

TATS eUpdate
Curriculum and Learning Environment

Developmentally Appropriate Practice – Motor Skills

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This is the fifth eUpdate that explores developmentally appropriate practices (DAP) in prekindergarten (Pre-K) programs. DAPs are based on a developmental perspective model that suggests that development occurs along a natural course within each child and is unique to that child. The theoretical approaches of Piaget, Dewey, and Erikson are examples of developmental models.

The two components of DAP address “appropriateness”—age appropriateness and individual appropriateness. Age appropriateness refers to the general growth and changes that a typically developing child will go through in the first eight years of life. These changes are predictable and occur in all areas of development (communication—receptive and expressive language; cognition; social emotional; physical—fine and gross motor; and adaptive/self-help). Individual appropriateness refers to the unique qualities of each child and that child’s individual patterns of development, including physical growth, personality, ways of learning, interests, and family background and culture.

Teachers who support DAP are knowledgeable about human development and recognize the unique differences among each child. They are able to create classroom settings and plan activities that will better match the child’s developing abilities while respecting their unique interests. (Source: Parent Tip sheet #13 – Terrific Transitions, p.1)

Teachers who support DAP recognize that young children have diverse backgrounds and experiences. The many factors that vary in a child’s life—how a child learns to socialize with others, the experiences the child has before coming to school, the child’s cultural and/or ethnic background, and individual learning style—necessitate the use of many teaching methods. When we address these differences, we celebrate each child’s uniqueness in the process.

In this update we will look at DAP for the developmental area of motor skills. Below is a table containing data on developmental milestones in motor skills for children from 24 months (2 years) to 60 months (5 years). It is adopted from *Adapting early childhood curricula for children with special needs* by Cook, Klein and Tessier (2008) and other sources. Skill acquisition will vary from child to child; therefore, these charts should not be used for diagnostic purposes.

Age in months	Gross Motor Skills	Fine Motor Skills
24 – 36	<ul style="list-style-type: none"> • Runs well • Kicks a ball • Walks on tiptoes • Jumps off floor using both feet 	<ul style="list-style-type: none"> • Begins to cut with scissors • Begins to approximate a regular grip for writing • Strings large beads • Can draw or paint by making dots, lines and circles
36 – 48	<ul style="list-style-type: none"> • Hops on one foot • Rides a tricycle, can steer and pedal • Throws a ball overhead • Catches a bouncing ball 	<ul style="list-style-type: none"> • Can build a tower with nine small blocks • Can copy circle and cross shapes • Can use clay or dough materials to roll, flatten and shape balls
48 – 60	<ul style="list-style-type: none"> • Gallops • Can jump forward multiple times without falling • Walks up and down stairs alternating feet 	<ul style="list-style-type: none"> • Cuts with scissors on a continuous line • Can copy a cross or square • Can print some uppercase letters

Best Practice

Motor development encompasses the use of muscles, joints, and limbs and is divided into two categories: gross and fine motor skills.

Gross motor skills use large muscle planning and coordination to walk, balance, run, jump, climb, throw, etc. Gross motor skills can be developed at home and at school. In addition to the classroom, children with gross motor deficits may also receive services from a physical therapist (PT). PTs work on gross motor acquisition and children’s function related to posture, movement, and mobility.

Fine motor skills use small muscle coordination for school activities, such as cutting with scissors, drawing, and doing puzzles and for life skills activities, such as eating with a spoon and dressing. In addition to the classroom, children with fine motor deficits may also receive services from an occupational therapist (OT). OTs may help children develop feeding skills, pre-writing skills, and positioning to maintain appropriate posture to facilitate school and self-help activities. Assistive technology equipment is also used to assist children with fine motor skills. These may include specialized spoons, lap trays, corners seats, and footrests.

Promoting motor skill development in the classroom:

One important purpose of developing motor skills in young children is to maximize their participation in activities in their home, school, and community. Early childhood classrooms should include opportunities—both indoor and outdoor—to practice and gain proficiency using gross and fine motor skills. With respect to the sequence of motor development, children gain control of large muscle (gross motor) activity before small muscle (fine motor) activity. As the body and motor control develops, movement becomes more efficient, and the child uses more localized parts of the body to perform a specific task. For example, when walking up stairs, a younger child may need to use both hands on the railing for balance in addition to stepping up with one foot and then placing the other foot on the same step. As the child’s motor skills progress, the child can alternate feet and steps and may use only one hand on the railing for balance.

Motor skills also play a large role in the development of adaptive or self-help skills. Establishment of adaptive skills, such as dressing, feeding, or toileting, comprises a large part of a young child’s daily routine. If motor skills development is compromised, self-care may be impacted as well. Having the ability to control gross and fine motor movements are pre-requisite skills which are necessary for many self-care tasks. (The eUpdate on Adaptive Skills will provide an in-depth look at these skills.) Here are some suggestions for promoting overall motor skill development.

- Provide opportunities for children to exercise large muscles every day.
- Offer a range of small motor activities and experiences in the classroom.
- Provide materials, equipment, and child-sized furniture in adequate numbers to allow all children to participate.
- Be aware of cultural differences in young children with regard to motor development; children from some cultures may develop certain abilities more quickly or more slowly than others. For instance, in a culture that believes in carrying young children, the children may not have well developed walking skills. Children raised in one-story homes may lag in stair climbing skills.

Promote motor skills:

Motor skill development can occur in all areas of the early childhood classroom. The following list provides activities or materials that should/could be present.

Morning circle:

- Activities that include music and movement such as “Simon says,” “The Hokey Pokey,” or other movement games or songs
- Passing bean bags to music
- Finger plays and puppets

Block play:

- Blocks of assorted sizes and shapes
- Supervised woodworking table for children to drive pegs and nails

Dramatic play:

- Dress-up clothes or dolls with buttons, zippers, and ties
- Variety of cooking utensils that require the use of different motor movements (salad tongs, spatulas, etc.)
- Canisters with lids

Art/Writing:

- Activities that require tracing, copying, cutting, folding, pasting, painting or coloring
- Writing or drawing implements (pencils, crayons, paint brushes, chalk) of different sizes
- Finger painting
- Pencil grips

Fine motor/Manipulatives:

- Activities that include stringing of beads, or lacing cards
- Knobbed puzzles
- Different size manipulatives (small plastic interlocking blocks vs. large plastic interlocking blocks)
- Geo/peg boards
- Tangrams
- Training scissors

Book/Listening Area:

- Large selection of different children's books in varied formats—regular books, big books, board books, or books adapted with tabs for ease of turning pages
- Books with interactive pages
- Tape/CD players

Science / Discovery:

- Tweezers to pick up and examine small objects

Outdoor Play

- Obstacle courses, swings, climbing apparatus
- Adapted equipment to facilitate participation (e.g., built-up pedals on bicycles)

Other helpful strategies for fostering motor skills:

- Seek advice of therapists (occupational or physical) who may already be providing intervention for a child with motor or adaptive issues. This is extremely important when addressing issues related to feeding or positioning if the child has a severe motoric impairment.

- Look around the room from the child's perspective; if the child has limited mobility, make sure items at the child's level are interesting and within reach.
- Encourage as much participation as possible.
- Provide the child more time to concentrate on making motor movements before progressing to the next activity.
- Provide hand-over-hand support, as needed, with gradual reduction in support.
- Provide a variety of toys, games, or activities that support a variety of motor skill levels.
- Engage all children in activities; if a child has motor impairments and cannot stand, position that child on a level with his/her peers, when possible.

Reflection

Think about how motor abilities gained in the preschool years are related to growth in cognitive skills.

You are worried about seeing him spend his early years in doing nothing. What! Is it nothing to be happy? Nothing to skip, play, and run around all day long? Never in his life will he be so busy again.

- Jean-Jacques Rousseau

References and Resources

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Technical Assistance & Training System (TATS)

TATS is a statewide project providing technical assistance and training to programs in Florida serving prekindergarten children with disabilities. The TATS Web site provides information and resources on curriculum and instruction, evaluation and assessment, family involvement, inclusion, program effectiveness/quality, and transition, as well as links to early childhood partners.

<http://www.tats.ucf.edu>

TATS eUpdates are a service of the Technical Assistance & Training System Communities of Practice. The TATS eUpdates are intended to provide current information related to best practices or trends in the education of young children with special needs in the areas of Transition, Program Effectiveness, Inclusion, Curriculum & Instruction, Evaluation & Assessment, and Family Involvement. For more information about the TATS Communities of Practices and the TATS eUpdates, please log on to <http://www.tats.ucf.edu>.