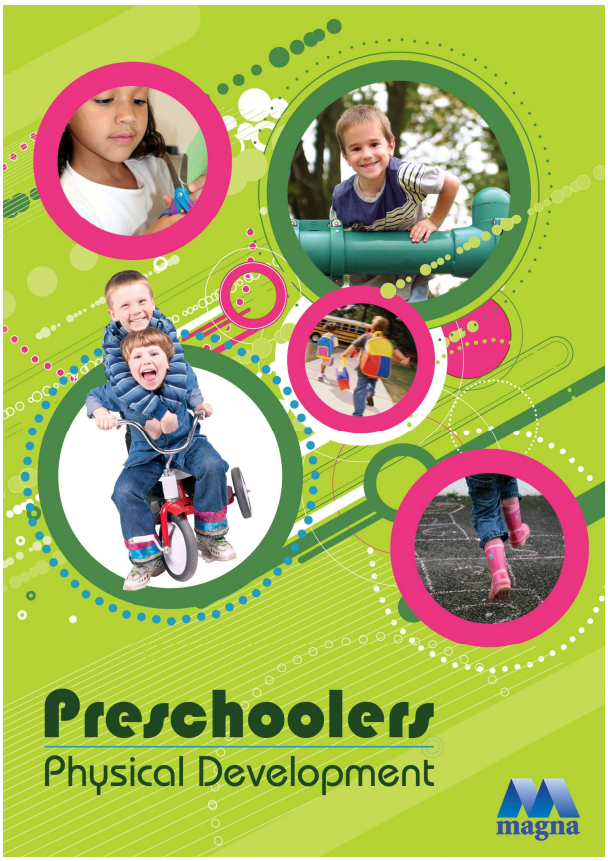
Preschoolers:
Physical Development



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Preschoolers:
Physical Development

Credits

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Magna Systems Catalog and ISBN Numbers

DVD MG-2006-08-DVD ISBN 1-55740-505-0

Closed Captioning

This program is closed-captioned.

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Using This Guide/Using This Video

- Before watching this video, have viewers recount memories of their preschool years. Have them talk about their favorite playground games and hands-on activities.
- Use questions and activities for class discussion, small group activity, home work, or assessment.

Preschoolers:
Physical Development

Table of Contents

The Program
Summary

From the ages of three to five, preschoolers reach many developmental milestones with seemingly endless energy and increasing physical coordination. As a toddler becomes a preschooler, her lower center of gravity improves her ability to balance and to try many new physical activities. Good nutrition and the proper amount of sleep are crucial to a preschooler's development.

This program shows them engaged in activities that exemplify the extraordinary physical advancements that children make at this age. Teachers and caregivers also share their firsthand observations of how this development takes place.

Key points:

- Preschoolers are children between the ages of three and five.
- Their physical development includes the acquisition of gross and fine motor skills.
- Vicktor Lowenfeld studied children's artwork and developed a framework of stages that their drawings go through as they mature.
- Preschoolers reach many developmental milestones during these years.
- Good nutrition and the proper amount of sleep are crucial to a preschooler's development.
- Though preschoolers will grow and develop no matter what, there are things that caregivers can do to foster this development.
- Some children have physically challenging conditions like Down syndrome, cerebral palsy, and visual and hearing impairments that can affect their acquisition of gross and fine motor skills.
- Teachers in an inclusive environment can make modifications to the physical classroom, materials, and activities in order to better serve children with special needs.

Physical Growth

The growth pattern of preschoolers leads them away from the unsteady gait of toddler hood. The torso grows longer and the stomach muscles strengthen. During the preschool years, their center of gravity shifts down closer to the belly button which allows them to become more surefooted and perform actions that were impossible in infancy.

Gross Motor Skills

Gross motor abilities are skills like running, jumping, climbing, and throwing. These skills require the use of large muscle groups in the arms and legs, as well as strength and stamina.

Rope ladders, jungle gyms, and rock climbing walls are commonplace in playgrounds and are a popular way for children to climb and work those large muscle groups. Their center of gravity comes into play as children try to walk along curbs and balance beams and even when they spin themselves dizzy and try to walk.

Teachers and caregivers can assist gross motor development by giving children lots of opportunities to run, climb, balance, throw, and catch - all which use those large muscle groups.

By the end of preschool, most children can: stop, start and change directions while running, walk up and down stairs with alternating feet, balance while walking on a beam, hop on one foot ten or more times in a row, and use a swing independently.

Fine Motor Skills

Fine motor skills require the ability to coordinate small muscle groups in the arms, hands, and fingers for tasks like drawing, zipping, snipping, tying, and molding with clay.

Parents, teachers, and caregivers can assist fine motor development by providing children with a variety of materials that allow them to use the small muscle groups of their hands and fingers.

The most common form of fine motor play involves drawing and other forms of artistic expression. An educator named Viktor Lowenfeld studied children's artwork and developed a framework of stages that their drawings go through as they mature. These stages are: Scribbling, Pre-schematic, Schematic, and Drawing Realism.

By the end of preschool, most children can hold a pencil using the thumb and fingers, write some letters, draw pictures, cut with scissors, string beads, dress themselves independently using clothes with large buttons and zippers, and feed themselves with a fork and spoon. These skills allow a preschooler to do self-help tasks. Suddenly, they can dress and feed themselves with little assistance. The small muscle groups in their hands will strengthen and they will demonstrate rapid gains in fine motor skills which are the foundation of learning how to write.

Physically Challenging Conditions

Some children have physically challenging conditions that can affect their acquisition of gross and fine motor skills. These conditions include Down syndrome, cerebral palsy, and visual and hearing impairments.

Many preschools use inclusive education, which is a practice that welcomes children with special needs into the classroom to learn alongside children without such conditions to help serve their physical, cognitive, and social needs. Teachers in an inclusive environment can make modifications to the physical classroom, materials, and activities in order to better serve children with special needs. Regardless of the physical challenge of the student, the goal of inclusive education is for educators to support the children's full participation in activities alongside their typically developing peers.

Children with Down syndrome may have low muscle tone which can affect balance and gross motor skill acquisition. Fine motor skills can also be a challenge because they tend to have shorter than normal fingers and underdeveloped bones in their wrists.

Preschoolers with cerebral palsy can experience a wide range of gross and fine motor challenges that range from slight to severe. Some children may have limited fine motor function, and some may need assistance to remain upright while in a seated position.

Some children have visual impairments like blindness and severely limited vision, as well as hearing impairments like deafness and severely limited auditory perception which can impair or cause delays in motor development.

Nutrition

Good nutrition is crucial to a preschooler's physical development. Though there are governmental guidelines in place, all preschoolers are not receiving the balanced diet that they need. According to the U.S. Department of Agriculture, barely one-fourth of toddlers and preschoolers eat a balanced diet. In the United States, approximately 17 percent of children live at or near poverty. Poverty dramatically affects nutrition which, in turn, affects physical as well as cognitive development.

The USDA created a special version of the food pyramid to help teach preschoolers what to eat so that they can grow and be healthy. Even with this guide in place, the predominance of fast food and convenience food items cuts down on the amount of healthy foods offered to many preschoolers. Healthy diets hinge on choosing a wide variety of foods of all types: grains, vegetables, fruits, meat, and dairy products.

Parents and caregivers can improve the diets of preschoolers by providing a variety of healthy foods for meals and snacks, using the USDA food guide pyramid for young children, and setting a good example by eating a healthy diet.

Sleep

Getting enough sleep is important to a preschooler's development. The National Sleep Foundation recommends that 3-5 year-olds get 10-12 hours of sleep each day. While a child sleeps, important biological processes occur that directly impact physical and cognitive development. During the Non-Rapid Eye movement state, hormones are released for growth and development, blood supply to the muscles increases, and energy is restored. During the Rapid Eye Movement state, the brain becomes active, and dreams occur.

Sleep related issues pop up during the preschool years that can be a challenge to overcome. As their imaginations grow, preschoolers commonly experience nighttime fears and nightmares. Sleepwalking and night terrors also peak during the preschool years. A child that doesn't get enough sleep can be irritable and even aggressive. According to some research, the less sleep they get, the more likely children are to perform poorly in school.

Parents and caregivers can improve a preschooler's sleep by maintaining a consistent sleep schedule, keeping a child's environment quiet and free of distractions, especially TV, and having a calming bedtime routine.

Review

- A preschooler's center of gravity improves her ability to balance and engage in physical activities.
- They develop large motor skills like running, throwing, and climbing that use the large muscle groups in the arms and legs.
- Preschoolers practice fine motor skills like drawing, zipping, and molding with clay that use the small muscles of the hands.
- Teachers and caregivers can foster physical development through the use of various teaching materials and activities.
- Inclusive education is used to help children with physical challenges to learn and develop in a classroom setting.
- Good nutrition and the proper amount of sleep can help in a preschooler's overall physical development.

Interactive Elements
Questions For Discussion

1. Why is it important for preschoolers to have daily opportunities to exercise their large muscles?

   Preschool aged children need daily opportunities to exercise their large muscle groups. Running, jumping, throwing, and catching, may seem like basic play, but aside from strengthening muscles, gross motor skills learned at a young age may be the foundation for a person's attitude toward physical activity later in life.

2. Why is it important for preschoolers to have daily opportunities to exercise their small muscles?

   Throughout the preschool years, children should be given opportunities to improve finger dexterity and tool use. The small muscle groups in their hands will strengthen and they will demonstrate rapid gains in fine motor skills which are the foundation of learning how to write and do self help tasks independently.

3. How does the USDA food guide pyramid for young children attempt to portray nutritional information in a way that appeals to preschoolers?

   Access the pyramid at http://teamnutrition.usda.gov/Resources/mpk_poster.pdf. Discuss. Touch on how the artwork used on the poster would appeal to children, the foods featured, and how the children are shown doing physical activities.

4. How would an inclusive classroom differ from one that did not make accommodations for children with special needs? Consider the physical layout of the room as well as the materials in it.

   Students should touch on the following accommodations: Equipment that aids in maintaining posture, materials that are accessible to all students, larger sized materials that are easier to see, grasp, and use. The use of new and unusual materials, enriched sensory environment, and graded challenges in play materials would be implemented. Teachers can arrange the physical layout of the classroom to encourage participation by all students, encourage parallel play and even collaborative play with their typically developing peers.

Suggested Activities

1. Give students an opportunity to observe some preschoolers in a group setting (classroom or childcare center). Arrange your timing at the facility so that you can observe gross motor play in the gym or playground as well as fine motor activities at learning centers or during an art project. Have them bring notebooks in which to record some of the activities and behaviors they remember from the program.

2. Put students in the role of preschool teacher. Ask small groups to create a lesson plan that could be used in a four-year-old preschool classroom and would foster physical development.

Research Project

Research the findings of Vicktor Lowenfeld regarding the development of artistic expression in preschool aged children. Visit http://students.uww.edu/scottmj15/artstages/ to view more examples of children's artwork and examine how they progress through various stages of development.

Evaluation/Testing

Fill-In-The-Blank

Fill in the blanks with the correct words from the bank at the bottom of the page.

A child's development includes physical changes that help with coordination and balance. Their _____ lowers, which makes them steadier on their feet. This allows them to use rope ladders, jungle gyms, and rock climbing walls which are popular ways for children to improve _____ skills. It is common for young children to engage in activities like puzzle making and block stacking that promote _____development. Drawing is another great way to develop small muscles. An educator named Viktor Lowenfeld studied children's artwork and developed a _____ of stages that their drawings go through as they mature. It begins with the _____ stage, which is characterized by large zigzagging lines and nondescript shapes. This is followed by the _____ stage where they begin to create representations of what is important to them and draw simple faces. During this stage they engage in _____ practice, where they draw the same thing over and over. Then they move on to the _____ stage in which objects are drawn attached to the ground, and over time, come into closer proportion with the real world. Finally they reach the drawing _____ stage, characterized by details, proportion and depth perception. Good nutrition is crucial to a preschooler's development. In the United States, approximately 17 percent of children live at or near poverty which can affect nutrition. Caregivers can use the food guide pyramid to help ensure that children are eating right. Sleep is also important because during _____ eye movement, hormones are released for growth and development, and during _____ eye movement, the brain becomes active and dreams occur.

Word Bank:

gross motor	Non-rapid	fine motor	rapid
realism	schematic	scribbling	repetitive
pre-schematic	center of gravity	poverty	framework

Fill-In-The-Blank *Answer Key*

Fill in the blanks with the correct words from the bank at the bottom of the page.

A child's development includes physical changes that help with coordination and balance. Their center of gravity lowers, which makes them steadier on their feet. This allows them to use rope ladders, jungle gyms, and rock climbing walls which are popular ways for children to improve gross motor skills. It is common for young children to engage in activities like puzzle making and block stacking that promote fine motor development. Drawing is another great way to develop small muscles. An educator named Viktor Lowenfeld studied children's artwork and developed a framework of stages that their drawings go through as they mature. It begins with the scribbling stage, which is characterized by large zigzagging lines and nondescript shapes. This is followed by the pres-schematic stage where they begin to create representations of what is important to them and draw simple faces. During this stage they engage in repetitive practice, where they draw the same thing over and over. Then they move on to the schematic stage in which objects are drawn attached to the ground, and over time, come into closer proportion with the real world. Finally they reach the drawing realism stage, characterized by details, proportion and depth perception. Good nutrition is crucial to a preschooler's development. In the United States, approximately 17 percent of children live at or near poverty, which can affect nutrition. Caregivers can use the food guide pyramid to help ensure that children are eating right. Sleep is also important because during non-rapid eye movement, energy is restored, and during rapid eye movement, the brain becomes active.

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Preschoolers: Physical Development
Multiple Choice Worksheet

Circle the best available answer for each of the following:

1) An activity that involves fine motor skills is:

a) stringing beads
b) balancing on a beam
c) jumping rope
d) reading

2) The percentage of American preschoolers that regularly eat a balanced diet is:

a) 10%
b) 25%
c) 50%
d) 75%

3) An activity that involves gross motor skills is:

a) running
b) reading
c) remembering
d) writing

4) Fine motor skills can NOT be practiced with:

a) tweezers
b) scissors
c) monkey bars
d) clay

5) The food guide pyramid for young children does NOT include:

a) recipes
b) pictures of food
c) drawings of children
d) varieties of food

6) Three to Five year-olds usually move from the scribbling stage to the:

a) pre-schematic stage
b) schematic stage
c) repetitive stage
d) drawing realism stage

7) A poor idea to help a preschooler get enough sleep is:

a) a quiet room
b) a consistent schedule
c) a T.V. as a night light
d) a calming routine

8) The National Sleep Foundation recommends that 3-5 year-olds get:

a) 12-15 hours of sleep each day
b) 10-12 hours of sleep each day
c) 9 -11 hours of sleep each day
d) 6 - 8 hours of sleep each day

Preschoolers: Physical Development
Multiple Choice Worksheet *Answer Key*

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Preschoolers: Physical Development
Matching Quiz

Match the words in the first column to the best available answer in the second column.

_____	State of sleep in which hormones for growth and development are released	1) inclusive
_____	Created a Food Guide pyramid for preschool-aged children	2) gross motor
_____	State of sleep in which dreams occur	3) fine motor
_____	Skills that involve the large muscle groups	4) milestones
_____	Developed a framework to classify children's art	5) non-rapid eye movement
_____	Environment where children with special needs are welcomed into the classroom to learn alongside typically developing children	6) Vickor Lowenfeld
_____	Tasks that most children can do by a certain age	7) rapid eye movement
_____	Skills that involve the small muscle groups	8) USDA

Preschoolers: Physical Development
Matching Quiz *Answer Key*

5) non-rapid eye movement	State of sleep in which hormones for growth and development are released
8) USDA	Created a Food Guide pyramid for preschool aged children
7) rapid eye movement	State of sleep in which dreams occur
2) gross motor	Skills that involve the large muscle groups
6) Vickor Lowenfeld	Developed a framework to classify children's art
1) inclusive	Environment where children with special needs are welcomed into the classroom to learn alongside typically developing children
4) milestones	Tasks that most children can do by a certain age
3) fine motor	Skills that involve the small muscle groups

Glossary

Developmental Milestones
Tasks most children can perform at certain ages

Drawing Realism Stage
Lowenfeld's stage of artistic development (approximate ages 9 to 11 years) that is characterized by details like lips, hairstyles, and clothing in character drawings as well as perspective and depth perception that make scenes appear close to real world proportion

Fine Motor Skills
Skills that require the ability to coordinate small muscle groups in the arms, hands, and fingers for tasks like drawing, zipping, snipping, tying, and molding with clay

Gross Motor Skills
Skills like running, jumping, climbing, and throwing that require the use of large muscle groups in the arms and legs, as well as strength and stamina

Inclusive Education
The practice that welcomes children with special needs into the classroom to learn alongside typically developing children

Non-Rapid Eye Movement
State of sleep in which hormones are released for growth and development, blood supply to the muscles increases, and energy is restored

Preschematic Stage
Lowenfeld's stage of artistic development (approximate ages 3 to 4 years) that is characterized by representations of what is important to them. Drawing faces is common and arms and legs often protrude right out of the heads. Eventually, people, houses, trees and the sun are drawn without regard for proportion, and objects often float in space

Rapid Eye Movement
State of sleep in which the brain becomes active and dreams occur

Repetitive Practice
A component of the pre-schematic stage of artistic development in which children learn to draw one thing and then fill page after page with the same representation

Schematic Stage
Lowenfeld's stage of artistic development (approximate ages 3 to 4 years) that is characterized by drawn objects that are attached to the ground and eventually come into closer proportion with the real world. Often times a strip of blue sky is drawn across the top of the page

Scribbling Stage
Lowenfeld's stage of artistic development (approximate ages 15 months to 3 years) characterized by large zigzagging lines and nondescript shapes

For More Information...

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