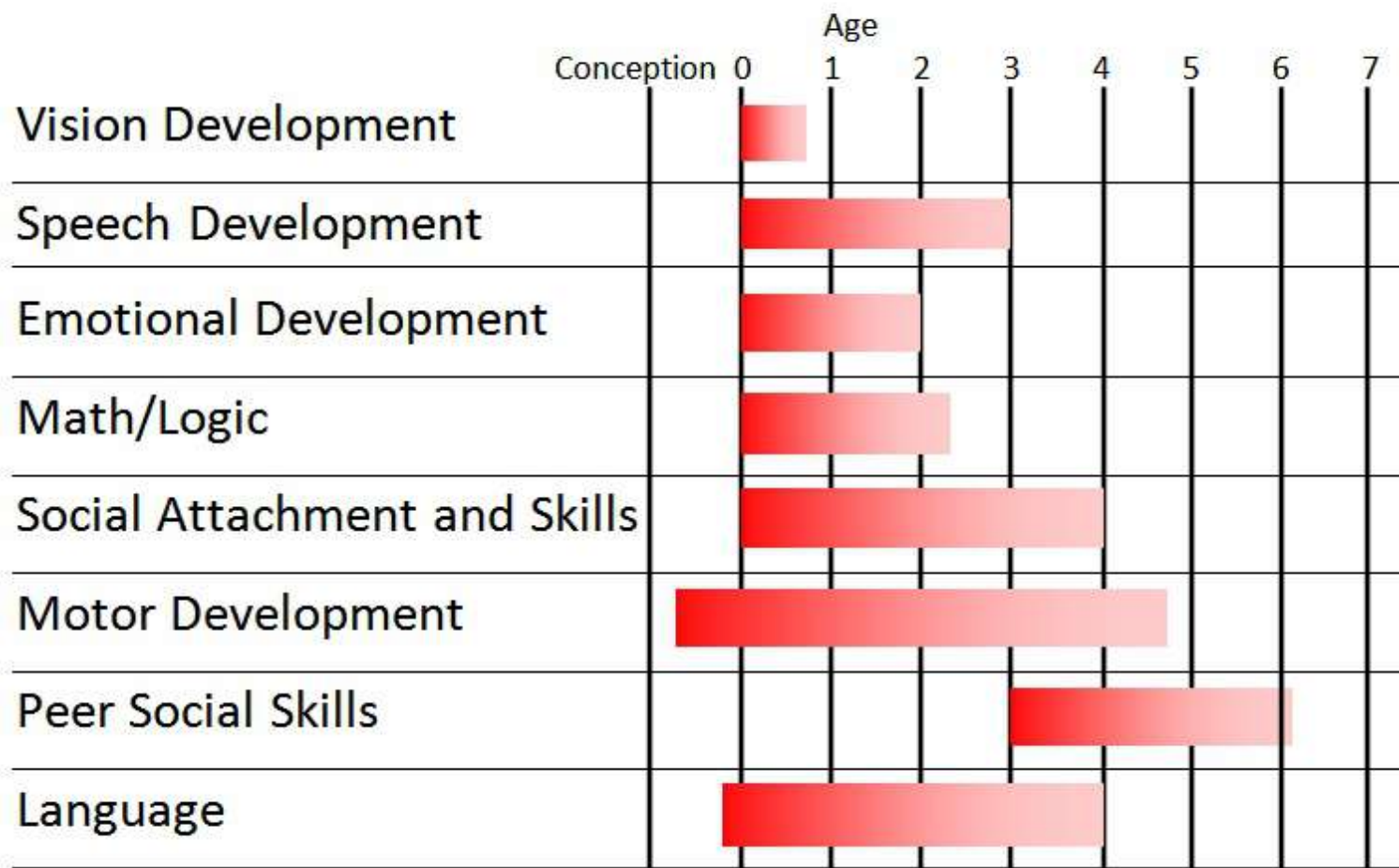
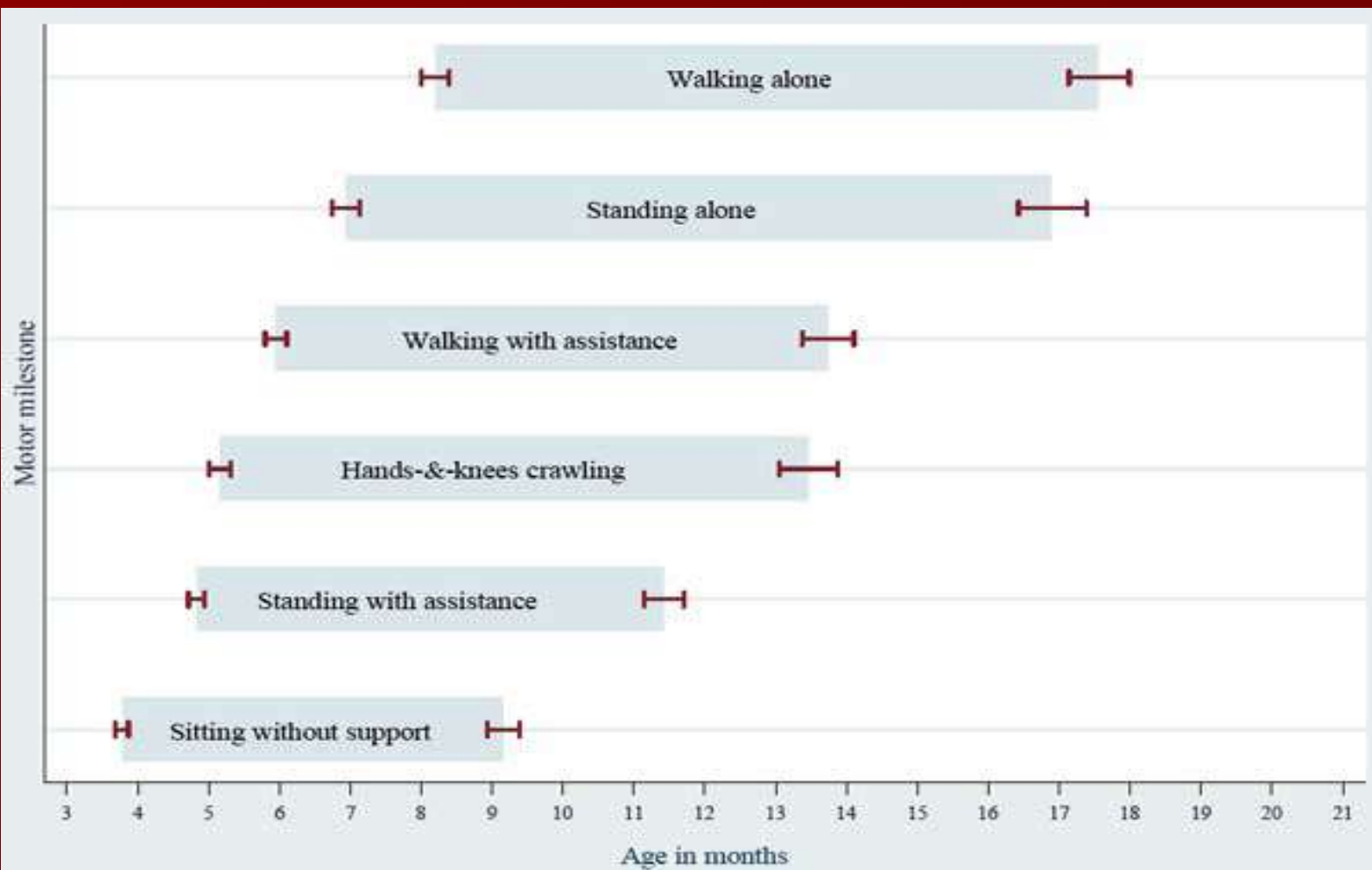


# Infant Development



# Stages of Brain Development in an Infant





# Influences on growth

- Heredity
- Nutrition
- Health
- environment

# Each Child is Unique



- Rates of growth in first year may vary
  - Birth length increases by 1 ½ times
  - Birth weight triples
- Milestones are celebrated by parents and used by childcare workers
- Development is an orderly process
  - Follows the same sequence for all children
- Failure to thrive – term doctors use when growth slows considerably





# charting your baby's development



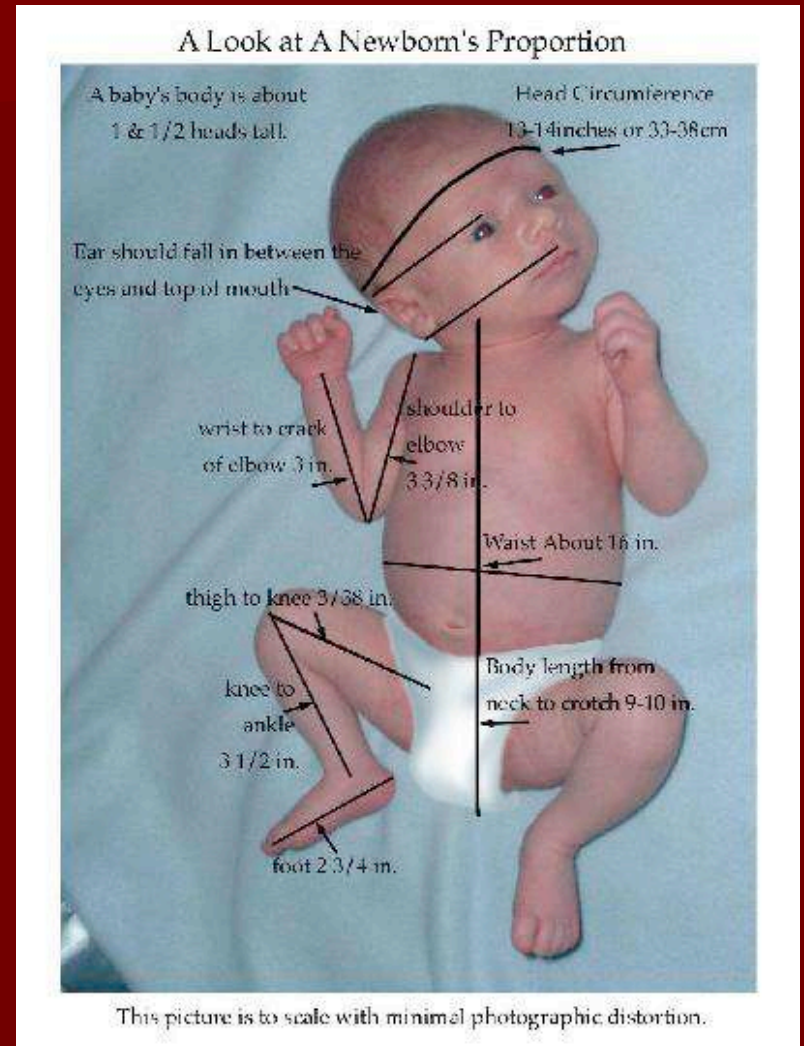
# Growth and development

	Males		Females	
Age	Length/in	Weight/lbs	Length/in	Weight/lbs
Birth	19 3/4	7.5	19.5	7.5
3 months	24	13	23.5	12 1/4
6 months	26.5	17.5	25.5	15.5
9 months	28	20.5	27.5	18 3/4
12 months	29	22.5	29	21



# Proportion

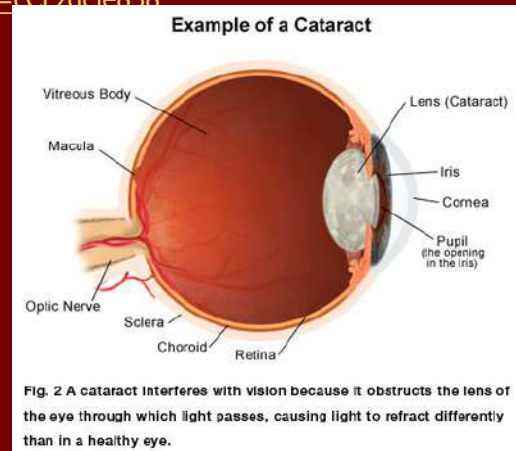
- Babys head and abdomen are larger



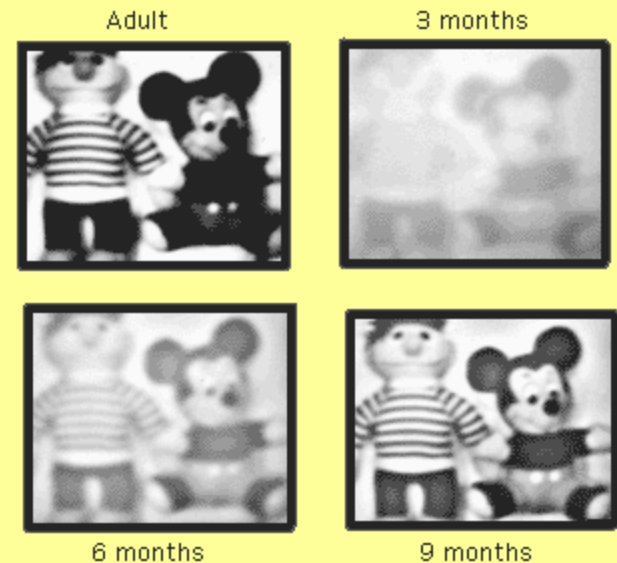
# Senses

## ■ Vision

- <http://www.youtube.com/watch?v=cCEzacie838>



A human baby perceives his or her parents with unformed sight. At birth, vision is blurred. It increases in clarity through the first two years of life.



# Senses continued

## ■ Hearing

- Develops before birth
- They respond to the tone of voice not words



# Senses continued

## ■ Touch

- Rely on touch of others



## ■ Smell and taste

- Develops rapidly



# Voice

- Its important to talk to your child
- Newborns cry=shrill. The cry softens as lungs develop

## ■ 3 – Month Language Developmental Checklist

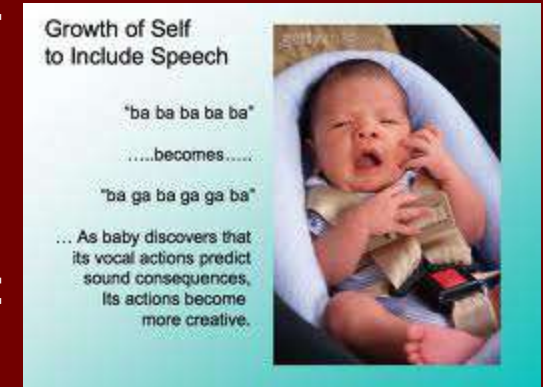
- Smiles at the sound of your voice
- Begins to babble
- Begins to imitate some sounds
- Turns head toward direction of sound

## ■ 7 – Month Language Developmental Checklist

- Responds to own name
- Begins to respond to “no”
- Can tell emotions by tone of voice
- Responds to sound by making sounds
- Uses voice to express joy and displeasure
- Babbles chains of sounds

## ■ 1Year Language Developmental Checklist

- Pays increasing attention to speech
- Responds to simple verbal commands
- Babbles with inflection (changes in tons)
- Says “dads”: and “mama”
- Uses exclamations, such as “Oh-oh!”
- Tries to imitate words



# Reflexes

## ■ What is a reflex?

## ■ Sucking reflex

- stimulated when something is put into babies mouth

## ■ Rooting reflex

- When babies cheek is poked baby turns head towards side of face that was touched



Rooting & Sucking Reflex



# Motor skills

- Gross motor skill
  - Large muscles
- Fine motor skill
  - Small muscles







Fine or gross motor skill?



# Caring for an infant

- Holding a baby
  - Always hold newborns head



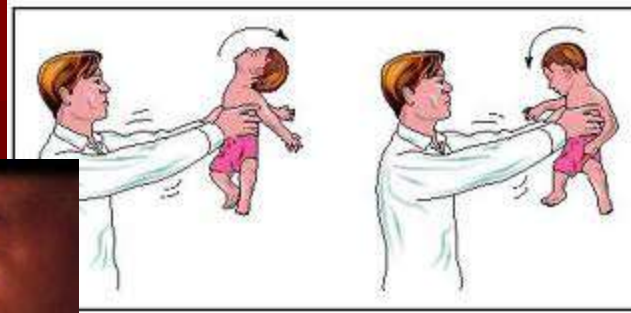
- Sleep routines

Age	Nighttime Sleep	Daytime Sleep *	Total Sleep
1 month	8 1/2	7 (3)	15 1/2
3 months	10	5 (3)	15
6 months	11	3 1/4 (2)	14 1/4
9 months	11	3 (2)	14
12 months	11 1/4	2 1/2 (2)	13 3/4
18 months	11 1/4	2 1/4 (1)	13 1/2
2 years	11	2 (1)	13
3 years	10 1/2	1 1/2 (1)	12

\* number of naps in parentheses

# Shaken baby syndrome

## Causes:



## Effects:



**NEVER,  
NEVER,  
NEVER  
SHAKE  
YOUR  
BABY!**

Cheyenne, Age: 4 Months  
Brevard County, Florida

**S**haken Baby Syndrome is the medical term used to describe the violent shaking and result sustained from shaking. These injuries can include: Brain swelling and damage, subdural hemorrhage, mental retardation, and death. Shaken baby syndrome can occur when children are violently shaken as part of a pattern of abuse or simply because an adult has momentarily succumbed to the frustration of responding to a crying baby. Because babies have large heads and underdeveloped necks, the whiplash action created by shaking causes the brain to bounce around in the skull, often tearing blood vessels that connect the brain to the skull. This can result in brain aneurysms, paralysis, blindness or death. If you feel like you are losing control and have the urge to shake your baby, STOP, place your baby in his crib and take a deep breath. Be gentle for your baby.

**Special care must be taken when handling children must never**

## Preventative Methods:

**Shaking a baby  
SHATTERS LIVES**



Relax

Stop

**If you are feeling  
frustrated...**

Take a Break

Ask for help

# Sudden infant death syndrome

## S.I.D.S

- Sudden infant death syndrome (SIDS) is the unexpected, sudden death of a child under age 1 in which an autopsy does not show an explainable cause of death.

The following have been linked to a baby's increased risk of SIDS:

- Sleeping on the stomach
- Being around cigarette smoke while in the womb or after being born
- Sleeping in the same bed as their parents (co-sleeping)
- Soft bedding in the crib
- Multiple birth babies (being a twin, triplet, etc.)
- Premature birth
- Having a brother or sister who had SIDS
- Mothers who smoke or use illegal drugs
- Being born to a teen mother
- Short time period between pregnancies
- Late or no prenatal care





# Feeding an infant

## ■ Breast vs. Bottle



## BURPING THE BABY

(Fig. A) SHOULDER BURP

- 1 Drape towel over shoulder
- 2 Use shoulder hold
- 3 Rub back in small circles
- 4 Pat back if needed
- 5 Repeat for five minutes



1



3



5



(Fig. B) SIT UP BURP

- 1 Drape towel over hand
- 2 Sit in chair, with baby facing away from you
- 3 Lean baby forward
- 4 Rub back in small circles
- 5 Pat back if needed
- 6 Repeat for five minutes



1



4



6



# Caring for an infant

- Introducing solid foods

- weaning

- Allergies

- Signs to watch for

- Dressing a baby

- Bathing

- Diapering

- Healthcare

- Teeth

- teething

# Safety poster

- Make a safety advertisements for parents and caregivers of infants (0-1) in the following areas:
- Home
  - Bathroom
  - Kitchen
  - Bedroom
  - Living area
- Outdoor
  - Playground/"Play houses"/sandbox
- Water
- Car
- Food
- Sleep

# Safety concerns

## ■ Preventing

- Choking
- Falls
- Sun
- Suffocation
- Poisoning
- Animal
- Water
- Burns
- clothing



# Regular checkups

## ■ Immunizations

- Shot of small amount of a weakened or dead disease

## ■ Watching for illness

- Irritability
- Lack of energy
- Constipation
- Nasal congestion
- Coughing
- diarrhea



# Infant Physical development

- Babys first year slideshow

# Infant Social/Emotional development



# Infant Social/Emotional Development

## ■ Emotional development

### – Emotions and crying

#### ■ Colic:

uncontrollable crying by an otherwise

#### ■ Reflex:

partially digested food rises in the throat

### – Self comforting





## ■ Attachment and emotional development

- Communication

- Failure to thrive



## ■ Temperament



# Social Development and learning

- Cause and effect
- Imitation
- Stranger anxiety



# Hand eye coordination

- <http://www.howcast.com/videos/8873-Preschool-Activities-For-LearningHand-Eye-CoOrdination-Pre-K-Activities>



# Toddler Sleep

- [http://www.youtube.com/watch?v=uhURV-Yrlg4&safety\\_mode=true&persist\\_safety\\_mode=1&safe=active](http://www.youtube.com/watch?v=uhURV-Yrlg4&safety_mode=true&persist_safety_mode=1&safe=active)

# Milestone stickers



sitting



walking



1st



eats solids



Feeds  
Self



WEANED



First Word

.....

crawling



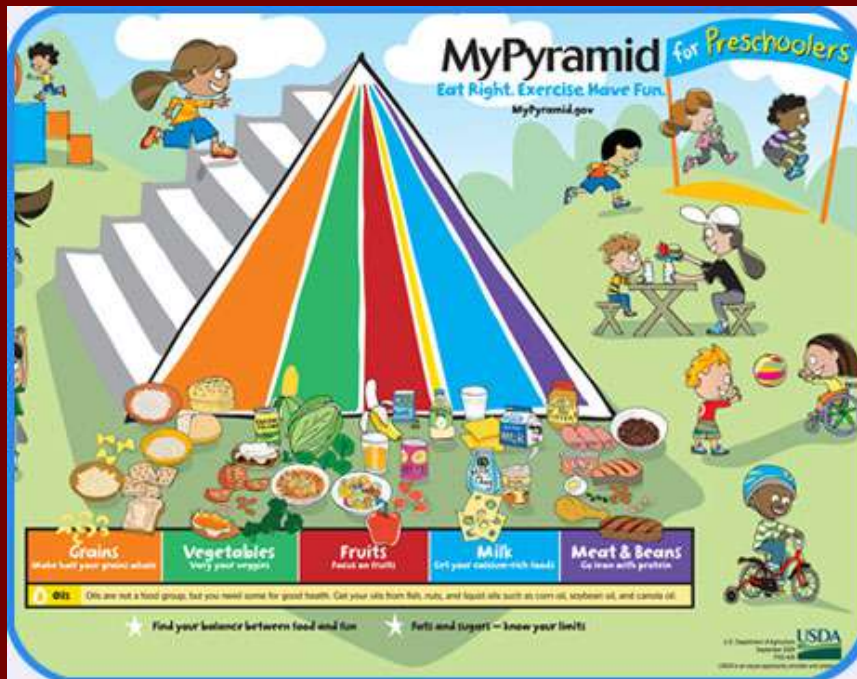
1st **TANTRUM**

standing



# Nutrition

- <http://www.mypyramid.gov/preschoolers/index.html>
- <http://www.livestrong.com/video/1719-healthy-food-choices-snacks-toddlers/>



## **Do now:**

### **Toilet Training Quiz**

Why can't you toilet train a baby?

List two signs a child is ready to toilet train?

What can you do to prepare your child to toilet train?

What is regression and how does it relate to toilet training?

## **Fill in the blanks:**

Flushing can be \_\_\_\_\_ and \_\_\_\_\_.

Nighttime control comes \_\_\_\_\_ than daytime control.

More \_\_\_\_\_ wash their hands than \_\_\_\_\_ do.

Respect the child's \_\_\_\_\_ and \_\_\_\_\_.



# Safety

- [http://www.safety4toddlers.com/babyproof\\_tips.htm](http://www.safety4toddlers.com/babyproof_tips.htm)
- <http://www.howcast.com/videos/458452-Toddler-Safety-With-Kim-Dulic>
- <http://www.safeny.ny.gov/media/seatbro.htm>



# hygiene

- <http://abcnews.go.com/Health/Parenting/pressure-potty-train-earlier-earlier/story?id=12972798>

# Social emotional development

- Temper tantrum
- Phobia
- Self centered
- Negativism
- Jealousy
- Separation anxiety
- empathy

**As a parent how can you adjust  
your child's emotional  
development?**

# Sleep

- Why is it so important that a toddler is on a regular sleep cycle and gets an adequate amount of sleep?
- REM versus NREM sleep
  - [http://www.youtube.com/watch?v=Z\\_dH2MX\\_RH0&safety\\_mode=true&persist\\_safety\\_mode=1&safe=active](http://www.youtube.com/watch?v=Z_dH2MX_RH0&safety_mode=true&persist_safety_mode=1&safe=active)
- Infant sleep cycle is about 60 mins

- How can parents help children develop social skills?

# play

## ■ Parallel

- [http://www.youtube.com/watch?v=uf3oHEEykpM&safety\\_mode=true&persist\\_safety\\_mode=1&safe=active](http://www.youtube.com/watch?v=uf3oHEEykpM&safety_mode=true&persist_safety_mode=1&safe=active)
- [http://www.youtube.com/watch?v=NbsgXKvTGCQ&safety\\_mode=true&persist\\_safety\\_mode=1&safe=active](http://www.youtube.com/watch?v=NbsgXKvTGCQ&safety_mode=true&persist_safety_mode=1&safe=active)
- <http://streaming.videatives.com/assets/220>

## ■ Imaginary friends



■ How can parents guide behavior?

■ How can parents deal with aggressive behavior?

- biting
- Kicking
- Tantrum

<http://www.abc15.com/dpp/lifestyle/family/toddler-tantrums-how-to-prevent-them-from-happening>

<http://abcnews.go.com/Health/video/happiest-toddler-block-9934262>

- On small pieces of scrap paper write responses to the video.
  - Baby cousins side by side [ [Go to Site](#) ] Video clip of 6 mos and 8 mos interacting
  - Twin Baby Boys Laughing [ [Go to Site](#) ] 4 mos old babies laughing at each other
  - Baby crying in the rain [ [Go to Site](#) ] Is mom meeting baby's needs?

# Emotional development

- Process of learning to recognize and express feeling to establish a personal identity

## Emotions and crying:

- A feeling response->care->cuddle,move the baby,sing,offer a baby a toy
- Uncontrollable crying:

Colic: uncontrollable crying by an otherwise healthy baby

Reflux: a condition in which partially digested food rises in the throat

Self comforting: thumb sucking, pacifiers

# Attachment and Emotional development:

- Attachment and Emotional development: a baby's bond to its caregiver

- Communication:

Infants respond to voice, facial expressions, eye contact

- Failure to thrive:

Babies do not grow and develop properly

- Temperament:

A persons unique personal makeup

How a baby reacts to the environment

\*temperament traits can not be changed- parents must learn how to adapt tot the temperament

# Social development and learning:

- Process of learning how to interact and express oneself to others
- Cause and effect:
  - Relationship between events in which one event is caused by another event
- Imitation/model:
  - Teach through example
- Stranger anxiety:
  - Fear of unfamiliar people

# 1 Month

- Coos and babbles
- May cry a lot but will quiet down when he/she sees caregivers face



# Month 2- 3

- Maintains brief eye contact while being fed
- Makes different crying sounds for different needs
- Begins to smile
- Eyes can show moving objects
- Wants companionship
- May like being tickled
- Can tell a smile from a frown





# Month 4-6

- Turns to sounds of familiar voices
- Laughs ,squeals ,babbling
- Can tell the difference between family members
- Reaches out to play
- May cry when left alone



# Month 7-8

- Tries to imitate sounds
- Plays alone and plays longer with others
- Enjoys other children
- Begins to experience stranger anxiety



# 9-10 months

- Responds to no and own name
- Says simple words like no ,bye bye, mama ,dada
- Crawls around to look for parents
- Enjoys playing peekaboo and sound games



# Month 11-12

- Uses gestures as well as simple body language
- Shows stronger likes and dislikes
- Spends time looking in mirrors



# Social development through play:

## **0-6 months**

- play games with toys or objects the baby can touch
- place colorful toys or objects that the baby can learn to recognize
- make noise with a rattle
- Follow the babies lead or example. Laugh and smile after the baby does

## **6-12 months**

- play peek a boo
- set toys just out of reach for baby so they must crawl
- read to the baby simple books
- play silly songs and dance with the baby
- give baby plastic buckets that they can fill up with things

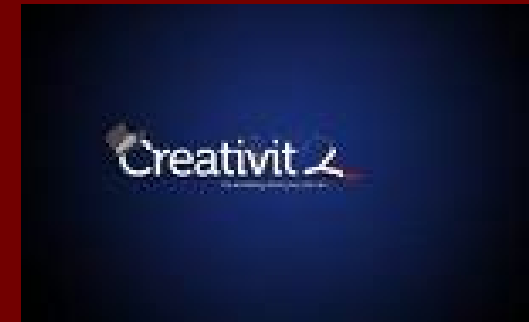
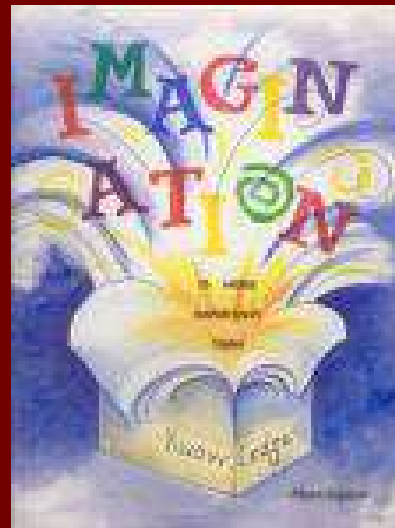
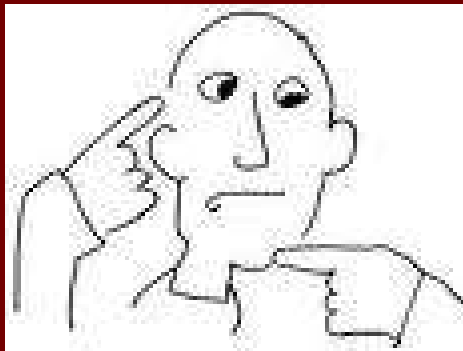
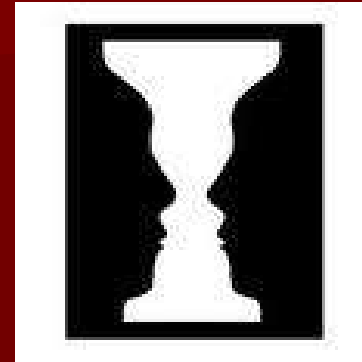
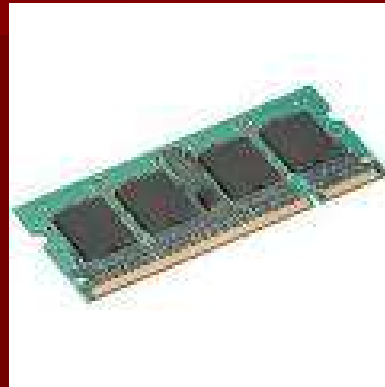
## ■ Intellectual development

## Methods of learning:

- Incidental learning:
  - Trial and error learning:
  - Imitation
  - Directed learning
- 
- [http://www.ehow.com/info\\_7896195\\_teacherdirected-activities-infants-toddlers.html](http://www.ehow.com/info_7896195_teacherdirected-activities-infants-toddlers.html)



# Seven areas of intellectual activity



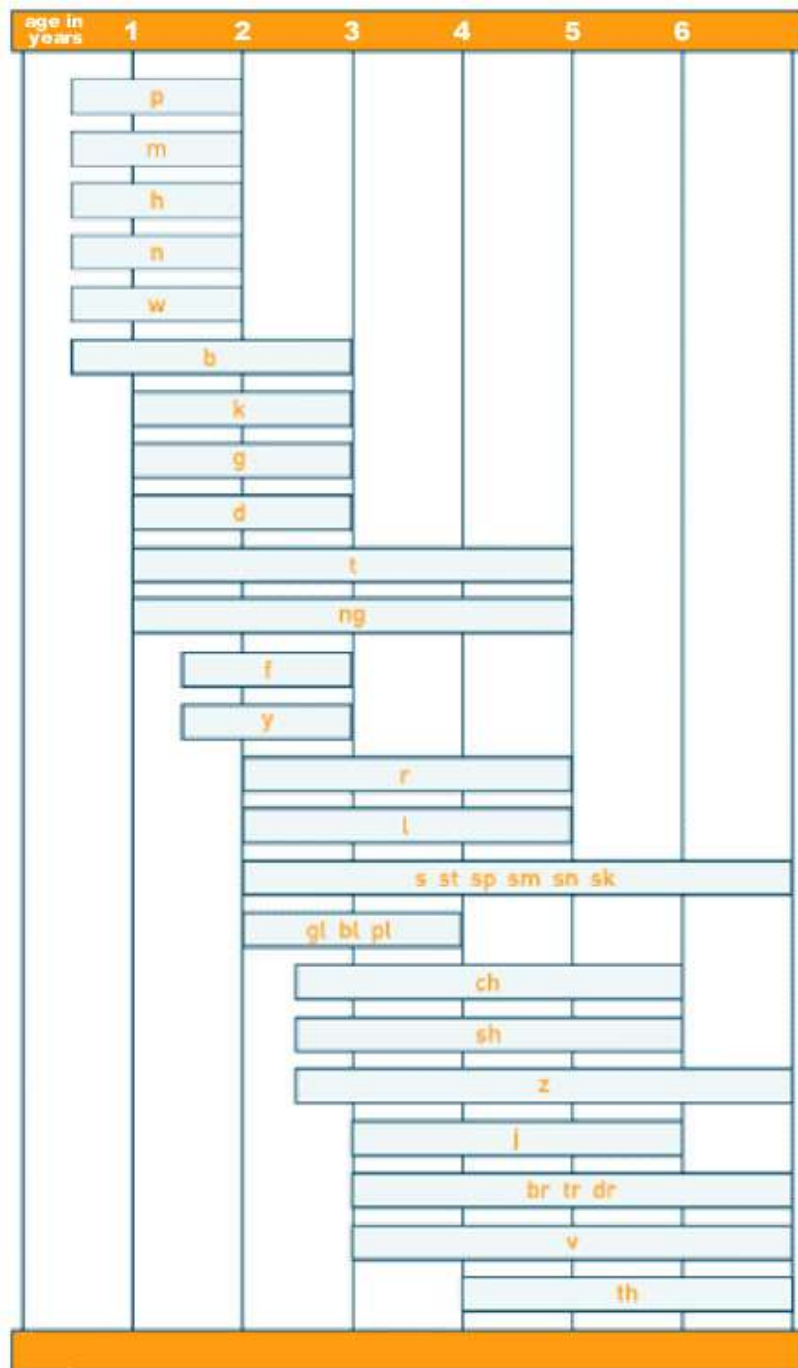
## ■ How can we guide a child's learning?



# Speech development

- What is a child has speech difficulties?
- Articulation vs. stuttering





# Play activities:

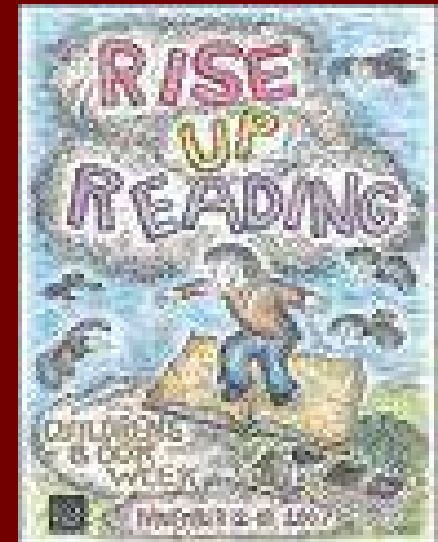
## ■ Toys: Evaluation

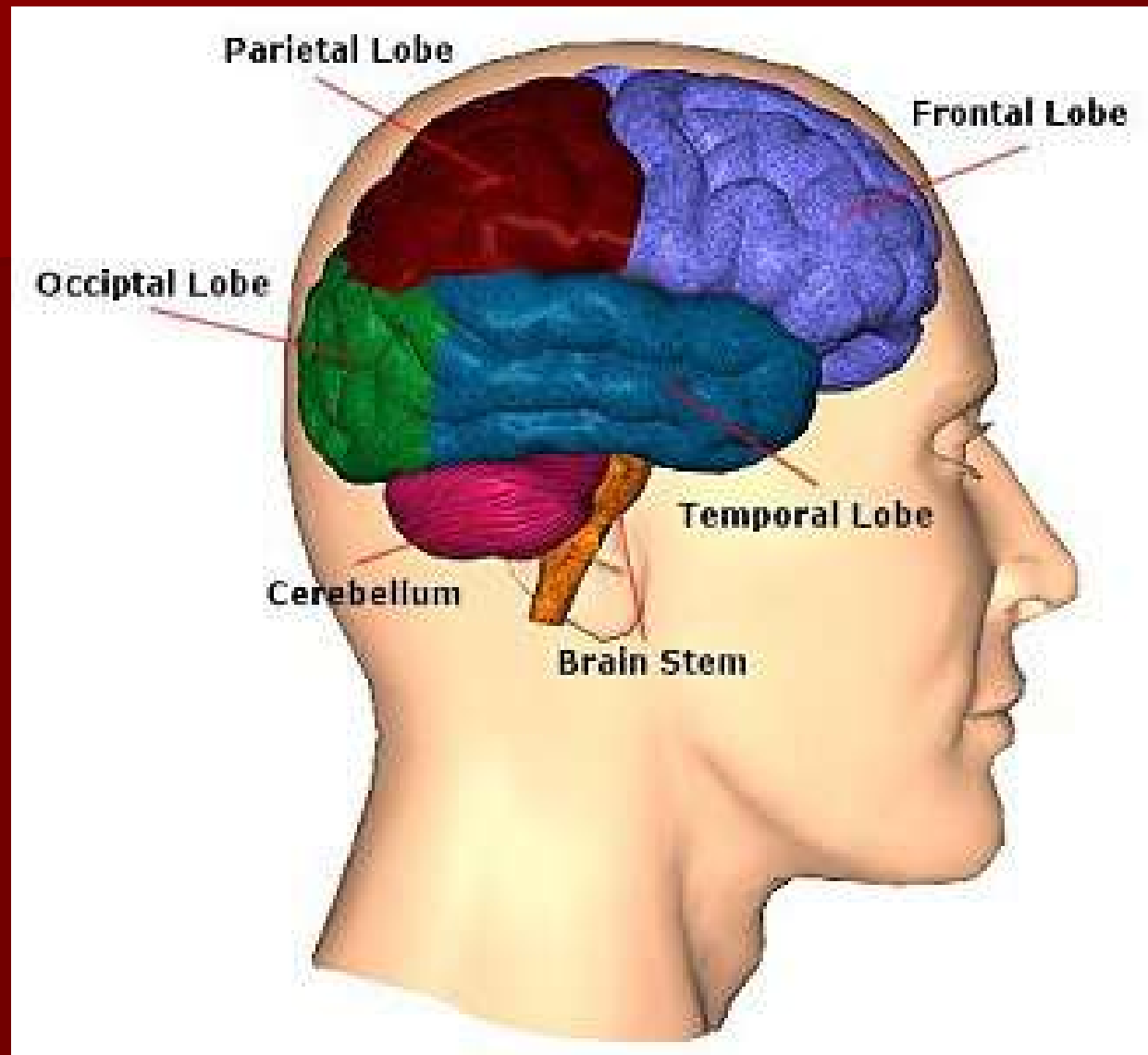
- Are they safe?
- Durable?
- Colorful?



## ■ Books:

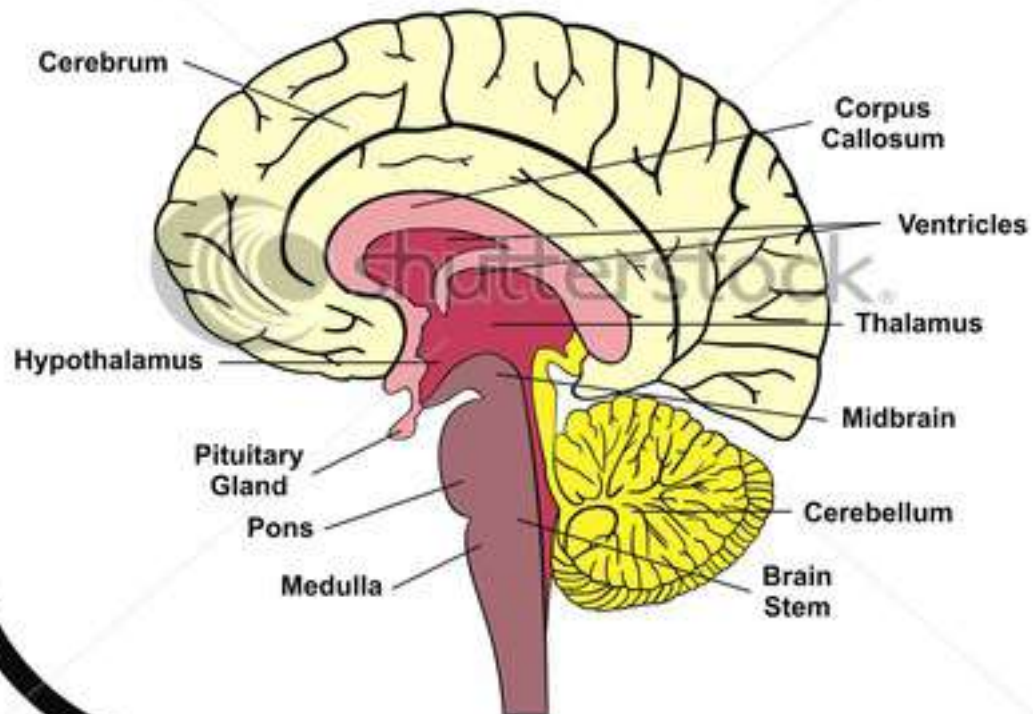
- Does the book teach a lesson?
- Is it age appropriate?





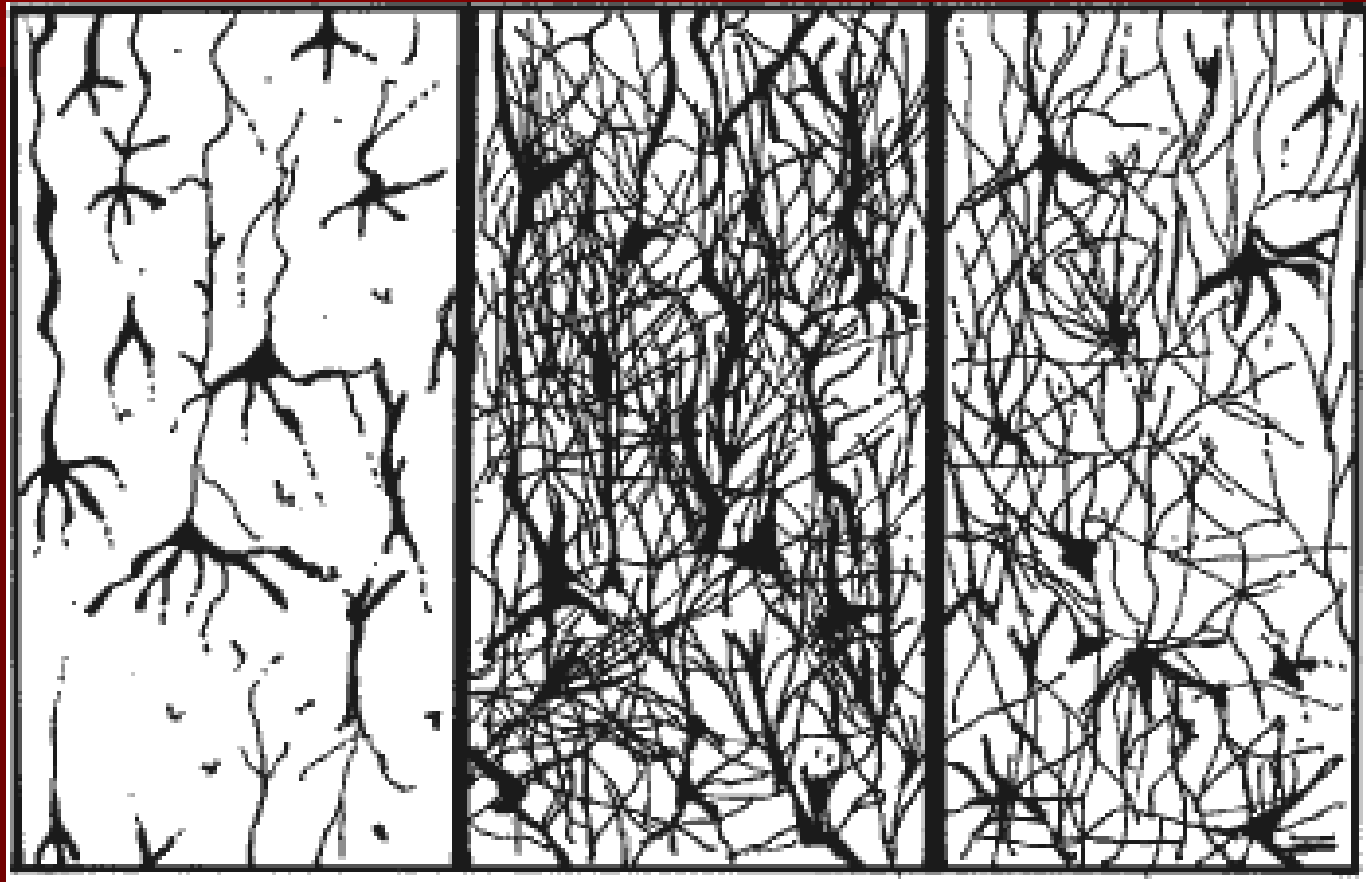
<http://www.youtube.com/watch?v=uqGz7uqoPZ4&feature=related>

## HUMAN BRAIN -SIDE VIEW





Shows neurons of a newborn with few dendrites compared to older children with more dendrites



at a child's birth

at 7 years of age

at 15 years of age

# Ways to stimulate infant brain development

- Keep it simple and natural
- Match experiences to the child's mental abilities
- Practice makes perfect
- Actively involve baby
- Provide variety but avoid overload
- Avoid pushing the child

# What is sensorimotor period?

- Piagets first stage of learning that lasts from birth –age 2. during this period they learn mostly from their senses and their own actions

Stage	Approximate age	Characteristics/ intellectual abilities
Stage 1	Birth to 1 month	practices reflexes does not understand self as a separate person
Stage 2	1-4 months	Develops hand mouth coordination
Stage 3	4-8 months	Acts intentionally to produce results Improves hand- eye coordination
Stage 4	8-12 months	Beings to solve problems Finds partially hidden objects Imitates others

[http://www.youtube.com/watch?v=\\_0EYXx9iI64&feature=related](http://www.youtube.com/watch?v=_0EYXx9iI64&feature=related) \*

■ [http://www.youtube.com/watch?v=JOrOw8L\\_Gb4&feature=related](http://www.youtube.com/watch?v=JOrOw8L_Gb4&feature=related)

■ [http://www.youtube.com/watch?v=GAAOWN-x0e0&safety\\_mode=true&persist\\_safety\\_mode=1](http://www.youtube.com/watch?v=GAAOWN-x0e0&safety_mode=true&persist_safety_mode=1)

■ [http://www.youtube.com/watch?v=FZ3401XVYww&feature=related&safety\\_mode=true&persist\\_safety\\_mode=1](http://www.youtube.com/watch?v=FZ3401XVYww&feature=related&safety_mode=true&persist_safety_mode=1)

# Object permanence

- The concept that objects still exist even when they are out of sight
- [http://www.youtube.com/watch?v=NjBh9ld\\_yIo&safety\\_mode=true&persist\\_safety\\_mode=1](http://www.youtube.com/watch?v=NjBh9ld_yIo&safety_mode=true&persist_safety_mode=1)
- [http://www.youtube.com/watch?v=PuP53BbIY0A&safety\\_mode=true&persist\\_safety\\_mode=1](http://www.youtube.com/watch?v=PuP53BbIY0A&safety_mode=true&persist_safety_mode=1)

# How can parents encourage learning?

- Learn about child development
- Give the child attention
- provide positive feedback
- Express love
- Read
- Talk

# Intellectual development of infants and young children

- [http://www.youtube.com/watch?v=7Qb3DXY\\_7fU&feature=related&safety\\_mode=true&persist\\_safety\\_mode=1](http://www.youtube.com/watch?v=7Qb3DXY_7fU&feature=related&safety_mode=true&persist_safety_mode=1)
- [http://www.youtube.com/watch?v=tLiP4b-TPCA&safety\\_mode=true&persist\\_safety\\_mode=1](http://www.youtube.com/watch?v=tLiP4b-TPCA&safety_mode=true&persist_safety_mode=1)

# Speech development

Months	Developmental milestone
Birth- 3 months	<ul style="list-style-type: none"><li>• Watches your face when you speak</li><li>• Babbles</li><li>• Cries to express hunger anger pain or discomfort</li></ul>
4 months-6 months	<ul style="list-style-type: none"><li>• Babbling sounds more like speech with different sounds</li><li>• Voices excitement and displeasure</li><li>• Gurgles</li></ul>
7 months-1 year	<ul style="list-style-type: none"><li>• Babbling has long and short groups of sounds</li><li>• Uses speech to get attention</li><li>• Imitates different speech sounds</li><li>• Says one or two words</li></ul>



<u>Months</u>	<u>Intellectual Developmental milestone</u>
<u>1-2 months</u>	<ul style="list-style-type: none"> <li>• gains information through senses</li> <li>• makes eye contact</li> <li>• prefers faces to objects</li> <li>• can distinguish between familiar and unfamiliar voices</li> </ul>
<u>3-4 months</u>	<ul style="list-style-type: none"> <li>• Can distinguish between familiar faces</li> <li>• Makes vowel consonant combinations- ah goo</li> <li>• Can tell a smile from a frown</li> </ul>
<u>5-6 months</u>	<ul style="list-style-type: none"> <li>• Alert for long r periods of time- up to 2 hours</li> <li>• Studies objects carefully</li> <li>• Recognizes own name</li> <li>• recognizes basic sounds</li> </ul>
<u>7-8 months</u>	<ul style="list-style-type: none"> <li>• Imitates the actions of others</li> <li>• Begins to understand cause and effect</li> <li>• Remember things that have happened</li> <li>• Sort objects by size</li> <li>• Solves simple problems</li> <li>• Recognizes some words</li> <li>• Babbling imitates speech</li> </ul>
<u>9-10 months</u>	<ul style="list-style-type: none"> <li>• Looks for dropped objects</li> <li>• Responds to some words and phrases- no – all gone</li> <li>• Takes objects out of contains and puts them back in</li> <li>• May says a few words</li> </ul>
<u>11-12 months</u>	<ul style="list-style-type: none"> <li>• Can point to and identify objects in books</li> <li>• Fits blocks inside one another</li> <li>• Says mama and dada for parents</li> <li>• Speaks some words regularly</li> </ul>

# Importance of play

- [http://www.youtube.com/watch?v=I5TQ7cFUQ20&safety\\_mode=true&persist\\_safety\\_mode=1](http://www.youtube.com/watch?v=I5TQ7cFUQ20&safety_mode=true&persist_safety_mode=1)

- Birth -3 months-



- 4-6 months-

- 7-9 months-



- 10-12 months-



# Infant activities

Soapy water play



Cheerio pickup



<http://www.brighthub.com/education/early-childhood/articles/109759.aspx>

# Infant activities 0-6 months

1. Talk and sing to the babies, when you feed, diaper, and clean them.
2. Imitate the sounds that the babies make.
3. Point to and say the names of the babies' mouth, ears, nose, fingers, etc.
4. Place toys and other colorful objects where babies can see and/or touch them.
5. Shake a rattle behind a baby's head, and let the baby turn and grab the rattle.
6. When you hold or rock the baby, sing lullabies or other soothing songs.
7. Place babies in different positions. For example, place them on their stomach so they can practice lifting their head and rolling over.
8. Encourage hand clasping and kicking.



# Infant activities 6-12 months

1. Play peek-a-boo or other games in which you disappear and reappear.
2. Give babies a safe place where they can crawl, creep, and pull themselves up.
3. Roll a ball or place a toy where babies have to reach or crawl for it.
4. Give babies toys that squeak.
5. Give babies teething toys.
6. Read aloud books that have large pictures and not much writing.
7. Talk to babies, and name objects as you and the babies handle them.
8. Begin to teach what is allowed and what is not allowed.
9. When babies indicate that they want help, provide it.
10. Rock and hold babies when they are upset.
11. Let babies fill containers with objects and then dump them out.
12. Change toys often when babies get bored with them.



# videos

- <http://www.youtube.com/watch?v=yYyGyEX0CL0>
- <http://www.youtube.com/watch?v=vm8PwlgdQE>  
E
- [http://www.youtube.com/watch?v=cl-h9ENea3E&feature=results\\_main&playnext=1&list=PLA5D6FD4CD59887B4](http://www.youtube.com/watch?v=cl-h9ENea3E&feature=results_main&playnext=1&list=PLA5D6FD4CD59887B4)
- <http://www.youtube.com/watch?v=DhGRBFZBPuE>
- <http://www.youtube.com/watch?v=wAeIF1gCXOw&feature=relmfu> \*

# Info.

- <http://www.livestrong.com/article/75473-importance-play-infant-development/>

<http://www.nncc.org/Curriculum/help.inf.learn.html>

<http://www.npr.org/templates/text/s.php?sId=19212514&m=1>

# Infant Toy evaluation

- Groups of 3
- Evaluate each toy based on the worksheet.
  - How does it support their development?
  - Is it safe?
  - Would you change anything? If so why?





