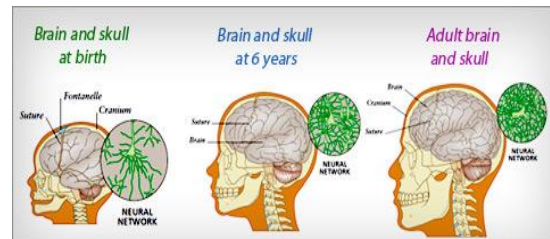


Hands-On is Brains-On

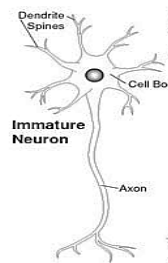
by Janelle Durham, MSW
Parent Educator at Bellevue College
www.gooddayswithkids.com

How does the brain develop

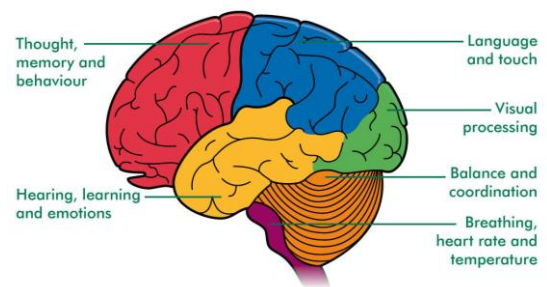


How does the brain develop

- ▶ Neurons are brain cells
- ▶ A baby has as many as an adult: 100 billion
- ▶ In nature vs. nurture, this is nature – the raw material
- ▶ Few connections, mostly in brain stem

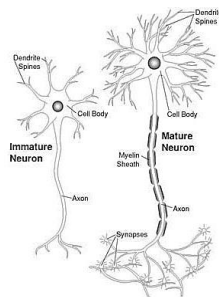


How does the brain develop



How does the brain develop

- ▶ Synapses are connections between neurons
- ▶ By age 3: 500 trillion
- ▶ In nature vs. nurture, this is nurture
- ▶ Connections built through experience: novelty
- ▶ 5 Senses



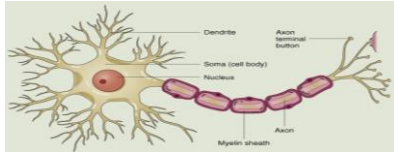
Learning in Process - Novelty

- ▶ Share an A-Ha! Moment



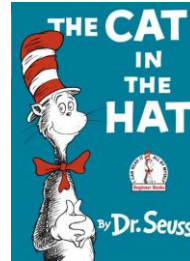
How does the brain develop?

- ▶ Myelination – insulated nerve fibers transmit quickly
- ▶ Built with Repetition. Reinforced during sleep.
- ▶ Sleep matters! So does nutrition!
- ▶ Avoid overstimulation



Learning in Process - Repetition

- ▶ Share a story of repetition to mastery



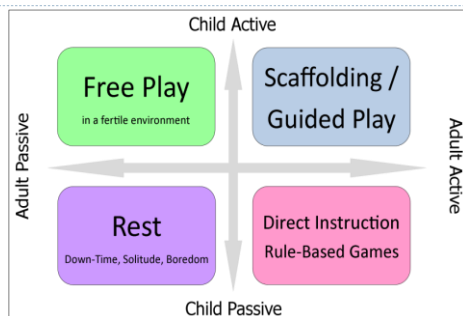
How does the brain develop?

- ▶ **Emotional Context of Learning**
 - ▶ If frightened or stressed – adrenaline - survival mode
 - ▶ Can't learn, except how to avoid threat
 - ▶ If feel loved and safe – oxytocin – neuro-plasticity – open to learning and will want to repeat
- ▶ What does this tell you about effective discipline?

Summary: Keys to Brain Development

- ▶ Novelty
- ▶ Repetition
- ▶ Down Time
- ▶ Feeling Safe and Happy

What activities do kids need to learn?



Direct Instruction / "Teaching"

- ▶ Teacher (or Parent) Led
- ▶ Add information and skills to database
- ▶ Builds *crystallized intelligence*



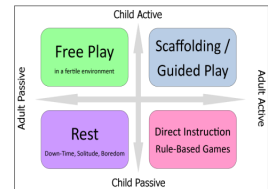
Direct Instruction / “Teaching”

- ▶ Some skills just need to be taught
- ▶ Parent teaches skill, then fades back as the child masters it
- ▶ Great for specialized skills: gymnastics classes, violin lessons...
- ▶ Good for academic basics



Guided Play

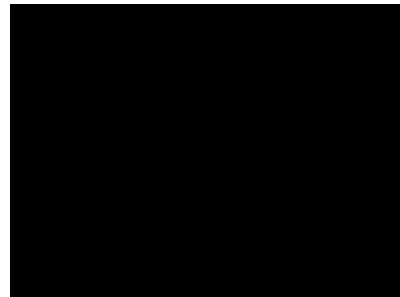
- ▶ Teacher creates an environment full of learning opportunities – “play-based”
- ▶ Child decides what to do and how long
- ▶ Teacher/parent is nearby but not interfering
- ▶ Balance of child-led and teacher-led



Guided Play: Role of the Teacher/Parent

- ▶ *Set Designer*: “invitation to play”
- ▶ *Stage Manager*: Get tools, keep it tidy.
- ▶ *Observer*: Reflect excitement.
- ▶ *Ask questions*: “What would happen if...”
- ▶ *Mediator*: Help resolve conflicts and *Interpreter*: Help children understand other children
- ▶ *Participant in play*: You follow *their* lead. Don’t try to make the game your own.
- ▶ *Project-based (Reggio Emilia)*
- ▶ *Scaffolding*: Help move to next level

Ask Questions to Extend Learning



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Free Play

- ▶ Child Led
- ▶ Process, Not Product
- ▶ Creative
- ▶ Spontaneous
- ▶ Fun



What About Play:



▶ www.youtube.com/watch?v=IjoG6tMq9ZU

Learning Benefits of Free Play

- ▶ Fluid intelligence
- ▶ Physical competence
- ▶ Self-direction
- ▶ Problem-solving
- ▶ Language skills
- ▶ Creativity
- ▶ Conflict resolution skills
- ▶ Emotional intelligence
- ▶ Symbolic play
- ▶ Better memory
- ▶ Reduced stress

Rest, Solitude, Boredom

- ▶ Need down time to reinforce synapses
- ▶ Need solitude (esp. introverts)
- ▶ Avoid over-stimulation
- ▶ Boredom leads to creativity



Summary: What do kids need to learn?

- ▶ Novelty and Repetition
- ▶ To feel safe and happy
- ▶ Balance of Direct Instruction, Guided Play, Free Play, and Rest
- ▶ Hands-on Experiences with all 5 senses engaged