

Stages of Development Ages 2 to 7 years

Making Connections Between The Whole Child and Classroom Learning

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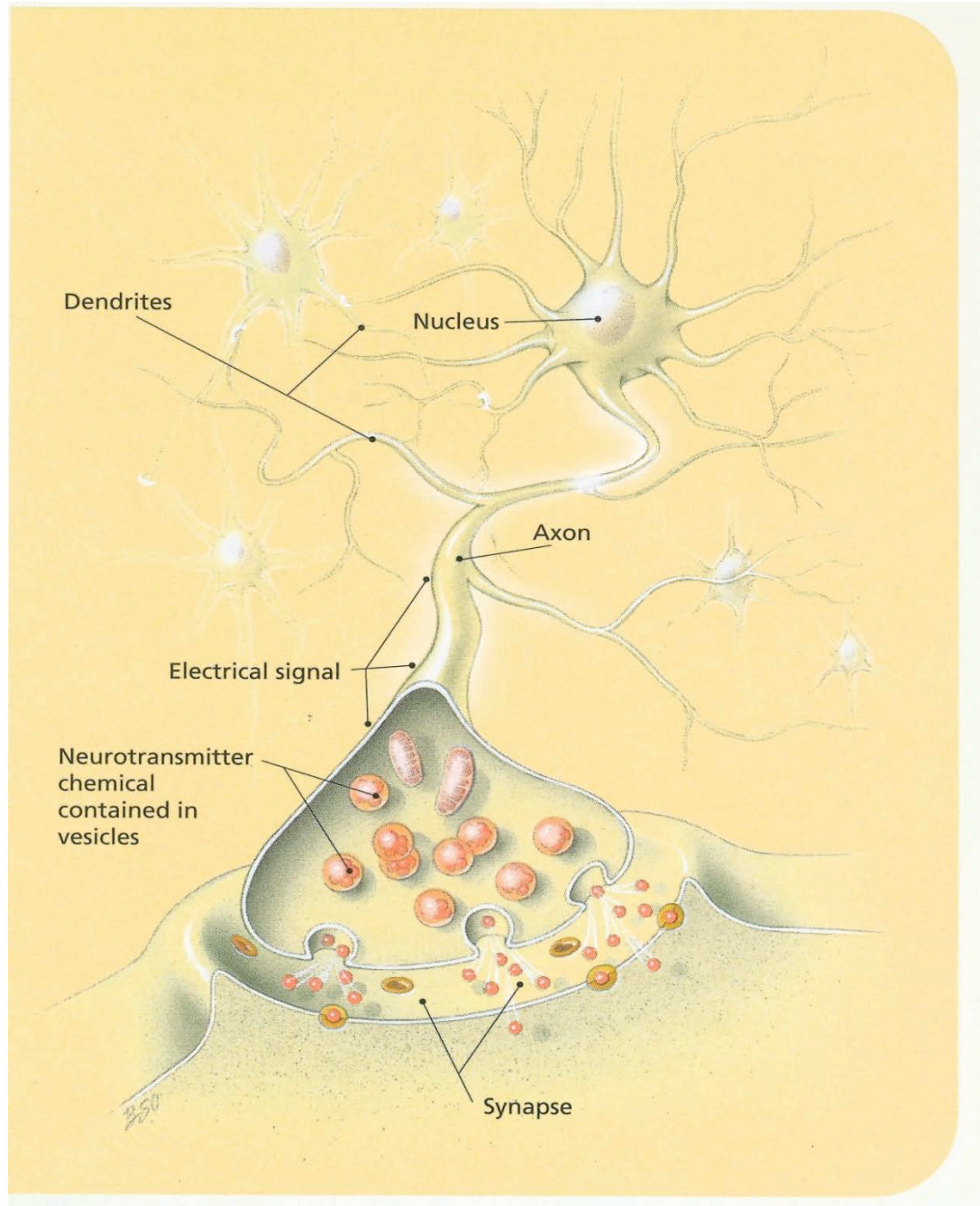




Brain Architecture

- Most current thinking on cognitive development!
- Brain cells are called neurons
- Neurons have a head called a nucleus, an axon (usually one) that sends signals, and many many dendrites that receive signals
- When the axons and dendrites meet they form a synapse and exchange impulses
- The forming of synapse after synapse is what forms the “wiring” or “architecture” of the brain



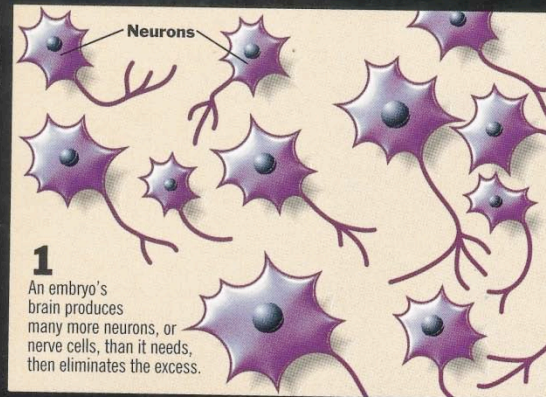


Neuron

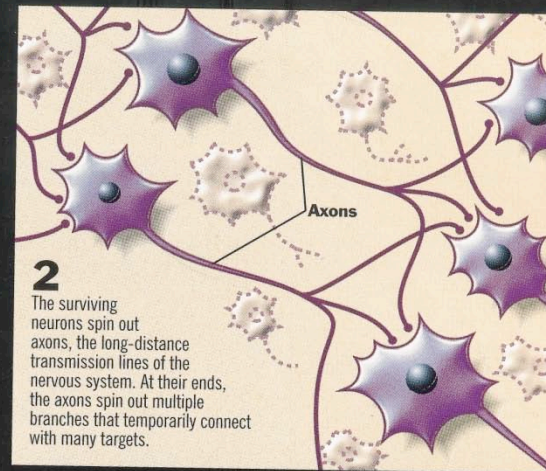


Wiring the Brain

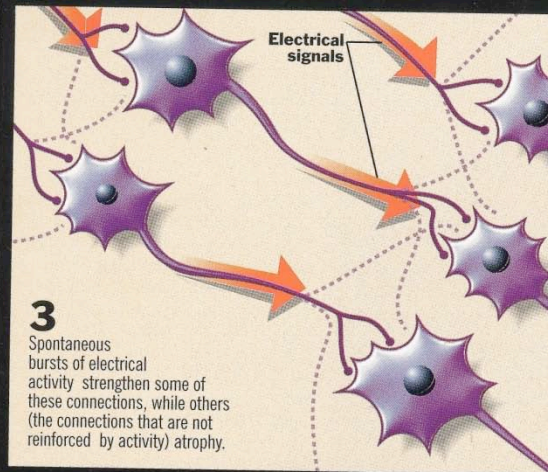
Wiring the Brain



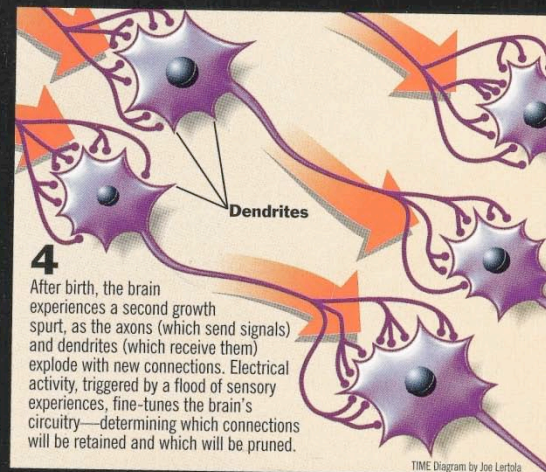
1
An embryo's brain produces many more neurons, or nerve cells, than it needs, then eliminates the excess.



2
The surviving neurons spin out axons, the long-distance transmission lines of the nervous system. At their ends, the axons spin out multiple branches that temporarily connect with many targets.



3
Spontaneous bursts of electrical activity strengthen some of these connections, while others (the connections that are not reinforced by activity) atrophy.



4
After birth, the brain experiences a second growth spurt, as the axons (which send signals) and dendrites (which receive them) explode with new connections. Electrical activity, triggered by a flood of sensory experiences, fine-tunes the brain's circuitry—determining which connections will be retained and which will be pruned.

TIME Diagram by Joe Lertola

1 At birth many more cells than needed

2 Surviving neurons spin out dendrites to make temporary connections

3 Spontaneous bursts of energy (resulting from human interactions) strengthen some, making connections, while others atrophy

4 Fine tuning occurs with sensory experiences, pruning begins



Rapid Growth



5 Days



2 Months



1 Year



28 Years



Brain at age 1 more closely resembles that of an adult





What is Normal Development?

- Predictable and patterned stages
- Unique rates
- Earlier is not better
- Based on the following
 - Heredity
 - Temperament
 - Culture
 - Environment and Experiences
 - Intelligences





Normal Development Can...

- Be sporadic and inconsistent
- “Appear” to have setbacks
- Include negative and positive behaviors, both of which help the child grow and develop



Gesell's Cycles & Stages of Development

- Each cycle is made up of 6 stages
- Cycles are varying in length depending on the child
- Stages of behavior are observed beginning at birth
- Cycles with their stages are repeated throughout development





Gesell's Cycles & Stages of Development

- Children move from equilibrium to disequilibrium as they move through stages within each cycle
- Gesell's use of the terms "equilibrium" and "disequilibrium" are more global as compared to Piaget's Cognitive Theory





One Cycle Consists of Six Stages During Early Childhood

- Smooth (E)
- *Break-up (D)*
- Sorting Out (E)
- *Inwardizing (D)*
- Expansion (E)
- *“Neurotic” Fitting Together (D)*

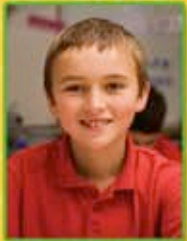




2 yr. Old -- Smooth

- Equilibrium
- Gentle temperament
- Mesh well with environment
- Socially compliant
- Love role playing, imitating adults, such as cooking, hammering, infant care, talking on the phone





2 ½ yr. Old – Break Up

- Disequilibrium
- The terrible two's
- A peak age of disequilibrium
- Rigid, Inflexible
- “No” is used often
- Cannot adapt, give in, or wait





2 ½ yr. Old (cont.)

- For domestic routines, sets up rigid sequence of events
- Domineering -- “Mommy do it” -- Daddy cannot “sub”
- Age of violent emotions
- Cannot make decisions, shuttling back and forth between extremes





2 ½ yr. Old (cont.)

- Difficulty making decisions about what to wear
- Perseverates: Wants to go on & on with whatever he is doing...not just right now but from day to day
- In school, pays more attention to other children than at 2 years, but mostly to protect any object that is using, has used, or might use





2 ½ yr. Old (cont.)

- May be upset when it is time to go home from school
- Might behave better at school than at home
- Tip to adults: It is best to try to avoid conflicts by being casual and assuming they will cooperate



3 yr. Old -- Sorting Out



- Equilibrium
- Things quiet down ... for awhile
- Loves to conform & cooperate
- Highly social
- Gives as well as takes
- Likes to share (objects as well as experiences)





3 yr. Old (cont.)

- More secure in relationships
- Better motor ability, making daily routines easier
- Language development has improved tremendously
- Loves new words -- adults can use words to influence him, such as “new,” “big,” “surprise,” and “secret”





3 yr. Old (cont.)

- Language is, for the first time, directed as much toward other children as toward adults
- Language is reciprocal -- talks with other children, not just to them





3 ½ yr. Old -- *Inwardizing*

- Disequilibrium
- Tremendous change
- Marked insecurity, disequilibrium
- Lack of coordination -- stumbling, falling, fear of heights
- Stuttering and lisping may occur
- Hands may tremble





3 ½ yr. Old (cont.)

- Vision is changing, depth perception is off, difficulty going up and down steps
- Reverts to two feet per step
- Tensional outlets are exaggerated -- blinking eyes, biting nails, picking nose, facial tics, sucking thumb excessively





3 ½ yr. Old (cont.)

- Relationships with others difficult due to insecurity -- crying & whining, “You don’t love me”
- “Don’t look!” Don’t talk!” “Don’t laugh!”
- May demand exclusive attention of family or friends
- Emotional extremes -- shy then over-boisterous





3½ yr. Old (cont.)

- Rigid, ritualistic, again, in eating, sleeping, dressing
- Separation problems if mom leaves, must be able to physically see her
- Frequent verbal disputes with other children
– will seek adult help



4 yr. Old -- Expanding

- Equilibrium
- Tireless bundle of energy!
- Out of bounds in every direction
- May hit, kick, throw fits of rage
- Language may shock you
- In drawing, tends to improvise





4 yr. Old (cont.)

- Gets along better with other children than at 3 ½ yr.
- Less need to exclude others
- Tells tall tales
- Still boastful, boisterous, & belligerent
- Vision is focused on the distance





4 yr. Old (cont.)

- More elaborate sentence structure
- Moods change rapidly, age of extremes
- Highly imaginative
- Beginning cooperative play, “best friends”





4 ½ yr. Old -- *Neurotic*

- Disequilibrium
- Borrow characteristics from adjacent ages
- Age of opposition, uncertainty, and unpredictability
- Can be scared by the same wild scary stories that they used to love
- May have nightmares

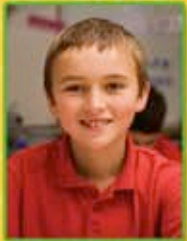




4 ½ yr. Old (cont.)

- More self motivated, stay on task more
- Short attention span
- Concerned with detail, like to be shown
- Improving control, perfecting skills
- Tend to improvise





4 ½ yr. Old (cont.)

- Beginning interest in letters & numbers
- Play is less wild
- Emotions are uncertain
- The “Bothered” age





5 yr. Old -- Smooth

- A time of extreme & delightful equilibrium
- Wants to be good, to please you
- Needs approval, therefore, needs consistent guidelines
- Needs “release” from tasks





5 yr. Old (cont.)

- Calm, friendly, not too demanding
- Content to stay on or near home base
- Realist -- tries only that which he can accomplish
- Mom is the center of his world





5 yr. Old (cont.)

- Is very literal & succinct
- Thinks aloud
- Can now sit still for awhile
- Focuses up close, better than far away
- Makes some reversals





5 ½ yr. Old -- *Breaking-up*

- Disequilibrium
- Brash, combative, argumentative
- Can't make up their minds
- Need consistent rules
- Extremely emotional; emotions can fluctuate to opposite extremes





5 ½ yr. Old (cont.)

- Complains a lot
- Shows initiative and tries things – often unsuccessfully
- When speaking, elaborates more than 5 yr. old did
- Is the center of his world – has not yet developed a secure sense of self





5 ½ yr. Old (cont.)

- Mom has moved into second place – gets blamed for everything that goes wrong
- More restless, less motor control
- Confusion in spatial orientation, peak age for reversals

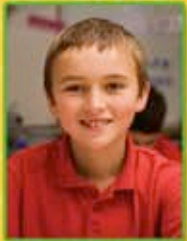




6 yr. Old -- *Sorting Out*

- Equilibrium
- Wants to be first... or last
- Competitive
- Trying out relationships with authority by extreme behaviors: Bossing, teasing, tattling





6 yr. Old (cont.)

- Critical of others, but easily hurt himself
- Takes failure hard
- Likes to “work”
 - Big producers! Fast but sloppy
 - Quantity, not quality





6 yr. Old (cont.)

- Talkative
- Likes to work on teams: projects
- Constantly active, energetic, enthusiastic
- Expect and plan for active & noisy classroom





6 yr. Old (cont.)

- Can focus up close & far away, but not back & forth, back & forth ...
- While working, they may be mumbling
- Balance on the back legs of chairs
- Need a fixed routine: changes bother them
- “King of the Pencil Sharpener”





7 yr. Old -- Inwarding

- Disequilibrium
- Shy, withdrawn and moody
- Filled with inner tension
- Calmed down, easier to live with – however, more likely to complain than rejoice





7 yr. Old (cont.)

- More likely to retreat rather than confront
- Works best in pairs, not groups
- Likes to be alone, resents intrusion





7 yr. Old (cont.)

- Hands are busy touching and exploring
- More discriminating in what she sees and does
- Often does not respond promptly
- Does not hear directions – may forget what you told him
- Easily distracted – dependent on reminders and guidance





7 yr. Old (cont.)

- Needs more time to complete work – because of his laborious work style
- Often demand too much of themselves – need help defining stopping points
- Take time to think; interested in conclusions and logical ends





7 yr. Old (cont.)

- Very fond of teacher
- Have good days & bad days
- Use the eraser most frequently
- Myopic vision





Knowing Ages and Stages of Development assists:

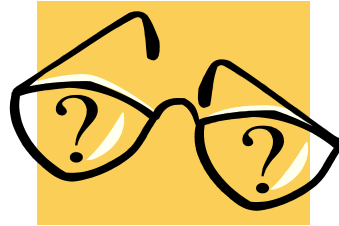
Not only in...

- Curriculum planning
- Creating a developmentally appropriate environment
- The identification of inconsistencies in development

But also in...

- Setting realistic expectations for behavior as well as performance!





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