

Interventions for Protecting our Children



**MORE TECH SOLUTIONS
CELL PHONE POLICIES
REDUCING ENERGY USE
INTERVENTIONS FOR PARENTS,
NURSES & COUNSELORS
RESOURCES FOR FOLLOW-UP**

**Mary Anne Tierney, RN, MPH
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Informal RF findings in 4 classrooms reduced power output, 2.45 GHz off, SSID at 3



| | Under Wireless Access Point : all in center of room In $\mu\text{W}/\text{m}^2$ | Devices powered on? |
|-------------|---|--|
| Classroom 1 | 191- 286 | None Smartboard hardwired |
| Classroom 2 | 270 | None |
| Classroom 3 | 1090 | Teacher's laptop on, screen lit No one in room |
| Classroom 4 | 326 | None; next to # 3 |

Two Adjustments to Access Points' SSID (Service Set Identifier) to lower RF



- 1: Increase delay time between SSID "beacon" transmissions from 100 milliseconds (ms) to 1000 ms.**
- 2. Lower SSID transmitter power level (3 used successfully)**

Benefits:

1. Reduces risk of health effects
2. Consumes less electricity
3. Allows for more capacity of additional access points
4. Reduces battery life; less backup needed
5. Runs cooler; requires less air conditioning
6. Could extend the life of the equipment

- Courtesy, Chris Hoffmeyer

Easy Internet Solution: Low-RF Router

- 90% less RFR emitted
- Passive “Beacon” signal (biologically harmful).
- OFF Button for Wi-Fi when desired
- 4 Ethernet ports
- *Yet RFR still emitted from personal device*
- *Asus or JRS Eco Routers at ElectraHealth.com*



Institute of Electrical and Electronics Engineers (IEEE): **Wi-Fi Consumes more Energy than Ethernet**

“During the manufacture stage, the energy consumption for the WiFi access point is about 80% higher than that of the Ethernet switch. During the usage stage, the energy consumption as well as CO2 emissions of the WiFi access point is about 37% more than that of the Ethernet switch.” (B. Sikdar, 2013)

[IEEE Transactions on Consumer Electronics](#)

*“5G could consume up to 1,000 times more energy,”
Dexter Johnson, [IEEE Spectrum](#), 3 Oct 2018*

Energy Consumption of 5G, Wireless Systems and the Digital Ecosystem

The more we use wireless electronic devices, the more energy we will consume.

- **“Power consumption of the 5G network is expected to SOAR..”** - Environmentally Sustainable 5G Deployment
- **“While the idea of more space for devices is great for consumers, this will lead to a spike in energy use for 2 reasons: The technology itself is energy demanding and will increase the demand for more electronic devices.”**
- Jackson School of International Studies, U of WA

Find many studies on energy/carbon footprints reports at EHTrust.org or here at [this link](#).



THE SHIFT PROJECT

THE CARBON TRANSITION THINK TANK

a Paris-based
think-tank on
energy
transition

Damaging environmental impacts caused by the explosion of digital technology can and should be avoided by “digital sobriety”:

- Buy the least powerful equipment possible
- Change them the least often possible
- Reduce unnecessary energy-intensive uses
- Include environmental impacts as decision-making criteria when developing policies for purchase and use of equipment

UN's Unesco Report on Technology in Education:

A tool on whose terms?



“While...the use of technology in education can enhance children’s opportunity to learn, it can also put their physical and mental integrity, privacy, and dignity at risk.”

- Banning cell phones improves academic performance, especially for low-performing students
- Urges parental/family awareness of digital safety

Canadian Paediatric Society's guidelines:



Canadian
Paediatric
Society

- Minimizing
- Mitigating
- Mindful usage
- Modelling healthy use of screens

AAP's Cell Phone Safety Standards

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

- Do not use the cell phone up to your head. Use speaker mode or hand-free headset.
- Avoid carrying the phone against your body, like in a pocket, sock, or bra.
- Make only short or essential calls on cell phones.
- Keep an eye on the signal strength (ie: how many bars you have).
- Avoid making calls in cars, elevators, trains, buses.
- Remember that cell phones are not toys or teething items

AAP's HealthyChildren.org 2016

RFR Emissions from your Smart Phone

Against the Body

> 1,500,000 uW/m²



30,000 eggs irradiated

**Let's end this
fashion trend.**

[Dr. Devra Davis: Rapid Fire - What Brain and Sperm Share and Why Care | TED Talk](#)

Cell Phone Policy at Aquinas Academy: from burdening teachers to 8:00 AM check-in



“It is important that we give our students freedom from their phones for 7 hours a day so they can engage with each other in person and focus on learning without notifications buzzing in their pockets.” - Rosemary Meland, Aquinas teacher, Pittsburgh

- All phones & smart watches checked in at office in door pocket organizers in hallway, moved to office during the school day
- No more policing phones to cheat on tests and distract from learning, homework, and interacting with peers
- Phones found on students result in detention
- Students are allowed to use office phone when needed

Cell Phone Lockers: from Fancy to Free



Desert Sage Charter High School Tucson, AZ





Desert Sage High School

Students are required to turn in ALL electronics to the administrative office prior to entering their first class of the day regardless of arrival time. This includes music/game devices, and Bluetooth earphones.

Consequences if found with device:

1st time: The device will be taken away, returned at end of day, and the student will be given a one-time warning.

2nd time: The device will be confiscated and held in the office. The student's parent/guardian may pick it up at the end.

3^d time: The parent/ guardian will be notified that the device was confiscated again. The length of time is at the discretion of the Head of School, up to the end of the semester.



New Hampshire Commission on 5G Health & Environment

Recommendations

- Wireless infrastructure be setback 1,640 feet from schools and homes.



Interventions for Parents, Nurses, Counselors:



- Prioritize youngest, special needs
- Keep symptomatic child away from Access Points (often on ceiling)
- 504 plan: flexibility or home schooling
- Request assignments on paper. Bring Back Books!
- Best: Hard-wired connection. Spitter/switch can be added at teacher's desk; then "airplane mode"
- Opt-out/limit use of wireless devices at school and home
- Teach safer tech use; distance from devices
- Requests of School Improvement and IT Team
- Share this webinar with BOE/Admin/RN/counselors
- Share: [Think Wireless Technology is Safe? Read the Fine Print Warnings](#)

Easiest, Cheapest Way to Assess for EMF Sensitivity



- **Camping Unplugged** in remote area for 3+ days
- Use RFR Meter: Safe & Sound Pro II
- Borrow SafeTech NC's meter



Safeguard Sleep with Family Charging Station



- Set time for ALL family devices to be put away.
- Lock charging station in a closet if teens at home
- Landline is key! Cheap: VOIP phones; or
- 1 phone on, distant with “Do Not Disturb” + program in number(s) of those who can reach you

Encourage Use of Battery-Powered Alarm Clock



- Avoid elevated electric and magnetic fields, and wireless radiation
- Helps avoid habit of “checking” smart phone during the night
- Critical modeling for kids

How SafeTech NC can Help NC schools



- Recording of this Webinar and support documents at SafeTechNC.org next week
- Lending our Safe & Sound Pro II meter
- Practitioners Directory up by early November
- Remote, group education with PTA, admin
- CME-level/CEU level education for nurses, mental health counsellors
- Reach us at
Info@SafeTechNC.org





Building Biology Institute
The science of healthy buildings

Safer Tech Tips

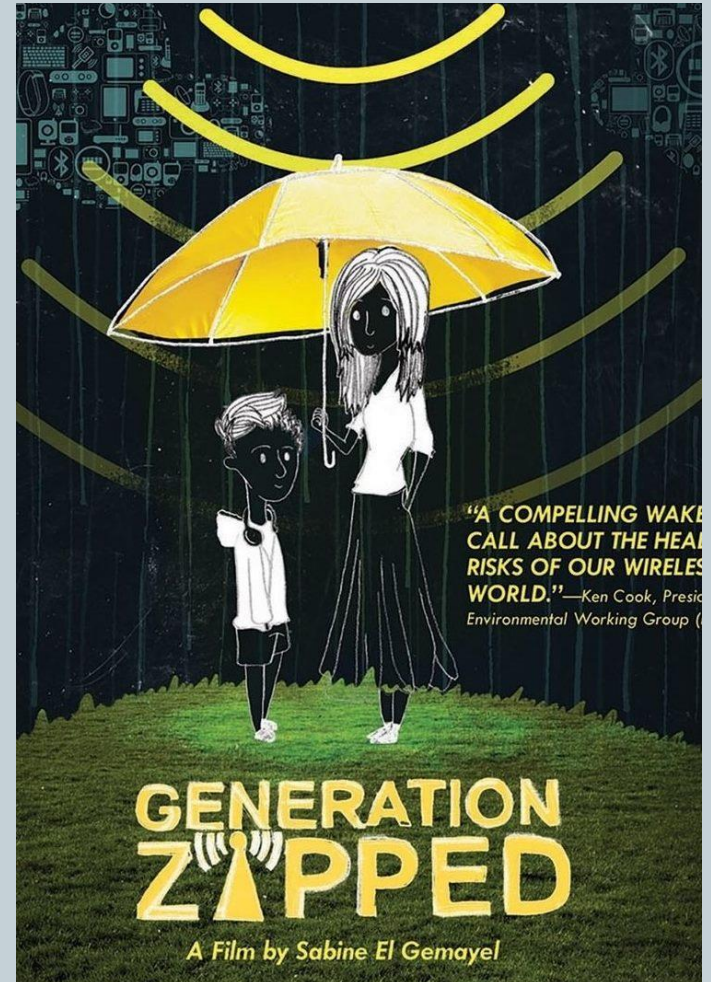
Based on the Precautionary Principle

- Safeguard Sleep
- Reduce Use
- Increase Distance
- Favor Hard-Wired Connections



Reliable Websites to Learn More

- **MDSafeTech.org**
<https://mdsafetech.org/wi-fi-in-schools-2/>
- **EHTrust.org**
<https://ehtrust.org/wifi-in-schools-tool-kit/>
- **HealthyTechHome.org**
- **TechSafeSchools.org**
- **BioInitiative.org**
- **BabySafeProject.org**
- **SafeTechNC.org**



Thank You. Please support our work!



<https://safetechnc.org/donate>

Your Questions? NC residents prioritized

