Screentime, Childhood and Development

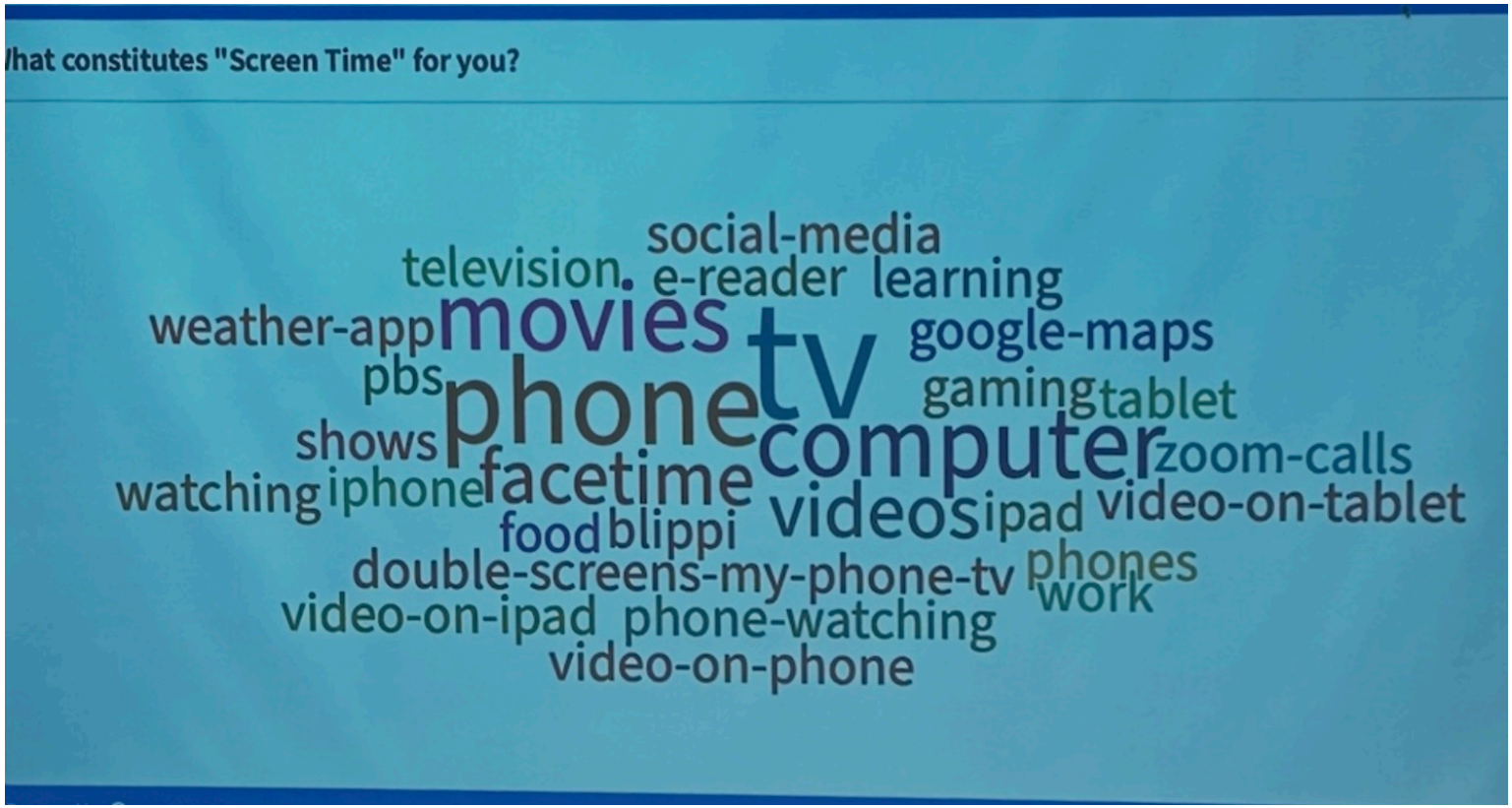
Welcome to the GPA Parent Education Committee

A Community Conversation

Agenda

Introduction & Kickoff Questions
Clinical Perspective - Dr. Sammy Dhaliwal
Educational Perspective - Emily Bittner
Parenting Perspective - Kerry Stouffer
Small Group Discussion
Wrap-Up / Q&A

What constitutes screentime for you?



Clinical Perspective

SCREENTIME & DEVELOPMENT

CLINICAL PERSPECTIVE

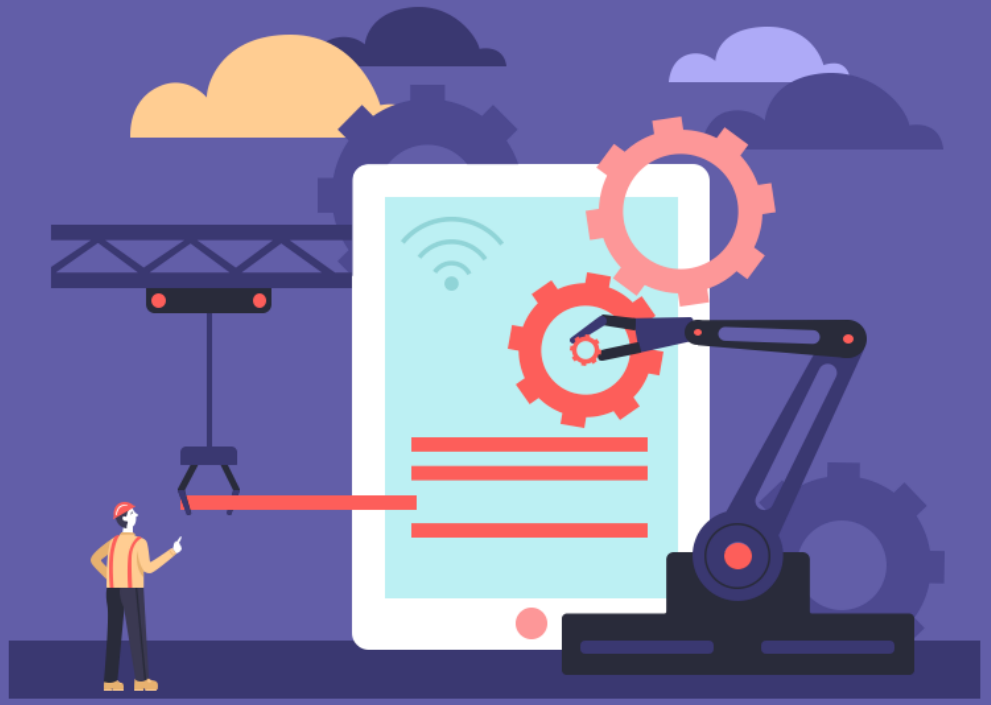
Sammy S. Dhaliwal, PhD, MSc
Mother to a 3-year-old (& sometimes some adults)
Pediatric & Reproductive Psychologist
Sleep Scientist
Perelman School of Medicine, University of Pennsylvania

THE STRUGGLES

What do we need to watch out for?

THE STRENGTHS

How do we leverage support & strategies?



STARTLING TECH STATS

73%

Active Social Media Users >age 13

64%

. . . of all web traffic = cellphones

15%

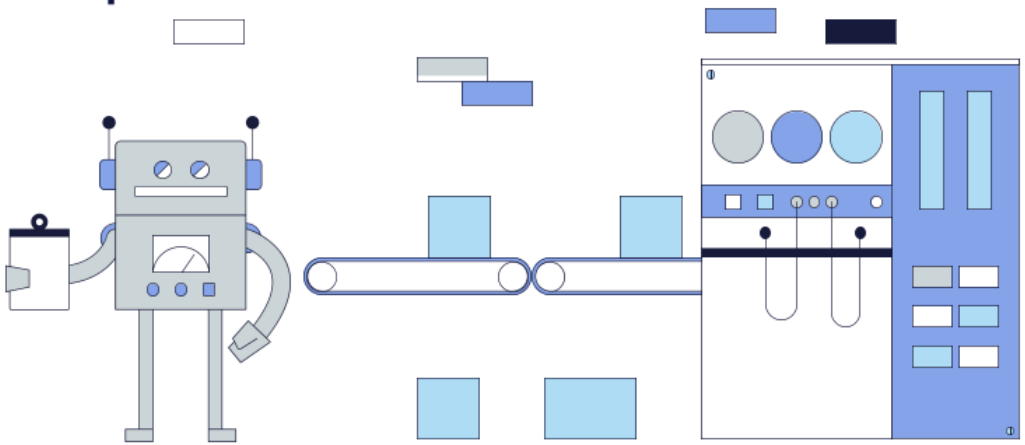
smartphone-only

47 sec

time on task

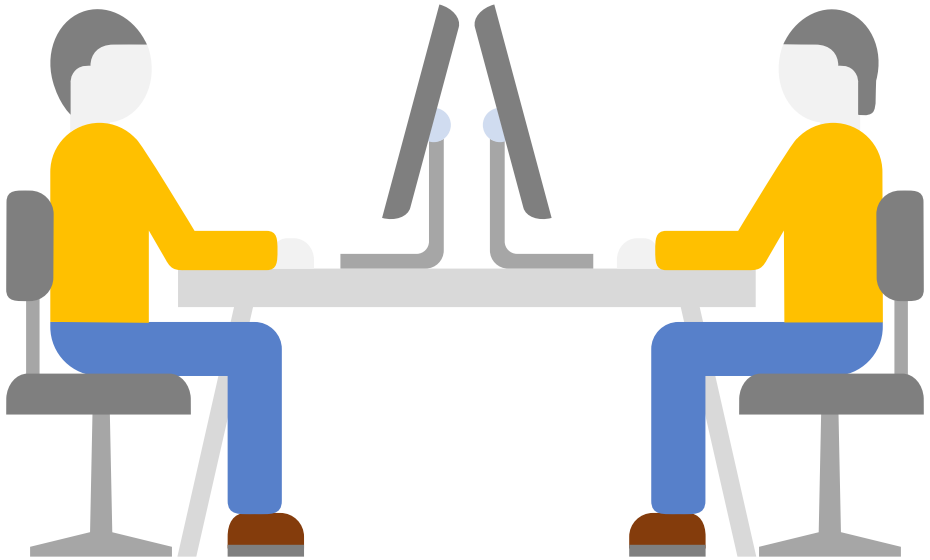
90%

spent on apps



PRESCHOOL RECOMMENDATION IS ≤1HR/DAY

Clinical guidelines for screentime



23 - 46% MEET W.H.O. GUIDELINES
Why are these numbers variable?

~77% EXCEED GUIDELINES
What explains this rate?

SLEEP-SPECIFIC MECHANISMS

BTW, the reasons why these are "bad" overlap. . . .and, can have negative synergistic effects

BLUE LIGHT

Why is this so bad?

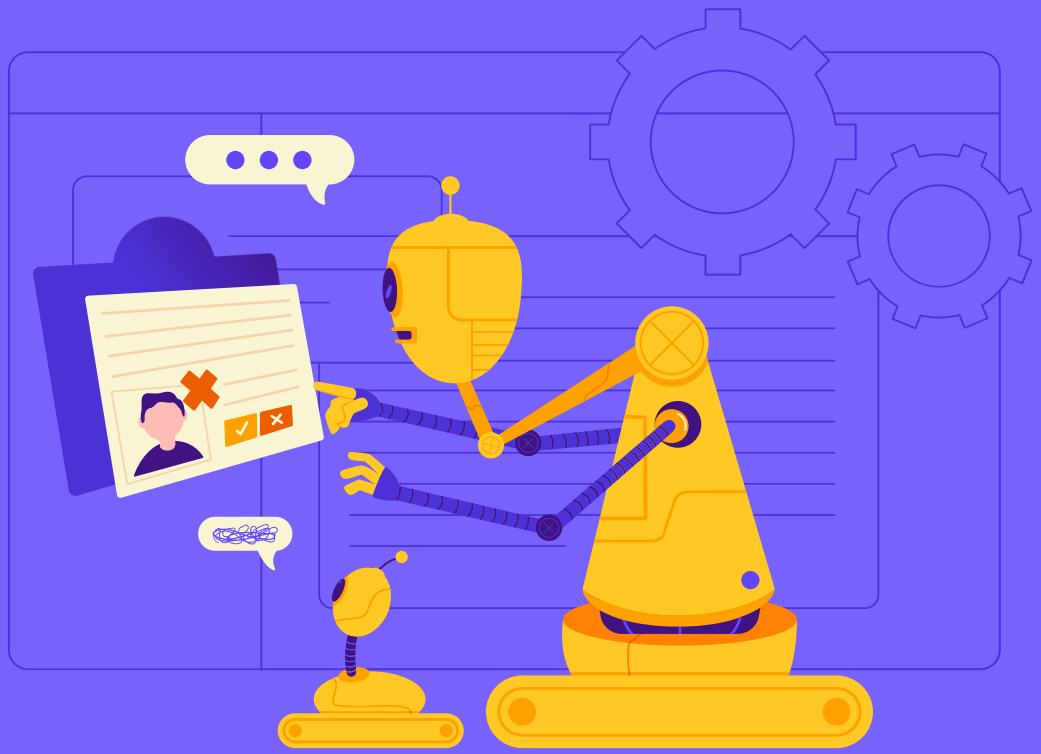
- x Developing circadian systems
- x Melatonin suppression
- x Peak sensitivity in early/mid-puberty

CONTENT

- x Delays sleep onset
- x Increases psychological arousal
- x What bedtime routine?

TIME & PHYSIOLOGY

- x Replaces time for sleep
- x Reduces opportunity for bedtime
- x Shorter, more fragmented sleep



Sources: Chronobiology in Medicine (2024); Biological Timing and Sleep (2025); National Sleep Foundation (2025)

Developmental Neurocognitive Impacts

Executive Function Deficits

Inhibitory Control

High screen time
associated with:

- Reduced impulse control
- Lower effortful control
- Difficulty with self-regulation

Working Memory

Screen time >1h/day
linked to:

- Impaired visual WM
- Reduced verbal WM
- Difficulty holding info in mind

Cognitive Flexibility

Dose-dependent
relationship:

- Lower task-switching
- Reduced adaptability
- Impaired problem-solving

Longitudinal evidence: Screen time at age 24 months predicted worse executive function at 36 months, suggesting ***"trait" rather than "state" effects*** — early exposure may have lasting impact on cognitive development.

Sources: Academic Pediatrics (2024); Scientific Reports (2025); Frontiers in Dev. Psychology (2024)

Mechanism: Activity Displacement

Screen time displaces developmentally appropriate activities during ***sensitive periods*** when brain networks for higher-order cognitive skills develop

Activities Displaced by Screen Time:

Imaginative Play
- Pretend play
- Creative exploration
- Self-directed activity

Physical Activity
- Gross motor development
- Outdoor exploration
- Active games

Social Interaction
- Face-to-face conversation
- Emotional reciprocity
- Relationship building

Sensory Learning
- Tactile exploration
- Multi-sensory engagement
- Real-world physics

Source: Academic Pediatrics (2024)

Critical Windows & Dose-Response

Screen Time Trajectory Groups (Preschoolers):

LOW

0.9 h/day

23% of children

Best EF & effortful control outcomes

MEDIUM

3.0 h/day

56% of children

Moderate impairments in inhibitory control

HIGH

6.4 h/day

21% of children

Significant EF deficits across domains

Age-Specific Vulnerabilities:

Infants & Toddlers: Screen time impacts sleep across all ages; particularly vulnerable due to rapid brain development

Preschoolers: Only 23% adhered to <1h/day during pandemic; those who did showed significantly better outcomes by age 5.5

Early/Mid-Puberty: Peak sensitivity to melatonin suppression; physiologically delayed sleep timing compounds screen effects

Sources: Academic Pediatrics (2024); Sleep Medicine Reviews (2019); Chronobiology in Medicine (2024)

Evidence-Based Recommendations

Duration Guidelines by Age:

<2 years	**Minimal to none**	*Video calls excepted*
2-5 years	**<1 hour/day**	*High-quality + co-viewing*
6-12 years	**Individualised**	*Consistent limits essential*
Adolescents	**Self-regulation**	*Balance on/offline*

Timing & Context:

✓ **No screens 1 hour before bedtime**
(All ages - AAP 2016)

✓ **No screens in bedrooms**
(Sleep hygiene essential)

✓ **Content matters:**
- Educational > recreational
- Co-viewing optimises learning
- Avoid social media pre-bedtime

✓ **Behavioural interventions:**
- Can attenuate negative effects
- Family-centred boundary setting

Clinical Pearl: Sleep disruption mediates relationship between screen time and cognitive/emotional/behavioural outcomes. Addressing sleep is key to mitigating developmental impact.

Sources: Sleep Health (2024); Pediatrics (2017); Child & Adolescent Mental Health (2024)

Key Takeaways

1. Screen time significantly impairs sleep health through multiple pathways: blue light circadian disruption, content arousal, and time displacement

2. Executive function deficits are dose-dependent and show longitudinal "trait" effects—early exposure has lasting cognitive impact

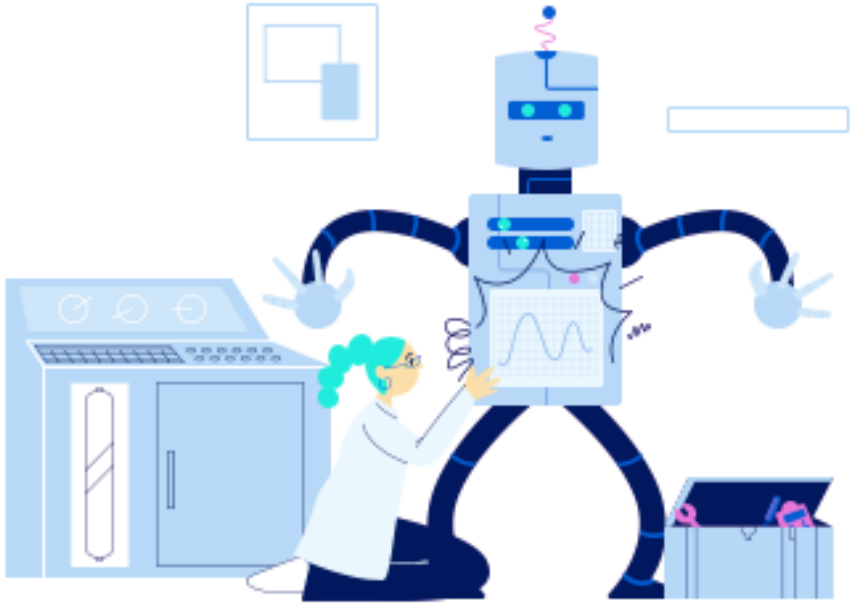
3. Only 23% of preschoolers meet guidelines; displacement of developmentally critical activities occurs during sensitive periods

4. Evidence-based interventions: <1h/day for preschoolers, no screens 1h before bed, prioritise co-viewing and educational content

Sleep is a modifiable risk factor for developmental outcomes

Contact me anytime

Sammy S. Dhaliwal, PhD, MSc



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No one uses fax.

Educational Perspective

MONTESSORI LENS:

SCREENS & CHILDHOOD

DEVELOPMENT HAPPENS THROUGH REAL LIFE

WHY AGE & TIMING MATTER

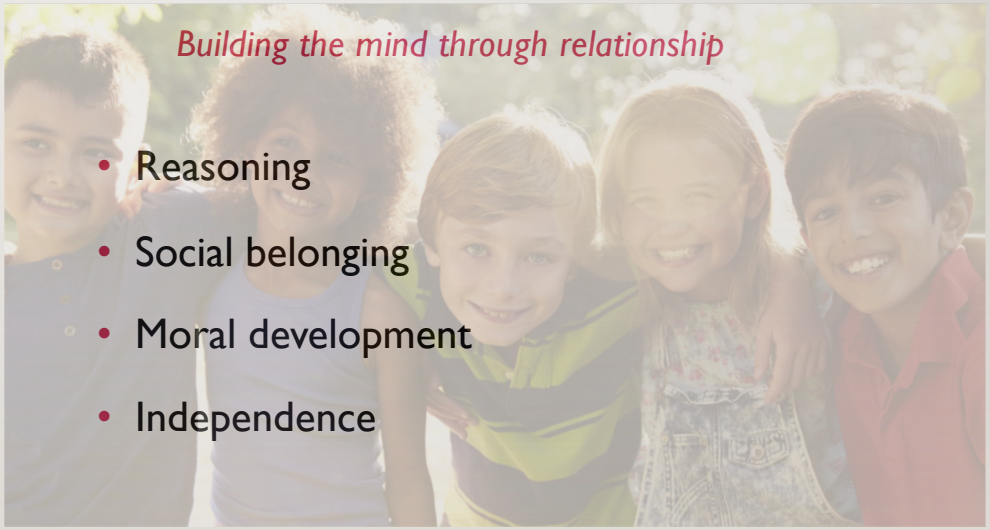
FIRST PLANE OF DEVELOPMENT (0-6):

Building the brain through the body

- Movement
- Language
- Sensory Exploration
- Emotional Regulation

SECOND PLANE OF DEVELOPMENT (6-12):

Building the mind through relationship



- Reasoning
- Social belonging
- Moral development
- Independence

WHAT SCREENS CAN DISPLACE

FIRST PLANE

Foundational Development

- Language through conversation
- Movement and coordination
- Imaginative play
- Concentration through repetition

SECOND PLANE

Social and Cognitive Development

- Peer problem solving
- Independent play and exploration
- Moral reasoning and responsibility
- Deep, sustained attention

PATTERNS TEACHERS NOTICE OVER TIME

TODDLERS (0-3)

- Difficulty with frustration
- Shorter independent play
- Reliance on external soothing

PRIMARY (3-6)

- Less tolerance for waiting
- Shorter concentration cycles
- More impulsive peer interactions

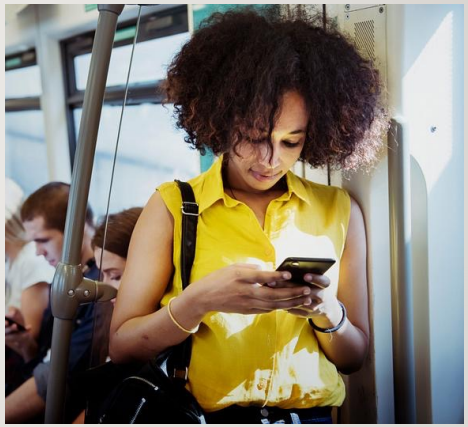
LOWER ELEMENTARY (6-9)

- Dependence on novelty
- Reduced imaginative play
- Earlier peer comparison

CULTURAL SHIFT:

LIFE AFTER

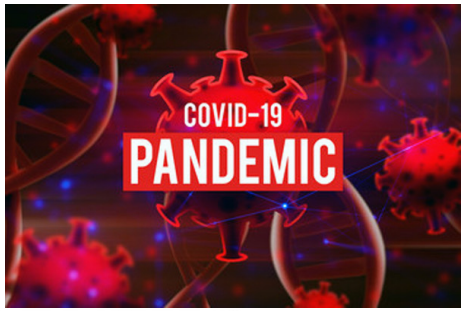
2020



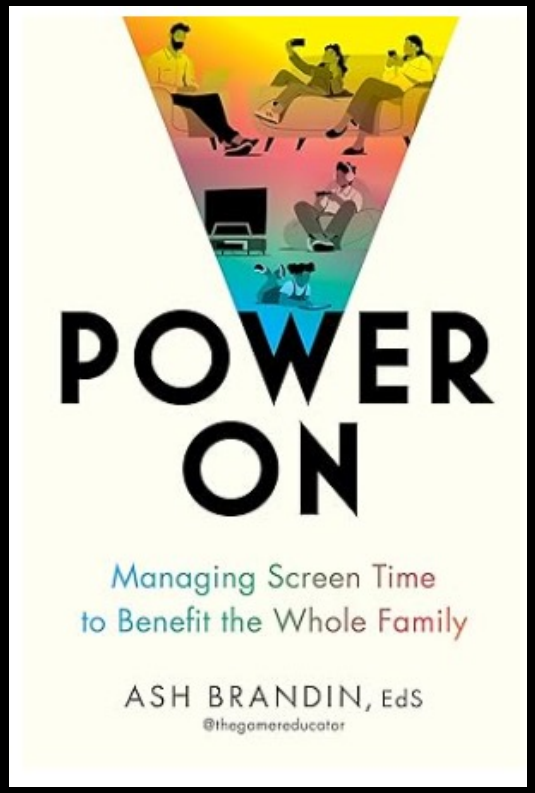
A Parent's Perspective

“Our worth as parents, and our children’s worth as kids, is NOT tied to the amount of time they spend outside, playing independently, doing homework, or playing on screens.”

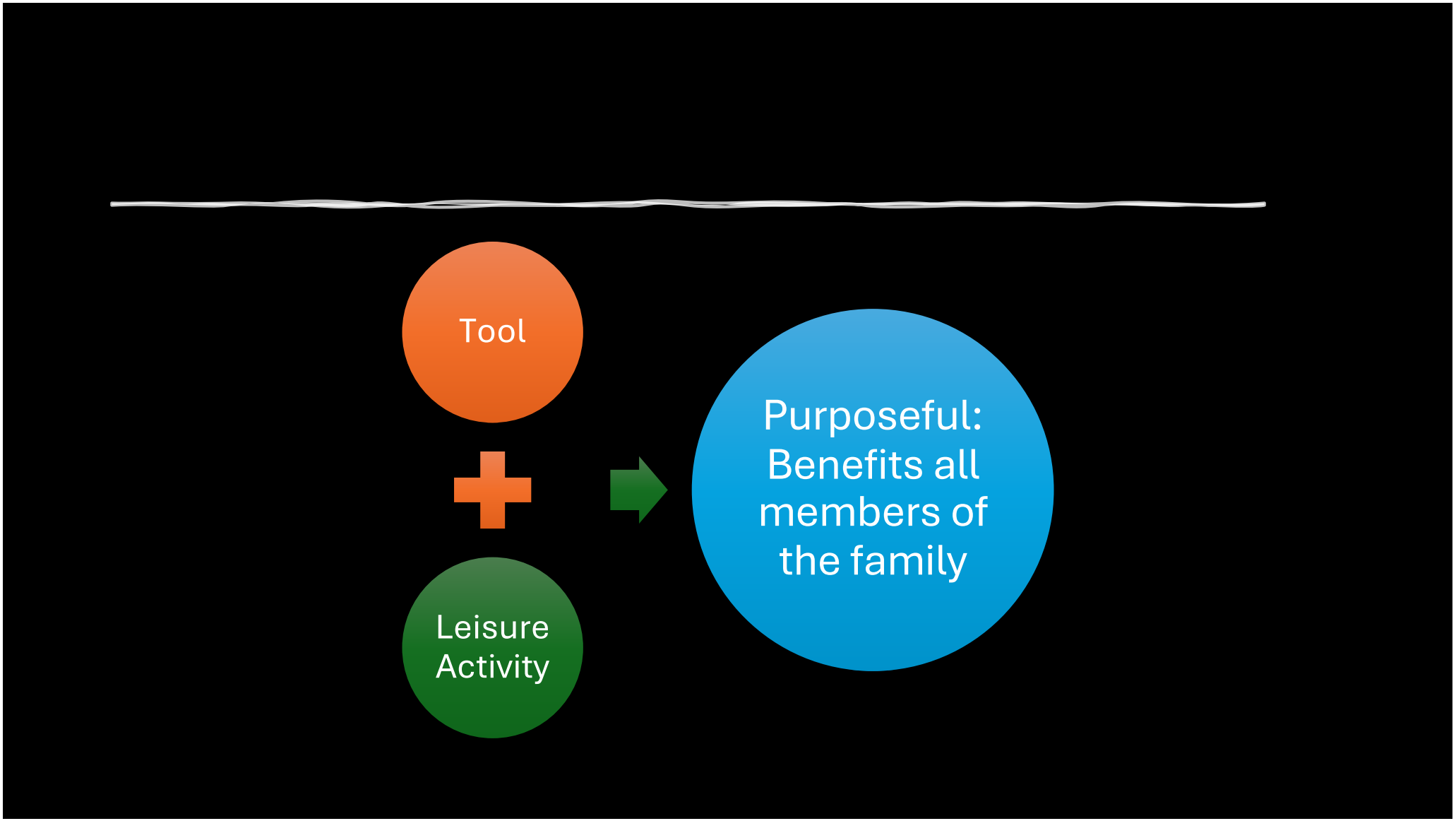
My Reality



Record-Breaking LEGO® Builds | Guinness World Records


POWER ON
Managing Screen Time to Benefit the Whole Family
ASH BRANDIN, EdS
@thegamereducator

Information should empower, not admonish


Tool
Leisure Activity
Purposeful: Benefits all members of the family

Build Familiarity

- When deciding what restrictions or parameters to put in place, it can help to determine if our goal is to protect our kids or build a skill for their digital literacy and safety, or a mix of both.
- Not only is readiness an important consideration for our kids, it includes OUR readiness to control access or content limits.
- Gaining familiarity with a game or device is a big first step to knowing what we are comfortable allowing; if we don't feel ready to enforce a boundary to keep kids safe or address the necessary skills, then that might be a sign that we should hold off on allowing it until we feel ready!

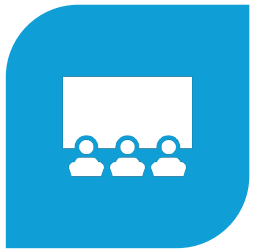
A – B – Cs of Screentime

Access	Behavior	Content
• Covers everything related to how a child accesses a screen • Routine and predictable • Ex: How much time, when are screens allowed, starting and ending times	• How a child conducts themself in online play, how they are regulating their emotions during play, how they interact with family to get or maintain access to screens, etc.	• The show or game as well as the structure of the content, types of devices, and most importantly, the tools available to manage and safeguard content.

Any device or content we give our child should get a STAR

S –
SETTINGS

T –
TIME



A –
ADS/APP STORE

R –
RESTRICTIONS

Parental Screen Use: *Why It Matters for Children's Development*

- The goal is to **increase awareness** of how *adult* screen habits shape children's development, behavior, and relationship with technology.
- Why does this deserve attention?
  - Modeling - Children learn by watching
  - Connection builds development
  - Small moments matter ("Technoference")

Parental screen use is a powerful TOOL for teaching balance, self-regulation, and presence.


Whatever plan you choose to put in place, trust that you have the tools and structure you need to not only make screen time work for you, but to raise digitally literate kids who can thrive both on a screen and in the real world.

Small Group Discussions

What is working for your family right now in terms of screen time?

What feels the hardest about managing screen time in your household?

“Having more screen time does NOT make you an inferior caregiver and having less doesn’t make you a superior one.”


Q&A
Wrap-Up

Thank you!