

## A Few Facts on Electronics and the Developing Brain

### Brain Development

(*Brainstorm* by Dr. Dan Siegel and *The Whole Brain Child*, by Drs. Dan Siegel and Tina Payne Bryson)

- ▶ Birth to 3, brain is 90% developed
- ▶ Birth to 6 is the sensitive period
- ▶ 11-13 the brain is pruning (getting rid of what they don't use and keeping what they do)
- ▶ 25-30 brain is fully developed
  - Frontal Cortex (executive functioning part of the brain)
  - Emotional Regulation
  - Planning and Organizing

### Research from Glow Kids:

- ▶ There is **not one credible research study** that shows that a child exposed to more technology earlier in life has better educational outcomes than a tech-free kid.
  - ▶ There is **some** evidence that screen-exposed kids may have some increased pattern-recognition.
  - ▶ **Brain-imaging research** is showing that glowing screens-like those of iPads-are as stimulating to the brain's pleasure center and as able to increase levels of dopamine (primary feel-good neurotransmitter) as much as sex does.
  - ▶ **Recent brain-imaging studies** conclusively show that excessive screen exposure can neurologically damage a young person's developing brain in the same way that cocaine addiction can.
  - ▶ **Research is indicating** that there is potentially a more addicting effect of excessive electronic use than TV, as well as an increase in clinical disorders such as ADHD, aggression, mood disorders and psychosis.
  - ▶ **Children of addicts** are eight times more likely to develop an addiction problem.
- Glow Kids*
- ▶ In short, **excessive** screen-time appears to impair brain structure and function. Much of the damage occurs in the brain's frontal lobe, which undergoes massive changes from puberty until the mid-twenties. Frontal lobe development, in turn, largely determines success in every area of life—from sense of well-being to academic or [career](#) success to relationship skills.

### Books:

*Reset Your Child's Brain: A Four-Week Plan to End Meltdowns, Raise Grades, and Boost Social Skills* by Reversing the Effects of Electronics—by [Victoria L. Dunckley MD](#)

*Glow Kids: How Screen Addiction Is Hijacking Our Kids-and How to Break the Trance*—by [Nicholas Kardaras](#)

## **Reset Program:**

### ▶ **4-week Reset Program**

#### **Planning Stage**

- ▶ Take all electronics and put them up
- ▶ Plan for the whole family to try this
- ▶ You can have movie night and there are times you can allow 30 minutes of cartoons
- ▶ Create a list of things to do instead
- ▶ Inform relevant adults in your child's life
- ▶ Set a date and create a schedule
- ▶ Call our clinic if you need more support during this reset

### **Results to look for**

#### ▶ **Within Days**

- Child is initially angry, defiant, tearful
- Child's mood/attitude begins to improve
- Sleep improves
- Play begins to be more creative

#### ▶ **Within Weeks**

- Meltdowns become less frequent/severe, or both
- Mood/attention/grades improve
- Sleep deepens

#### ▶ **Within Months**

- All areas continue to improve, social improvements are more apparent, child is more self-aware,

## **Things to do instead of electronics**

1. Build a fort
2. Bake something you've never made before
3. Have a treasure hunt
4. Get out the craft box
5. Create a chalkboard mural on a wall, fence or driveway
6. Take bikes to a park and have a picnic
7. Find some fruit to pick
8. Find a walking track you've never been on
9. Find some rocks and paint some rock people
10. Make mud pies
11. Get some beads, shells, noodles and string and make some jewellery
12. Basketball, football, kickball, baseball, Frisbee
13. Climb a tree (yes we can still do that stuff)
14. Make a kite and fly it
15. Ask an elderly neighbour if they have any chores they need doing
16. Make a sock puppet
17. Do a great big jigsaw puzzle
18. Paper plane races
19. Pick flowers, make a daisy chain, a flower crown or press flowers between books
20. Write a poem
21. Volunteer at an animal shelter or community service
22. Learn to sew
23. Plant a herb garden
24. Play your favourite board game
25. Choreograph a dance routine
26. Grab wood, nails and hammer something
27. Set up a beauty salon and give your mom a pedicure and foot massage
28. Go fishing, real or with paper and magnets and paperclips
29. Take the dog for a walk, or offer to walk a neighbour's dog
30. Write a letter to someone and post it
31. Camp out in the back yard .....or the lounge room if weather not kind
32. Learn to juggle
33. Practise some card tricks
34. Tie dye some clothing
35. Clean your room....I know! crazy fun but super productive!
36. Clean the family car.....who said chores can't be boredom busters!
37. Dance
38. Sleep
39. Swimming
40. Go to a park
41. Play in sand
42. Sensory Play- slime, shaving cream, water beads, make snow, etc.