

Developmental Ball



Student with special needs practicing dribbling skills.

An Innovative Approach to Teaching Kicking, Soccer Style Dribbling, Tossing, and Catching Skills

by Pam Skogstad

“There is an intricate relationship between the acquisition of motor milestones and the emergence of play.....when motor milestones are delayed, the development of fine motor skills, language, and play are also delayed.” (Brigance, A.H., 1991)

As an adapted physical education specialist for over 25 years, I have observed students with disabilities, sensory integration disorders, and developmental delays struggle with ball skills. A critical need to create a ball affording students opportunities to work independently (not relying on peers, teaching assistants, or teachers) was long overdue.

During the fall of 2009, as the author was finalizing an equipment order for the Anchorage School District’s Adapted Physical Education Collaborative Model, I searched **ALL** of the equipment catalogs to be found, both in hard copy, as well as online. I thought I would surely find an adaptive ball that would meet criteria for developing independent kicking, dribbling, tossing, and catching skills for students with special needs. Unfortunately, the extended search provided no new insights on novel equipment to promote independent kicking, tossing, and catching.

Soccer trainers, cloth balls, balloon balls, and peer mentors are some adaptations used for incorporating ball skills (perceptual and sensory motor stimulation) for students with disabilities. All of the aforementioned adaptations do not support independent skill acquisition as they involve support staff and/or peers. Staff

or peers are needed for support as the balls speed of movement is too fast for tracking and focusing on task. Developmental Ball remains in play, creating a successful, positive physical education experience for all students.

Evolution of Developmental Ball

Reaching a dead end with options in catalogs for any ball that would meet the criteria of fostering independent ball skills, it was time to become creative. The idea of slowing an inflatable ball which would enable students with disabilities, coordination issues, and those on the autism spectrum to easily track were the criteria. Inserting 3, 5, 6, 8, and 10 ounces of sand into inflatable 8 inch balls, then inflating the balls created a unique feature which allowed the balls to move slower and remain in play.

Experimenting with various weights over a two-month time period, three weights proved to be successful. Repeated trials with the 6, 8, and 10 ounce balls demonstrated these were the correct weights.

- 6 ounces for pre-K through 2nd grades
- 8 ounces for 3rd through 6th grades
- 10 ounces for 7th through 12th grades
- Regular soccer balls with 10 ounces of sand for 7th through 12th grades gives an appearance of the same ball utilized in general physical education.

Designing Developmental Ball began in rural Hope, Alaska, in the fall of 2009. Over 100 Developmental Balls were created in my husband's workshop. Developmental Ball became a huge success in the K-12 physical education programs in the Anchorage School District.

students with autism could play catch and enjoyed this so much. Their homeroom teachers were pleased. I saw the Developmental Ball used very successfully by students in physical education today. They played a soccer game. The ball clings to their feet, so good for them."

Omiyakita Special Needs School, Saitama Japan

September 10, 2010, I demonstrated Developmental Ball to the Omiyakita Special Needs School in Saitama, Japan. A regular soccer ball with 10 ounces of sand was used by the middle school students at Omiyakita Special Needs school. Developmental Ball was a huge success, with staff and parents requesting more of the balls. As Mari Kido, Curriculum Coordinator, Omiyakita Special Needs School explained, "Our teachers of junior high school tried to use the ball with students today. Seven students who have serious mental disabilities could catch and throw the ball, two

Unique features of Developmental Ball

- **Developmental Ball** is an innovative approach to teaching kicking, soccer style dribbling, tossing, and catching skills for students with physical disabilities, developmental delays, and general physical education students from pre-K through second grade.
- **Developmental Balls** are easier to kick and dribble as their trajectory is slower than regular playground and soccer balls. Proprioceptive feedback is positive as opportunities for



Students from from Omiyakita Special Needs School working with Developmental Ball during an outdoor soccer unit.



Student with special needs working independently with Developmental Ball



General education students practicing soccer skills with Developmental Ball.



repetitive trials are allowed with the slower moving balls. No more chasing balls across the gym floor and soccer fields.

- **Developmental Ball** fosters independent skill development on an individual level.
- **Developmental Ball** is excellent for students with sensory integration issues to include students on the autism spectrum. Kicked balls are not flying across the gym creating an overstimulating environment. The weight of this ball provides tactile and proprioceptive feedback to the learner. This helps to maintain focus on the ball and on the skill.
- **Developmental Ball** activities benefit not only students with disabilities, sensory impairment issues and developmental delays, but students with coordination issues, unable to keep up with their peers. Students with visual impairments also benefit from the heavier ball.

In Summary

- It is a unique strategy for teaching soccer style dribbling, kicking, tossing, and catching;
- Ball easily remains in play;
- Proprioceptive feedback is positive, as correct repetitive opportunities are allowed;
- Slower moving balls are easier to track;
- No more chasing balls across the gymnasium floor or on the field, creating a control problem, as well as contributing to an overstimulating environment;
- Ball is excellent for students requiring sensory integration and students with autism;
- Benefits students with coordination issues and/or unable to keep up with peers.

As a result, it is wonderful to observe students with special needs work alongside their peers, not having to constantly chase balls while staying on task for longer periods.

NASPE/APENS Standards

Developmental Ball addresses standards for both National Association for Secondary Physical Education (NASPE) and Adapted Physical Education National Standards (APENS).

NASPE standards addressed are: **Standard #1**—demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities, and **Standard #2**—demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to learning and performance of physical activities (www.naspe.org).

APENS standards addressed are: **Standard #2**—Motor Behavior; **Standard #6**—Unique Attributes of Learners, and **Standard #9**—Instructional Design and Planning. By using the Ball and providing a developmentally appropriate instructional strategy, adapted physical education teachers may apply their knowledge of unique attributes of learners, thereby demonstrating competency of these standards (www.apens.org).

Selected References

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