

Nurturing the Brain through Storytime



Presented by Dr. Betsy Diamant-Cohen
for the Pennsylvania Department of Education

April 2015

Workshop Presented by:

Dr. Betsy Diamant-Cohen

Children's Programming & Early Literacy Consultant

443-928-3915

betsydc@mgol.org

www.mgol.org

www.facebook.com/mothergooseontheloose



Albert Einstein

Learning is experience.

Everything else is just information!

Confucious

- I HEAR AND I forget.
- I SEE and I MIGHT remember.
- I DO and I UNDERSTAND.



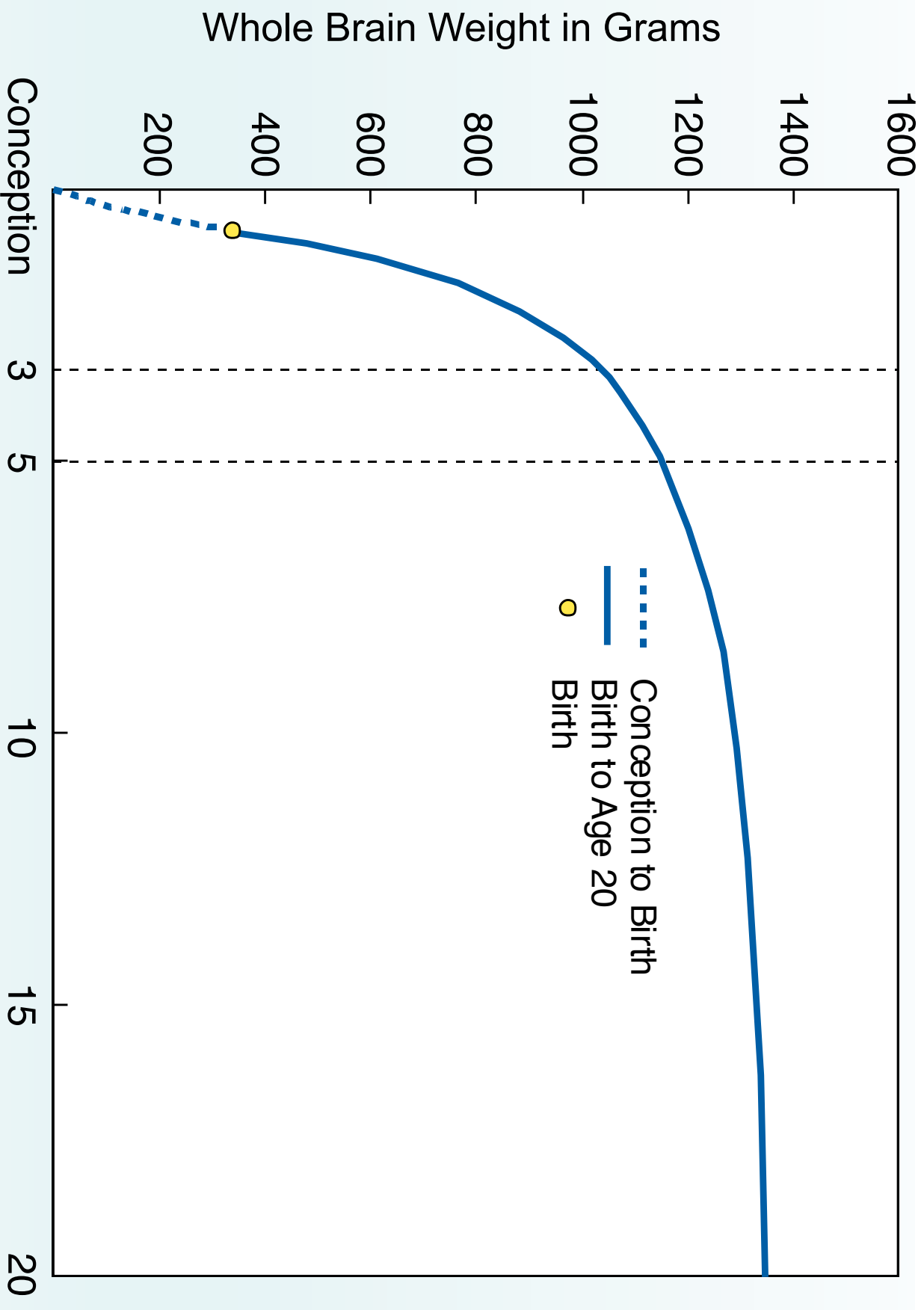
John Ciardi

An ulcer is an unkissed imagination.

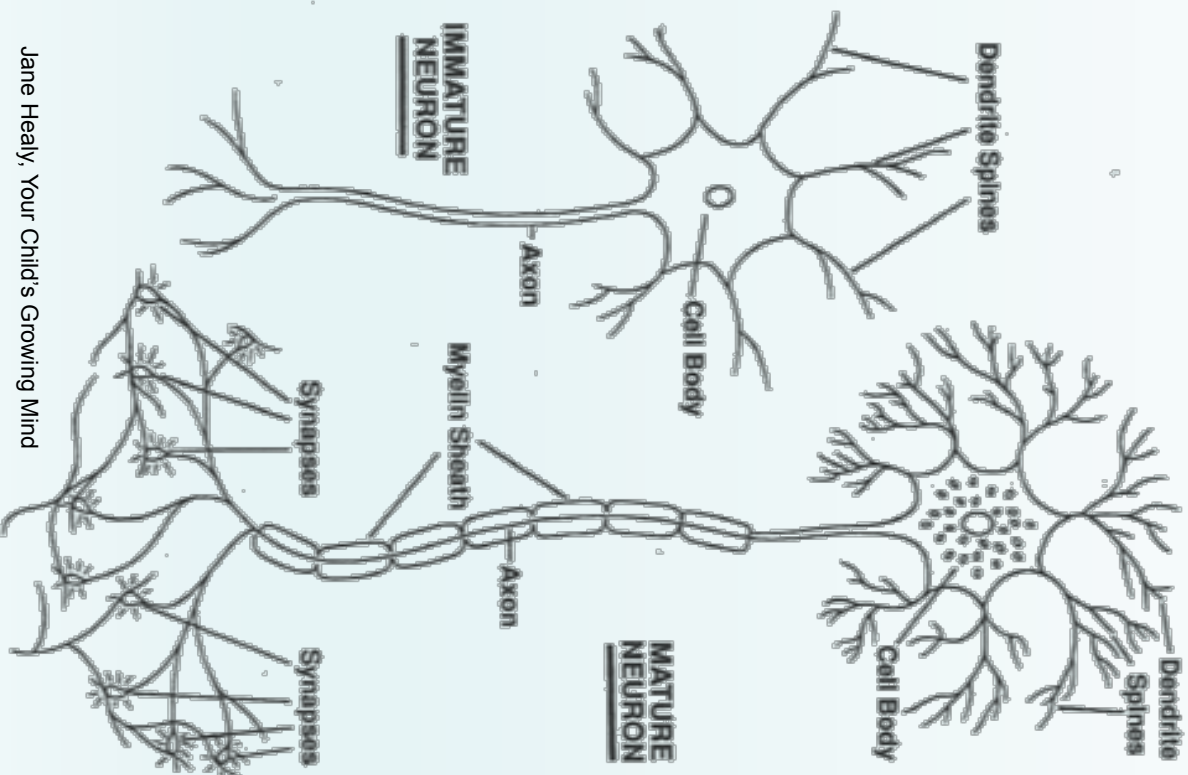
A few facts....

- At birth, a baby's brain contains 100 billion neurons
- At birth the brain weights 25% of it's adult weight; by age 2, it is 75% of its adult weight
- As a child grows, the number of neurons remains relatively stable. So why does the brain gain so much weight?

Growth of Brain



The Developing Neuron: Where Learning Begins



Brain Cells Song

By Brooke Harding

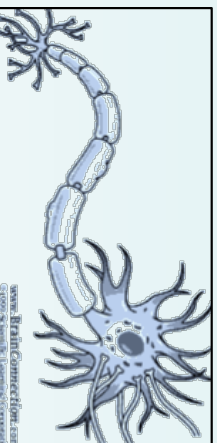
Sung to the tune of “Where Have All the Flowers Gone?”

Cytoplasm nucleus,

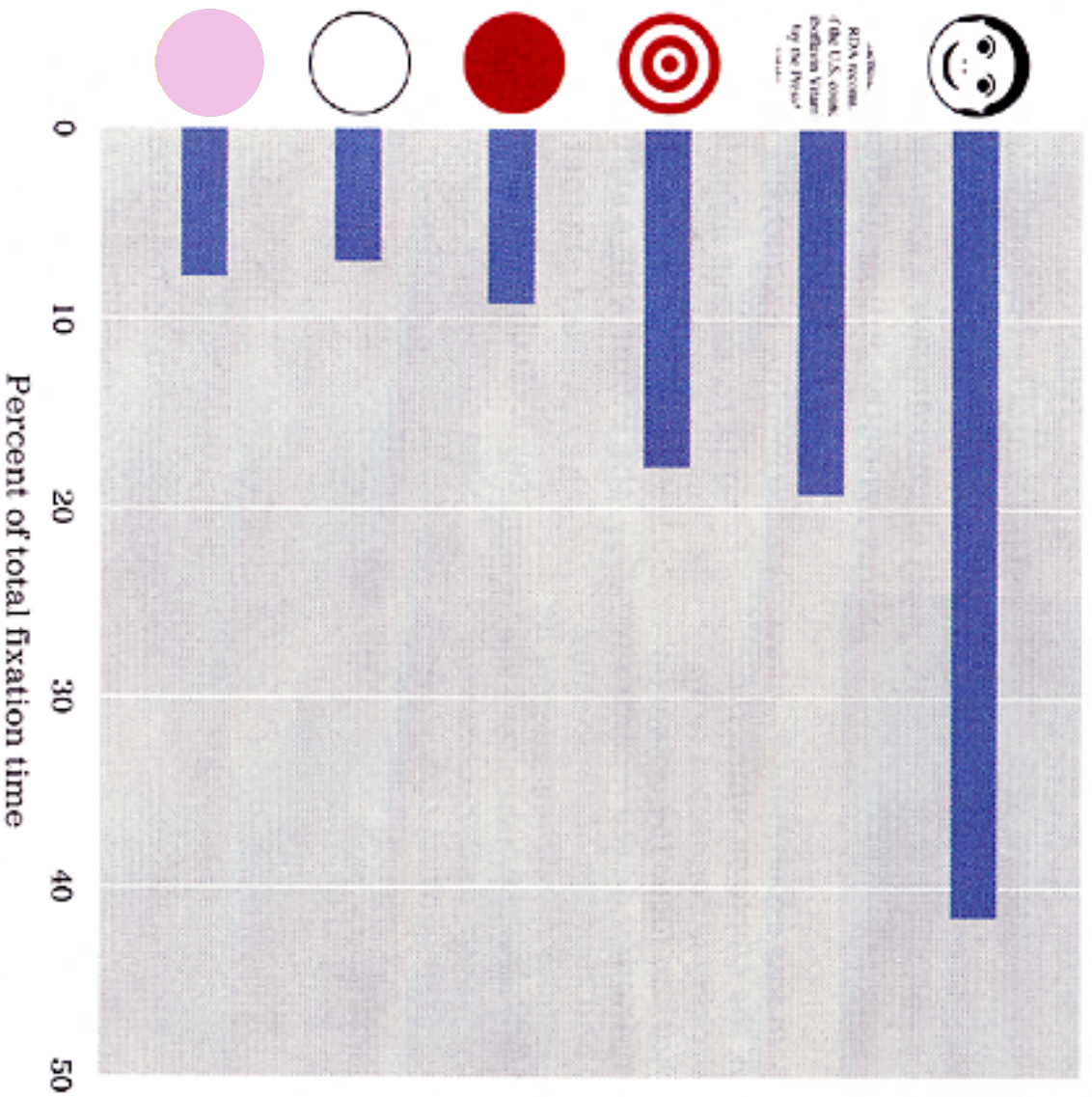
Axon, myelin sheath, dendrites.

Synapse .. between neurons

Synapse .. between neurons.

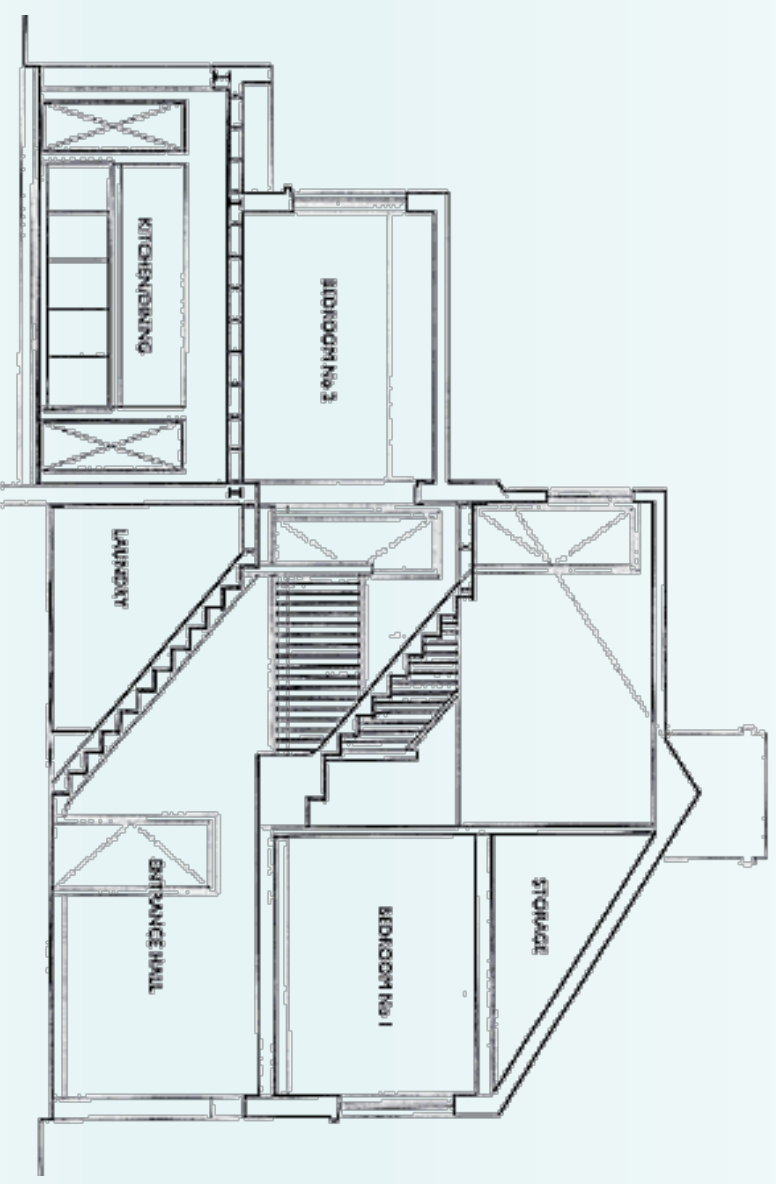
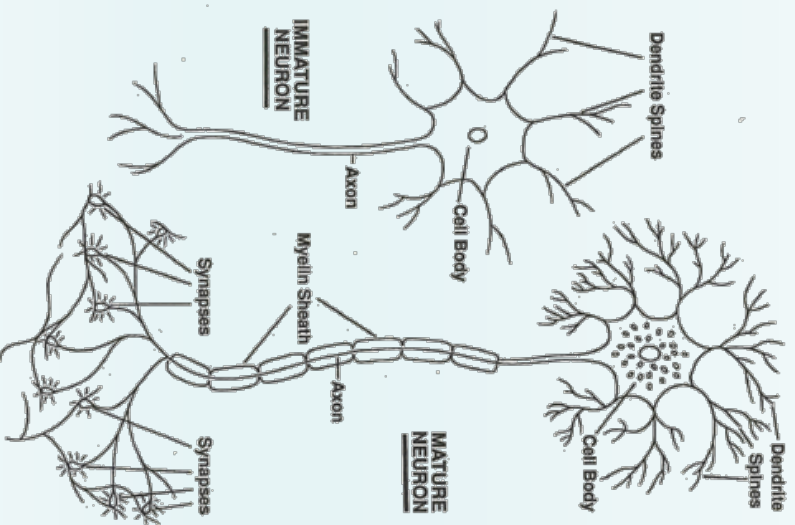


Infant Gazing Study



Children's Emotional Development is Built into the Architecture of their Brains

THE DEVELOPING NEURON:
WHERE LEARNING BEGINS

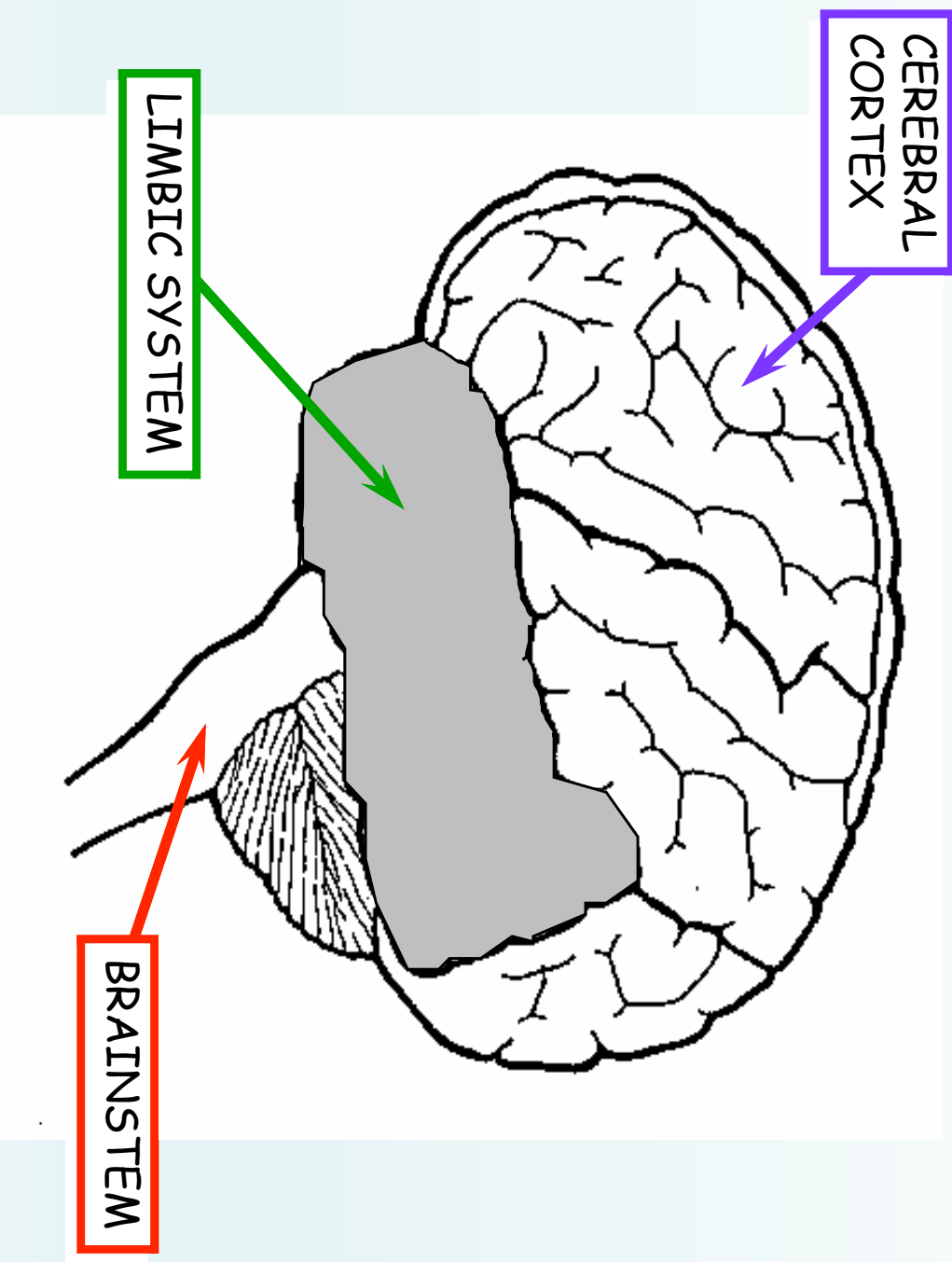


Our first relationships hold many clues to how we've become who we are...



Attachment theory explains how the parent-child relationship emerges and connects it with social, emotional and cognitive development.

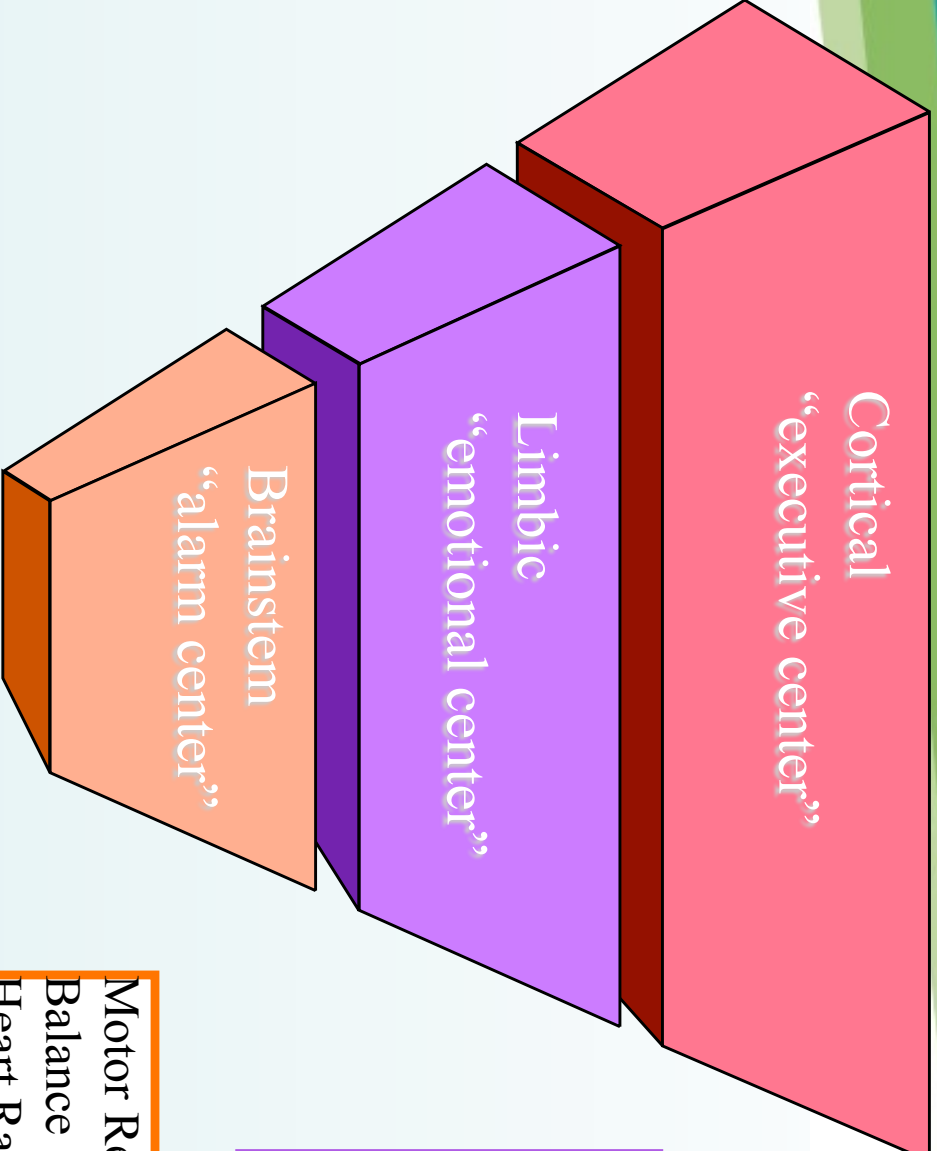
The Triune Brain



Limbic Level Communication

- Touch
- Tone of voice
- Facial expression
- Music
- Rocking, other rhythmic motion
- Smell

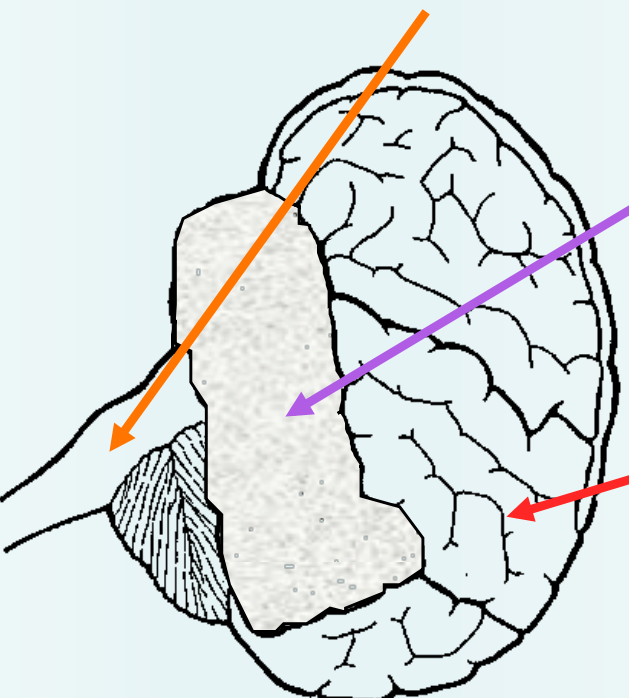




Abstract thought
Logic
Reasoning

Attachment
Contextual Memory
Sexual Behavior
Emotional Reactivity
Appetite/Satiety
Blood Pressure
Body Temperature

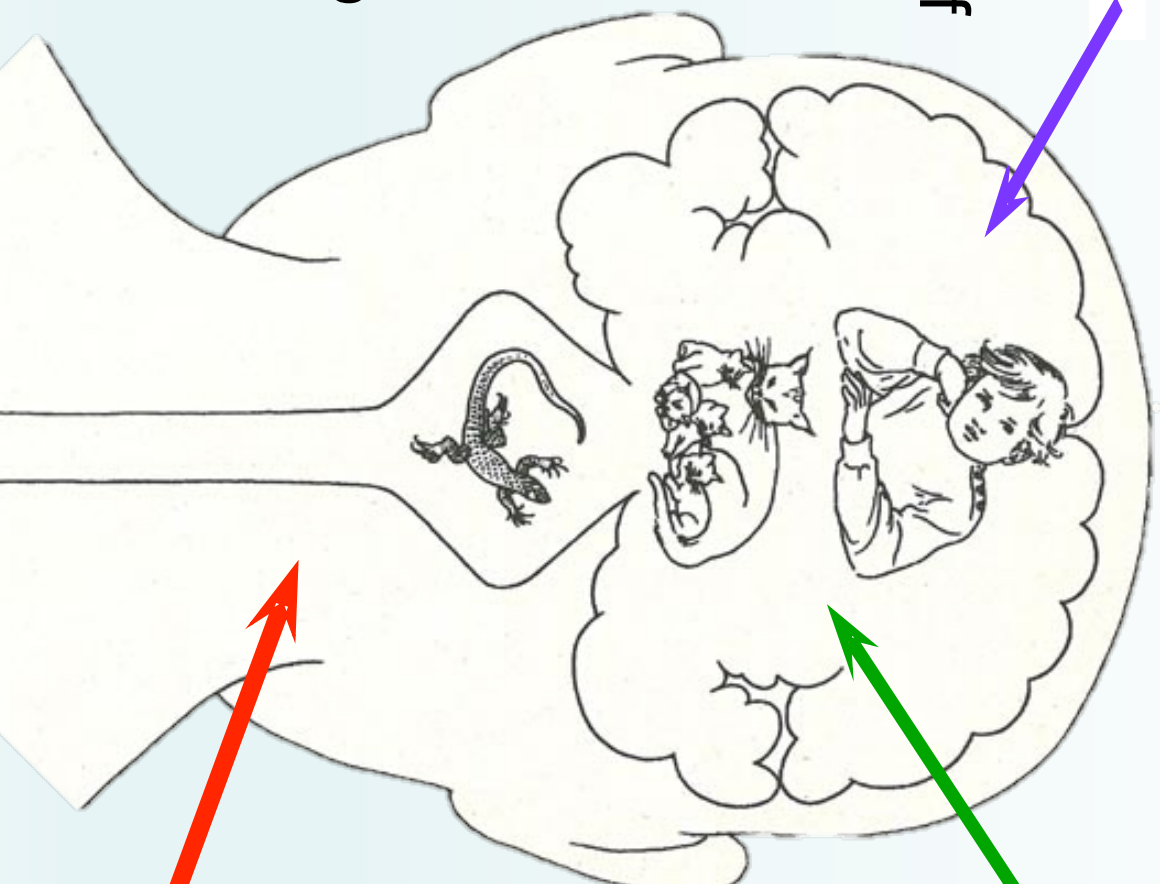
Motor Regulation
Balance
Heart Rate
Breathing



Three Brains in One

CEREBRAL CORTEX

The executive part of the brain manages attention, emotions, and behavior. It weaves together social, emotional, and intellectual capacities in order to help us reach our goals.



LIMBIC SYSTEM

Pulling together feeling and thinking helps people reflect, plan, and evaluate.

BRAINSTEM

Young Children Develop in an Environment of Relationships

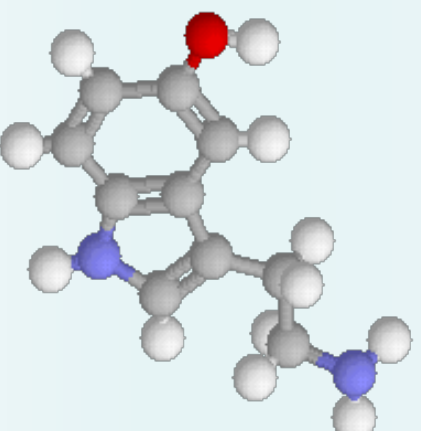


Brain Chemistry

- Cortisol (stress hormone)



- Serotonin (neurotransmitter with implications for mood, anxiety, aggression, impulse control)



Experiences that Strengthen Connections

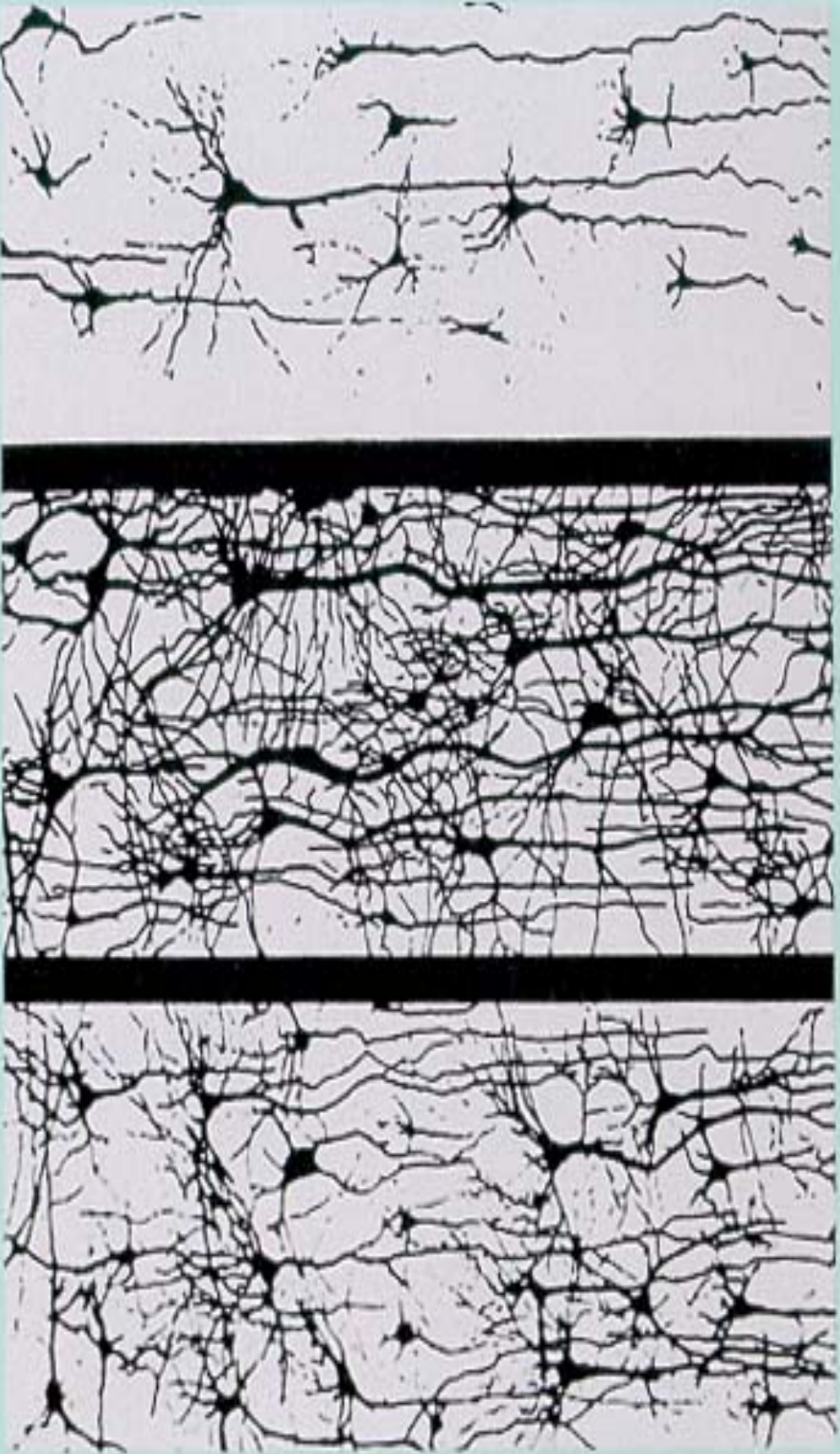
- Are frequent, regular, and predictable
- Occur in the context of a warm, supportive relationship
- Are associated with positive emotion (fun, excitement, humor, comfort)
- Involve several senses
- Are responsive *to the child's* interests or initiative

Synaptic Density

At Birth

6 Years Old

14 Years Old



From *Rethinking the Brain: New Insights into Early Development* by Rima Shore (NY: Families and Work Institute, 1997)

Synaptic Density: Synapses are created with astonishing speed in the first three years of life. For the rest of the first decade, children's brains have twice as many synapses as adults' brains. (Drawing supplied by H.T. Chugani)

Early Brain Development

Research Does Not...



- Indicate that parents need specialized skills to meet their children's needs
- Support early emphasis on academic skills

Early Brain Development Research Does...

- Support an emphasis on nurturing and early relationships
- Indicate that early experiences influence which brain connections are kept and which are pruned away
- Indicate that optimal brain development requires consistent, responsive, and affectionate caregiving.

PA Early Learning Standards

Standards Aligned System (SAS)





Environment

Welcoming

Warm

Safe

Stimulating

Joyful



Hands-On

STEM

Learn by doing

Natural Inquiry

Exploration

Intentionally designed activities

Effective use of available technologies

Working with others



Repetition...Repetition...Repetition

Promotes learning

Increases enjoyment

Creates a sense of safety



SURPRISE!

Alert – senses

Focus – attention

Activate – response

Impress -- memory

Movement

Movement is responsible for physical changes in the brain that can lead to higher intelligence

Movement provides an outlet for expression of emotions



Music Helps Children Develop

- Physically
- Mentally
- Emotionally
- Socially
- Aesthetically



“The basic elements of the *Listen – Like – Learn* program are the basic elements of music, which are: singing, movement, rhythm and melody, and these elements can only be introduced successfully if, at the same time, the children are learning to listen” (Cass-Beggs 1986, 21).

Play

- Playing helps children cope with everyday pressures
- **Social play** strengthens and builds friendships and attachments
- **Imaginative play** develops creative problem solving skills
- **Physical play** helps children to develop gross and fine motor skills as well as balance and coordination.



Theories of Children's Learning

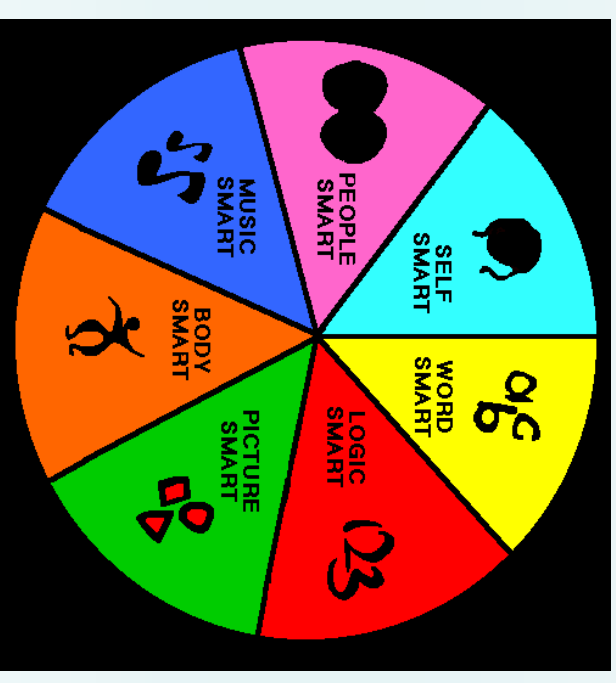
- Dewey – Constructivism
- Montessori – Active Learning
- Vygotsky - Scaffolding
- Piaget – Cognitivism
- Golinkoff & Hirsh-Pasek- Purposeful Play
- Gopnik, Meltzoff & Kuhl - Scientific Experimentation
- Ellen Galinsky – Life Skills

Theories of Children's Learning



Multiple Intelligences

- Linguistic Intelligence
- Logical-Mathematical
- Spatial
- Bodily-Kinesthetic
- Musical
- Interpersonal
- Intrapersonal
- Naturalist (“nature smart”)



National Domains of School Readiness

1. Health and physical well-being
2. Social and emotional well-being
3. General knowledge
4. Approaches to learning
5. Language development
6. STEM
7. The Arts

In other words, The WHOLE CHILD



PA Early Learning Standards

- Approaches to Learning Through Play
- Language and Literacy Development
- Mathematical Thinking and Technology
- Scientific Thinking and Technology
- Social Studies Thinking
- Creative Thinking & Expression
- Health, Wellness, and Physical Development
- Social and Emotional Development
- Partnerships for Learning

2014 Infants- Toddlers Pennsylvania Learning Standards for Early Childhood



Knowledge Gained when Learning Through Play

- Recognizing shapes
- Knowing colors and sizes
- Familiarity with everyday things
- Names of objects
- People's roles
- Routine sequences
- Learn via mistakes



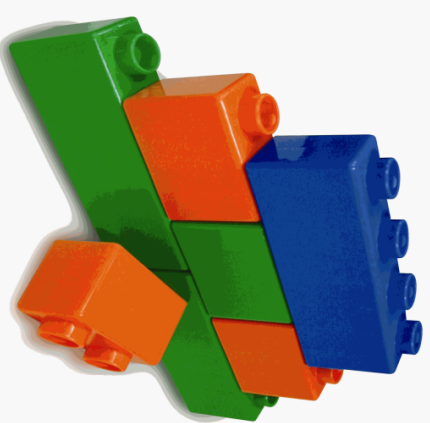
Approach to Learning Through Play

- Enthusiastic
- Persistent
- Wants to find out about things
- Imaginative
- Able to ask questions
- Can work independently or as part of a group
- Can follow directions



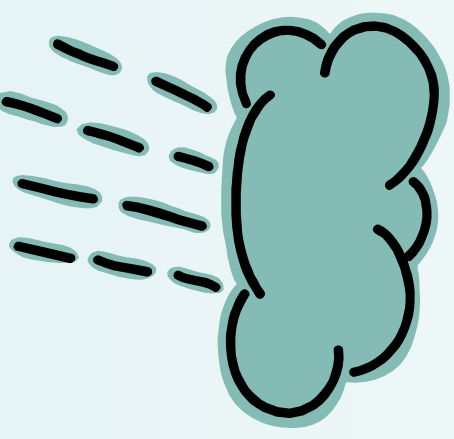
Mathematical Thinking and Expression

- Counts to tell number of objects
- Understands more or less
- Stacking & unstacking, dumping and filling
- Matching and sorting games
- Puzzles and shapes



Scientific Thinking and Technology

- Interest in the natural world
- Explore using all senses
- Collects data
- Describes observations
- Label and respond to weather conditions



Social Studies Thinking

- Sense of belonging (to family or group)
- Identifies community workers
- Knows characteristics of own home
- Understands role of local businesses (barber, pet shop, supermarket)





Creative Thinking and Expression

- **Makes & responds to music**
- **Responds to music** (with movement, props, & song)
- **Acts out new or unknown experiences**
- **Uses imagination and creativity to express self through the process of art**

Health, Wellness and Physical Development

- Coordination and balance
- Fine motor skills
- Gross motor skills
- Basic hygiene
- Understands “stop”



Social and Emotional Development

- Self-confidence
- Able to express feelings and needs
- Sensitive to others
- Seeks adult help if needed
- Can work as part of a group
- Makes connections between emotions and behavior



Social and Emotional Development

Self- Regulation



Language and Literacy Development

- Knows how to listen
- Things have names
- Print awareness
- Letters make up words
- Words are composed of sounds
- Scribbling as the first step to writing
- Familiarity and good feelings about books
- Listens and asks questions



Pat
Please
Clap

This little piggy
Sweetie-pie

Some researchers believe “the number of words are the single most important predictor of later intelligence, school success, and social competence.”

How do you
shine

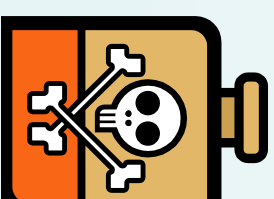
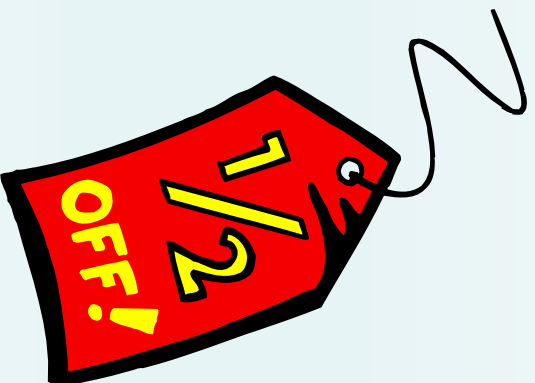
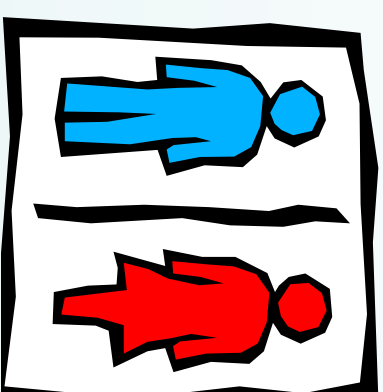
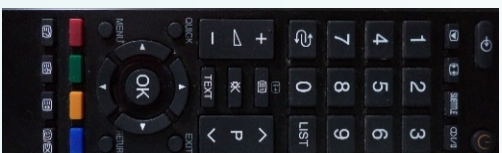
Play

Hearing words is important even for the youngest children

A study from Johns Hopkins suggests “that infants as young as 9 months use words to begin shaping their view of the world, arranging objects into mental categories, in a process previously associated more with preschoolers than with mere babies.”

<http://www.slideshare.net/vacagodx/infant-brain-development-2891731>

Literacy can be found ANYWHERE



Teacher's Definitions of School Readiness

- o Verbally communicates thoughts (84%)
- o **Enthusiastic and curious (76%)**
- o Can follow directions (60%)
- o **Is not disruptive in class (60%)**
- o Is sensitive to other's feelings (58%)
- o **Takes turns and shares (56%)**
- o Pays attention (42%)
- o **Identifies primary colors and basic shapes (24%)**
- o Uses pencils and paint brushes (21%)
- o **Knows letters of the alphabet (10%)**
- o Can count to 20 or more (7%)

Why is School Readiness Important?

- Relationship with literacy and life experience
 - Graduation from high school
 - Likelihood of holding a job
 - Average weekly earnings
 - More successful long-term relationships
 - Lower rates of incarceration
 - Direct economic benefit to society

**“Say it with words,
not with your hands.”**





Studies

- HighScope Perry Preschool
- The Abecedarian Project
- Chicago Child Parent Centers
- Utah School District
- Child/Parent Study in Canada

Language and Literacy: The Six Skills To Get Ready To Read

- **Print Motivation**
- **Vocabulary**
- **Narrative Skills**
- **Phonological Awareness**
- **Print Awareness**
- **Letter Knowledge**



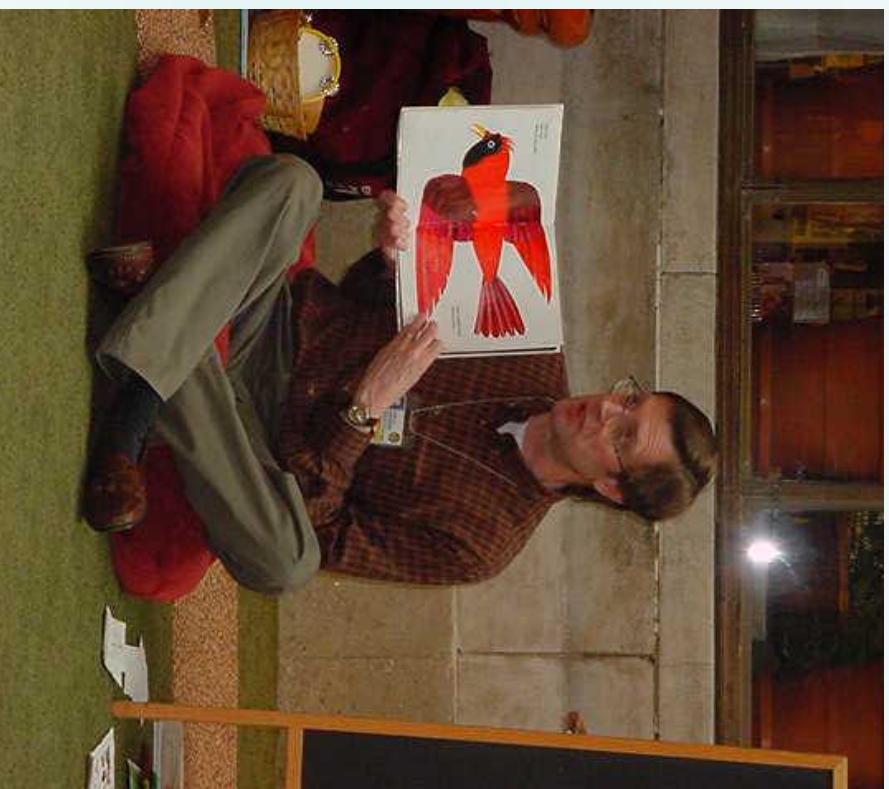
ECRR2

The Five Practices That Help Children Be Ready to Learn

- Talk
- Sing
- Read
- Write
- Play

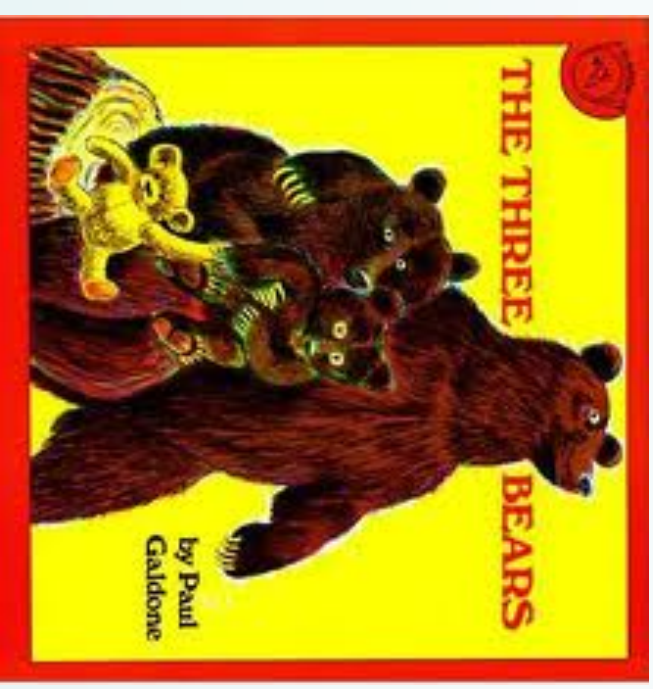


***Would occasionally using one picture
book in many different ways serve young
children best rather than always reading
different books aloud?***



Repeat Books in Different Ways

- Read it aloud
- Tell it
- Use puppets
- Flannel board
- Create props
- Create a soundtrack
- Ask open-ended questions
- Act it out in an environment
- Use new media
- Interview characters



MGOL Activities that Build School Readiness Into Preschool Programs

- **Drum – Phonological awareness**
- **Bells, Shakers, Sticks – Experimentation**
- **Recorded Music – Learning to listen**
- **Colored Scarves – Imagination**
- **Dancing – Get wiggles out, gross motor**
- **Freeze games – Learning how to stop**
- **Puppets – Vocabulary, narrative skills**
- **Animal apps - General knowledge of the word**
- **Book illustrations (paper or digital) – Aesthetic awareness**

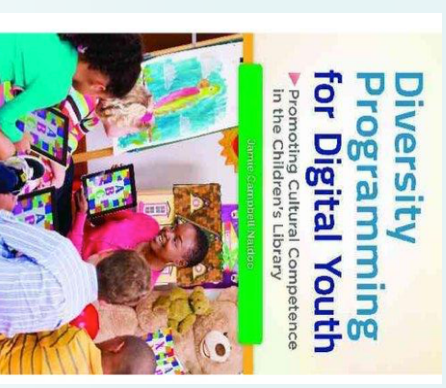
Include New Media

Why?

- Reading choices abound
- Foster early literacy & familiarize children with digital tools
- Spark different senses/multiple intelligences
- Help bridge the digital divide

How? Curation & Reader's Advisory

- Digital Media Diet - <http://digitalmediadiet.com>
- Digital storytime <http://digital-storytime.com/>
- Common Sense Media <https://www.commonsensemedia.org/>
- Littleelit - <http://littleelit.com/>



NAEYC/Fred Rogers Center Position statement



Key messages:

- Intentional use of appropriate technology can support learning and development
- Limit media use-interactive vs. passive media
- Special considerations for media use <2
- Digital citizenship requires equitable digital access
- Ongoing research & professional development is necessary

Key messages for Screen Sense



- **JOINT MEDIA ENGAGEMENT:**
Caregivers should participate when your children use digital media
- Help children extend the learning experiences beyond the screen
- Choose high quality content, especially interactive vs. passive content

Apps build ECRRR2 skills!

- **Animal Sounds** (Zoola animals)
- **Book Apps based on print** (Byron Barton)
- **Apps based on Books** (Pigeon)
- **Non-fiction/Information Book App** (Smithsonian ABC, Merlin Bird ID)
- **Presentation Apps** (Background colors)
- **Toy apps** (Toca Tea Party)
- **Camera** (Super Hero! Photo Booth)
- **Creation Apps** (Felt Board -Mother Goose on the Loose)
- **Games** (Charades)

Other Resources

- Pinterest
- Blogs to read:
 - [Guerrilla Storytime](http://storytimeunderground.wordpress.com/guerrilla-storytime/) (<http://storytimeunderground.wordpress.com/guerrilla-storytime/>)
 - [Littleelit](http://littleelit.com/) (<http://littleelit.com/>) (examples of digital storytimes)
 - [Flannel Fridays](#) (or a preschool blog)
- Digital Music (iTunes/YouTube, Google Play)
- Facebook:
 - <https://www.facebook.com/mothergooseontheloose>
- Youtube



Be Creative! “Sneeze for Peas”

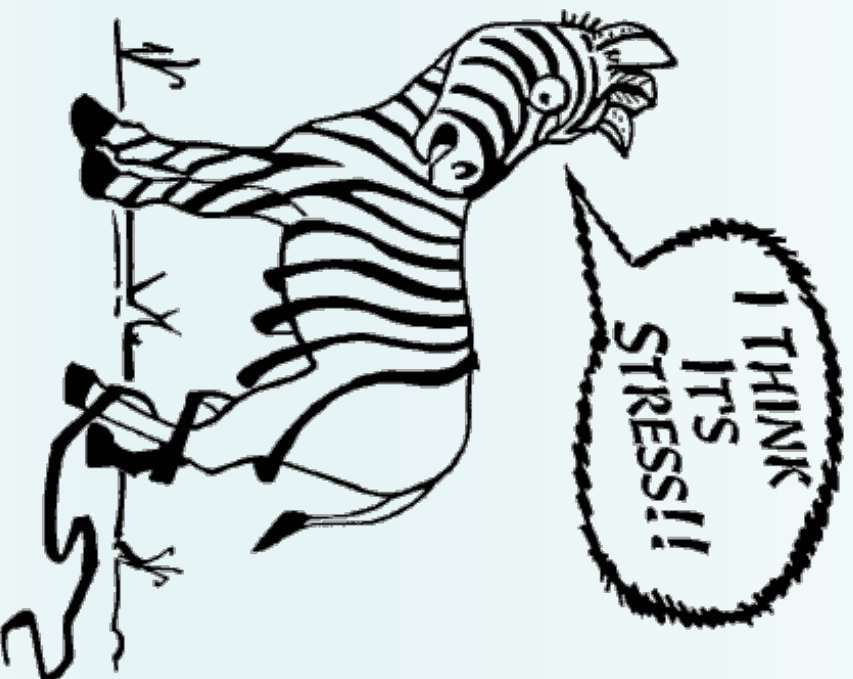
Click here for “I Got a Pea”



Activity Directions for Each Group:

- Choose a book
- Someone in your group reads the book aloud
- Brainstorm (as a group) six different ways to present the book
- Incorporate at least language and literacy skills in with your program.
- List what is being learned & what skills are being strengthened
- Choose an example of your best program to share

Excessive Stress Disrupts the Architecture of the Developing Brain



Presentations



What can we do?



Translate the Research into Practical Implementation



- Greet people warmly (*we want them feel welcome*)
- Create a safe environment for children as well as adults (*with risk-taking in a safe way that builds self-confidence*)
- Offer fun, age-appropriate, stress-free experiences (*no “right” or “wrong” way to do things*)
- Provide experiences that ignite imagination, inspire learning, nurture growth through play

Build children's literacy:

- Model using books with very young children without actually reading them
- Incorporate language with movement, music, and art
- Use words in a variety of ways
- Explain things
- Play with books!



Create self-regulation & school readiness opportunities for children

Direct activities in an encouraging way, getting children to

- Follow directions
- Take turns and share
- Be curious and enthusiastic
- Interact positively with peers



Bring parents into the picture

- Encourage discourse at home
- Provide developmental tips in small doses (*let parents know the importance of seemingly easy activities for helping in their children's brain development*)
- Remind parents that they are role models.



Other ways we can help

- Encourage families to use the public library
- Provide a place with age-appropriate toys, games, activities, furniture, and books
- Remind parents to sing, talk, read, write and play with their children
- Model appropriate ways of using of new media



Plan Programs that...

- Take place in an environment with the child in mind & take multiple intelligences into account.
- Plug into children's social and emotional development.
- Encourage development of school readiness skills.
- Have opportunities for children to work & play together
- Promote bonding between children & families
- Enrich children's lives through the arts
- Are joyful and make everyone laugh
- Incorporate repetition



Transform Your Storytimes

- Incorporate repetition of a book through your storytimes, presenting it differently each time
- Use a planning sheet to keep track of what you have done and want to do
- Explain the importance of repetition to families
- When adults are present, add developmental tips that touch upon all the domains of school readiness, connecting the tips with the activities



Summing Up

- Consider the impact of repetition in programs
- Consider building school readiness along with social and emotional skills when planning programs
- Give developmental tips to families

Assist with healthy development
of the **WHOLE CHILD**



Questions

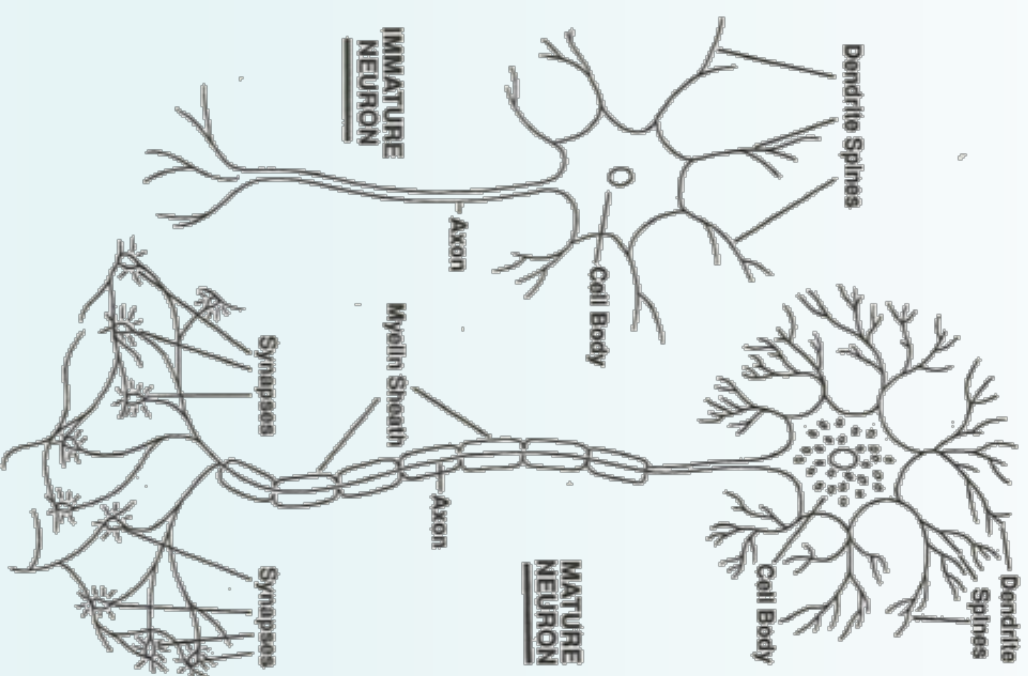


The Cup



- Competence
- Connection
- Control

Summing up



Roots, Connection, Protection



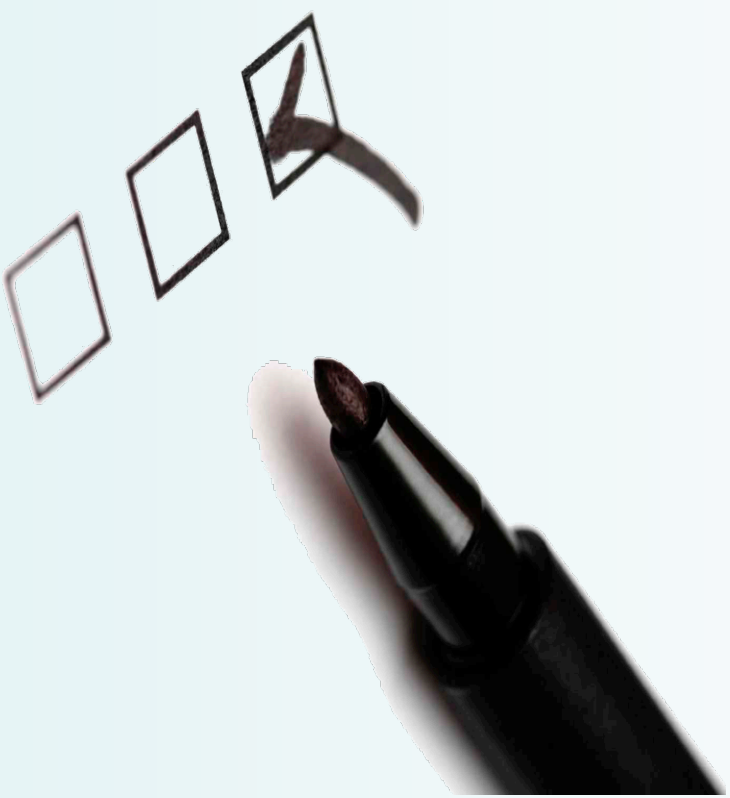
What do you get?

C

P

R

Evaluation



Thank you!

Dr. Betsy Diamant-Cohen
betsydc@mgol.org

www.mgol.net



<https://www.facebook.com/mothergooseontheloose>

Dancing with Books

We went to storytime early today,
To read and to sing and to laugh and to play.
We're using our books in so many new ways....
We're dancing with books today, hip, hip,
hooray!

Chorus

We're da-da-da, da-da-da, dancing with books.
Mystery books, hist'ry books, picture books too.
The storytime children do more than just look,
They love to go dancing, da-da-da dancing.
They love to go dancing, dancing with books.

Dancing with Books

We went to storytime early today,
To read and to sing and to laugh and to play.
We're using our books in so many new ways....
We're reading our books today, hip, hip, hooray!

Chorus

We're ree-ree-ree, ree-ree-ree, reading our
books.
Mystery books, hist'ry books, picture books too.
The storytime children do more than just look,
They love to be reading, ree-ree-ree reading.
They love to be reading, reading a book.

Dancing with Books

We went to storytime early today,
To read and to sing and to laugh and to play.
We're using our books in so many new ways....
We're sharing our books today, hip, hip, hooray!

Chorus

We're sha-sha-sha, sha-sha-sha, sharing with
books.
Mystery books, hist'ry books, picture books too.
The storytime children do more than just look,
They love to be sharing, sha-sha-sha sharing.
They love to be sharing, sharing their books.

Dancing with Books

We went to storytime early today,

To read and to sing and to laugh and to play.

We're using our books in so many new ways.....

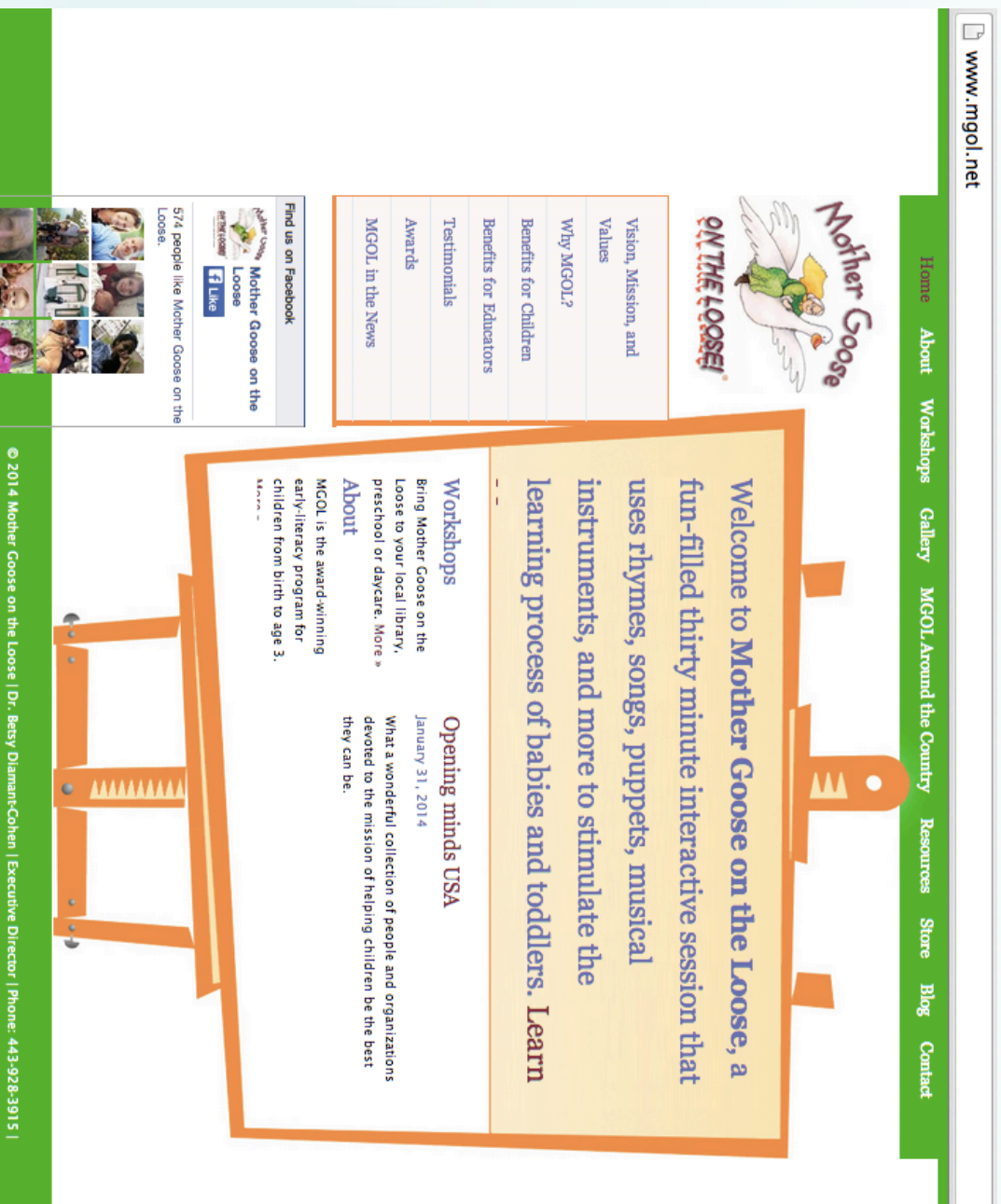
We're da-da-da dancing,

Ree-ree-ree reading,

We're sha-sha-sha sharing

Our books every day!

Visit the MGOL Website for more ideas!



The screenshot shows the MGOL website homepage. At the top right, the URL www.mgol.net is displayed. A green navigation bar contains the following links: Home, About, Workshops, Gallery, MGOL Around the Country, Resources, Store, Blog, and Contact. The main content area features the Mother Goose logo with the tagline "ON THE LOOSE!" and a list of menu items: Vision, Mission, and Values; Why MGOL?; Benefits for Children; Benefits for Educators; Testimonials; Awards; and MGOL in the News. A central orange-bordered box contains the text: "Welcome to Mother Goose on the Loose, a fun-filled thirty minute interactive session that uses rhymes, songs, puppets, musical instruments, and more to stimulate the learning process of babies and toddlers. Learn more!" Below this, there are sections for "Workshops" (Bring Mother Goose on the Loose to your local library, preschool or daycare. More ») and "Opening minds USA" (January 31, 2014. What a wonderful collection of people and organizations devoted to the mission of helping children be the best they can be.). At the bottom left, a Facebook widget shows "Mother Goose on the Loose" with 574 likes. The footer contains the copyright notice: © 2014 Mother Goose on the Loose | Dr. Betsy Diamant-Cohen | Executive Director | Phone: 443-928-3915 |

www.mgol.net

