Presenter:
Gayle Karen Robertson
PPT # 1 of 4

LET THE CHILDREN PLAY

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What are your memories of playing as a child?

Some of us will remember hide and seek, house, tag, and red rover red rover.

Others may recall arguing about rules in kickball or stick ball or taking turns at jump rope, or creating imaginary worlds with our dolls, building forts, putting on plays, or dressing-up.

From long summer days to a few precious after-school hours, kid-organized play may have filled much of your free time.

But what about your children?

Are their opportunities for play the same as yours were? Most likely not.

Play time is in short supply for children these days and the lifelong consequences for developing children can be more serious than many people realize.

Seriously!
The Future Depends On Play

http://www.youtube.com/watch?v=dMUcGhz1lg




What are your thoughts about what you just saw?

Tell the others at your table.

This session will provide information about the research and best practice around the issue of children's play.

There will be opportunities for participants to discuss what they have heard, share their own best practice and learn some new ways to help children grow and develop in the way they do best – through play!




Shape of the Day

Current Research on Play

What is Play and Why is it Important?

Types and Stages of Play

The Role of the Adult in Play

Shape of the Day

Social-emotional Development and Play

Literacy and Play

Children and Nature

The importance of play in children's healthy development and learning has been documented beyond question.

Research directly links play to children's ability to master academic content as well as to control their own behaviour.

And yet recent studies report that children have less and less time to engage in playful learning.

"Since about 1955 ... children's free play has been continually declining, at least partly because adults have exerted ever-increasing control over children's activities."

Peter Gray, Ph.D., Professor of Psychology (emeritus) at Boston College, Oct 2011

Over the past 30 years children have lost 12 hours of free time a week including 9 hours of free unstructured play and outdoor activities.

Since 1989, 30,000 schools in the United States have eliminated recess to make time for more academic study.

Elkind, (2008) *Greater Good*

Changes within the family structure may have contributed towards a decline in free play as children are increasingly kept indoors or in structured, organized activities.

Children's time could be 'over-scheduled'

A shift towards more structured forms of play alongside other family and school obligations may have lead to the 'over-scheduling' of children's lives.

While some children are excelling academically from this, over-scheduling of children's time has also been linked to stress and depression, amongst other mental health issue

Outdoor, unstructured, and loosely supervised play is missing in children's lives, resulting in "*an explosion in children's clinically diagnosable mental health problems*," say experts.

Children spend less time playing outdoors than their mothers did when they were young—even in rural areas.

70 % of today's mothers in a recent study said they recalled playing outdoors every day as children, but only 31 percent of them said their kids play outdoors daily.




Children who are not engaged in play and physical activity outside of school hours spend time engaged in sedentary activities, such as viewing hours of television, playing video games, or listening to music.

Jago 2007, AAP 2010

This time is often spent in isolation without social interaction and without adult supervision.

In sharp contrast to the benefits of active, creative play, there is substantial evidence that excessive screen time has adverse effects.

Jago 2007, AAP 2010




Only 36% of children meet doctors' recommendations for physical activity

(Robert Wood Johnson Foundation Report ***Recess Rules***, 2007).




Canadian children receive an "F" in physical activity.

The organization **Active Healthy Kids** analyzes current data and literature related to physical activity and creates a report card.

Canadian children were given an "F" this year as 87% of children did not meet Canada's physical activity guidelines of 60 minutes of physical activity a day.

Active Healthy Kids Canada 2011 Report Card

Children ages 8-17 now spend an average of eight hours a day in media-based activities, up dramatically from five years ago.

(Kaiser Family Foundation, 2010).

In 2006, 87 per cent of children have a home computer, 62 per cent have a digital television and 82 per cent own a games console.

There are mixed opinions about the health and social implications of modern technology.

Some evidence suggests that the use of some technologies can enhance a range of skills, while other sources argue excessive use of technology leads to inactive lifestyles.

Josie Gleave, Play England, June 2009

A combination of easy access to endless entertainment games and expensive manufactured toys may have left children with very little time for play that involves creativity and imagination.

Canadian children, between 2 and 11, watched 15.5 hours of television per week in fall 2000.

(Source: Statistics Canada, Oct. 2001)

Canadian children receive an "F" in screen-based sedentary behaviour.

For the 3rd year in a row children and youth are spending an average of 6 hours a day on screen related activity outside of school hours AND 7 hours a day on weekends.

201 - Number of Minutes preschoolers in low income families watch TV each day

183 - Number of Minutes preschoolers in high income families watch TV each day

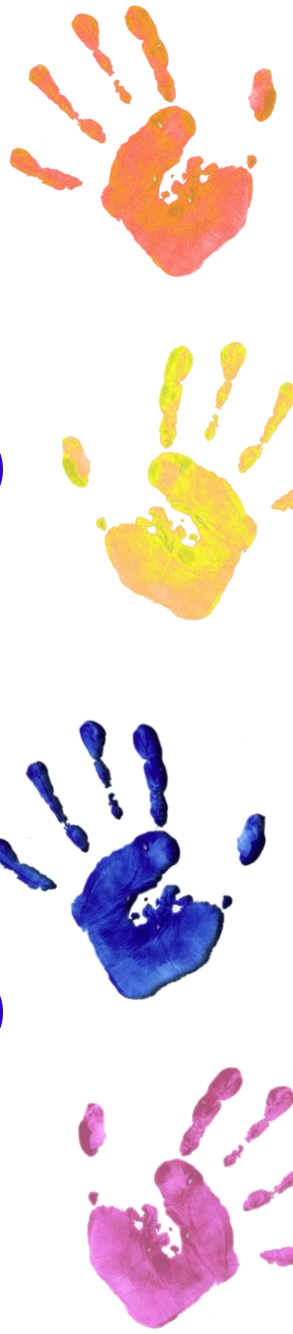
Burdette, H. L. & Whitaker, R. C. (2005, September 1).

0 - Number of Minutes of screen time recommended for children 2 and under.

(American Academy of Paediatricians 2012)

60 - Number of Minutes of screen time recommended for children from 2 to 5.

(Canadian Pediatric Society 2012)



The latest Canadian data indicates that children who watch more than 2 hours of screen time (TV, computer, video games) per day have double the incidence of overweight and obesity when compared to children who watch less than 1 hour per day.

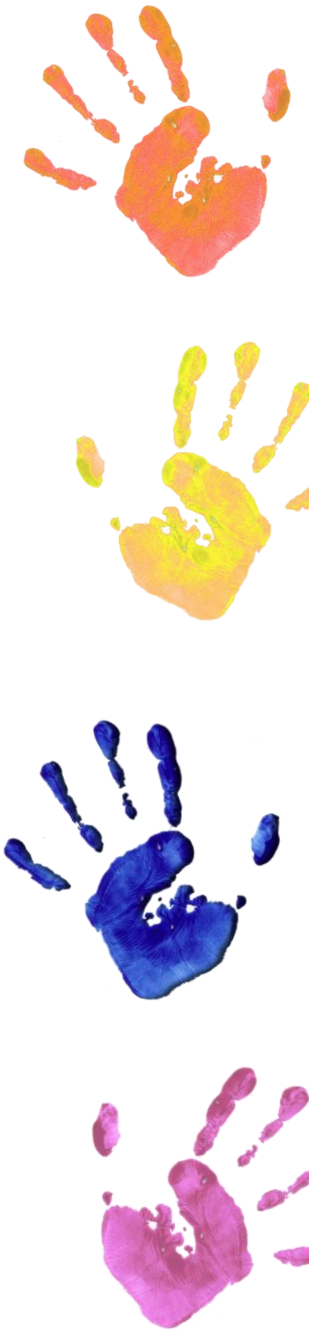
Screen time takes the place of essential physical activity.

In addition children eat while they watch and often will eat what they watch, that is, what they see advertised. Most food and beverage ads on children's programs are for high calorie, low nutrition content foods.

TV viewing is a sedentary activity, and has been proven to be a significant factor in childhood obesity.

According to the Heart and Stroke Foundation of Canada almost one in four Canadian children, between 7 and 12, is obese.

Time spent in front of the TV is often at the expense of more active pastimes.



One researcher suggests that a generation of children is not only being raised indoors, but is being confined to even smaller spaces like car-safety seats, high chairs and even baby seats for watching TV.

Jane Clark, University of Maryland professor of Kinesiology

Infants (aged less than 1 year) should be physically active several times daily – particularly through interactive floor-based play.

Canadian Society for Exercise Physiology 2012

http://www.csep.ca/english/view.asp?x=804

Being active as an infant means:

- Tummy time
- Reaching for or grasping balls or other toys
- Playing or rolling on the floor
- Crawling around the home




- Toddlers (aged 1–2 years) and pre-schoolers (aged 3–4 years) should have at least 180 minutes of physical activity spread throughout the day, including:
  - A variety of activities in different environments;
  - Activities that develop movement skills;
  - Progression toward at least 60 minutes of energetic play by 5 years of age.




Being active as a toddler or preschooler means:

- Any activity that gets kids moving
- Climbing stairs, moving around the home
- Playing outside and exploring their environment
- Crawling, brisk walking, running, dancing

The older children get, the more energetic play they need, such as hopping, jumping, skipping and bike riding.




All activity counts. Try these tips to get young kids moving:

- Create safe spaces for play.
- Play music and learn action songs together.
- Dress for the weather and explore the outdoors.
- Make time for play with other kids.
- Get where you're going by walking or biking




For maximum health benefits children aged 5 to 11 should at least 60 minutes a day of moderate to vigorous physical activity.

Note: moderate activity will cause them to sweat a little. Vigorous activity will cause them to be 'out-of-breath'.

Parents and caregivers can help to plan their child's daily activity. Kids can:

- Play tag – or freeze-tag!
- Go to the playground after school.
- Walk, bike, rollerblade or skateboard to school.
- Play an active game at recess.
- Go sledding in the park on the weekend.
- Go "puddle hopping" on a rainy day




Whether it's time spent playing video games and with "over-elaborate commercialized toys" that inhibit rather than stimulate creative play -- or whether it's parents' anxiety about "stranger danger" -- children are getting few opportunities to engage in creative, interactive play.

Too many of the toys have sounds, lights, and all sorts of bells and whistles.

Children may be entertained, but passively so. Much like the entertainment of television, little if any effort or interaction is needed on their part.

Children come to expect that play just happens, rather than something they must create.

Many toys are spin-offs of television programs.

The problem with this is that when a child plays with a toy that already has a character description, the play tends to be limited; the child doesn't invent the figure's personality or actions because those characteristics are already determined.

Diane Levin, Wheelock College, Boston




"The best toy is 90 percent child and 10 percent toy,

"The perfect toy's meaning and its use changes at the child's behest."

Susan Linn, Harvard, co-founder of campaign for commercial-Free Childhood

Lack of play is hurting children's mental health, experts warn an international group of child therapists including several prominent Canadians.

2007 Vancouver Sun




The demise of play in early childhood programs has been virtually formalized in the largest US early-intervention programs serving low income children.

Currently, many schoolchildren are given less free time and fewer physical outlets at school;

In the US many school districts responded to the No Child Left Behind Act of 2001 by reducing time committed to recess, the creative arts, and even physical education in an effort to focus on reading and mathematics.

This change may have implications on children's ability to store new information, because children's cognitive capacity is enhanced by a clear-cut and significant change in activity.

Similar events are happening in England. Children in preschool and early school programs are subject to continuous assessment on 13 learning scales which do not take into account children's psychosocial well-being.

(House of Commons Report UK 2007)

There have been increasing numbers of kindergarten children held back in a number of jurisdictions as an intervention strategy despite lack of research evidence.

Academically regimented classrooms with repetitive boring tasks that exceed the attention spans of 3 to 5 year olds frequently cause withdrawal, rebellion and emotional meltdowns.

Indiana University early education Professor Mary Benson McMullen sees two kinds of play in schools:

- the kind of directed play teachers use to teach specific skills and
- the kind of unscripted free play that children choose.

Both, she says, are very important to the development of young children.

ASCD Smartbrief oct 19, 2010




"People, from the very beginning, need to learn how to get along together," she said. "That is one of the fundamentals of kindergarten. And you do that by sharing toys and by sharing experiences and making up rules together that you can all live with."

ASCD Smartbrief oct 19, 2010

Yet in recent years, as schools are pressured to ace standardized tests, recess and playtime have been squeezed out of daily school schedules for more "academic" pursuits.

To take away playtime from a 5-year-old, McMullen said, schools might as well take away lunch. It's that essential to learning.

Parents' beliefs about preschool children's needs seem to be increasingly conflicted.

Many modern parents do not seem to appreciate the value of free play and gently guided play for children's learning.

(Hirsch-Pasek,Golinkoff, Berk,Singer, 2009)




Parent's buying patterns reflect the belief that workbooks and electronic toys can teach children their ABCs.

Recent research findings indicate that media products have no proven educational value for infants, toddlers and preschoolers.

(Kaiser Foundation Report, 2005)



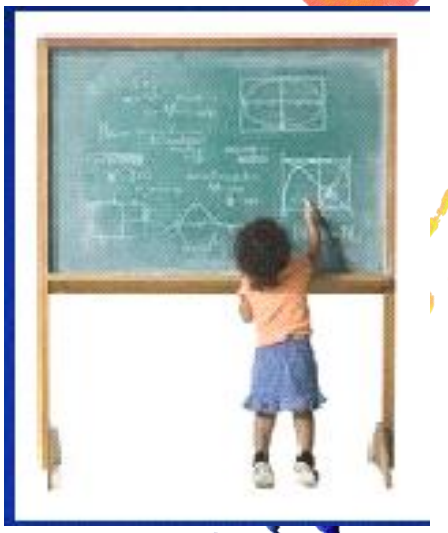

Think about this …

With electronic books 41% of the parent's talk is about managing the child's book behaviour and only 59% is about the book.

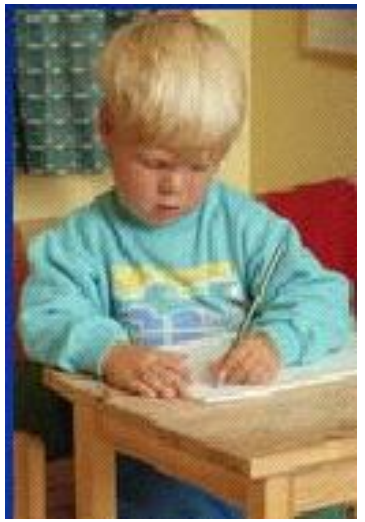
With traditional books 92% of the parent's talk is about the story.

(Kaiser Foundation Report, 2005)

We are wearing out our youngest children by –



engaging in "drill-and-kill" activities rather than playful and meaningful learning, *even at the youngest ages!*



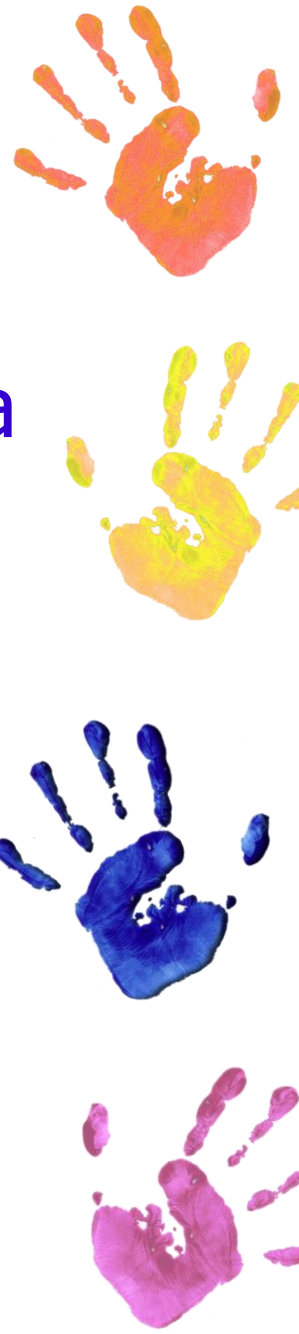
and testing for "factoids" in our assessments rather than real learning.

ARE CHILDREN CHANGING?

The Gesell Institute for Human Development shared the results of a 3 year study at a conference in New Haven, Conn. on October 15, 2010.

The national study, undertaken to determine how child development in 2010 relates to Gesell's historic observations, used key assessment items identical to those created by Gesell in 1925 and used more recently in 1979 by Ames and Ilg.

The Gesell Institute's national study on children's development drew on a nationwide sample of about 1,300 3 to 6-year-olds from 53 schools in 23 states, from a variety of demographic and economic backgrounds.



The new data allowed Gesell researchers to ask some provocative questions:

- **Have kids gotten smarter?**
- **Can they learn things sooner?**
- **What effect has modern culture had on child development?**




The surprising answers were:

- **no,**
- **no,**
- **and none.**

Despite overtly academic work in preschool & kindergarten, the results revealed **remarkable stability around the ages at which most children reach cognitive milestones** such as being able to count four pennies or draw a circle, square or triangle.

"People think children are smarter and are able to do these things earlier than they used to be able to—and they can't."

What we often see is rote learning without understanding, and early gains that dissipate in 2 or 3 years.

Gesell Institute Executive Director Marcy Guddemi said that according to study results children are developing at the same rate neurologically as they did when Dr. Arnold Gesell did his pioneering work in the 1940s, yet, they're being pushed to do everything sooner.

These developmental milestones relate directly to what can be expected of children in kindergarten.




The results of the fast track approach haven't brought better test scores, Guddemi said.

- Rather, studies show children feel like failures now by pre-K age.

- They are being expelled at four times the rate of children in kindergarten through 12th grade.

- They have not fully developed qualities such as persistence, creativity, cooperation and communication, "that are necessary in the adult job market,"

In a nation "consumed with sooner and faster," young students are being pushed academically at the expense of developing crucial social and problem-solving skills, Guddemi said.

Above all, young children need time—time to manipulate objects and ideas, time to make the information their own."

National Association for the Education of Young Children

Children may not have changed but kindergarten has

- There are no nap times.
- Workbooks on numbers and letters appear in many programs.

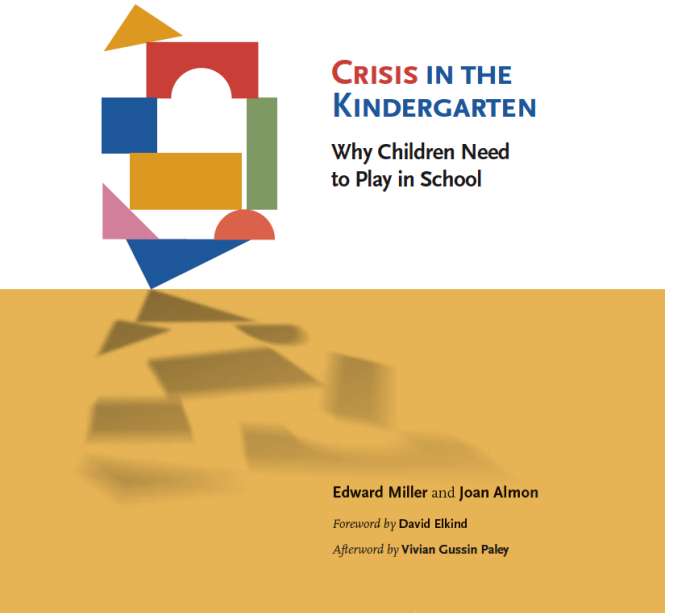
- Some rotate children through prescribed activities with little opportunity for choice.
- Some believe that children who cannot write their names, recite the alphabet, count to 20 are not ready.

- Some have given in to pressures that say there is no time for free play when there is so much to learn.

A recent report, **Crisis in the Kindergarten,** from the *Alliance for Childhood* Survey showed…

Play -- in all its forms, but especially open-ended child-initiated play, is now a minor activity in most kindergartens, if not completely eliminated.

(April 2009)



Direct observation of 142 New York classrooms and 112 Los Angeles classrooms revealed that…

- 25% of the teachers in the Los Angeles sample reported having no time whatsoever in their classrooms for children's free play.

- 61% of the teachers in the New York sample reported having 30 minutes or less of daily choice time. (In Los Angeles, the figure was 81%.)

- 79% of the New York teachers reported spending time every day in testing or test preparation. In Los Angeles, it was 82%.

Why the changes?

- Increased pressures from primary grades

- Increased pressures from administration
- Increased pressures from parents

- Increased information about the brain and how children learn and misguided attempts to use that information

Why the changes?

- Changes in society as to what is considered acceptable behaviour

- More media and technology – screen time for children has increased dramatically – sometimes making us think they know more than they do

Change is inevitable - except from a vending machine." Robert C Gallagher

- But the question we need to ask is whether we are making changes in a way that is consistent with known child development?

- Another is whether we are spending our time (and our children's time) on the right domains of learning?

- Using preschool to enhance school readiness is an excellent idea. **BUT young children learn differently from older children.** Their ways of making sense of the world depend heavily on play, exploration and imagination.

(Gopnik 2009)




- An exclusive focus on top-down training in specific academic skills is developmentally inappropriate and counterproductive.
- And given what we know about the importance of play for children's development, suppressing it can have harmful effects.

But let's not put the blame on kindergarten!

What is happening in kindergarten is a reflection of what is happening in society as a whole.

Children's opportunities to learn through play are disappearing everywhere **even in preschools and homes!**

WHY WORRY ABOUT WHAT HAPPENS IN KINDERGARTEN?

Researchers found that kindergarten student behavior was a significant predictor of 1st grade achievement, even after controlling for prior achievement.

Pellegrini, A. D., & Bohn, C. M. (2005, January/February). The role of recess in children's cognitive performance and school adjustment. *Educational Researcher*. Retrieved December 25, 2007, from http://www.aera.net/publications

Is that important?

Should any of that be a concern to parents and teachers of young children?

YES!

Play is so important to optimal child development that it has been recognized by the United Nations High Commission for Human Rights as a right of every child.

Article 31 of the UN Convention on the Rights of the Child 1989

(*An international treaty that sets out universally accepted rights for children.)*

. . . every child has the right to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts.

This birthright is challenged by forces including child labour and exploitation practices, war and neighbourhood violence, and the limited resources available to children living in poverty.

Even those children who are fortunate enough to have abundant available resources and who live in relative peace may not be receiving the full benefits of play.

Many of these children are being raised in an increasingly hurried and pressured style that may limit the protective benefits they would gain from child-driven play.

Because every child deserves the opportunity to develop to their unique potential, child advocates must consider all factors that interfere with optimal development and press for circumstances that allow each child to fully reap the advantages associated with play.

There is evidence that play is linked to the development of strong parent-child relationships.

(Ginsburg, K. R. (2007)

The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds

Play is essential to developing social and emotional ties. First, play helps to build bonds within the family.

Children's healthy development is mediated by appropriate nurturing relationships with consistent caregivers.

Neurons to Neighbourhoods, 2000

Play allows for a different quality of interaction between parent and child, one that allows parents to “listen” in a very different, but productive, way.

When parents observe their children playing or join them in child-driven play, they can view the world through their child’s eyes and, therefore, may learn to communicate or offer guidance more effectively.

Key health benefits that play provides to children include:

- the development of new competencies and decision-making skills;

- resiliency;
- the ability to share with others;

- the ability to resolve conflicts.

(Ginsburg, K. R. (2007)

A big part of childhood is being able to spend time playing with peers.

This is very important because "it gives children the opportunity to learn about themselves, to create and to innovate, and to learn how to make independent judgments. They also learn mutual respect and how to work with others."

David Elkind 2007

"Play gives children a sense of enjoyment that they can call upon later in life. When they're adults and feeling down or stressed, they can remember those happy, carefree times when they were children."

"These childhood experiences give us a storehouse of memories that we can fall back on when we're adults. But when we overwork and overpressure our kids, they don't develop that storehouse of happy memories."

David Elkind 2007

Vivian Paley believes that the most vital form of play for young children involves fantasy and role-playing with their peers.

"They're inventing abstract thinking, before the world tells them what to think." "It gets them thinking, 'I am intended to have my own ideas.'"

Vivian Paley 2004




Vivian Paley worries that preschools, in the drive to prepare students for the academic challenges ahead, are reducing the opportunity for group fantasy play — and thus reducing children's chances to learn on their own about fairness, kindness and other social interactions.

Free, imaginative play is crucial for normal social, emotional and cognitive development. It makes us better adjusted, smarter and less stressed.

(Melinda Wenner, Scientific American, Jan 28, 2009)

Childhood play is crucial for social, emotional and cognitive -development.

Imaginative and rambunctious “free play,” as opposed to games or structured activities, is the most essential type.

Kids and animals that do not play when they are young may grow into anxious, socially maladjusted adults.

Melinda Wenner | January 28, 2009 | Scientific American

"Unless we engage in symbolic, dramatic play, we don't develop a good sense of empathy with others. Play is crucial to understanding what it's like to be some other kind of person."

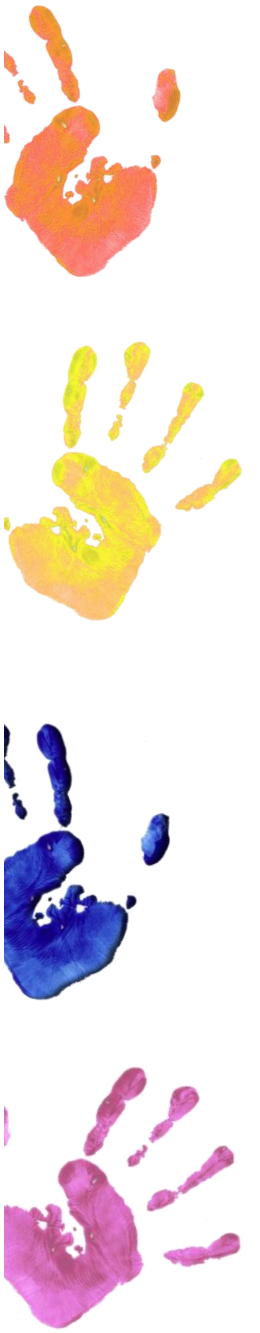
Henderikus Stam, psychology professor at the University of Calgary.

Stuart Brown has interviewed 6,000 people about their childhoods, and his data suggest that a lack of opportunities for unstructured, imaginative play can keep children from growing into happy, well-adjusted adults.

"Free play," as scientists call it, is critical for becoming socially adept, coping with stress and building cognitive skills such as problem solving.

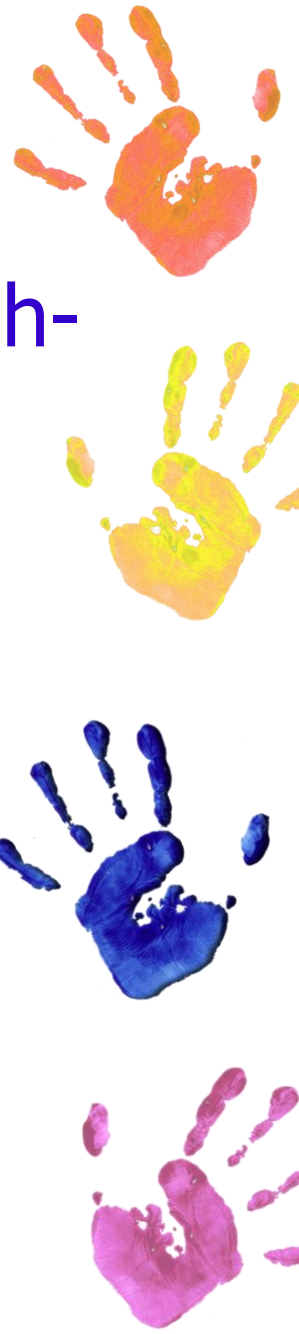
Psychologist Edward Fisher analyzed 46 published studies of the cognitive benefits of play (Fisher 1999).

He found that "**sociodramatic pla**y" —what happens when kids pretend together—"results in improved performances in both cognitive-linguistic and social affective domains."



Both free play and playful learning should command a central role in high-quality education for preschoolers.

Children taught in a more playful manner almost always achieve more than children who are subjected to more direct teaching methods.



No recess? Does it matter?

- Brain research says that we need a break from whatever we are doing to allow the brain to rest and refresh

- Recess is one of the few times where children can interact freely with peers.

- Physical activity is necessary for healthy development.

School-aged kids (6-11 years)

Studies show that even one to two hours of daily television viewing by school-aged children has a significant harmful effect on academic performance, especially reading.

(Canadian Paediatric Society, 1999)

Preschoolers (2-5 years)

Children in this age group should spend most of their day playing and socializing, not watching TV. The Canadian Paediatric Society suggests no more than one hour of television per day for preschoolers.

The American Academy of Pediatrics recommends no television for children under age two, saying that parents should focus on interacting with their children instead.

Preschoolers (2-5 years)

Because preschoolers are more prone to exhibiting aggressive behaviour after watching shows containing violence, parents should restrict their exposure to violent programming, especially cartoons.

Avoid buying action toys based on violent programs.

A study of British children, aged 1-6 years, measured kids' capacity for symbolic play.

Researchers found that kids who scored higher on a test of symbolic play had better language skills—both receptive (what a child understands) and expressive (the words she speaks).

(Lewis et al 2000



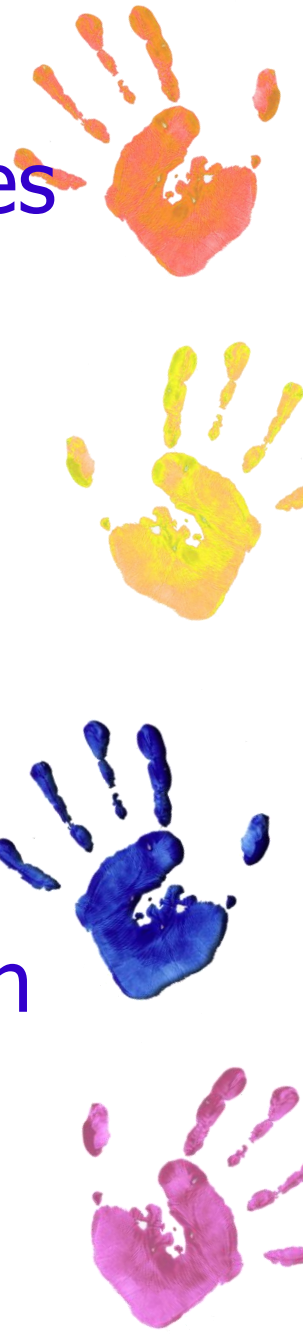

A longitudinal study measured the complexity of children's block play at age 4 and then tracked their academic performance through high school (Wolfgang, Stannard, & Jones, 2001).

Researchers found that the complexity of block play predicted kids' mathematics achievements in high school. Those who had used blocks in more sophisticated ways as preschoolers had better math grades and took more math courses (including honors' courses) as teenagers.

In one experiment, researchers presented preschoolers with two types of play materials:

- convergent play materials such as puzzle pieces).
- divergent play materials such as blocks.

Kids were given time to play and then were tested on their ability to solve problems.



The results?

Kids given divergent play materials performed better on divergent problems. They also showed more creativity in their attempts to solve the problems.

(Pepler and Ross 1981).




Research into animal behavior confirms play's benefits and establishes its evolutionary importance: ultimately, play may provide animals (including humans) with skills that will help them survive and reproduce.

There is a growing body of research on how spending time outdoors benefits children's development beyond the more obvious physical benefits.

This research shows that children are more imaginative, creative, and cooperative when they have opportunities to play outdoors

(Burdette & Whitaker 2005).

And they experience less stress and are more able to focus their attention when they have opportunities to get outside and connect with the natural world.

Although there still is a need for more research there is enough evidence to show that spending time outdoors every day in natural environments has a positive impact on development (Kellert 2005).




A word or two about neuroscience and what it tells us about the brain and play.

The 'building blocks' for brain development are created before birth. 60% of human genes are dedicated to brain development and the brain is only about 25% completed at birth

Since 75% of brain development occurs after birth, experiences in the early years profoundly affect the way individual brains are structured and the way they perform.

Play contributes to healthy brain development.

Children engage and interact with the world around them through play from a very early age.

Even in the academic environment, play helps children adjust to the school setting, thereby fostering school engagement, and enhances children's learning readiness, learning behaviors, and problem-solving.

Neurons to Neighbourhoods 2007 skills

The Brain & Play

Birth to 1

Infant play reflects patterns of brain development. Much early play reflects development of the sensorimotor system – observing patterns, colours, exploring texture, sounds, grasping, objects, repeating actions (practice play)

Frontal lobe activity leads to more social play – turn taking games like peek-a-boo, one word naming of objects and so on.

The Brain & Play Ages 2 – 3

By age 2 examples of pretend play appear, indicating symbolic thought;

Beginnings of symbolic play - Children begin to transform actions and objects in play – "feeding dolls", "driving trucks", etc.

Children continue to explore the properties of materials with mouths as well as hands and other body parts.

Children play with language in rhymes, songs, silly sounds.

Children express emotions as well as actions – mad, sad, happy, excited and so on.

The Brain & Play

Ages 3 - 8

Play is at its most elaborate and extensive;

Sociodramatic play – complex theme play with roles, costumes (doctor, princess, superhero)

Construction play on its own or with socio-dramatic play is very prevalent;

Symbolic Play - children are increasingly able to use symbols, explain their play and their actions;

By age 6 games with rules (elastic as they can be) become pervasive.

Emotions and the Brain

Emotions are housed in the middle section of the brain. When incoming information is connected with an emotion it receives a high priority for processing.

Researchers believe that when emotions are present, hormones are released by the brain and these hormones act as a memory fixative. That is why emotions affect our information retention.

(Pam Schiller's "**Start Smart: Building Brain Power in the Early Years**", 1999, Gryphon House)

"Brain research shows that if we enjoy something, positive emotion helps build those neural pathways."

And, it does so "more quickly, more strongly than something that is boring, something that has a negative emotion." Learning through play is how children learn.

McMullan 2011. ASCD Briefing Notes




Exercise and the Brain

Exercise increases the flow of blood and oxygen to the brain.

People who exercise regularly have improved short-term memory and exhibit faster reaction time.

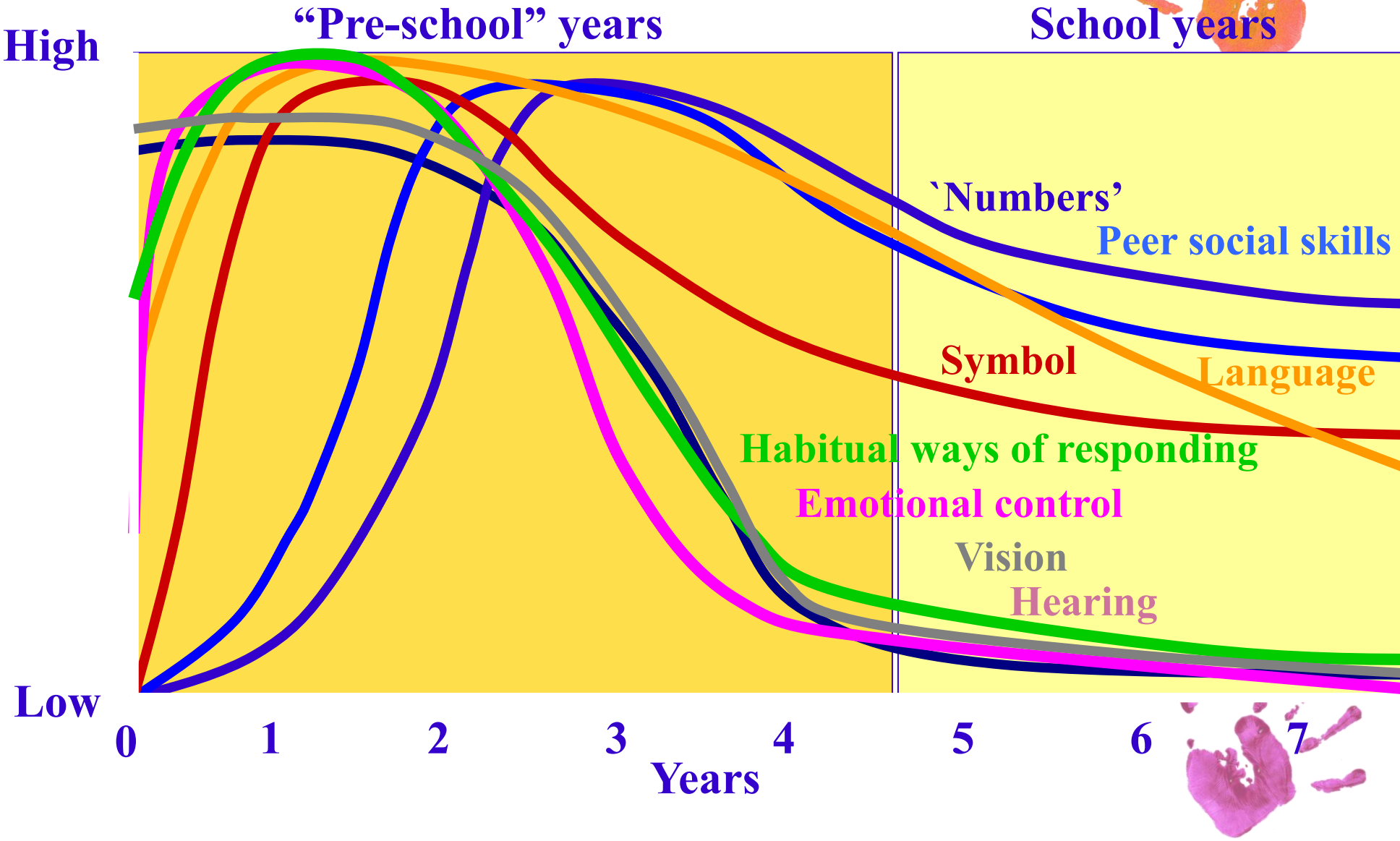
Exercisers demonstrate higher levels of creativity than non-exercisers.

Stimulation of the whole or parts of the body can stimulate the brain. Many researchers have validated the positive effects of tactile stimulation (touching textured materials and surfaces)

Children need to be engaged in active, physical play.

(Pam Schiller's "**Start Smart: Building Brain Power in the Early Years**", 1999, Gryphon House)

`Sensitive periods' in early brain development



Graph developed by **Council for Early Child Development** (ref: Nash, 1997; *Early Years Study*, 1999; Shonkoff, 2000.)

Sensitive periods definitely exist in biological development.

There are more and less receptive periods for learning certain things such as language.

However the windows do not snap shut after those periods. It often means that it may take longer to learn certain things after the most responsive periods and it will cost more but it does not mean it is impossible.

Play opportunities improve memory and stimulate the growth of the cerebral cortex

In 1964, Marion Diamond and her colleagues published an exciting paper about brain growth in rats. The neuroscientists had conducted an experiment, raising some rats in boring, solitary confinement and others in exciting, toy-filled colonies.

When researchers examined the rats' brains, they discovered the "enriched" rats had thicker cerebral cortices than did the "impoverished" rats (Diamond et al 1964).

Play opportunities improve memory and stimulate the growth of the cerebral cortex

Subsequent research confirmed the results—rats raised stimulating environments had bigger brains. They were smarter, too—able to find their way through mazes more quickly

(Greenough and Black 1992)

Do these benefits of play extend to humans? Ethical considerations prevent us from performing similar experiments on kids. But it seems likely that human brains respond to play and exploration in similar ways.

Choices and the Brain

When children are offered choices they feel more positive about their work and play and they feel less anxiety.

High anxiety causes the release of hormones that inhibit learning while low anxiety enhances the learner's ability to learn.

Positive feelings trigger the release of endorphins which enhance the functioning of brain connections.

Choices allow learners to reach self-determined goals, sparking and maintaining their motivation which is critical to learning.

(Pam Schiller's "**Start Smart: Building Brain Power in the Early Years**", 1999)

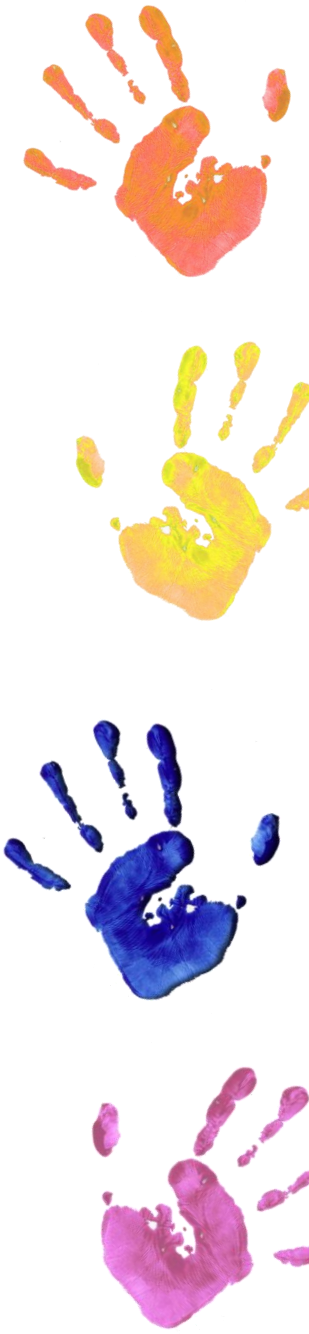
A large body of research suggests that….

High quality preschool programs are characterized by playful environments in which children have strong relationships with their caregivers and are engaged in active learning.

__ Galinsky 2005

Research directly links play to children's ability to master academic content as well as to control and master their own behaviour.

So why do so many programs limit the time children have for free play?



Parents and teachers feel pressure to accelerate and augment their children's learning.

In an effort to give children a head start on academic skills such as reading and mathematics, play is discouraged and didactic or rote learning is stressed.

When we rush learning, we often try to teach things that make little sense to the child and that would better be learned at a later age.

Flash cards used at an early age do not build competencies and there is no evidence that they improve the brain.

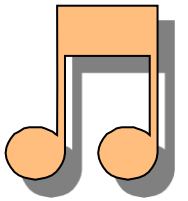
(Pasek et al, 2003)

Buyer Beware!

Don't be taken in by messages about enhancing your baby's brain development that appear on products.

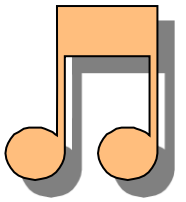
And stay away from those workbooks for 2 and 3 year olds! They are developmentally INAPPROPRIATE.

Buyer Beware!



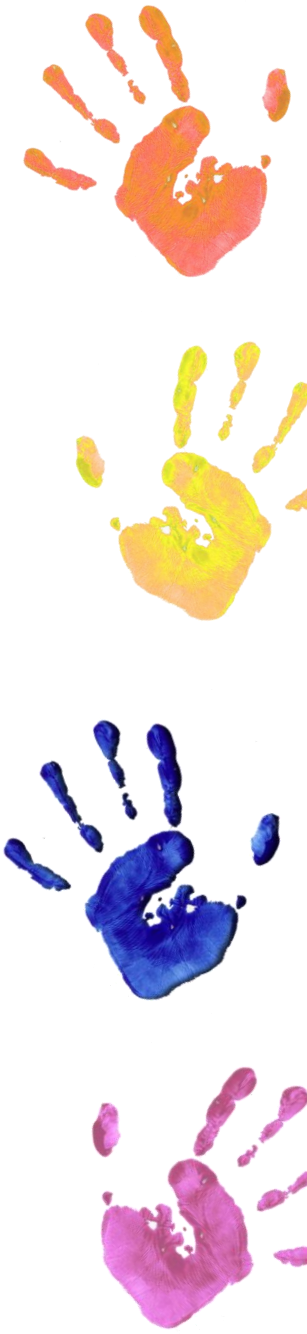
Heard about the Mozart effect? Mozart may be good for children. But so is Raffi, Simon and Garfunkel or the Beatles.

Music is wonderful. But there is no evidence that listening to particular music will make your child a math genius.



Competition spurs many parents to rush their children. We all want our children to succeed in life.

That often means putting them on the fast track in everything – school, sports, music and so on.



Kindergarten is now our new first grade!

- Many believe that children must be independent readers by the end of K year;
- Many think the way to learn is to sit in desks and "learn";
- Many are worried about tests and teach to the test, —isolating bits of information or "factoids";
- Many ignore everything we know about how young children learn

which leaves . . .

No time for play!

Fortunately not everyone thinks like this.

Carl Honore, a Canadian journalist from Alberta, currently living in London, England has written "**In Praise of Slow**" and "**Under Pressure**".

What are some of the tell-tale symptoms of living too fast?

- Feeling tired all the time;
- Feeling like you're just going through the motions;
- Getting through the things on your To-Do list but not engaging with them deeply or enjoying them very much;

- Not remembering things as vividly because you are rushing through them;
- Feeling like you're racing through your life instead of actually living it.

- Illnesses which are often the body's way of saying "Enough already, slow down!"

Honore says children increasingly pay a price for leading rushed lives. Kids as young as five now suffer from upset stomachs, headaches, insomnia, depression and eating disorders.

Many children get too little sleep. This makes them cranky, jumpy and impatient. Sleep deprived children have more trouble making friends.

This isn't new news. In 1989 David Elkind published a book called "The Hurried Child: Growing Up Too Fast Too Soon".

He warned against rushing kids into adulthood. But it seems not many people took heed.

Today's children are more hurried than ever.

When it comes to learning, putting children on the fast track often does more harm than good.

A growing body of evidence suggests that children learn better when they learn at a slower pace.

Research by Kathy Hirsh-Pasek (2003) looked at children who attended pre-schools that stressed social interaction and a playful approach to learning and at children who attended schools that stressed academic achievement using memorization, rote learning approaches.

Those in the more relaxed, slower environment turned out **less anxious, more eager to learn and better able to think independently.**




Slow schooling does not mean ‘goofing around’.

Slow schooling means taking the time to investigate, to ask questions, to do projects to enhance understanding.

It means taking the time to understand and find meaning not just spit out the one right answer.

Around the world many schools have been created to include more time for unstructured play and experimentation.

Many studies show that unstructured time for play helps younger children develop their social and language skills, their creative powers and their ability to learn.

Unstructured play is digging for worms, messing about with toys, building castles, dressing up and playing house and more.

In Finland, children enter preschool education at the age of six and formal schooling at 7. Their curriculum includes a lot of play and time outdoors.

Finland routinely tops the Organization for Economic Cooperation and Development's (OECD) prestigious world rankings for educational performance and literacy




So what do you think about play in the lives of the children you live with, work with and play with?

Have you seen changes in play since you were a child?

Do you think it's a problem?

"Let the Children Play", is the first in a series of 4 PPTs presented by Gayle Karen Robertson at the Manitoba Regional Forums, Spring, 2012.

- Healthy Child Manitoba
- Manitoba Education: Early Childhood Education Unit
- Family Services and Labour: Early Learning and Child Care
- Manitoba's Parent Child Coalitions