagement with screen technologies.





SCREEN AWARE early childhood

action kit

SCREEN AWARE EARLY CHILDHOOD ACTION KIT

OBJECTIVES

Guidance for prioritizing healthy child development in a screen saturated world

Strategies for managing screen use (for children and adults)

Research-based information on impacts of screen technologies

Resources for promoting screen awareness at home and in the classroom

SCREEN AWARE EARLY CHILDHOOD ACTION KIT

AUDIENCES

- Families
- Early childhood educators (across settings & practices)
- Child and family service providers (across settings & practices)

SCREEN AWARE EARLY CHILDHOOD ACTION KIT

10 FACT & ACTION SHEETS

- Early Learning and Development
- Impacts
- Relationships and Technoference
- Advertising and Media Literacy
- Outdoor Time & Nature
- In the Home
- In the Classroom
- Digital Privacy at Home
- Digital Privacy in the Classroom: Practitioners
- Digital Privacy in the Classroom: Families

CONTENT

ADDITIONAL RESOURCES

- Printable signs
- Customizable letter templates
- Promotional material

IMPACTS

Screen awareness helps prioritize the developmental needs and wellbeing of young children amid many confusing and misleading messages about screen-based technologies.

What's wrong with screens?



Screen technologies can be effective tools for communication, organization, and learning for older children, teens, and adults but there is little evidence that screen use has benefits for babies, toddlers, and young children.^{1,2}

Many apps and other screen-based programs are designed to capture and hold children's attention, which can result in overuse, behavior challenges, and exposure to harmful advertising.³

Why be screen aware?



Children's development

Research shows that the brains of infants and toddlers are not wired to learn from two-dimensional screens and that heavy exposure to screen media disrupts physical, social, and language development. Early tech use is associated with executive function challenges (the capacity to initiate and complete tasks). While some evidence indicates that preschoolers may learn from well-designed, developmentally-appropriate screen media, most apps and programs categorized as "educational" have no evidence to support that claim. They also take time away from real-world experiences proven to be educational for young children.^{4,5,7,8}

continued on next page

Scan or
click for
full Screen
Aware Kit



Scan or click for
research references
and recommended
reading!



An Early Childhood Work Group Project

LEAD AUTHORS: Mindy Holohan, MA, CFLE and Patricia Cantor, EdD



IMPACTS

continued from previous page



Children's relationships

Screen use—by both children and adults—can interfere with the development of attachment between kids and their caregivers. Screens can distract adults, draw their attention away from children, and reduce the quality and amount of engagement and responsiveness that are the earliest foundations for attachment, trust, and self-regulation. Beginning in infancy, talking to children and responding to their vocalizations, (called serve-and-return interactions), are essential for children's brain development, as well as their acquisition of speech and language.^{2,12,16}



Children's desires, behaviors, and habits

The creation of digital content that manipulates human behaviors, neurological (brain) functioning, and beliefs is referred to as "persuasive design."

Apps and programming that use persuasive design to manipulate children's attention, attitudes, and desires threaten healthy development. They also undermine children's ability to entertain themselves by promoting dependency on external entertainment and stimulation. (Many creative ideas grow out of boredom)

Researchers, educators, mental health professionals, and many in the technology sector are raising alarms about technologies that exploit children's developing brains for profit and that reinforce neural pathways associated with addiction.^{5,8}



Children's eyesight, speech, sleep, and physical activity

Children are spending more and more time with screen media—at home, in care settings, and in classrooms. All that time adds up fast and takes away from activities that promote healthy development such as movement, play, exploration, and social interactions.

More time on screens (and less time outdoors) has been linked to greater risk for nearsightedness and other eye ailments. The blue light emitted from screens interferes with children's sleep, which contributes to behavioral problems, anxiety issues, academic struggles, and a wide range of health issues. Early smartphone and tablet use is associated with speech delays. Children who spend more time with screens are more likely to be sedentary and are at heightened risk for obesity.^{2,6,7,8,13,14,15,17,18}

Scan or
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Aware Kit



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An Early Childhood Work Group Project

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RELATIONSHIPS & TECHNOFERENCE



Trust, responsiveness, and communication form the foundation of human relationships. Researchers use the term **“technoference”** to describe how technology can get in the way of crucial interpersonal relations and engagement.

Evidence suggests that screen use presents serious challenges for adults as well as kids.

According to research¹ from Zero to Three:

Parent technology use gets in the way of talking and connecting with kids.

Heavy technology use by parents is associated with lower-quality parent-child interactions.

Parent technology use means that kids act out more to try and get our attention.

Heavy technology use by parents is also associated with more reports of challenging child behavior

Parent technology interrupts our time with children.

Half of surveyed parents say that technology interrupts parent-child interactions at least three times a day. 50% of surveyed children agreed that their parents check their phones too much, and 36% say their parents get distracted by their phones during conversations.

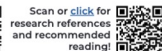
Technology use can make it harder to parent as a team.

More technology use by parents is associated with less cooperation between them on child-rearing issues.

Screen awareness supports adult-child connections!



Scan or [click](#) for full Screen Aware Kit!



Scan or [click](#) for research references and recommended reading!



Technoference disrupts important interactions between adults and children and can cause children to feel confused, frustrated, sad, and resentful. It can also interrupt important bonding and attachment experiences, leading children to feel a lack of safety and security.^{2,3,4,7}



Check out the back of this page for tips on reducing technoference and enhancing adult-child relationships!

RELATIONSHIPS & TECHNOFERENCE

Key practices for reducing technoference and strengthening connections

1. **Make screen-free parent/child time every day.** Small doses of attention make big impacts!
2. **Put devices away when not actively using them.** Reduce unnecessary distractions/interruptions.
3. **Be a media role model.** Children learn best from watching adults balance screen time.

Relationship-boosting activities

Reading a book, playing games (peek-a-boo, chase, etc) or doing puzzles with your child.

Tip: Use this opportunity to mix up positions: on your lap, cuddled up next to you, or on bellies face-to-face.

Singing together and using hand motions.

Tip: Fun song choices include “Twinkle, Twinkle”, “Itsy Bitsy Spider”, “Head, Shoulders, Knees and Toes”, and “Wheels on the Bus”

Taking a walk.

Tip: Make it a treasure hunt and ask them to look for beautiful things. Or count things – like red cars, birds, different kinds of flowers, etc.

Sitting together when eating meals.

Tip: Letting your child feed you and feeding your child can make meals more interactive and fun!

Teaming up on chores.

Tip: Doing chores together (cleaning, cooking, petcare, raking leaves, etc.) creates bonding opportunities, gives children a sense of accomplishment, and gets them in the habit of helping.

Relationship-boosting habits

Getting down to their level. Kneel down or raise them up so you are face-to-face.

Picking them up when you can. Young children are held far less than they used to be because of the strollers, bouncers, car seats/carriers, etc. Children learn to self-soothe with support from adults. They need a loving parent/caregiver to develop this ability.

Keeping routines. Let them know ahead of time if there will be any changes. This helps young children know what to expect and rely on you.

Narrating what you’re doing on your screen and sharing when you’ll be done. This helps children learn that technology is a tool used for specific purposes and that they are not being ignored. For example, “I have to respond to this text and then we’ll get a snack.”

Putting down your screens when children are present. Screen-based distractions can cause you to miss your child’s cues and bids for interaction. For children to feel connected and safe, they need to see your face and recognize that you are responding to them.



ADVERTISING & MEDIA LITERACY

Managing the impacts of advertising on children is a challenge. Stealth marketing is everywhere!

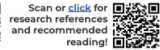
Did you know?

- 1 Young children cannot distinguish between advertising and app/program content. This distinction is even more difficult when advertising is disguised as content, a common practice in children's entertainment.^{1,4}
- 2 Advertisers work to expose children to brands as early as possible, encouraging them to influence adults' purchasing decisions through nagging and attachment to branded characters.^{5,11}
- 3 Researchers have found that children as young as two can recognize brands. (Marketers are aware of this as well!)¹⁰
- 4 The more advertising that children see, the more likely they are to demonstrate materialistic values.^{5,11}
- 5 The business model of for-profit media leads many platforms to engage in manipulative and unfair practices. For example, YouTube's algorithm is designed with autoplay to keep kids watching video after video in order to serve more ads.
- 6 Many "free" apps for young children exploit developmental vulnerabilities to make a profit by allowing children to play a very small portion of a game and requiring in-app purchases to access additional content, characters, or experiences.⁴
- 7 Consumerism is associated with increases in anxiety, depression, and low self-esteem and can have negative effects on children's physical, social, emotional, and academic health.¹¹
- 8 Companies apply strategies such as emotional and social manipulation to ads targeting kids. As young children work to understand and make meaning in the world, they are especially vulnerable to these deceptive techniques.¹

Explore more research on the impacts of commercialism on child development at fairplayforkids.org/beyond-brands/



Scan or click for full Screen Aware Kit



Scan or click for research references and recommended reading!

Children need guidance to grow up healthy among countless advertisements, images, and strategies.



Adults can help by...

Setting limits on children's screen time.

Choosing content that is age appropriate and free of commercial messages.

Teaching media literacy skills that help children make sense of the motives behind screen-based content.

Supporting initiatives for public policy solutions and corporate accountability.

ADVERTISING & MEDIA LITERACY

Modeling skepticism of advertisements and influencers

Children don't often see or hear how we think about pop-up ads, paid influencers, and other commercials. Identifying and discussing advertisements helps your child develop an understanding of how companies try to affect their behavior.



For example, if you see an ad for fast food, you might point out that the pictures look much different than if you buy it in real life. It looks yummier, bigger, fresher, etc in the ad. This is intentional because they want you to buy it. Saying it out loud helps children grasp these concepts.^{3,7&8,9}

Key questions to ask your child when they see an ad or influencer

- 1 What is this ad or influencer trying to get me to do?
- 2 How does this advertisement make me feel?
- 3 Do you remember the last <toy, game, etc> we bought after seeing it on an ad? Where is it now? How often do you play with it?

TIP: If your child insists they want what is being sold, you can ask "Shall we put this item on your wish list?" Often just putting an item on a list will help your child move on. They will often forget or be less excited by the time you get back to it.

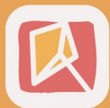


Key questions to ask yourself before allowing a show or app

- 1 Why am I having my child watch or play on a screen?
- 2 Who are the role models and what values do they teach?
- 3 Is this trying to sell something to my child or train my child to nag me to buy something?
- 4 How does my child behave after watching this show or playing this app? Do I see scenes or scripts from the show or game reenacted in their play?
- 5 If it claims to be educational, how does it back up the claim? Is it supported by a trusted educator or educational organization?
- 6 Does this app contain in-app purchases, frequent ads, or pop-ups? Many apps marketed as "free" encourage or even require children to make in-app purchases or are full of ads. An ad-free app that costs a few dollars is often cheaper in the long run than "free" ones.



ACTION KIT EXPLORATION



SCREEN AWARE
early childhood

action kit

What is one way you could utilize the Action Kit in your work with young children and families?

Join the Action Network!

- **Membership is free**
- **Visit the Early Childhood Work Group**
- **Check out an Action Network Live event**
 - **Feel connected!**

www.screentimenetwork.org/membership

