Zone'in
Healthy Technology Balance for Children

Agenda

1. Review screen usage stats and expert guidelines.
2. Identify 4 critical factors for optimizing child development, behavior, and learning.
3. Evaluate research on impact of technology on children in four domains: physical, social, mental, cognitive.
4. Implement *Balanced Technology Management* strategies in home and community environments.

Research references are located on website **zonein.ca** under **Fact Sheet** section.

New Millennium Children
Are they Sustainable?

- No experience of life without technology.
- 3D reality → 2D virtual.
- Hard wired for high speed.
- Isolated from family, peers.
- Exposed to high levels of media violence.
- Largely sedentary.
- First generation that may not outlive their parents.

Small 2008, Mangen 2008, Anderson 2008, Tremblay 2011, New England Journal of Medicine 2012

Epidemic of Child Disorders

- Developmental delay 1 in 3 at school entry.
- Obesity 1 in 4.
- Depression/anxiety 1 in 6.
- Suicide rate doubled over past 5 years in males.
- Autism 1 in 65.
- Adhd 1 in 5 for boys, 1 in 11 for girls.
- Sleep deprivation 73%.
- Tech addiction 10 (research) - 50% (self-report)
- Learning disabilities 1 in 3.

HELP EDI Mapping 2009/13, WHO 2015, CDC 2016, Waddel 2007, National Sleep Foundation 2017, Gentile 2011, Common Sense Media 2017, BCTF 2016

Screen Stats

Babies watching 2.5 hours/day

Toddlers using 4.5 hours per day

Children using 7.5 hours per day

Teens using 9 hours per day


Parents using 11 hours per day

Expert Recommendations

- 0-2 years should not be exposed to ANY technology (including passive watching).
- 3-5 yrs not use more than 1 hour TOTAL screens/day.
- 6-12 yrs not use more than 2 hrs/day.
- 13-18 yrs not more than 3 hrs/day.
- < 6 yrs should not watch ANY violent media content.
- Only 10% of children meet expert guidelines.

American Academy of Pediatrics 2002/13/15/16, Canadian Pediatric Society 2010/17

Rapid Pruning 0 - 10 Years
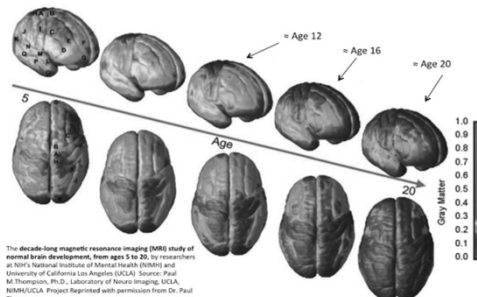
The decade-long magnetic resonance imaging (MRI) study of normal brain development, from ages 5 to 20, by researchers at NIH's National Institute of Mental Health (NIMH) and University of California Los Angeles (UCLA) Source: Paul M. Thompson, Ph.D., Laboratory of Neuro Imaging, UCLA, NIMH/UCLA Project Reprinted with permission from Dr. Paul Thompson.

Brain Hard Wired by Age 20

Balanced Technology Management

Critical factors for growth and success:
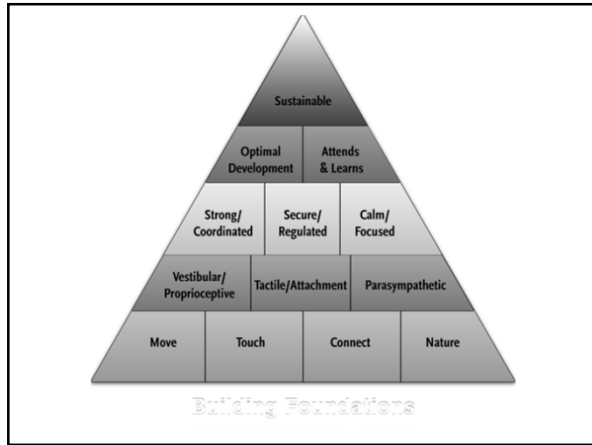- movement
- touch
- human connection
- nature

Technology Use

© 2009 Zone'in Programs Inc
www.zonein.ca

Building Foundations

*Growing a child is like building a house;
it's all about the foundation.*

Sustainable

Optimal Development | Attends & Learns

Strong/ Coordinated | Secure/ Regulated | Calm/ Focused

Vestibular/ Proprioceptive | Tactile/Attachment | Parasympathetic

Move | Touch | Connect | Nature

Building Foundations

Movement

*Hand a child a device, they sit.
Take it away, they move.*

Canada Movement Guidelines

- < 13% of children meet the *Canadian Movement Guidelines*.
- Effects of sedentary lifestyle costs Canada $70 billion per/year in healthcare costs.

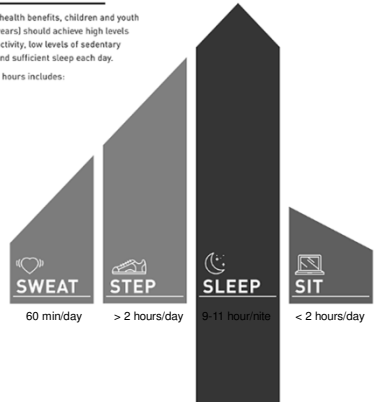Canadian Society for Exercise Physiology 2018, National Institute of Health 2018

GUIDELINES

For optimal health benefits, children and youth (aged 5–17 years) should achieve high levels of physical activity, low levels of sedentary behaviour, and sufficient sleep each day.

A healthy 24 hours includes:

SWEAT STEP SLEEP SIT

GUIDELINES

For optimal health benefits, children and youth (aged 5–17 years) should achieve high levels of physical activity, low levels of sedentary behaviour, and sufficient sleep each day.

A healthy 24 hours includes:

SWEAT	STEP	SLEEP	SIT
60 min/day	> 2 hours/day	9-11 hour/nite	< 2 hours/day

SWEAT
MODERATE TO VIGOROUS PHYSICAL ACTIVITY
An accumulation of at least 60 minutes per day of moderate to vigorous physical activity involving a variety of aerobic activities. Vigorous physical activities, and muscle and bone strengthening activities should each be incorporated at least 3 days per week;

STEP
LIGHT PHYSICAL ACTIVITY
Several hours of a variety of structured and unstructured light physical activities;

SLEEP
SLEEP
Uninterrupted 9 to 11 hours of sleep per night for those aged 5–13 years and 8 to 10 hours per night for those aged 14–17 years, with consistent bed and wake-up times;
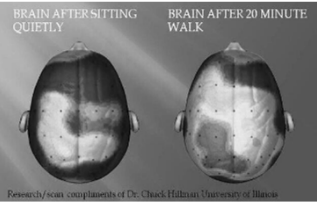
SIT
SEDENTARY BEHAVIOUR
No more than 2 hours per day of recreational screen time;
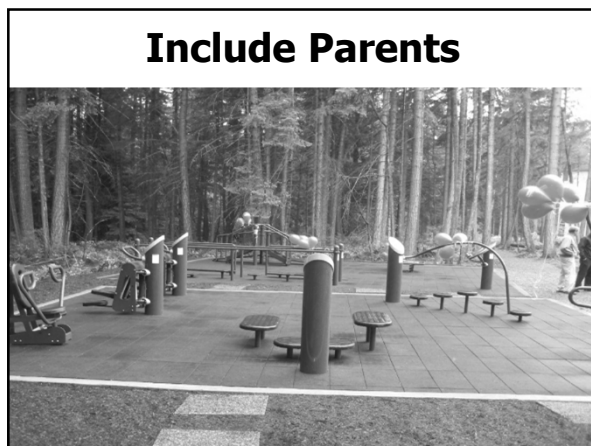
Moving to Learn

- Cardiovascular
  - Obesity/diabetes
  - Stroke/heart attack
- Core stability/strength
- Motor coordination
  - Sports
  - Print/read literacy
- Visual spatial
  - Math
- Attention/learning
- Mental health

Ratey 2008, movingtolearn.ca

BRAIN AFTER SITTING QUIETLY   BRAIN AFTER 20 MINUTE WALK

Research/scan compliments of Dr. Chuck Hillman University of Illinois

Improve Playgrounds

Include 7-12 Years

Include Youth - Barstarzz

Include Parents

Touch

Activates parasympathetic system, lowing adrenalin.

Tech Prohibits Touch

- Touch is a biological necessity without which, infants die (orphanages).
- Adequate touch produces secure & relaxed children.
- Inadequate touch results in fearful, anxious and agitated children.

Hopper 1957, Montagu 1978

Hugs, Rough-N-Tumble Play

Bath, Book, Bed

Connection

The origin of child mental health.

Tech Isolates
Humans need their 'pack'

- Attachment is a biological need.
- Failure is #1 causal factor for mental illness.
- Incidence of child/youth mental disorders now 1 in 6 North America.
- Need to *disconnect* and *reconnect.*

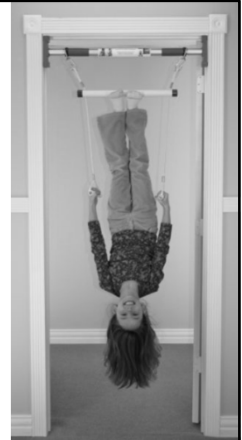Montagu 1978, Insel 2001, Waddell 2007, Houtrow 2014, Crittenden 2008
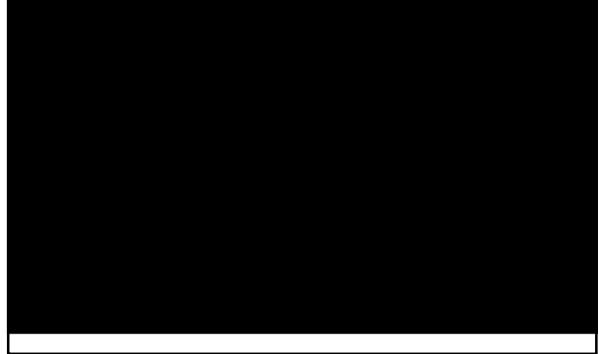
Family Dinners

Board Game Night

Indoor Gym

Dance Night

Social Media Guard

Nature

When did nature become unsafe?

Reassessing Risk

- Parents who fear 'outside' have children with higher tech usage.
- Yet…screens are not safe!
- High anxiety of parents projected onto child.
- Yet…risk reduces anxiety!
- Everything fun got taken to the dump.

Penelakut Elementary Trails

Nature Benefits

- 20 min per day access to 'green space' significantly reduces adhd and improves attention and behavior.
- Backpackers scored 50 percent better on a creativity test after spending 4 days in nature screen-free.
- Students showed improved cognitive memory and affect (anxiety) after 50 min. rural walk.
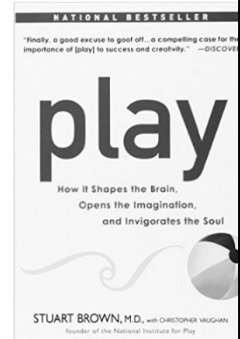
Faber-Taylor 2004, Strayer 2012, Bratman 2015

Penelakut School Nature Trail 2019

7 Components of Play
(why kids love recess and hate gym)

Play and building with hands as a child increases success as an adult; those in jail had neither.

1. Purposeless
2. Voluntary
3. Inherent attraction
4. Freedom from time
5. Diminished consciousness of self
6. Improvisational potential
7. Continuation desire

NATIONAL BESTSELLER

"Finally, a good excuse to goof off...a compelling case for the importance of [play] to success and creativity." —DISCOVER

play

How It Shapes the Brain, Opens the Imagination, and Invigorates the Soul

STUART BROWN, M.D., with CHRISTOPHER VAUGHAN
Founder of the National Institute for Play

Go Outside and Play!

Heiltsuk First Nation

Fix those Bikes!

Family Gathering Sites
Covered Fire Pit

Screen Research

Check for the Red Flags

- ✓ Developmental delay – speech, motor, cognition
- ✓ Sleep deprivation/disorders – tired in day, nitemares
- ✓ Social phobias – no friends, dislikes outings
- ✓ Behavior problems – controlling, defiant
- ✓ Self-regulation issues – can't wait turn, tantrums
- ✓ Disinterest in activities - other than tech
- ✓ Dependency – needs help, requires reminders
- ✓ Emotional problems - depression, anxiety, obsession
- ✓ Attention deficit – distracted, learn difficulties,
- ✓ School performance – low grades, wants to drop out

Physical Development

Technology is a restraint

95% of time sedentary indoors
Louv R 2009

1 in 3 delayed development
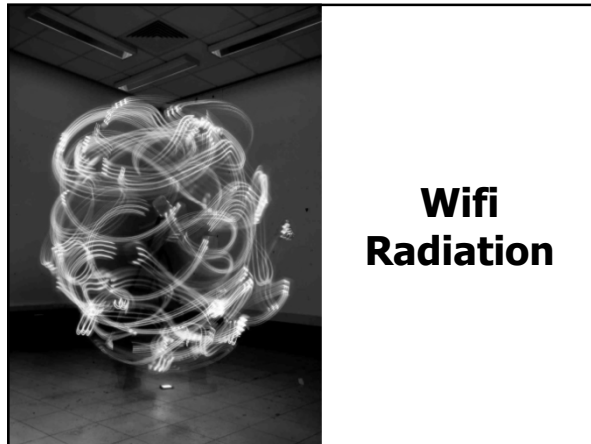Hutrow J 2014, UBC HELP EDI Mapping 2009/13

1 in 4 overweight → 30% diabetes
Tremblay M, 2011

2-D Myopia Up 40%
Sherwin, American Academy of Ophthalmology 2012, Liu 2014

Wifi Radiation

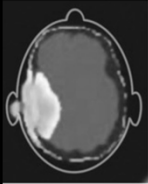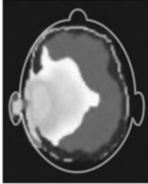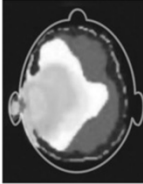## Wifi & Cancer Research

- <u>WHO</u> categorized WiFi as a possible Group 2B carcinogen.

- <u>Experimental</u> animal studies by NIH/NTP show tumors at 2 yrs.

- <u>Epidemiology</u> studies show:
  - acoustic neuromas and brain gliomas in cell phone users after 20 years.
  - sperm DNA fragmentation and decreased sperm motility in laptop users at 20 years.

- <u>Incidence</u> studies show marked increase in cancer:
  - 1 in 2 people will get cancer and 1 in 4 adults will die from cancer in our lifetime.
  - 25% increase in teen cancers past 30 yrs

WHO 2011, National Toxicology Program 2016/18, Pall 2013, Emre 2010, Khurana 2009, Avendano 2011, Hardell 2013, Burkhamer 2017, Canadian Cancer Society 2018

Children High Risk

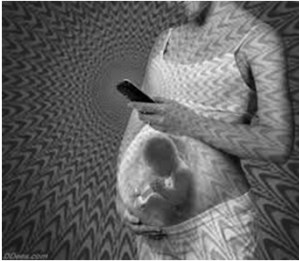Penetration of cell phone radiation into human skull

adult skull   10 year old   5 year old

Tests conducted by researchers Gandhi, Lazzi and Furse, 1996 - used with permission.

Thinner skulls, more aqueous bodies/brains, higher cell turnover. AAP 2014

Pediatric Cancer Research

- Incidence of pediatric cancer increased 2001-2014 across sex, age, race/ethnicity, region, economic status, and rural/urban status.
- For lymphoma, thyroid, brain, kidney and liver representing 98.8% of population.
- Brain cancer highest in 0-4 yr. population.

Center for Disease Control 2018, Baby Safe Project

Why Aren't We Being Warned?

- Exposure is universal.
- No control group.
- Warnings about cancer from smoking took 30 years.
- Technology companies producing 'backlash' research to counter valid data.
- Industry says "we never said wifi was safe". Dr. Martin Pall

June 2017 educational video on zonein.ca

RADIATION HAZARD

## Social Development
Asocial, antisocial

Social Skills

- Who we are is determined by what we do.
- Identity formation is relevant to how we spend our time.
- Social confidence and social engagement come from social interaction.
- Social skill perception low with high users of tech.

Elkind 1988, Turkle 2015

Self Regulation

- Co-regulation with parents and school staff lead to self-regulation.
- Virtual world doesn't teach human coping skills for real world.
- Can control virtual…not reality.
- Early and high duration screens:
  - Difficulty soothing self when upset.
  - Tantrums, meltdowns.
  - Unable to wait turn.
  - Can't listen.
  - Can't pay attention; distracted.
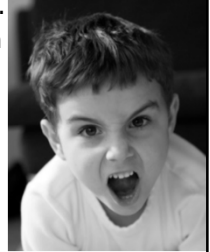
Teen Social Phobias

- Virtual reality replaces real relationships.
- Males: relationship phobic, addicted to video games &/or porn. Females: addicted to social media.
- Rising incidence of anxiety, depression, obsession, agoraphobia, suicide.

Gentile 2009, Bristol University 2011

The Great Social Divide

MALES Videogames, Porn *Heavily researched*	FEMALES Social Media *Poverty of research*
Desire competence.	• **Desire social acceptance.**
36% U.S. and 48% Canadian 18-30 year old males live with their parents; not working; not in school.	• Canadian Association of Mental Health reports >50% of teen girls report significant depression and anxiety; cited social media as causal factor.
Stats Canada 2012, U.S. Census Bureau 2012	• CAMH 2018

Social Media
All Breadth, No Depth

Looking for love in all the wrong places…
- Instagram – rated "worst app" for mental illness.
- Facebook – promotes envy, exclusion, depression
- Snap Chat – streaks constant monitoring; pic never dies.

Feeds off the need to be liked.

Fortnite…the New Drug
Saving the World from your Couch

- Intermittent rewards
  - *loot boxes – gambling*
- Immersive
  - *"killer" graphics*
- Novel
  - *change modes wkly*
- Personalized
- Competitive
- Social
  - *Talk to other players*

95% of video games violent/porn
Gentile D 2009

World Health Organization gaming addiction as a mental health disorder

Decreases in Psychological Well-Being Among American Adolescents After 2012 and Links to Screen Time During the Rise of Smartphone Technology. Jean Twenge

Gamer Brain

Help! I'm dying!!

Video Games Cause Aggression

Moderate Gamers: 3-4hr/day

- Increased risky behaviors (sex, reckless driving, drugs/alcohol, smoking).
- Increased defiance and aggression.
- Sleep deprivation.
- Decreased attention, concentration, memory.

Heavy gamers: > 4 hrs/day have 4-5 times increased incidence of effects noted above. Jay Hull 2015

42% of 10 year olds using porn...
Sapolsky R 2013

Gaming, Porn and Your Heart

Mental Development

Isolated, neglected, bullied

1 in 7 children mentally ill
Canada Mental Health Associiation 2018

3 in 4 Sleep Deprived
Obesity/diabetes, depression, accidents, attention deficit, risk taking, antisocial, irritable.
Czeisler 2013, National Sleep Foundation 2016

Sleep, Cancer, Heart Disease

Less than 6 hours of sleep is associated with:

- 40% increase in cancer.
- Twice as large tumors.
- 35% increase in heart disease (attack or stroke).

Czeisler 2013, Nagai 2010, National Sleep Foundation 2016

Screens, Anxiety, Depression 2007 - 2015

- Teens who use > 7 hours total screens/day have double the rate of anxiety and depression.
- From 2007 to 2015 suicide rates doubled for females and increased by 30% for males.

Twenge, 2018

U.S. Suicide Rates % Change: Comparison of Most Digitally Connected Generations vs. Less Connected 2000–2016.

After being flat for nine years, 30% increase in the suicide rate for connected generations since 2008.

SOURCE: CDC DATA

Suicide Rate % Change Ages 35–75
Suicide Rate % Change Ages 15–34
Increasing Suicide Rates Ages 15–34
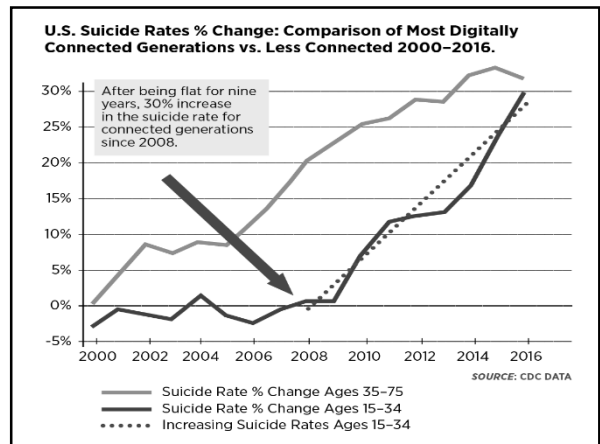
Screens and Autism

- Critical period for socialization 6-18 mo.
- Increased screen time (phone, tablet)…combined with decreased parent connection…
- …results in increased incidence of PDD and oppositional defiance.
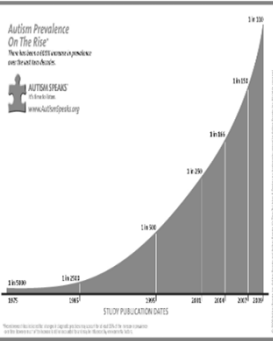- By 2025 autism will be 1 in 2 for males, 1 in 5 females.

Heffler 2015, Chonchaiya 2011/15, Numata-Uematsu 2018, CDC 2018, MIT 2015

Still Face Experiment Youtube 2 min.

Virtual Autism Research

In 2015 TV exposure 6-18 mo. associated with PDD.

In 2017 > 4 hours screens/day 0-3 years causes syndrome similar to autism.

In 2018 autism reversed with screen removal.

Autism now termed "epidemic".

Chonchaiya 2015, Jones 2013, Zamfir 2017, Numata-Uematsu 2018, CDC 2018

…1 in 11 children tech addicted
Gentile D 2011

ICD – 11 Gaming Disorder
WHO's International Classification of Diseases

A pattern of gaming behaviour characterized by:

1. Impaired control over gaming.
2. Increasing priority given to gaming over other activities.
3. Continuation or escalation of gaming despite negative consequences.
4. Significant life problems (personal, family, social, education, occupational).

Pontes 2019

Cognitive Development
Attention deficit, learning impaired

Sponge'Blobs'

- 9 minute exposure to Spongebob cartoon resulted in a significant reduction in executive function in 4 year old children:
  - Decreased memory
  - Decreased attention
  - Increased distractability
- Fast paced, violent cartoons as harmful as video games.

Christakis 2011, Gentile D 2009

Real vs. Virtual Learning

REAL	VIRTUAL
3D Constructed	2D Memorized
Blocks, paper, pencil, scissors.	Apps, tablets, phones, games.
Creative and imaginative.	Passive; told what to do.
Established concepts.	Memorizing symbols.
Inquisitive, interactive.	Rote memory only.
"Thick" learning.	"Thin" learning.

Screens vs. Paper

Attention: clicking and scrolling disrupt attention and disturb mental appreciation; media switches cause increased distraction and mistakes.

Comprehension: reader lacks both completeness and constituent parts.

Memory: change in physical surroundings has a negative effect on memory; multitasking decreases test performance.

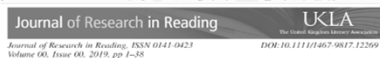Learning: doesn't allow required time and mental exertion.

Meaning: isn't a physical dimension, loss of totality.

Vision: not as acute as text.

Ask them! 92% of teens reported they preferred print to screens due to improved concentration.

Magnen 2008, Brasel 2011, Ghose 2013, Sana 2013, Naomi Baron 2015, Virginia Clinton, 2019

Screen vs. Paper Reading Meta-analysis

Journal of Research in Reading — UKLA
The United Kingdom Literacy Association

Journal of Research in Reading, ISSN 0141-0423
Volume 00, Issue 00, 2019, pp 1–38
DOI:10.1111/1467-9817.12269

Reading from paper compared to screens: A systematic review and meta-analysis

Virginia Clinton
University of North Dakota, Grand Forks, ND, USA

Background: Given the increasing popularity of reading from screens, it is not surprising that numerous studies have been conducted comparing reading from paper and electronic sources. The purpose of this systematic review and meta-analysis is to consolidate the findings on reading performance, reading times and calibration of

- 2008-2018 review of 33 studies
- paper reading showed increased reading comprehension, metacognition, and efficiency.

PISA Shows Declining Academic Performance

- Program for International Student Assessment (PISA) tests reading, math, science in 15 yr olds X 72 countries every 3 yrs.
- Canada dropped out of top ten to 13th, declining in all 3 subjects.
- U.S. ranked 27th with no improvement in 3 subjects.

www.oecd.org

Are They Really Doing Homework?

- 97% of time spent on devices at home is for entertainment; 3% is for learning (13 min/day).
- 98% of population cannot multitask.

Common Sense Media 2018, Strayer 2018

Multitasking a Myth

- Partial tasking results in progressive distraction.
- 3 sec. distraction doubles mistakes.
- Multitasking associated with depression/anxiety.

Braswell 2011 , Becker 2012

Texting During Class

- Teens unlock their phones avg 60 times/day for 180-200 min.
- *Anxiety dependence* (on phone) in teens is the best predictor of academic performance.
- # of times teens unlock their phones is predictive of grades:
  - "C" - 0-4 texts/hr
  - "D" – 5-8 texts/hr
  - "A" – waited for 1-2 min. before responding to texts.

Larry Rosen 2015

Screens in Schools
Industry is liable, schools are culpable

1. Not evidence based; highest performing schools use least amount of tech.
2. Industry driven (Facebook sued for $15 billion).
3. Privacy breached, data and identity harvested.
4. Decreased comprehension and memory compared to books. Students prefer paper and books.
5. 50% of students report screen addiction; tech-centric teachers may be addicted.
6. Proven harm to student health. 0% of schools concerned about student health.

Where are we going?
Sedentary, isolated, neglected, overstimulated...will they survive?
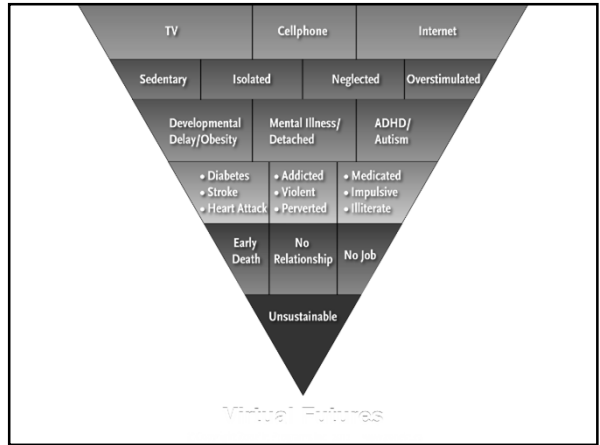
Technology Management

Home - Community

I can't believe we made it – You Tube – 2 minutes

What Do You Want for Your Child?

- Tell your children about what you did as a child.
- What was important to you when you were a child?
- Pass these values, cultures, traditions onto your children.
- Parents are the most important person to their children.

Paqtnkek First Nation, Cape Breton

Home 'Tech Talk'
Technology Guidelines for Parents HO

- Survey usage rates; provide usage stats.
- Profile expert guidelines.
- Survey sleep rates and device in bedroom; provide sleep stats.
- Determine 5 things to do other than tech.
- Survey interest for family 'tech unplug'.

Increase Healthy Activities = Decreased Tech Duration

1. Do one healthy activity first, then tech (chores, homework, play, instruction period).
2. Read one book per day (book, bath, bed).
3. Eat one 'no tech' meal a day with family.
4. Have one 'no tech' game night per week with family.
5. Play one 'no tech' game per day outside.
6. Do one 'no tech' outing per week with family.
7. Have one 'no tech' holiday per year with family.
8. No tech in bedrooms, bathrooms, restaurants, cars.

Make Outside Safe

- Know the risks in your community:
  - bears, wolves, cougars, strangers, unsafe adults.
- Train children what to do to be safe.
- Make safe boundaries e.g. fences, lighting, sidewalks, trails.

Courtesy of Andrew Stawicki, Pikangikum First Nation

Basic Screen Management

Early use
Content
Duration
Isolation

Change Content

- Prosocial content ⟹ prosocial behavior
- Antisocial content ⟹ antisocial behavior
- Fast paced content ⟹ adhd, impulsivity

Reduce Duration
Follow Technology Guidelines

Developmental Age	How Much?	Non-violent TV	Hand-held devices	Non-violent video games	Violent video games	Online violent video games and/or pornography
0-2 years	none	never	never	never	never	never
3-5 years	1 hour/day	OK	never	never	never	never
6-12 years	2 hours/day	OK	never	never	never	never
13-18 years	2 hours/day	OK	OK	limit to 30 minutes/day		never

American Academy Pediatrics, Canadian Pediatric Society, C Rowan, A Doan, H Cash 2014

Create Tech Free Zones
Cell phone, text, TV, & tablet rules

School

Red Zone - students

• no *wireless* devices allowed on school grounds

• *wired* devices limited to 0.5 hour/day

• NO unsupervised internet access

Yellow Zone - teachers

• calls only; no emails or texts in classroom, lunch room, recess

Green Zone - teachers

• calls, texts and emails okay when alone e.g. after school

Home

Red Zone - everyone

• NO TECH at dinners, in car, in bed, or when children are present

• NO TECH play time one hour prior to bed

Yellow Zone - everyone

• calls only; no emails or texts half day Saturdays, holidays.

Green Zone - everyone

• calls, texts and emails okay when alone

Ensure Online Safety

- Teens don't see difference between virtual/in person friendships.
- Prohibit unsupervised technology use; desktop in high traffic area only.
- Ban handhelds < 12 years.
- Restrict chat sites.
- Online firewalls – Ourpact, Moment, Circle.
- Voice only cell phones (no texting or online). Ives 2012

MORE INFO

Meet Susan... a 42 year old man posing as a 15 year old girl online.

See Everything Your Children Do on the Computer and Internet

SPECTOR PRO

Tracker Apps

- Qustodio – allows parent to turn on/off wifi, blocks sites, quantifies duration and content, can be operated from parent's phone.
- Circle (by Disney), Our Pact, Moment.
- Screen Time – iOS 12; comes with new iPhones.
- Game Play Time Tracker.
- Rescue Time – quantifies duration and content.
- AppDetox and Space – for Android users.
- Time Camp – for desktop users.
- Offtime – good for adults.

Blocker Apps

- Newer routers may have blocking capabilities.
- Qustodio – tracks and blocks.
- Block Site – for blocking video game, porn etc.
- Covenant Eyes – porn blocker.
- Porn Blocker, Net Nanny, Safe Surfer...
- Kaspersky Safe Kids
- Norton Symantec Family

Google "Hack [Application xyz]" or "get around [application abc]" to see how easy it is to override; some of these apps are pretty easy to get around.

Best Age for a Phone?
Do This First!

- ✓ Get up on own on time.
- ✓ Make own breakfast and lunch.
- ✓ Do own laundry.
- ✓ Cook one dinner a week.
- ✓ Clean room.
- ✓ 1 small chore per day, 2 big chores per week.
- ✓ Maintain good hygiene.
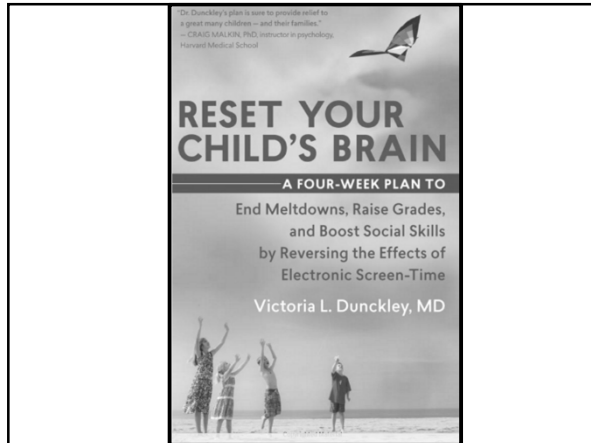- ✓ Functional social skills.

Once They Get One...

- The smaller the screen, the harder to manage.
- 30% of 8 year old boys play > 18 yr. video games.
- Children with Smartphones are 100% more likely to view porn than those without one.

Try a 'Tech Unplug'

Severe Symptom	Severe Strategy
Aggression, violent, rude	Stop all video games
Attention deficit, asocial	Stop all fast paced cartoons
Depression, anxiety	Stop social networking
Technology addiction	Stop all technology

Preparation: ensure adequate alternate activities available to replace time spent with technology X 1 week.
Procedure: at least 2-3 week elimination trial for activity reset; proceed as child's behavior indicates. Consult a therapist/counsellor.

"Dr. Dunckley's plan is sure to provide relief to a great many children – and their families."
– CRAIG MALKIN, PhD, instructor in psychology, Harvard Medical School

RESET YOUR CHILD'S BRAIN

A FOUR-WEEK PLAN TO

End Meltdowns, Raise Grades, and Boost Social Skills by Reversing the Effects of Electronic Screen-Time

Victoria L. Dunckley, MD

Up and Coming

- 5G – 5th generation of wireless; transmitters placed every 1000' for improved data streaming but with massive increase in wireless radiation; proposed need is to support IoT, Smart Cities and VR.
- IoT – Internet of Things; connection of every conceivable consumer item to internet and personal devices; issues with hacking, privacy invasion, and 'garbaging' workable items.
- VR – virtual reality; hypothetically needed to support growing porn industry.

Safe Homes
Tech Management Policy

- Go Wired.
- Prohibit all screens from bedrooms, cars and dining area.
- Try to only use screens after children are in bed.
- Outside play 1 hr/day minimum.
- Ensure foundation skills for school entry.
- Model good social skills.
- Plan one screen free night per week (cookies, games).
- Read one book to child every night.

Technology Management Tools

Parent Unplug'in Brochure

Mandatory Technology Screen

Technology Schedule & Contract

Tech Talks

Tech Talks for Families

- 10 sessions/10 hours/10 weeks/$100.
- Comes with *Tech Tool Kit.*
- Part 1: increase healthy activities.
- Part 2: tech impact info.
- Part 3: tech management strategies.

Tech Talks for Therapists

- 5 sessions/5 hours/$100.
- University course with Cris Rowan and Dr. Chantelle Bernier.
- How to assess and treat tech overuse.
- Comes with client tools and handouts.

Reduce Technology Use
10 Steps to Unplug Your Children from Technology (handout)

1. Get informed
2. Disconnect – unplug yourself
3. Reconnect – form sacred time
4. Explore alternate activities
5. Enhance skills
6. Move, touch, connect, nature
7. Address perceptions of safety
8. Create roles and jobs – fuel inner drive
9. Schedule balance – hour in = hour out
10. Link with community

Summary

Technology and Children
Tip of the "Techtanic" Iceberg

- Health and education systems haven't even begun to detect, much less understand the profound ramifications of child technology overuse.
- Secondary effects are yet to come.
- Need to proceed with caution.

Virtual Child

Radiation from technology devices has been identified as a **possible carcinogen** by WHO.

One in three children enter school **developmentally delayed.**

One in four children are **obese;** one third of these children will develop **diabetes.**

Children spend **95%** of their time **sedentary** and **indoors.**

One in 11 children are **addicted** to technology.

42% of **10** year olds are actively using **pornography.**

One in six children have a **mental illness** diagnosis.

40% of **parents** use over **11 hours per day** of entertainment technology.

Sedentary, isolated, overstimulated, and **neglected,** the ways in which we are raising and educating children with technology are no longer sustainable.

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Technology Train

- Don't know where it's going, what the long term effects are, yet are moving full steam ahead.
- Children are falling off.
- Need to stop, bring the train back to the station and adequately research the long term impact of technology on the developing child.
- Proceed with caution.

Screen Overuse Weblinks

- Zone'in Programs www.zonein.ca
- Families Managing Media www.familiesmanagingmedia.org
- Common Sense Media www.commonsensemedia.org
- American Academy of Pediatrics www.aap.org/healthtopics/mediause.cfm
- Center of Media and Child Health www.cmch.tv
- Center for Screentime Awareness www.screentime.org
- Center for Successful Parenting www.sosparents.org

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