



Development

Some students in a class will struggle with fundamental movement skills no matter how hard they practice or how effectively they are taught. To understand this, it is helpful to recognize the role of development age and how it impacts the physical capabilities of students.

Expectations are often set for students based on grade or chronological age (date and year of birth). For instance, often teachers expect a grade three student or an eight year old to be able to kick with a particular proficiency. However, not all students in the same grade are equally developmentally advanced.

The challenges faced by December-born students are well known to elementary educators. These students, who may be up to a year (less a day) younger than their January-born peers in the same grade, frequently exhibit academic, emotional, and self-regulation challenges. They may also have less developed physical skills.

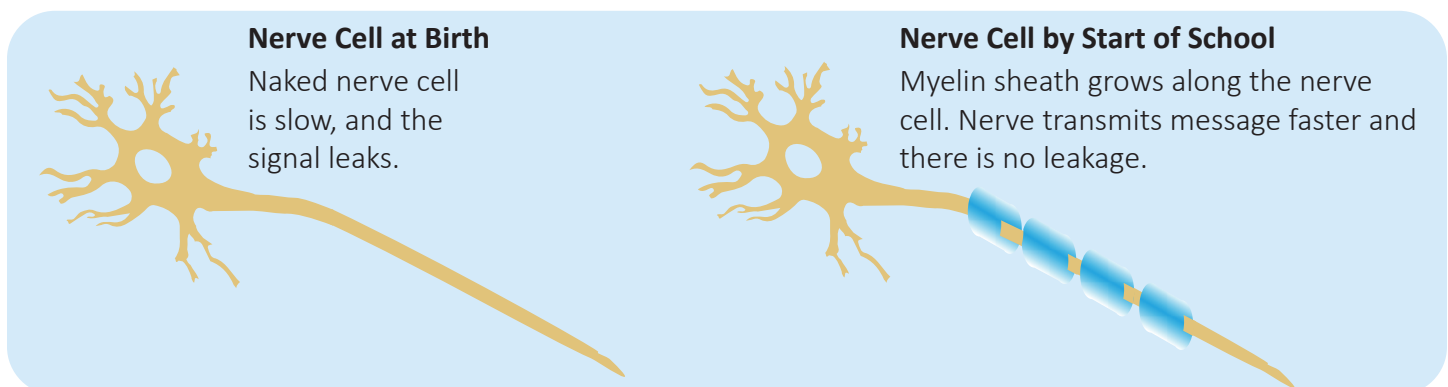
Even chronological age cannot explain discrepancy in skill levels with children. We are learning that not all children develop physically at the same rate and not all systems in the child develop equally.

A child's developmental age is defined as the age in years and months of the average youth with the same development as the individual in question. If an eight year-old has the same development as the average six-year-old, their developmental age is six. If a child who is five has the same development as the average four-year-old, then he or she has a developmental age of four. The inverse may also be true where say a five year-old has the same development as the average six-year-old.

In physical activity and sport the following breakdown of developmental stages is used as part of the Long Term Development in Sport and Physical Activity framework*.

How Does Age Affect Development of Physical Literacy?

Among other things, development age is influenced by brain and nerve connections. If these are not sufficiently developed, no amount of teaching or practice will help. Time is what is needed. Even a few months of development in the primary grades can greatly improve a student's ability to become proficient at a skill. By learning how a student moves, the observant teacher can gauge when they are ready to attempt skills they previously struggled to perform.



Nerve Cell at Birth

Naked nerve cell is slow, and the signal leaks.

Nerve Cell by Start of School

Myelin sheath grows along the nerve cell. Nerve transmits message faster and there is no leakage.

Finding the Optimum Time to Learn a Skill

Too Early to Learn

Brain and nerve connections not developed enough to learn the skill.

No amount of teaching or practice will help.

Optimal Time to Learn

Brain and nerve connections are well developed for learning the skill.

Teaching and practice are very effective.



Sequence in learning a new physical activity skill, for example catching a ball

Birth 1 2 3 4 5 6 7 8 9 10 11
Age

Learning Possible

Brain and nerve connections are developed enough to learn the skill.

Skill can be learned but progress is generally slow.

Remediation Required

If student has not learned the skill they will fall behind their peers.

Remedial practice required.

Why Does it Matter?

Students who fall behind their peers in movement skills are often left out of informal play, and as a result of not playing with their peers don't get the needed practice, social connections and fall further behind.

Tips

Break down a skill into small components that let a student who is less developmentally advanced experience some success.

Modify equipment to make skills easier to do. For instance, play badminton with balloons and not shuttlecocks.

Shorten the distance and increase the target size for throwing or kicking.

Alter the rules to games for those who are not as developmentally advanced.

Pick teams to avoid one sided games.

Keep a Watch!

In the elementary school there are three groups of students about whom educators need to be concerned:

- students who are the youngest in their grade – the December babies,
- those who are physically less mature than their peers, and
- those with pervasive coordination problems.

