Developing Physical Literacy 2.0

Drew Mitchel
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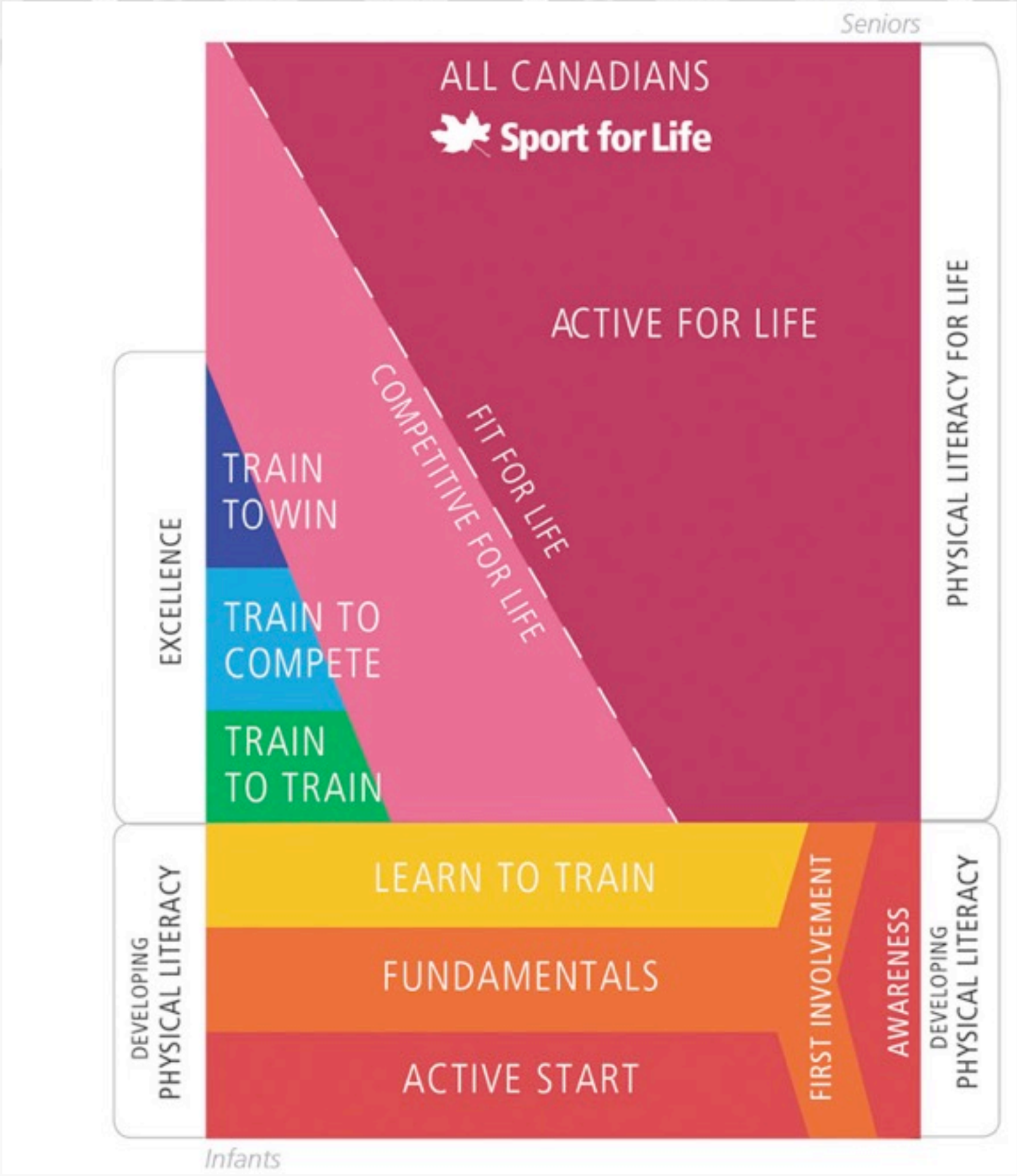
Sport for Life



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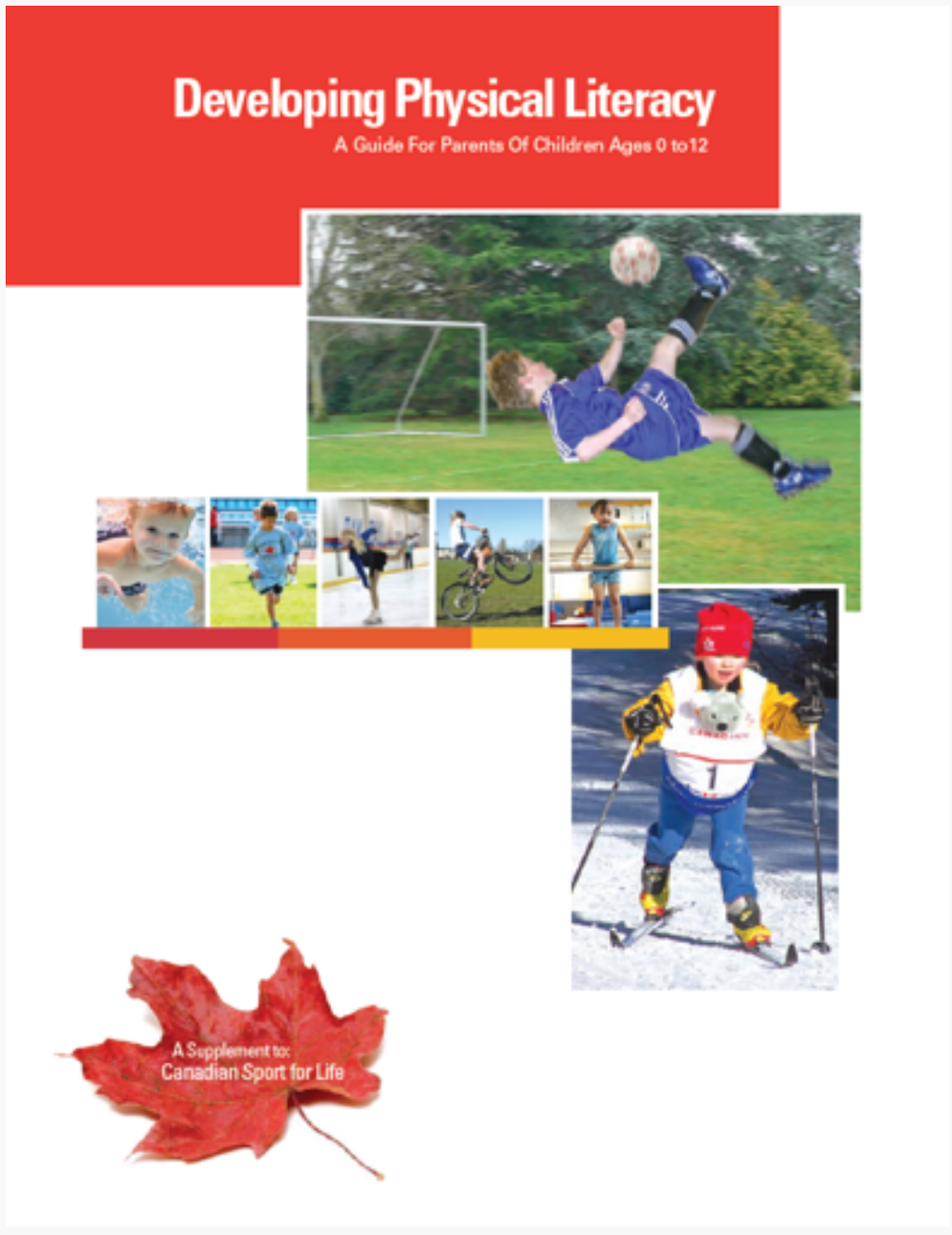
Developing PL 1.0



This first version was one of the most popular CS4L resources.

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Why update?

- Developing Physical Literacy 1.0 was one of the earliest ***Sport for Life*** documents produced.
- Since then thinking about Physical Literacy has evolved considerably - both in Canada and around the world.

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Sport for Life: Early thinking

Physical Literacy Achieved

Learn to Train	→	Foundation Sport Skills
FUNdamentals	→	Fundamental Movement Skills
Active Start	→	Basic Human Movements

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Physical Literacy compared to Literacy, Numeracy and Music

	Literacy	Numeracy	Music	Physical Literacy
Highest pursuit	Write professionally, pursue literature	Be mathematician, Statistician, engineer or scientist	Play professionally, study music, be music critic	Compete at the highest level, play professionally
Daily Use	Read newspapers, signs, directions	Make change, fill in tax forms, calculate day-to-day numbers,	Play an instrument for personal enjoyment	Play sports, engage in healthy physical activity
Functional Level	Put letters and words together to read and write	Add, subtract multiply, divide for basic arithmetic	Play simple tunes	Combine fundamental movement skills into games and activities
Basic Building Blocks	Learn Letters	Learn Numbers	Learn Notes	Learn Movement Skills

MASTERY

Motivates individual to continue, learn more, improve and value the actvity

Which together

Confidence

Leads to

Competence

Based on Mandigo, J. (2013)

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Two schools of thought

- The Canadian (Sport for Life) thinking
  - Highly pragmatic
- The British (Margaret Whitehead) thinking
  - More academic and philosophical
- Some tension - but more importantly, different purposes.

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The "British" approach

- A philosophical foundation based on the work of Maurice Merleau-Ponty (1908-1961)

- French phenomenological philosopher

- Believed the body was the primary site for knowing the world (not mind)

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My brain hurts…

- Phenomenology is a broad discipline and method of inquiry in philosophy, developed largely by German philosophers which is based on the premise that reality consists of objects and events ("phenomena") as they are perceived or understood in the human consciousness, and not as anything independent of human consciousness.

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Margaret Whitehead

- The work of Merleau-Ponty was taken up by Margaret Whitehead (U. Bedford, UK)
- She rejected "dualism" the separation of the mind and body, and asserts a "monist" perspective - and embodiment as a key argument.
- "We are our bodies".

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PL – George Morrison (1994)

"To be physically literate, one should be creative, imaginative, and clear in expressive movement, competent and efficient in utilitarian movement and inventive, versatile, and skillful in objective movement. "

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- ***Dr. Margaret Whitehead***
  (2001, 2007)

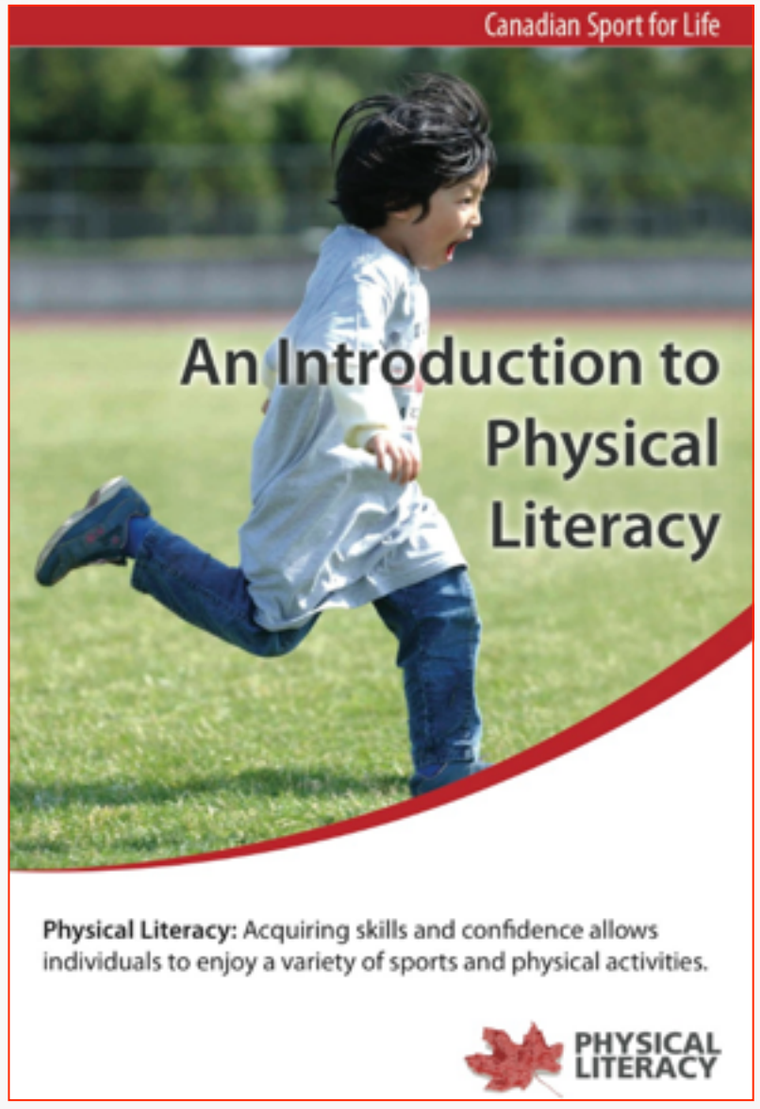
Definition

(a) moves with poise, economy and confidence in a wide variety of physically challenging situations; and,
(b) is perceptive in 'reading' all aspects of the physical environment, anticipating movement needs or possibilities and responding appropriately to these, with intelligence and imagination.

(c) Physical literacy can be described as the ability and motivation to capitalize on our movement potential to make a significant contribution to quality of life.
(d) As humans we all exhibit this potential, however its specific expression will be particular to the culture in which we live and the movement capacities with which we are endowed*. (e) An individual who is physically literate moves with poise, economy and confidence in a wide variety of physically challenging situations.

"Canadian" Approach (2005)

- Pragmatic not philosophical
- 30-second sound bite/ elevator pitch
- Purpose was to **change** the Canadian approach to Long-Term Athlete Development



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Canadian Approach

- Move sports to thinking about first developing the ***child as an athlete***
- Then refining the athlete into a ***sport specific*** athlete/player
- In part reaction against too-early over-specialization

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Purposes

- British
  - To articulate a life journey
  - To adhere to a "monist" philosophy
  - To create a deeper understanding of human physical development
  - To publish academic papers

- Canadian
  - To change the sport system
  - To put more focus on the early stages of physical skills in human development
  - To create a sound foundation for later sport excellence
  - To prevent drop-out from sport
  - To encourage physical activity across the life-span

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Fast forward to 2014/2015

- International Consensus statement
- An attempt to "bridge the gap" between the Canadian and British views
- An attempt to better articulate and define physical literacy — all singing from the same hymn book!

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Consensus statement

Canada's Physical Literacy Consensus Statement | June 2015

In recent years, various stakeholders have engaged in activities to promote and develop physical literacy. Excitement around the concept has also led to a variety of definitions, and sometimes a misuse of the term by using it interchangeably with "physical activity", "physical education", "fundamental movement skills" or "motor skill development". In a broad consultation, sector leaders in Canada suggested that a common definition with consistent language was needed to provide clarity for the development of policy, practice and research.

The purpose of this Statement is to:

- **promote** the value of physical literacy and preserve the integrity of the concept
- **advocate** for the use of a common definition of physical literacy, as defined by the International Physical Literacy Association
- **facilitate** alignment within and between the multiple sectors in the physical literacy community
- **improve** the consistency and clarity of communications relating to physical literacy
- **inform** the consistent and co-ordinated development of physical literacy tools and resources created by various stakeholders.

Definition of Physical Literacy

Physical literacy is the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life.

International Physical Literacy Association, May, 2014

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Physical Literacy at a glance

Physical Competence
Means how well a person can do any skill or movement. It can be thought of as their ABILITY at any given point in time.

Confidence
Means how sure a person is that they can do a skill or activity. If you are competent and confident, then you will also be consistent - you can count on being able to do the skill.

Knowledge
Means knowing the facts about physical activity and health, and knowing enough about the activities you are doing to keep yourself safe.

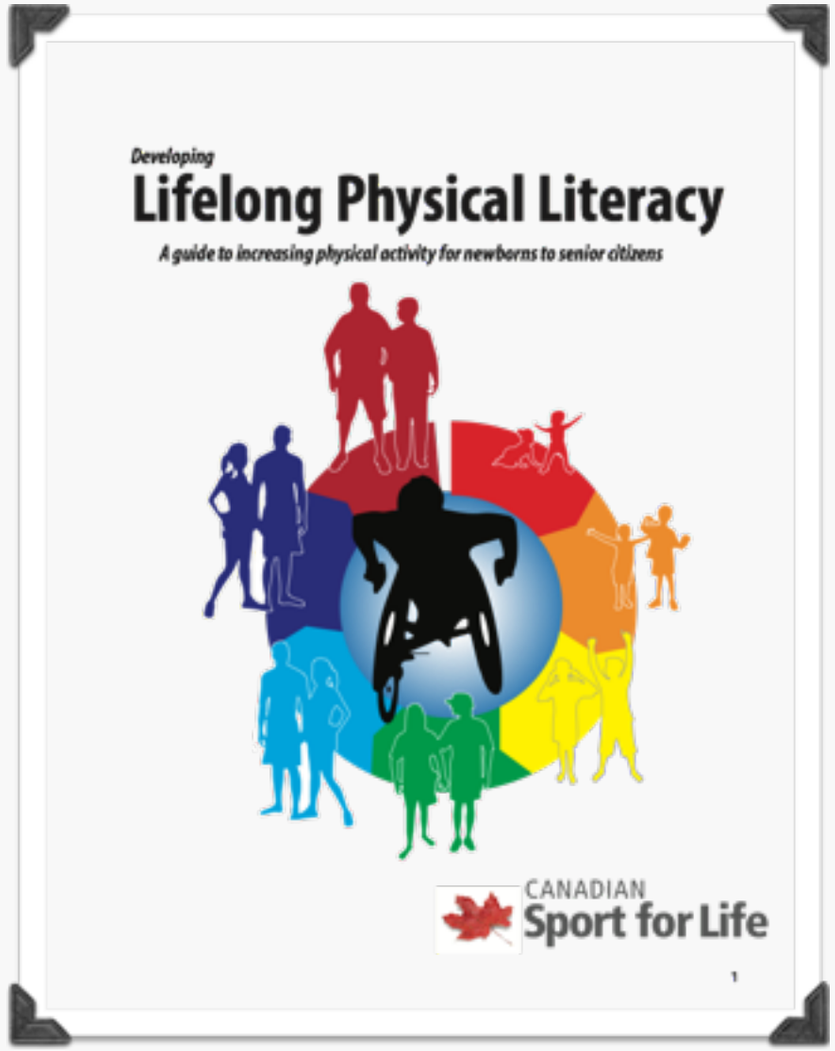
Understanding
Means more than just knowing the facts about physical activity and health. It means appreciating and acting on the importance of your knowledge.

Motivation
Means wanting to take part in physical activity without anyone else needing to encourage or push you. Motivation comes from inside of you.

It also means taking personal responsibility for taking part in physical activity regardless of age or ability

Physical Literacy 2.0

- Currently being written (99% completed)
  - Different target audience.
  - Incorporates latest thinking on PL
  - Writing it may cause permanent brain damage!



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Biggest changes

- A **life-span** approach
- Focus on importance of developing **Executive Function** in the early years
- A comprehensive **internal** document from which components can be extracted and combined for different audiences. (probably will be made available for anyone to download)

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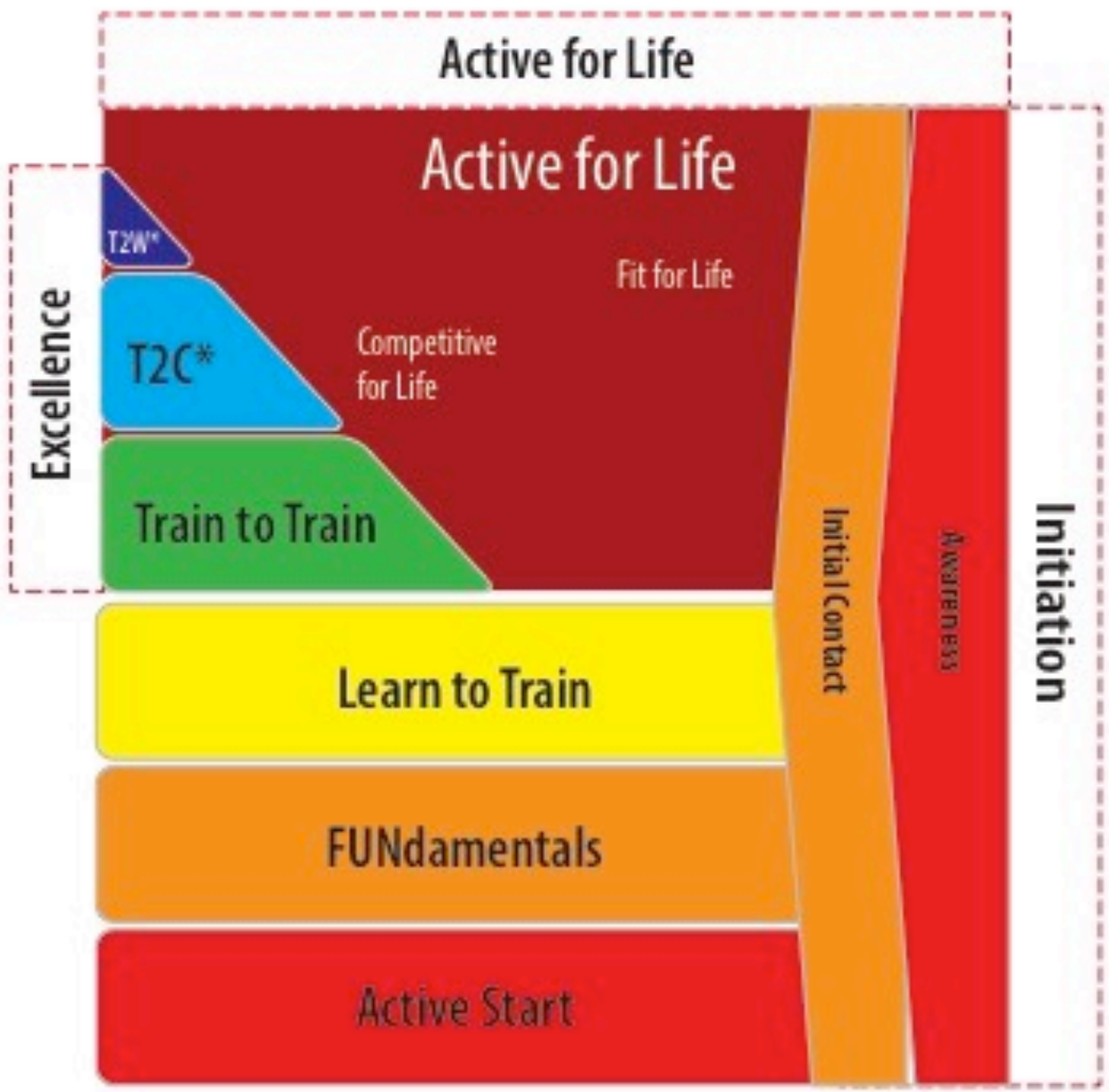
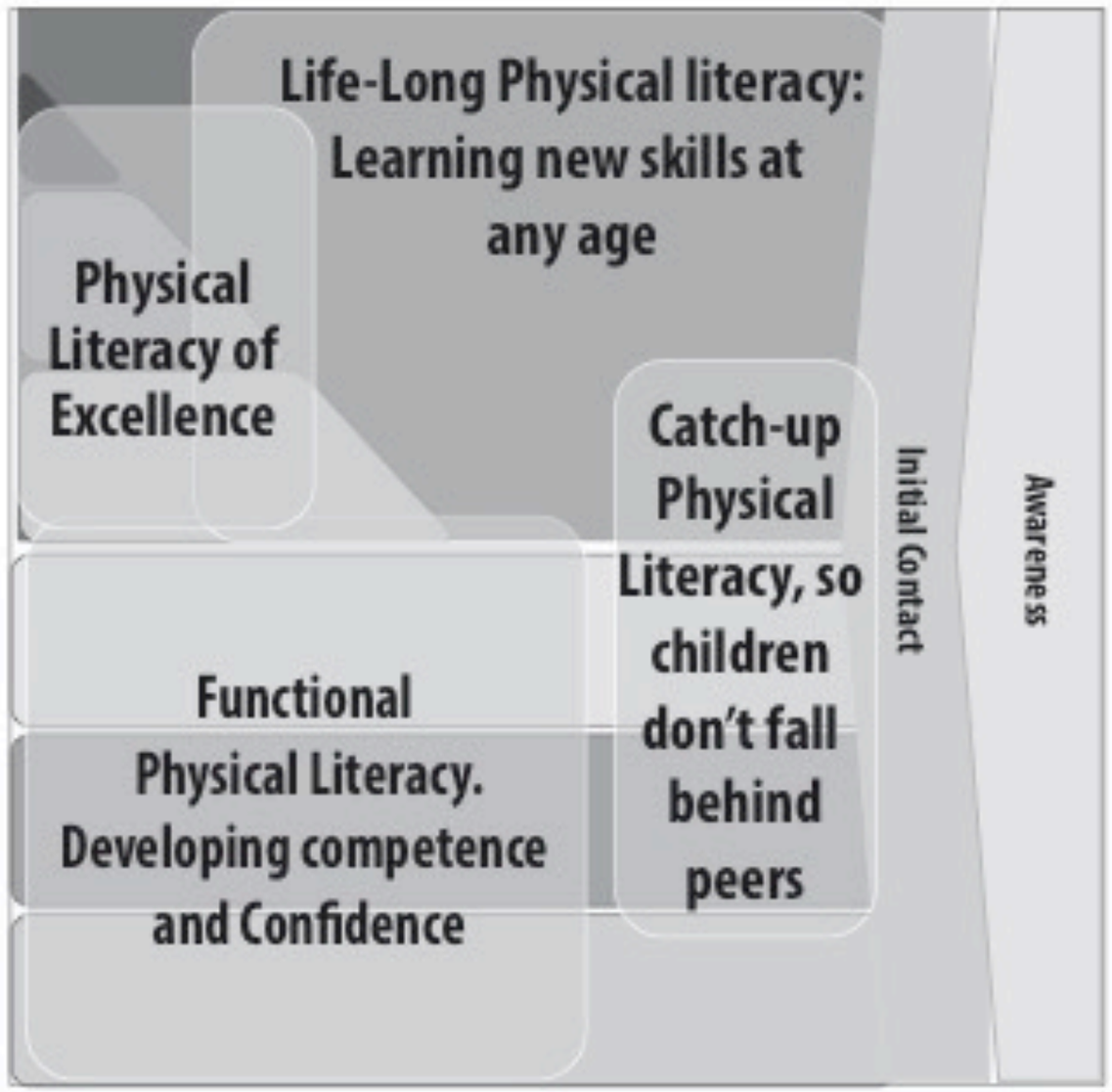
4 Types of Physical Literacy





Executive Function

- Three components
  - Working memory
  - Cognitive flexibility
  - Self regulation: Inhibition control

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Executive Function

- My **current thinking**:
  - Many traditional children's games from around the world evolved to develop executive function (This morning's presentation)
  - Free play is more important in its development than adult organized activities

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Expanded coverage

- Physical Literacy - what does it mean at each of the 7 stages of Long-Term Athlete Development

Developing Physical Literacy: Active Start

Need to know

Reminders - At this stage of development key outcomes are:

- Development of basic movement skills
- Not sedentary for more than 60 minutes at a time except when sleeping
- Some organized physical activity
- Exploration of risk and limits in safe environments
- Active movement environment combined with well structured gymnastics and swimming programs, and activities on ice and snow
- Daily physical activity with an emphasis on fun

Boys and Girls: Birth to 6

What

There are many skills that a child who is developing physical literacy needs to master in this, the first stage of Long-Term Athlete Development.

Basic Human Movements

It is probably impossible to create a list that everyone agrees to, but basic human movements include:

- Sitting
- Standing
- Reaching for objects
- Grasping objects
- Using objects to hit with
- Crawling
- Cruising
- Walking
- Running
- Hopping
- Jumping
- Twisting
- Turning
- Rolling
- Basic throwing action
- Simple catching of large ball
- Simple kicking action

Executive Function

- Working Memory
- Cognitive Flexibility
- Self Regulation

Habits of regular physical activity

Set aside special times during the day for the child to be physically active, and make this a fun time the child looks forward to.

Object tracking skills

Following moving objects with the eyes is an important skill to develop. It is also important that children learn to track objects that pass behind another object and then reappear so that they can learn to anticipate the path of things that move.

Where

It is important that children at this age take part in activities both indoors and out. Being out in "nature" is good for children, and walking and running on an uneven surface helps them develop coordination and balance.

It is also important that children get to experience being in water, so playing in "splash" pools or swimming pools (under close supervision) will go a long way to helping children learn to swim later.

We live in Canada and for most of us this means living in snow and ice for much of the year. Children need to learn to play in snow and (safely) on ice, so that it becomes part of their childhood experience - and prepares them for skiing, and skating sports.

Who

Parents and care givers make sure that children are physically active for at least an hour a day up to age 1, and for 3 hours every day from 1- 4 years.

Pre-schools need to build in active play times and intervals during the day. No child being still for more than 60 minutes at a time unless they are asleep.

Teachers: Deliver quality physical education programs, and encourage active recess and lunch breaks.

Sports and Recreation: Design and deliver programs that are fully inclusive, encourage the development of a wide range of skills, and are done in different environments.

How

Create a safe environment in which the child can explore.

Provide a brightly coloured selection of toys- but not all at once - that the child can use in many different ways. Include bats and balls once the child is old enough to hold them.

Set aside time each day for active play starting with "tummy-time" for babies.

Be an active role model and be active with your child. Go for walks in all weather, and encourage the child to interact with nature.

Challenge kids to try new things, for example, "Can you jump over puddle?" or "Can you walk along that line"

Executive Function

Create a safe environment in which the child can play.

To build **self regulation** play anticipation games in which the child has to supress his or her response until a signal is given -for example Simon Says, and similar games.

To build **working memory** play games in which the child has to remember a sequence of actions - such as "Head, shoulders, knees and toes" and follow-the-leader games where the sequence of actions gets longer and longer.

To build **cognitive flexibility** play games that require quick changes - such as "statues" where children have to switch between thinking about moving and thinking about being absolutely still.

Developing Physical Literacy: FUNdamentals

Need to know

Reminders - At this stage of development key outcomes are:

- Development of Fundamental Movement Skills
- Target of 180 minutes of activity every day
- Target of 60 minutes of vigorous activity every day (as part of 180 minute target)
- A mixture of structured and unstructured play, with some instruction
- Development of skills in different environments - land, water, ice/snow and in the air
- Learn skills and use them in small-sided games

On average: Boys 6-9 and Girls: 6-8

What

There are a huge range of fundamental movement skills, but they can usually be grouped into:

Body control skills: Learning to control the position of arms and legs, control of posture, and control of body orientation.

Locomotor skills: All the ways of moving on land, on snow and ice and in water.

Object manipulation: These skills include catching, throwing and kicking, and using bats, racquets and balls.

In addition children need to work on the ABCs of Agility, Balance, Coordination and Speed.

Agility: Learning to stop, start and change direction quickly.

Balance: Being able to balance on different body parts when stationary, and ability to balance on both stable and unstable platforms (a canoe would be a good example of an unstable platform).

Coordination: Being in control of all body parts, regardless of body orientation. Plus learning to use all available body parts in a smooth sequence - for example using the hips, trunk, shoulder, elbow, wrist and hands in a smooth sequence when throwing.

Speed: Learning to move hands and arms, and legs and feet at high speed, and using all available body strength to get the whole body moving.

This is a also a good time to start working on flexibility.

Building Good Habits: There is still a need to continue building habbits of daily physical activity, and to strengthen executive function.

Making time for Physical Activity: Reducing screen time during this stage of development provides more time for physical activity, and is to be encouraged.

Where

By this age children are spending more time outside of the home, and are in school - so quality physical education is critical.

In schools, trained educators have the ability to identify children whose physical skills fall well below those of their peers - often called "clumsy" children. Interventions to help these children "catch-up" to the skill level of their peers can do much to improve self-esteem and later participation in physical activity.

Community programs are also a key contributor to developing physical literacy, and should be designed to expose children to a wide range of games and activities that develop fundamental movement skills.

After-school programs should include play session with a focus on both low level and vigorous activity.

Who

Parents and care givers: Set time aside for regular, daily, physical activity, and provide time and encouragement to children who are having difficulty in mastering skills.

Teachers: Where possible have physical education taught be trained specialists. Provide teachers with tools (for example PLAY Tools) to help them assess children's fundamental movement skills, and chart progress

Recreation Leaders: Focus on multi-activity programs rather than early specialization, and design activities to maximize the use of skills in small-sided games and activities.

Coaches: Avoid early specialization, and use warm-ups and cool down periods to develop wide range of fundamental movement skills.

How

Fundamental Movement Skills

Quality physical education is the single best way to ensure that every child in Canada gets to develop fundamental movement skills.

It is also important that parents support efforts by sport organization and recreation departments to do the right thing. This means understanding that when a soccer coach is getting kids to throw a ball, or a hockey coach is getting kids to roll on the ground - they are building physical literacy that will help those children not only in their current sport but in any sport they child might later take up.

Create a safe environment in which the child can explore different ways of moving and playing with different bats, balls and other implements.

Expose children to supervised swimming programs in your pool if available, and learn to swim programs if possible.

Have children play outside on safe ice and in the snow, and experiment with skis and ice-skates.

Avoid early specialization in sports except for in few early specialization sports like gymnastics.

Children at this stage of development benefit from both supervised and unsupervised play.

When playing games that hone their fundamental movement skills keep the playing surface small, have only a few players on each team so that everyone gets to be involved, and as much as possible use "child-sized" equipment.

If biking, skating, skiing, skateboarding, or riding a bike, make sure that each child is wearing a properly fitted helmet, and additional safety equipment recommended for the activity.

Developing Physical Literacy: Learn to Train

Need to know

Reminders - At this stage of development key outcomes are:

- Develop foundation skills in a range of sports played in different environments
- Develop strength, endurance and flexibility through games and fun activities.
- Enhance speed, agility, and balance though warm-up and cool-down games
- Finding sports they enjoy playing and in which success is likely.
- Balance training (70% of the time) with competition (30% of the time)
- By the end of this stage narrow down involvement to approximately 3 sports

Males 9-12, Females 8-11

What

These are the "skill hungry" years: when learning skills is probably as good as it ever will be.

During this stage the fundamental movement skills are extended and refined into foundation sport skills that are sufficient to allow the young person to ENJOYABLY take part in sport.

Competence in sport skills bolsters confidence to take part in informal and organized activities - and this practice drives performance improvement.

Key physical literacy developments are:

Development of foundation sport skills in a broad range of sport activities in the gym or on the field, in water, on ice and snow, and in the air.

Having tried out, and learned basic skills in, a range of sports the athlete should narrow their focus and concentrate on 3 or 4 sports that they love the most.

Improvements in the fundamental movement skill ABCs of: Agility, Balance, Coordination and Speed in different environments.

Improved ability to see what is going on around the player and improved ability to focus on the IMPORTANT actions around them.

Significantly improved decision making of skill selection and execution based on the game/activity situation. This is the ability to read the game, anticipate what is going to happen, and respond appropriately.

Where

Participants are frequently engaged in physical activity and sport in a variety of locations: in school physical education, intramural activities and school sport festivals.

They may also take part in minor sport activities within the community, and may be starting to compete at the local and regional level. Participants in early specializations: sports such as gymnastics and figure skating may be starting to compete more formally.

For most participants it is important not to specialize in just one sport at this stage, and year round participation in one sport is discouraged. There will be time for specialization later.

Who

Teachers: For the provision of quality physical education and opportunities for intramural games and competitions, and for friendly competitions between local schools.

Recreation leaders: Through the provision of seasonal sport opportunities and "try it" days to encourage young people to try different sports. Offering "sport group-ings" works rwell at this stage. In this, participants: sign up for groups of sports - to learn (for example) the basics of tennis, table-tennis, badminton and squash, or sign up for aquatic sport - to learn to swim, dive, do synchro, and play water polo.

Parents: Need to encourage participation and frequently to provide transportation.

How

This is the stage of best skill development and is also a time when strength, endurance and flexibility can be developed.

For boys, developing flexibility through systematic exercises before they start their adolescent growth spurt is important - to maintain.

Strength can be developed through activities in which participants support and move their own body weight. For girls developing upper body strength at this stage is important.

Learning proper sport-skill techniques for safety and success is important. Incorporating those correct techniques into small games develop smooth, efficient, movements - but even more importantly - it helps players coordinate their skills with the movements of teammates and opponents.

By automating skill performance through small game activities athletes can focus on the outcomes of the skill rather than on the mechanics of performing it. This frees up the brain to think about tactics and strategies. It also allows them to track the movements of those around them and act accordingly.

Physical literacy development also requires participants to understand the rules of their sports, to understand safety issues, and to learn to conform to the sport's unwritten code of etiquette.

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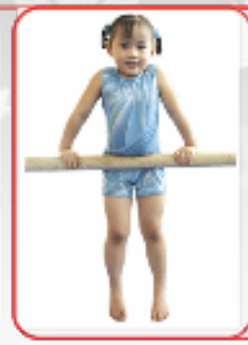
Developing Physical Literacy: Active Start

Need to know



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Overview and can be used as one-page information sheets

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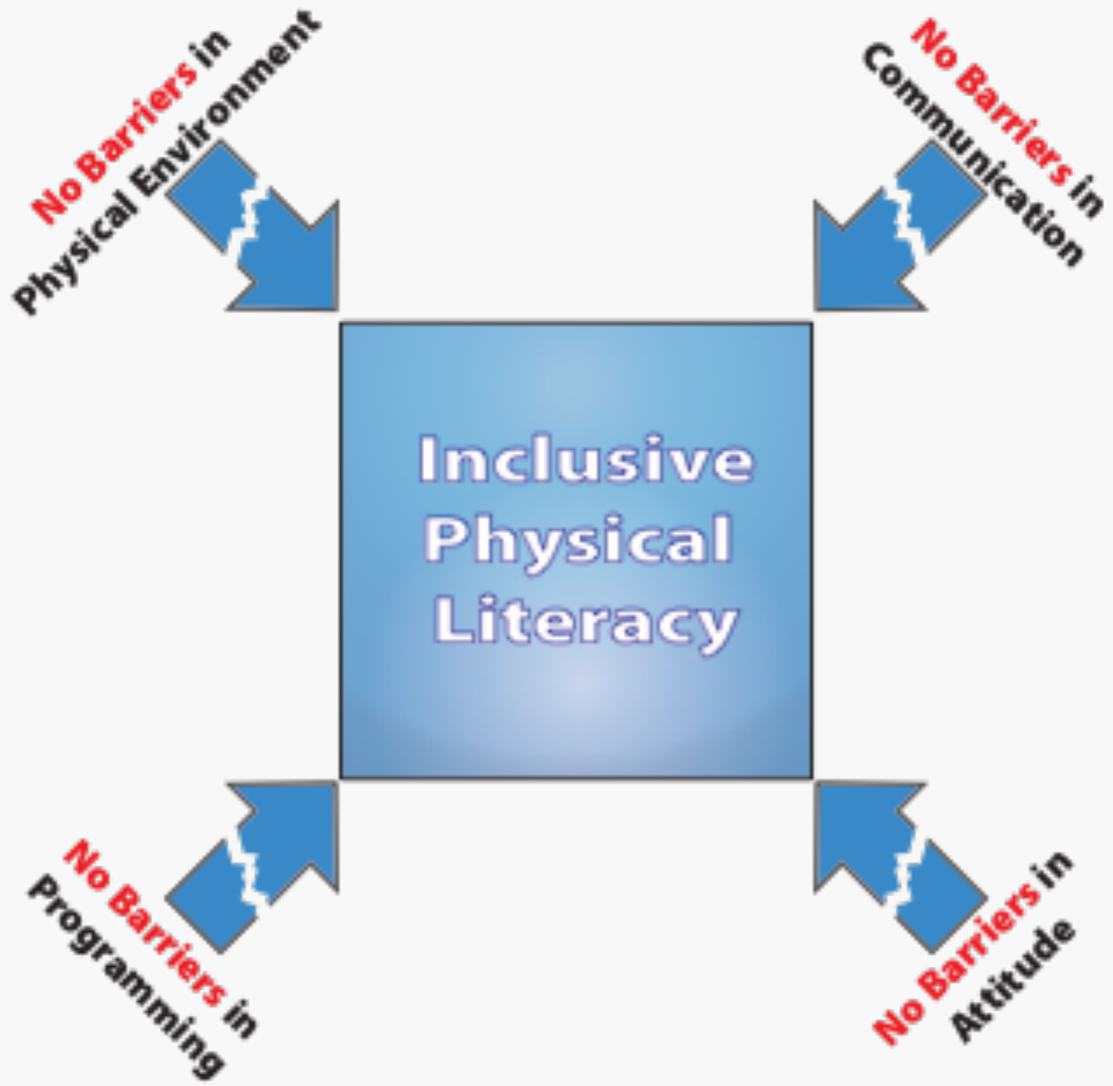
Other issues

- Inclusive Physical Literacy (persons with impairment + other populations)



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Persons with a disability

Physical Literacy: Persons with an Impairment

Need to know

Reminders - Physical Literacy is as important for persons with a disability as it is for everyone else

- Children born with congenital disabilities need opportunities to develop age-appropriate basic human movements, fundamental movement skills and foundation sport skills
- Individuals who acquire disabilities through injury or illness need to re-develop previously learned skills using appropriate prostheses or mobility aids
- Activities for persons with a disability should be modified as little as possible

Any age: congenital or acquired disability

What

Some children are born with disabilities (congenital disabilities) and other individuals acquire disabilities through injury or illness.

There are four main types of disability:

Mobility impairment: Individuals who use a wheelchair, crutches, or artificial limbs (prostheses)

Sensory impairment: Individuals who are blind or deaf, or who have reduced vision pr poor hearing.

Coordination impairment: Individuals with cerebral palsey or developmental coordination disorders.

Intellectual impairment: Individuals with a reduced capacity to think and plan.

Congenital impairment:

Children born with an impairment need to develop the same range of physical literacy skills as others. Skills should be modified as little as possible to accommodate the child's impairment. To the greatest extent possible children with impairments should learn, practice and use their emerging skills alongside non-disabled peers, rather than in a segregated environment. This facilitates learning and solcial integration

Acquired impairment

Following injury or illness that causes an impairment the individual needs to go through the stages of learning to be active again using their changed body (Active Start), re-learn fundamental movement skills (FUNdamentals) and learn or re-learn a range of foundation sport and recreation skills (Learn to Train).

Regardless of the impairment the objective is to ensure individuals learn as broad a range of skills as their non-disabled peers in order to take part in a wide range of sport and recreation activities

Where

For children with congenital disabilities they should be learning physical literacy skills in the same kinds of programs as their non-disabled peers: starting with the home, and progressing to pre-school, school, community recreation programs and sport organizations. For both children with congenital impairment and older individuals who acquire an impairment, there is an important role for hospitals and rehabilitation facilities in developing8

To makes this possible it is CRITICAL that facilities be accessible to those with an impairment and that education, sport and recreation front-line staff make individuals with a disability feel welcomed when they join an activity.

Facility accessibility and a welcoming environment are critical to success

Who

individuals with both congenital and acquired impairments require support from the same oeople as their non-disabled peers: Including parents, care-givers, teachers, coaches and community recreation staff.

In addition, individuals with an impairment often work closely with rehabilitation specialists including occupational therapists and physiotherapists who need to support the learning of a wide range of daily living and recreationak skills. Being physically active throughout life needs to be "normalized" and become the unquestioned expectation.

Family and friends of persons with a disability need to support efforts to engage in sport and recreational activities. One critical form of assistance is helping with transporation to and from activities, since transportation difficulties are one of the major barriers to participation for those with impairments.

How

Physical literacy for persons with a disability is developed in exactly the same way as for non-disabled participants. To improve opportunities for developing skills of persons with a disability it is useful to think about:

Using respectful language: Using respectful language makes a person with a disability feel welcomed and valued, and inapprorpate language can drive them away. WHen working with a person with a disability, talk directly to the - not to any able bodied person who is accompanying them

For suggestions on using Words with Dignity check out:

http://lin.ca/sites/default/files/attachments/words-with-dignity.pdf

Adapting the task: If you are in a wheelchair, you can't run, and so activities and games should be modified to make them possible while wheeling. For those with visual impairment, consider changing "catching" skills to "trapping" skills where the receiver traps a ball rolling along the ground. Be creative!

Adapting equipment: Work with individuals to come up with ways to adapt equipment or materials. No one has though tmore about adapting equipment than the person with a disability - so use their knowledge and ingenuity. While adapted equipment for high performance sport can be very specialized, adaptations for devleoping physical literacy can be both simple and home-made.

Safety: Talk to the person with a disability (or their parent/caregiver) about any restrictions in actvities they may have.

Don't assume: Don't make assumptions about what a person with a disability can or can't do. If in doubt ASK.

Useful links:

http://lin.ca/collections/active-living-resources-canadians-disability

http://canadiansportforlife.ca/athletes-disabilitie

Needs to be updated to include invisible disabilities.

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Physical Literacy in the work place

Physical Literacy in the Workplace

Need to know

Reminders - Occupational Physical Literacy is as important in many work environments, from fire fighters to circus performers

- Occupational physical literacy pays dividends in job performance, injury prevention and rehabilitation
- Focus is on efficiency of movement, and good mechanics to reduce acute and chronic injury
- Occupational physical literacy is best built on a solid foundation of "all-round" physical literacy
- Occupational physical literacy evolves with age, as physical capacity changes

Predominantly adult

What

Individuals in different types of occupation have different injury profiles. These range from lower back injury in nurses who must move immobile patients, to overuse injuries in sport professionals, and injuries caused by poor posture in sedentary office workers.

Occupational physical literacy is built around:

Good poster: Correct alignment of body parts to ensure that forces are supported by well aligned bones and joints - rather than muscles.

Efficient movement: Use of larger, rather than smaller muscle groups to provide force for lifting, lowering pushing and pulling.

Core strength: Development of core strength to provide a solid foundation for limb movements.

Distribution of load: Preventing all of the work-load from falling on a single muscle or joint.

Fatigue adjustments: Adjusting tasks to reduce the chance of injury as the individual becomes fatigued.

Agility, Balance and Coordination: While these are core physical literacy components, they need to be maintained or enhanced in occupational physical literacy.

Occupation specific tasks: Many occupations have unique movement patterns that workers need to master. These movement patterns need to be optimized for the individual, for the equipment they are using and for the specific demands of the environment in which the work is performed.

Occupational physical literacy builds on existing movement patterns, knowledge and skills, and evolves to adapt to the changes occupational demands, changes in equipment and the ever changing physical capacity of the body as workers age.

Where

Occupational physical literacy is developed through a combination of on-the-job training of new appointees, and self-directed fitness and life-long physical literacy development outlined in Active for Life.

Occupational physical literacy - by definition - happens in the workplace. The workplace may be fixed (an office or factory) or may be beyond the control of the worker (military, firefighters or police for example)

There is an important role for workplace health and safety in the design of both the physical workspace and occupational processes in which the workers are engaged.

Who

In occupational physical literacy the primary responsibility lies with the individual - supported by work-place experts and those with expertise in ergonomics kinesiology and training.

In high risk environments a team approach is optimal, including:

- Employee
- Workplace health and safety officials
- Expertise in ergonomics
- Equipment design and construction experts (if equipment used in employment tasks)
- Occupational therapist
- Rehabilitation specialist
- Strength and conditioning personnel
- Employment psychologist

How

Occupational physical literacy is developed in both occupation specific environments and elsewhere.

Occupation specific

New entrants to an occupation are assessed and their physical capacity to perform occupational tasks is evaluated.

Where deficiencies are identified a training plan is put in place to eliminate or reduce capacity shortfalls.

New entrants are instructed in biomechanically correct execution of required tasks under optimal conditions, and feedback provided until performance reaches an acceptable standard.

The range of conditions under which occupational tasks are practiced is expanded to include (where appropriate) unstable footing, adverse environments (rain and snow) and a range of thermal conditions from hot to cold.

Employees are regularly re-assessed in the performance of occupation related tasks, and as body capacity changes (with age, injury or change in physical capacity) the task execution is changed to match, or training and capacity building interventions are put in place.

General Physical Literacy

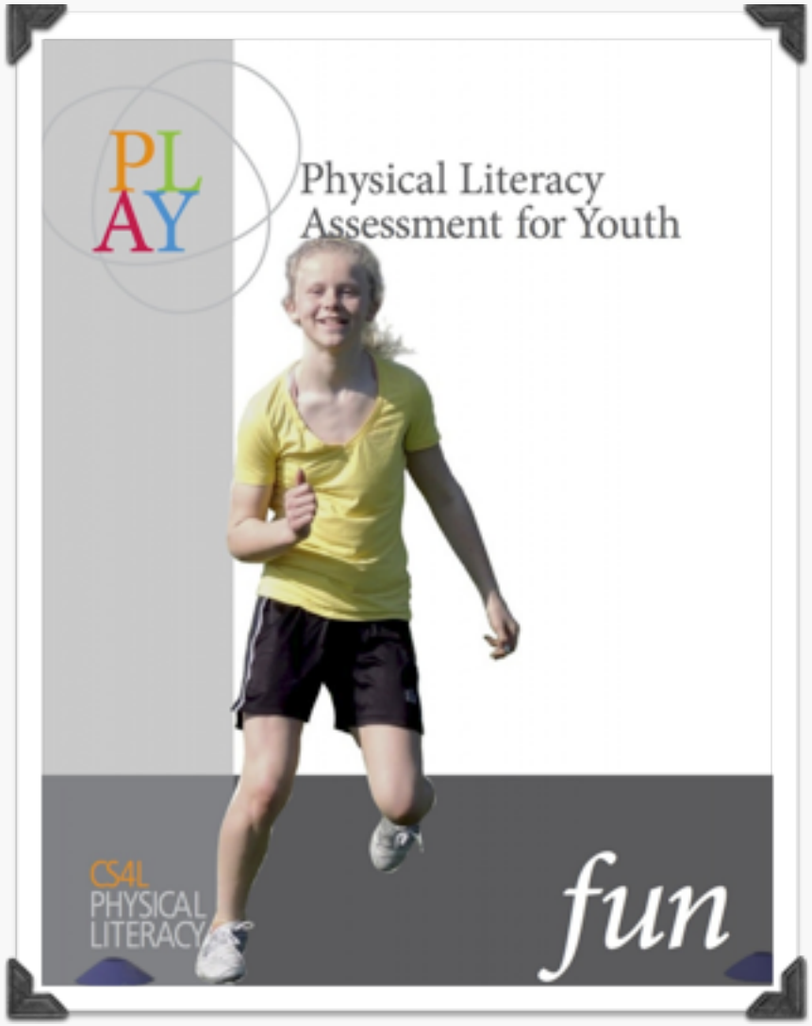
Regardless of occupational specific physical literacy activities, workers need to engage in the process of life-long physical literacy development.

This process of general physical literacy throughout adult life is outlined in Active for Life.

Sport for Life

Measuring Physical Literacy?

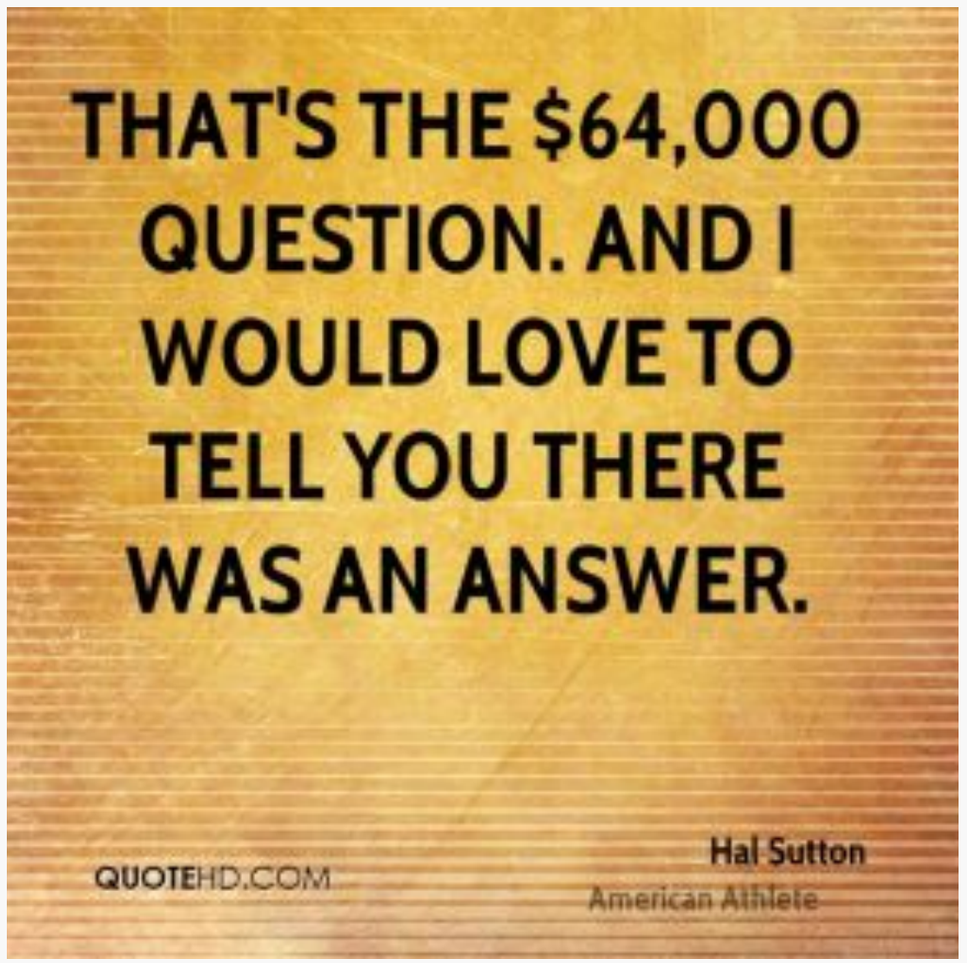
- CAN it be measured?
- How could you really measure it?
- What tools are available?
- PLAY
- CAPL
- PHE-Canada Passport



Sport for Life

So how can we develop PL

That's the $64,000 question - and I would love to tell you that I have the answer



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But there are clues

- We must structure programs where there are opportunities
  - To engage in developmentally appropriate activities
  - To try... and fail - without fear of judgement
  - To be helped if you fall behind
  - To be included

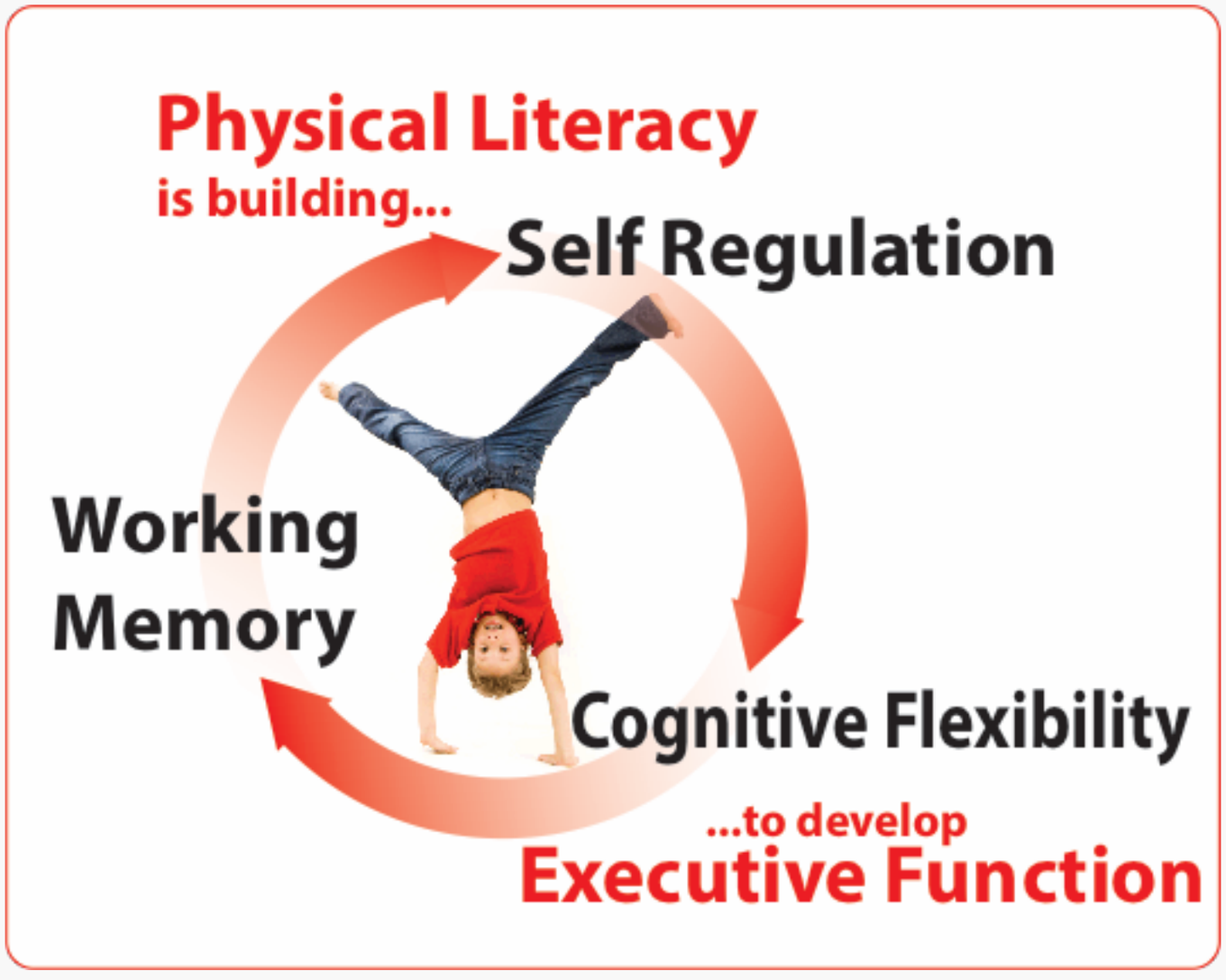
Sport for Life

More clues

- Build more “on ramps” to activities and get rid of as many “off ramps” as possible:
  - For all levels of interest
  - For all ages
  - For all cultures

Sport for Life

Early on:



Sport for Life

Then…

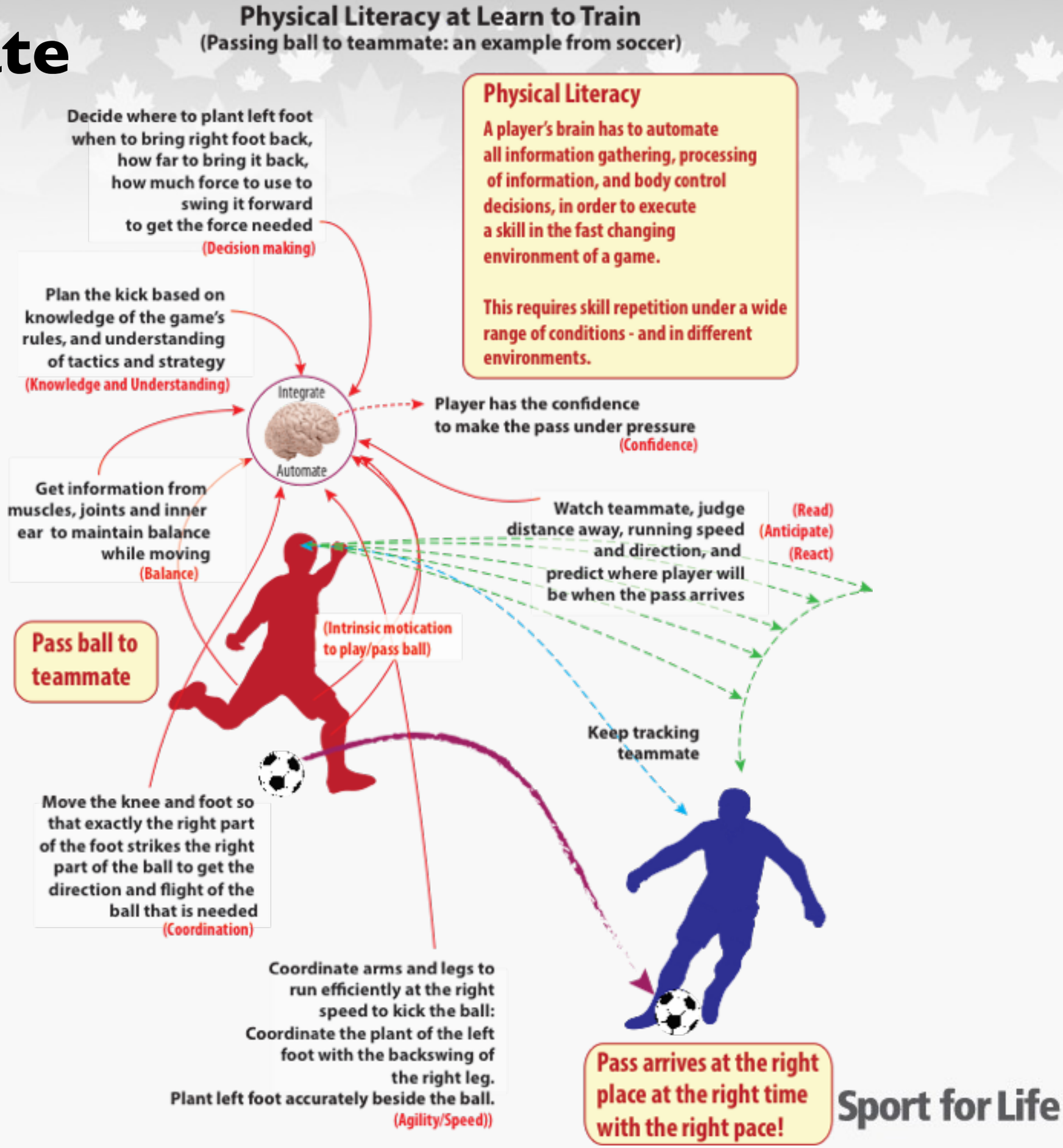
Sport for Life


On Land
In air
Physical Literacy
is the...
ability
desire
motivation
valuing
knowledge
confidence
...to be
active for life
On ice/snow
In water


Locomotor


Body Control
Physical Literacy
is the...
ability
desire
motivation
valuing
knowledge
confidence
...to be
active for life
Object control
A B Cs

Then integrate



And on to adulthood...

- You **CAN** teach old dogs new tricks
- In fact, for healthy aging, you **MUST** teach old dogs new tricks.
- There are **four** things that we know are important for healthy aging.

Sport for Life

1. PL and activity critical

- Physical health - CV/cancer/
- Mental Health - Including a MAJOR reduction in dementia
- Social engagement

1. Physical Literacy (cont.)

- Change in emphasis as we age:
  - Early: Aerobic activity and weight bearing (bones)
  - Middle: Aerobic fitness and weight control
  - Older: Shift to strength exercises, balance and flexibility.
  - Very old: Strength and balance - for independence

Sport for Life

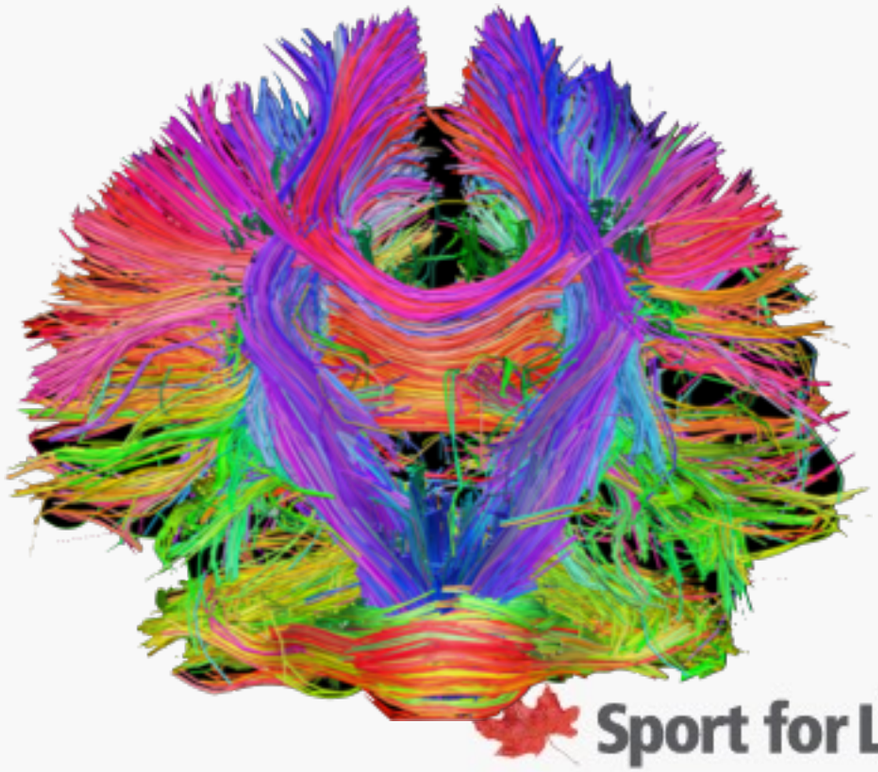
2. Production of brain cells

- Physical activity is a stimulus for brain cell development.
- But not for integrating those new brain cells into existing neural networks
  - Just having the extra brain cells is not enough.

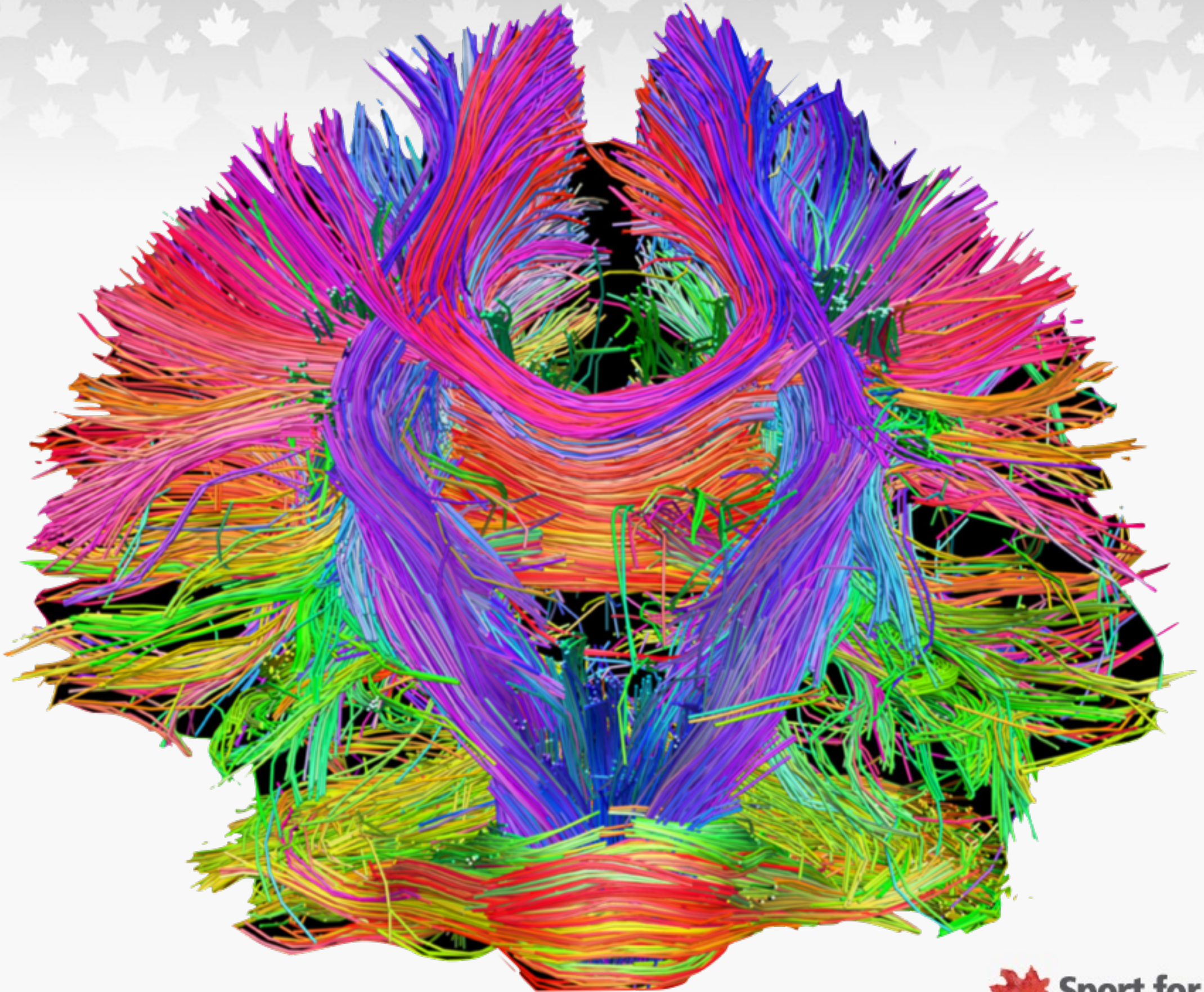
Sport for Life

3. Cognitive activity - thinking!

- Why learning new and different skills - developing physical literacy - is critical.
  - Physical Literacy integrates newly formed brain cells into existing brain networks
  - Increases the number of interconnections with other brain cells



Sport for Life



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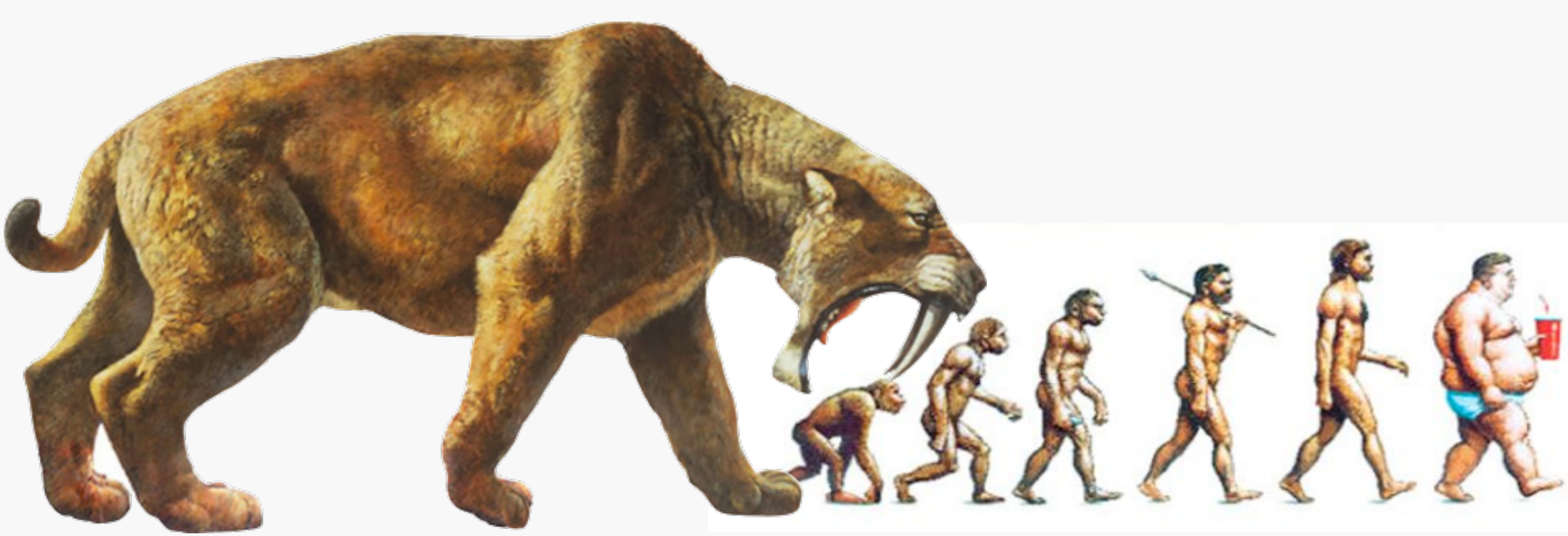
4. Periodic fasting

- Really new information.



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4. Periodic fasting

- Being hungry - historically - was a major stimulus for creativity!
- Where/how were you going to get your next meal
- This stimulates brain interconnections

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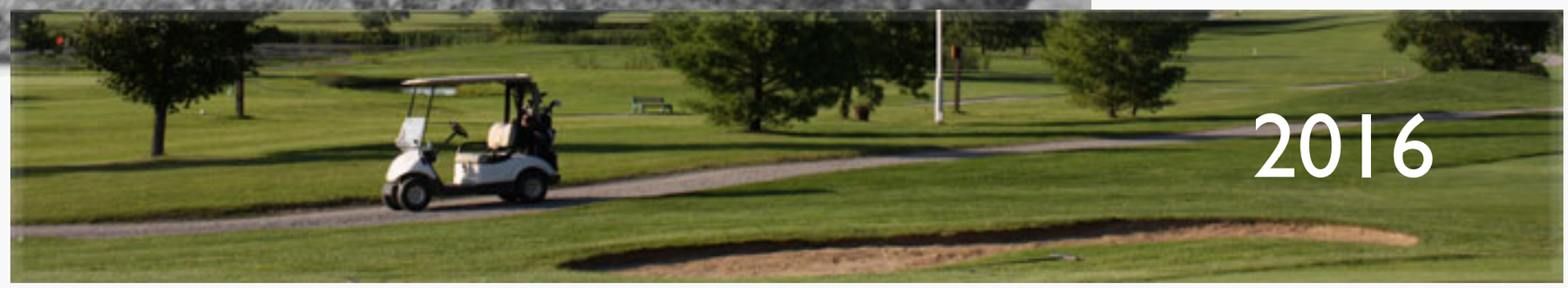
4. Periodic fasting

- Two days per week with adequate fluid intake and around 500 Calories.

Sport for Life

My PL Journey



I'm now old enough to learn to play golf

Sport for Life

Thank you

Sport for Life