



Your early learning guide for infants, toddlers and three-year-olds

facilitator guide

Module 2: Physical Health & Development

Competency-Based Learning Objectives

By the end of this module, successful participants will be able to:

- Describe how an infant’s experiences impact brain development
- List 5-7 classroom materials to encourage sensory exploration
- Assess gross motor development and describe 2 ways to scaffold development
- Identify 3 fine motor skills by observing and analyzing a video observation

Description of Target Audience

Early child care and education practitioners and administrators

Training Methodologies/ Strategies Utilized

PPT with content and lecture - Participants will view a PPT with illustrations and key points. Trainer will lecture on content, providing open floor for comments and questions.

Handouts – Participants will receive a packet that includes:

- Participants Guide
- What Kind of Environment Would You Prefer?
- Let’s Go Shopping
- Environmental Checklist

Small Group Discussion - Discuss prompts in small groups

Question and Answers - Time will be reserved at the end of the presentation for questions and reactions

Sequence of Training	Content	Methods / Activities	Time Allotment
	Introduction of facilitator and topic	Agenda overview and introduce Participant Guide	5 mins
	Brain Development	PPT and participant responses	5

Nutrition	PPT and participant responses	5
Environment	PPT and participant responses	20
Gross Motor Skills	PPT and observation activity	20
Fine Motor Skills	PPT and observation activity	20
Inclusion	PPT and participant responses	7
Conclusion and Q&A		5
Total Length		1.5 hours

Slide 1: Welcome. Introduce the workshop.

I would like to welcome all of you to **Physical Health and Motor Development**. My goal today is to give you an overview of the physical development of infants and toddlers. We will also discuss the importance of responsive caregiving and the environment, caring for children with special needs, and best practices for high-quality programs.

Introduce yourself

Name, position, experience with Little Texans, Big Futures

Determine the audience

Ask participants about their role with young children. With what age group do they work? Do they work in centers, homes, or public schools? How long have they been working with young children?

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TRAINER TIP:

Taking a few minutes to find out who your audience is at the beginning of the workshop allows for immediate engagement and helps you to personalize aspects of the training. For example, if there is a highly experienced infant teacher, you can solicit examples and responses from her as you move through the material.

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Review any “housekeeping logistics” such as location of bathroom, any planned breaks, ending time, etc.

Slide 2: Agenda

During our session today, we will be discussing the physical growth of infants and toddlers, including brain development and the development of the five senses. We will discuss factors that influence growth and development and best practices for providers. We will also examine the gross and fine motor skills that develop in the first few years, along with considering the impact the environment plays in the day to day activities of young children. Finally, we will share a few ways to create inclusive programs for those children with special needs.

As we cover each area, we will focus on your role as the caregiver in supporting the child's physical and motor development.

You each have a **Participant Guide**. As we go through the material today, there are opportunities to take notes, add information and extend your learning. There are also additional resources and information in your guide.

Slide 3: Objectives

The objectives for today's session are in your guide. After completing this training, you will be able to:

- Describe how an infant's experiences impact brain development
- List 5-7 classroom materials to encourage sensory exploration
- Assess gross motor development and determine appropriate activities to scaffold development
- Identify 3 fine motor skills by observing and analyzing a video observation

Slide 4: Consider for a Moment

Read the Power point to participants. How are we doing at this? What kind of lasting impact are we creating for the children in our care? Point out to participants that we should keep this in mind when considering important concepts in infant/toddler development and setting up appropriate environments.

"The children in child care today are the adults of tomorrow who will determine what provision to make for us, collectively and individually, in our old age. The way they will care for us will be heavily influenced by the provisions we are making for them while they are young. Do you view that as a threat or a promise? Our children's services should be of such a standard that we view it as a promise, that we find it reassuring rather than disturbing."

Anne Stonehouse

Slide 5: Body Growth

Infancy is a time of rapid growth, continued brain development, emergence of motor skills, and

significant sensory and reflexive capabilities. In the first few months after birth, infants gain an ounce a day and an inch each month. By age 2, they have already attained about half of their adult height and weight an average of 30 pounds.

Although we usually think of growth as slow and steady, babies actually grow in fits and starts. They may have no change to height and weight for several weeks, and then grow half an inch in 24 hours. These growth spurts are usually accompanied by irritability and discomfort, the reason for which may be unknown to caregivers and parents.

Bones and muscles are also developing quickly during the first few years. At birth, most bones are soft and pliable, much too small and flexible to support sitting or standing or balancing. As the child grows, the bones harden as calcium and other minerals are deposited into them. New bones also develop and become more closely interconnected.

Slide 6: Infant Routines

Healthy infants will establish organized and individualized patterns of daily activity – sleeping, eating, and playing. By 3 months, infants begin to establish a predictable sleep-wake cycle and by 6 months most infants have settled into a fairly consistent pattern.

Infants under 6 months spend about half of sleeping time in REM or active sleep. Adults only spend about 20% of sleeping time in REM sleep. This difference may be attributed to brain maturation and plasticity – in particular, the memory and learning process. Infants may also use sleep to regulate sensory stimulation. Their immature nervous systems can become overloaded and the child may reduce the stimulation by crying and then by sleeping.

Research and observation confirm that infants have very individualized routines. While some infants may have long periods of sleep and awake, other infants take multiple, shorter naps. Some infants may sleep only 9 hours in a 24 hour period, while others sleep 20 hours out of 24.

It is important for caregivers to respect the individual sleeping and eating routines of children under the age of 12 months. Infants should be allowed to sleep and eat based on their own schedule and routines.

Slide 7: Brain Development

Although the brain is the largest and most developed part of the body at birth, much of its development takes place after birth. At birth, the brain weighs 25% of its adult weight. By age 2, it has reached 75% of its adult weight, and by age 5 it is 90% of its adult weight. The brain's physical development continues throughout childhood and adolescence and is not complete until our early 20s. This illustration shows the synaptic connections from birth to adulthood.

Slide 8: Brain Development

Brain development is influenced by both genetic and environmental factors. A child's experiences during the first years are crucial to brain development. During those years, the brain is "under construction" and has **plasticity** – it is responsive to individual experiences and can develop in a variety of ways. It is also highly vulnerable to damage if it is deprived of sensory and motor experiences.

Slide 9: Brain Development

As infants are given opportunities to learn and explore and interact with responsive caregivers, connections in the brain are strengthened. If stimulation declines, those connections disappear.

As an infant explores their world, connections are formed. As those connections are accessed repeatedly, they become permanent in a process called myelination.

Slide 10: Brain Development

Activity: In your participants guide use the space below. Describe how an infant's experiences impact brain development. Allow a few minutes for this. Ask for volunteers to share.

Slide 11: Sensory Development

According to Jean Piaget's theory of Cognitive Development, infants explore the world using their five senses and motor skills. As they explore and process information, they are learning and building connections in the brain.

The sensory systems are developing before birth and all of the senses are functioning at birth. Newborns see and hear, and they respond to taste, smell, and touch in predictable ways. Infants visually track objects, turn in the direction of sounds, turn away from unpleasant odors, respond to touch, and show preferences for sweet tastes.

From birth, infants' vision is working reasonably well, although improvements will continue to develop for the first 6-12 months. Very young infants can see an object clearly when it is about 8 inches from their face. In general, their vision is about 40 times worse than an adult's, but is fully developed by 6-12 months. Young infants prefer bold, contrasting patterns. They enjoy objects with movement and simple colors.

Hearing may be the most important sense for initiating infants into the social world. They can hear better than they can see at birth. They can localize sounds- turning away from louder sounds and towards softer sounds. Infants prefer speech to other sounds, and can recognize the voice of a primary caregiver very early.

Infants' sense of touch is their most fully developed sense by birth. Infants have more tactile sensors on the face and mouth than in the lower parts of the body – a reason that they explore objects by putting them in their mouth; they can gather far more information. Higher tactile sensors around the mouth and face may also be a reason that infants and toddlers are resistant to having their face and nose wiped or having the spoon dragged along their chin to retrieve dribbled food. Infants that are comforted with touch by being held or patted are better able to regulate sleep patterns and stress responses.

At birth, infants can distinguish sweet, bitter, and sour tastes and show a preference for sweet. However, most taste preferences are learned behaviors. Infants and toddlers that are exposed to a variety of flavors may lead to more adventuresome eating later on. For example, a breast-fed baby with a mother who eats a variety of foods might experience more diverse food preferences.

The most overlooked sense in young children is the sense of smell (olfactory). While caregivers may be sensitive to sounds and visual stimulation in a child's environment, we often forget to consider the smells that might exist, particularly those close to the baby's face (a dirty bib, sanitized toys, carpets, floor cleaners, or a caregiver's perfume).

Slide 12: Influences on Development

While heredity, hormones, and genetic factors are influential on growth and development, there are also many factors that a caregiver can control that influence a child's physical development and well-being. Proper nutrition, adequate sleep, illness prevention and treatment, as well as responsive caregiving and an enriched environment are all important factors in healthy development. We will take a closer look at nutrition, caregiving, and the environment now. Information on sleep routines and illness prevention can be found in your handouts.

Slide 13: Nutrition

As we have seen throughout our discussion on growth and development, nutrition plays a crucial role. Bones need calcium and other minerals to harden, diverse flavors lead to future healthy habits, and rapid growth requires the right fuel. We have also learned that infants have individualized routines that should be respected by caregivers.

The American Academy of Pediatrics recommends that infants are fed only breast milk (or an iron-fortified formula) until 6 months and then a combination of breastfeeding and foods until at least 12 months of age. Breastfeeding is recognized by the American Academy of Pediatrics to have a protective effect against respiratory illness, ear infections, gastrointestinal disease, and allergies, including asthma, eczema and atopic dermatitis. Research also indicates that breastfeeding correlates with developing healthy habits, such as eating a variety of foods and maintaining a healthier weight.

Infants should be fed when they demonstrate hunger. As they are growing and changing so quickly, their level of hunger, times of hunger, and preferences in foods will change throughout the first year. Be responsive to those changes, rather than rigidly following a schedule. For toddlers and three-year-olds, provide three meals a day with a morning and afternoon snack. They should be offered a snack or meal every two to three hours. They should also have access to drinking water after activities or outdoor play.

When feeding young children, it is important to practice responsive feeding.

- Feed infants directly and assist older children when they feed themselves
- Feed slowly and patiently, and encourage children to eat, but do not force them
- If children refuse many foods, experiment with different food combinations, tastes, textures and methods of encouragement
- Minimize distractions during meals if children lose interest easily
- Remember that feeding times are periods of learning and love – talk to children during feeding, with eye to eye contact.

Choking is the leading cause of unintentional injury or death in children under age five. Young children should not be offered foods that are choking hazards, they should be encouraged to chew their food before swallowing, and they should always be well supervised during meals and snacks.

Slide 14: Nutrition

Take out your participant guide and look at the bottom of page 1. Take a few minutes to think about how breastfeeding can be supported in early child care programs.

Slide 15: Nutrition

Activity 1 – How can they support breastfeeding in their early child care programs?

Give them a few minutes to answer the question and then allow them to share best practices with the group.

- Provide training guidelines for early child care staff on how to support breastfeeding mothers and how to store and handle breastmilk.
- Provide a space that supports breastfeeding mothers.
- Provide accurate basic breastfeeding information
- Refer for skilled breastfeeding support
- Website for more information: www.dshs.state.tx.us/wichd/bf/childcare.shtm (Texas Department of State Health Services)

Slide 16: Responsive Caregiving - Routines

Responsive caregiving is a style of interaction in which caregivers take the time to pay attention to what a child is signaling, and then provide a response that meets the child's needs in a loving way. During the first 2 years, children are learning that the world is a safe place and that they can trust adults to meet their needs. This trust facilitates attachment relationships that are critical for healthy development and positive outcomes.

In order for children to meet their full potential for physical development, caregivers must provide for their basic needs and respond with warmth and affection. Let's discuss a few examples from the Early Learning Guidelines. In your handouts, you will also find a quick reference to use in your classrooms.

0-8 Months:

- Respond quickly when infants are hungry, wet or soiled
- Provide quiet/calm and stimulating experiences
- Provide nutritious foods (breast milk, formula, pureed fruits or veggies)
- Talk to infants about what is happening while bathing, changing or feeding
- Follow infants' feeding signals – feed them when they are hungry, stop when they are full

Slide 17: Responsive Caregiving - Routines

8-18 Months:

- Offer nutritious finger foods and utensils and allow them to feed themselves
- Encourage older infants to use body language, signs, or words to tell you their wants or needs
- Use caution words and a firm, but warm, tone of voice to warn older infants of dangerous items or situations, and redirect their attention
- Allow older infants to assist with dressing themselves to the best of their abilities

Slide 18: Responsive Caregiving - Routines

18-36 Months:

- Establish healthy self-care activities like hand washing and brushing teeth
- Respond promptly to toddler's awareness of being wet or soiled
- Provide plenty of healthy food options, including foods from various cultures
- Provide foods that toddlers can easily scoop or stab
- Talk to toddlers about using safe behaviors

Slide 19: Responsive Caregiving - Routines

36-48 Months:

- Provide forks and spoons during mealtime and allow children to serve themselves when appropriate
- Demonstrate good health behaviors and teach about personal hygiene
- Talk to children about safe behaviors and who they can go to if they need assistance

Slide 20: What Kind of Environment Would You Prefer?

Imagine for a moment that you are “older” and now unable to live independently. Your family is considering a number of retirement homes, and need your input on what kind of environment you prefer.

Read power point. Have participants to quietly reflect on the question.

Slide 21: What Kind of Environment Would You Prefer?

Have participants take out the “What Kind of Environment Would You Prefer” handout. Have them read over questions on the handout and then take five to ten minutes to write down responses to several of the questions they feel strongly about. After writing your responses, take 5 minutes to share with one or two people at your table your thoughts and feelings.

After participants have had five minutes to discuss their responses, bring the group back together and ask for volunteers to share some of their preferences.

Suggest that some of the same characteristics of living environments for older people apply to the environments we create for the care and support of young children. There is already quite a bit that we can understand about good environmental design from investigating our own preferences. Point out that these are equally valuable questions to ask when we plan an environment for very young children. Children may well spend up to 12,000 hours in child care. The quality of the children’s experience in care is greatly influenced by the environment.

Slide 22: Environment

An enriched, appropriate environment can act as an additional teacher for young children. If the environment is stimulating, purposeful, and safe, it will support healthy development through exploration. When children have a familiar and engaging space, they become confident to explore and create experiences for themselves.

Provide a variety of materials that engage each of the five senses. Textures, scents, sounds, tastes, and visually interesting materials should be accessible to children and provided in one-on-one activities with the caregiver.

The environment should be organized so that non-mobile babies can explore in a safe space separate from mobile infants. Create soft places with a visual stimulation such as mobiles, mirrors or a window for non-mobile infants. Allow mobile infants to move about the space and explore without direction or interruption. Remove any items from the space that would be 'off-limits' to the children to avoid having to continually guide them away from inappropriate items. The space should be designed for their exploration and caregiver accessibility. Time in swings, bouncy seats, highchairs, or pack-n-plays should be limited as much as possible.

Infants should be placed on their tummies for a few minutes at a time throughout the day. This helps strengthen the muscles in their back and upper body. Place interesting toys in front of them and sit where they can see you. Tummy time should always be supervised. Never walk away from a child placed on their tummy if the child cannot roll over on his or her own.

When infants are resting, adjust the lighting and sounds in the room as much as possible. If possible, place cribs and play areas on opposite sides of the environment. However, infants in cribs should still be seen and heard by the caregiver at all times.

Because infant's skeletal and muscular systems are still developing, you shouldn't 'prop' them into positions they are unable to sustain; for example, using pillows or a bumbo seat to force them into a seated position. Providing a small pillow or boppy pillow is sufficient.

Slide 23: Environment

Activity – Let's Go Shopping

Have participants take out the "Let's Go Shopping" handout. Ask participants to close their eyes and visualize a favorite place to shop. Next, tell participants to write down why it is their favorite. As they write down their responses, ask them to recall, what did they see, smell, hear, etc. Have them consider who else was there (how many people), what features make that store inviting to them.

Tell them that they can name the store if they choose, but the features are what are important. Be sure they include things like lighting, noises, were they greeted when they arrived, what the salespeople were like, etc. Allow 10 minutes for this activity.

Ask participants to share their experiences with the others at their table. Have groups list some of these features on chart paper. Then facilitate a discussion regarding differences noted. For example, someone might like a very busy place where the items change weekly or monthly, and where they can get a great bargain; others might like a predictable, quiet place where they know where everything is and can get individual assistance.

Relate these experiences to what young children experience in their environments.

Explain that the very same thing that one person enjoys may be overwhelming to another. End

the discussion with the reminder that as an adult, we can choose which store we go to shop in, but young children cannot. They are stuck with the environment we prepare for them. It is important to collect information from families on what their children are used to so that adaptations to the childcare environment might be made to each child's likes and dislikes.

Slide 24: Environment

Think about when you walked in to the training facility earlier today, what was your impression of this environment?

Allow a few of the participants to answer the question. Some answers might be too warm/too cold, clean, friendly, uncomfortable, etc. Ask participants to turn to each other and briefly discuss how has your perception changed now that you've been here an hour (you've gotten to meet the person beside you, familiar with the layout, know what is expected of the day).

Make the point that providing an environment that is comfortable, safe, child-sized, allows for choice, promotes health and encourages movement sets the stage for infants and toddlers to build confidence and have a wide range of experiences.

Slide 25: Environment

Ask Participants to think about the infant/toddler environment where they work or one they've observed. Ask the question, "What about the environment do you like and dislike? (comfortable, friendly, respectful, clean, space to move around) for dislike they might mention too small to move around, loud, unfriendly, chaotic, etc.

Write answers down on chart or laptop. Mention that the point is that infant/toddlers need relaxed, secure, stimulating environments for optimal brain development and emotional well-being.

Slide 26: Gross Motor Development

Gross motor skills refer to large muscle development through control of movements.

Gross motor development indicators include:

1. Moving body, arms, and legs with increasing coordination
2. Demonstrating increasing balance, stability, control, and coordination
3. Developing increasing ability to change positions and move body from place to place
4. Moving body to achieve a goal

Slide 27: Gross Motor Development

0-8 Months:

- Infants turn head from side to side, wiggle and shake arms and legs
- Lift head and shoulders
- Roll or try and move towards a toy
- Scoot forward or backward
- Begin to sit with support
- Bat at or kick at toys hanging above them

Slide 28: Gross Motor Skills

8-18 Months:

- Sit up and maintain balance while playing with a toy
- Crawl on hands and knees
- Use furniture to pull up, cruise, and lower from standing to sitting
- Walk on their own and with increasing speed

Slide 29: Gross Motor Skills

18-36 Months:

- Walk easily or run
- Jump into puddles, piles of leaves, or sandboxes
- Climb on chairs, stools, and playground equipment
- Enjoy playing on slides and swings
- Kick or throw a large ball toward another child or adult
- Climb stairs one step at a time

Slide 30: Gross Motor Skills

36-48 Months

- Walk up and down stairs alternating feet
- Kick, throw, and catch a large ball with accuracy
- Run more confidently and ride a tricycle
- Hop or Jump
- Climb a small jungle gym

Slide 31: Gross Motor Skills

Activity 2 – How can you use responsive caregiving and the environment to promote these new skills? What items should be included in the environment to promote these skills?

Allow 5 minutes for participants to fill in the spaces.

Slide 32: Gross Motor Skills – Activity 2

Show slide listing some examples. Then, allow the group to provide several appropriate materials and activities that would promote large motor development. Mention too, that responding with care and enthusiasm encourages toddlers to explore and builds confidence.

Slide 33: Gross Motor Skills – Observation

Take out page 2 in your participation guide. As you watch this short video, take note of the gross motor skills that this child is exhibiting. What activities can you plan for this child to help practice these skills and scaffold the development of new skills? Use the space in your participant guide.

Slide 34: Gross Motor Skills – Observation

Watch Video.

Slide 35: Gross Motor Skills – Observation

Allow participants a few minutes to make notes and then to discuss their ideas with a partner or small group. Read over answers on slide. If time allows, you can ask a few volunteers to share with the larger group.

Slide 36: Fine Motor Skills

Fine motor skills refer to small muscle development through control over movements, such as reaching, grasping, coloring, and turning pages in a book. Infants need sufficient and appropriate materials to practice grasping and reaching, which are important steps towards increasing precision in fine movement.

Fine motor skills indicators include:

1. Uses hands or feet to touch objects or people
2. Develops small muscle control and coordination
3. Coordinates eye and hand movements
4. Uses tools and different actions on objects

Slide 37: Fine Motor Skills

0-8 Months:

- Follow faces and objects with their eyes
- Bat or kick at objects
- Grab at things with a purpose

- Point to something they find interesting
- Look at objects while bringing them to their mouth

Slide 38: Fine Motor Skills

8-18 Months

- Bang toys together to make sounds or move toys from one hand to the other
- Scoop or rake with their hand to pick up objects, food, etc
- Use thumb and index finger to pick up, squeeze, or poke small items (pincer grasp)
- Grab, drop, and throw toys

Slide 39: Fine Motor Skills

18-36 Months

- Build a small tower with blocks
- Fit objects together by pressing and turning (pegs, nesting)
- Dig in sand with spoon or shovel
- Put on easy clothing
- Play with and complete simple puzzles

Slide 40: Fine Motor Skills

36-48 Months

- Handle or squeeze delicate or tiny objects between thumb and forefinger
- Start using simple tools like safety scissors
- Copy simple shapes and write some letters and numbers
- Dress and undress with minimal help
- Feed self relatively neatly

Slide 41: Fine Motor Skills - Activity 3

How can you use responsive caregiving and the environment to promote these new skills? What items should be included in the environment to promote these fine motor skills? Allow 5 minutes for participants to fill in the spaces.

Slide 42: Fine Motor Skills - Activity 3

Show slide listing some examples. Then, allow the group to provide several appropriate materials and activities that would promote fine motor development. Mention too, that responding with care and enthusiasm encourages toddlers to try new skills and builds confidence.

Slide 43: Observation

Turn to page 3 in your participant guide. As you watch this short video, take note of the fine motor skills that this child is exhibiting. What activities can you plan for children to help practice these skills and scaffold the development of new skills? Use the space in your participant guide.

Slide 44: Observation

Watch video.

Slide 45: Observation

Allow participants a few minutes to make notes and then to discuss their ideas with a partner or small group. If time allows, you can ask a few volunteers to share with the larger group. Go over answers with large group.

Slide 46: Inclusion

There are many physical and motor special needs that can be accommodated in a traditional group care environment. Children may have physical disabilities or sensory integration challenges. You should make every effort to make reasonable accommodations for those children that may need temporary or permanent supports in the classroom.

The room arrangement should promote easy accessibility for all children. The materials available can be adjusted or stored to accommodate the children. Children with sensory integration challenges may need adjustments to lighting, sound, or temperature.

Be sensitive to food and environmental allergies. Have a system for controlling allergens in place and a plan for responding to allergen exposure.

Keep an open mind and work closely with parents to determine if a child with special needs can be cared for in your program.

Slide 47: Inclusion

Turn to page 4 in your participant guide.

Direct participants to Inclusion Scenario – In small groups, read through the scenario and create 2-3 inclusion strategies that might be appropriate for this child.

Slide 48: Inclusion Scenario

Take about 5 minutes in small groups and then give the groups an opportunity to share with the group. Allow productive and appropriate discussion for 5 minutes. An extended version of this scenario, including strategies for inclusion, is found in the ITELG on Page. 29.

Slide 49: Conclusion

Healthy physical development creates a foundation for cognitive and social emotional development. The role of the caregiver and the child care environment is critical to a child's growth and development.

Take a moment to create a few action steps that you will implement as a result of this training. Share those with a partner.

If time allows, participants can share a few action items with the group. Open up the floor for questions. Allow maximum of 5 minutes

Thank the participants for attending.