

Pathway to Stewardship

A Framework for Children and Youth

DRAFT FOR PUBLIC REVIEW

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Summary

How do we raise engaged and concerned citizens in our community? How can we teach children to care for each other and the land and water we share? The *Pathway to Stewardship* is a community-based strategy that attempts to answer these important questions. It provides a way forward so that we, collectively, can foster tomorrow's stewards, today.

A steward can be defined as someone who tends to and takes responsibility for, the well-being of all community members, both human and non-human alike. A vibrant community contains healthy people in a healthy ecosystem. A steward works to protect the integrity of both.

The *Pathway to Stewardship* provides a guide and a roadmap towards stewardship based on every stage of a child's development. Using a series of *benchmarks*, or goals for each age group (29 benchmarks in total), this strategy is carefully matched with the developmental needs and abilities of children and youth as they grow from birth to adulthood. It suggests local resources able to support the achievement of each benchmark.

This proposal is grounded in extensive research in child development, educational theory, moral development, and the factors promoting mental and physical health in children. Many concepts emerging from the literature echo Indigenous knowledge and wisdom, which we include with great appreciation and respect.

This strategy emerges out of the thoughts, ideas and insights of many local Peterborough leaders. We interviewed more than 75 community leaders from a wide variety of sectors, to learn what childhood experiences helped promote their love of the natural world, and to collect their recommendations for today's young people. These results were overlaid on the literature review to develop the benchmarks suggested in this proposal.

It is worth noting that the strongest links between childhood experiences and stewardship in later life, also play a key role in fostering wellness in children. For example, giving children ample time for unstructured play in diverse natural areas enhances mental and physical health while fostering important personal traits such as creativity and self-esteem.

The *Pathway to Stewardship* is a call to action for everyone who plans for, or spends time with children – parents, teachers, relatives, community groups, health professionals and government agencies. It integrates with the Ontario curriculum, and provides many ideas for family activities and community programs. The more broadly this strategy is endorsed and adopted in the community, the deeper the benefit for our children and their world.

This document forms a basis for community discussion – a place to start. It will strengthen from further ideas and feedback. This Pathway begins in Peterborough, but can be expanded and applied in other regions as well. It is grounded in our shared love for our children and hopes for their present and future health and well-being.

Pathway to Stewardship

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Contents

	<i>Page</i>
<i>Summary</i>	<i>1</i>
<i>Steering Committee</i>	<i>2</i>
<i>Getting Started</i>	<i>4</i>
<i>For Everyone</i>	<i>9</i>
<i>Ages and Stages</i>	<i>14</i>
<i>Working Together</i>	<i>42</i>
<i>Appendices</i>	
<i>References</i>	<i>46</i>
<i>Interview Questions</i>	<i>51</i>
<i>Interviewees</i>	<i>52</i>
<i>Interview Results</i>	<i>54</i>
<i>Community Resources</i>	<i>62</i>

Getting Started

Imagine a community where all children grow up respecting each other and the natural world around them – one in which every child values human and environmental health. Imagine our children learning how to help make their neighbourhoods and their schools more vibrant and sustainable - a place where each child is guided and inspired by their parents, teachers and leaders to create a diverse and healthy community where all living things are given the opportunity to thrive.

We believe that here in the Greater Peterborough area, we have the creativity, resources and expertise to make this dream a reality. The *Pathway to Stewardship* is a call for collective action in simple ways to create a formidable collective impact on the well-being of our children, our community, and our children's future.

At the heart of the discussion is the concept of *stewardship* and the role it can play in realizing this vision for the future. Fostering stewardship is about providing children with the right tools and experiences at different stages of their development to know, love, respect and ultimately protect the very life systems that sustain us all. In so doing, we empower our children, and give them hope. These are powerful gifts.

We are especially grateful to the First Nations representatives who so generously shared their experiences and wisdom with us. There is so much to be learned from Indigenous teachings as we strive to create a culture of stewardship that is reflected in the way we raise our children. In fact, so many of the overarching principles recommended by modern research in child development echo the teachings of the First People who have been an integral part of this land for millennia.



What is Stewardship?

Stewardship is a sense of connection to, caring about, and responsibility for each other and the natural world around us. It involves personal action to protect and enhance the health and well-being of both natural and human communities.

Fostering stewardship is a proactive undertaking. Building on a sense of awe and wonder, we cultivate empathy and respect for all life. As children begin to learn how the world functions, they understand the impacts that people can have, and explore solutions to challenges in their community. As they develop leadership skills by participating in local action, they develop confidence, a sense of agency, and belonging.

True stewardship means living in ways that honour and strengthen the complex and interdependent web of life we are embedded within. As John Muir suggested: *“When one tugs at a single thing in nature, we find it attached to the rest of the world.”*



Why Now?

Many sectors are sending out warning signals that something is drastically wrong. Psychologists have pointed to an epidemic of mental health issues ranging from anxiety disorders in children to feelings of alienation and depression in adults. Teachers notice a spike in children with special needs, such as attention deficits and anti-social behaviours. Health care providers are concerned about children's fitness and health status, resulting from too little physical activity and too much screen time. This sedentary, indoor lifestyle can contribute to a suite of health challenges including heart disease and diabetes. Today's children may be the first in generations to not live as long as their parents.¹

These issues have led to a flurry of research into causes and potential solutions to these issues, starting in early childhood. Much of this research is coming to very similar conclusions – that plenty of childhood time spent in unstructured play in natural outdoor environments has many benefits, including:

- reducing stress,
- improving physical and mental health,
- stimulating creativity,

¹ Parliament of Canada (2007). *Healthy Weights for Healthy Kids*.

- enhancing concentration and conflict resolution skills,
- building self esteem,
- encouraging co-operation, collaboration and self-regulation,
- developing problem-solving abilities, and
- sparking a life-long interest in learning. ^{2,3,4,5,6,7}



Giving children many opportunities to have positive experiences in the natural world, especially at a young age, is the most powerful way to stimulate a sense of community, of belonging, and a sense of responsibility towards the world around them.⁸ And by engaging in simple acts of stewardship we inspire advocacy and an ethic of caring. In the end, this seems like such a simple recipe for engaged citizenship.

Sadly, most childhood experiences in a modern world push children in exactly the opposite direction. Many children's days are pre-scheduled from the moment they wake. Fascination with technology leads to children spending an average of 7½ hours a day in front of a screen.⁹

Media focus on rare incidents of child abduction frightens us into over-protection and we pass our fears onto our children. For "safety's sake" and fear of litigation, we've

made our schoolyards and parks into sterile environments with little opportunity for creative play or interaction with the natural world. We drive our children to and from school. Children are missing the opportunity to play and explore freely in the outdoors.¹⁰

² Participation (2015). *The Biggest Risk is Keeping Kids Indoors*.

³ Kuo & Sullivan (2001a). "Aggression and violence in the inner city: Effects of environment via mental fatigue."

⁴ Nisbet, Zelinski & Murphy (2009). "The nature relatedness scale: linking individuals' connection with nature to environmental concern and behaviour."

⁵ Faber Taylor & Kuo (2009). "Children with attention deficits concentrate better after walk in the park."

⁶ Louv (2008). *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*.

⁷ Munoz (2009). *Children in the Outdoors: A Literature Review*.

⁸ Ontario Ministry of Education (2014). *How Does Learning Happen? Ontario's Pedagogy for the Early Years*.

⁹ Statistics Canada. *2012-13 Canadian Health Measures Survey*, cited in Participation (2015).

¹⁰ Participation (2015). op. cit.

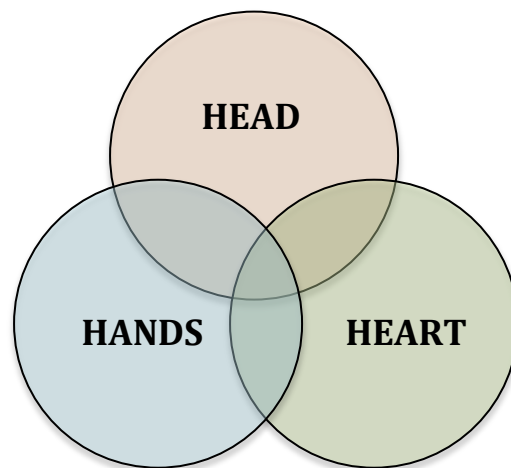
This unfortunate sense of risk results in unintentional and long-lasting harm to children.¹¹ Health professionals see increasing numbers of children with anxiety and attention disorders, fearful of people and nature, feeling powerless and disconnected from the world around them.¹²

It's the opposite of what we deeply wish for our children.

The Road to Stewardship

This proposal attempts to address these concerns in a simple, straightforward way. We have combined scientific research with the wisdom of local leaders to produce a series of recommendations for children at various stages of their growth and development. These “*benchmarks*” will not only serve to rekindle our children’s connections to land and water, but they will help us to develop our innate love of the world around us, and to rediscover our own connections with, and responsibility to – our human and natural communities.

The benchmarks also provide ideas for inspiring action in a way that builds hope and empowerment, instead of fostering fear. Nurturing stewardship means not only educating the “*head*”, but also providing experiences that cultivate the “*heart*” and translate into positive action for the “*hands*.”¹³



Who Is This For?

We hope this proposal will be useful to teachers, parents, grandparents, caregivers, community groups – in short anyone who spends time with children.

This framework for stewardship is not intended to replace parenting manuals, detailed school curricula and existing community programs, but to enhance and enrich them. The

¹¹ Brussoni (2015). “What is the Relationship between Risky Outdoor Play and Health in Children? A Systematic Review.”

¹² Gray (2011). “The decline of play and the rise of psychopathology in children and adolescents.”

¹³ Forest School Canada (2014). *Forest and Nature School in Canada: A Head, Heart, Hands Approach to Outdoor Learning*.

recommendations link with school programs, provide ideas for family activities, action projects for children of all ages, and guidance for community groups who are planning or conducting programs for children and youth.

The more broadly these basic principles are recognized and encouraged by all sectors of our community, the wider the potential benefits for our children's health and lasting well-being. We don't need big budgets or years of preparation. We can and should start now.

The Background

Peterborough is blessed to have many wonderful people doing good work with children. The concept for this framework came from Camp Kawartha's Jacob Rodenburg as he developed a series of linked stewardship programs for school groups. As he discussed the concept with other community groups, it made sense to expand the scope to include families and any community resources offering services for children and youth.

We believe the saying "It takes a village to raise a child," and likewise, "It takes a village to raise a steward." This must be a collective and coordinated undertaking.

We formed a steering committee of educators, public health professionals and conservation groups to oversee the project. Committee members offered their extensive expertise with children and youth ranging from birth through the teen years, coupled with a commitment to environmental health and sustainability.

Seed funding from the Community Foundation of Greater Peterborough facilitated extensive background research. We began with a review of recent research in child development, including factors promoting mental and physical health, moral and social development.

We also interviewed more than 75 community leaders interested in the environment and environmental issues, to learn what childhood experiences shaped them, and hear their suggestions for the best ways to foster stewardship in today's young people. The research has resulted in this proposal – a challenge to our entire community to work together in order to raise our children as engaged stewards.

Moving Forward Together

This proposal represents the voices of many diverse sectors in Greater Peterborough: education, health, government, First Nations, environment, social services, business and non-profit groups. It is a unique first attempt to chart a path specifically towards stewardship in the way we raise our children. It is also a dynamic proposal that will strengthen and benefit from ongoing community discussion and recommendations. It is a place to begin, a place to help us create an enduring culture of stewardship for our community. We hope it will also inspire other jurisdictions to do the same.

For Everyone

As we began to review and summarize our research, it became obvious that there are important, overarching stewardship principles relevant for everyone, regardless of the age or stage of the young person. We will attempt to summarize them here, focusing in the following section on more age-specific principles and benchmarks.

Respect for each other and all living things

A fundamental value in building a foundation for stewardship is the understanding that life itself is amazing and that all living things – human and non-human – deserve respect.¹⁴ This value is especially important for everyone who interacts with children. It might take some personal reflection and resolve to overcome fears or prejudices that we adults have acquired, in order to become effective mentors for children on the road to stewardship. A simple way to practice respect and empathy is to provide children opportunities for positive interactions with animals, either wild or domestic.

Sense of awe and wonder

We are never too old to appreciate the wonders of life, or to encourage and share that sense of awe that results from truly seeing the world around us. Awe and wonder underpin a natural curiosity and desire to learn, which accompany the lifelong thrill of discovery. We forget as adults how powerful language can be. If you want to cultivate a sense of wonder you need to use the language of wonder.¹⁵



Build knowledge together

It's a wise teacher who knows when to share information, and when to let natural discovery take place. When children are subjected to too many facts, the overload can actually inhibit or destroy interest and learning. The best learning focuses on the child, not the teacher. Keep in mind that the engine of learning is curiosity.¹⁶ As adults, we need to remember that a name or a label is merely a beginning point. It is the start of a story – an intriguing one – and it is up to you to keep the story going! A good question should invite other questions. Think about your questions as way to encourage kids to ask why, to wonder, to marvel at the natural world and to promote further exploration.

¹⁴ Bell (2013). "Anishinaabe Bimaadiziwin: Living Spiritually with Respect, Relationship, Reciprocity and Responsibility".

¹⁵ Louv (2008). op. cit.

¹⁶ Sobel (1998). *Beyond Ecophobia*.



Sense of place

An important part of developing a sense of security and belonging is spending enough time outdoors in the same place to become deeply familiar and connected with it. For those who have developed a particular attachment to a place when growing up, that sense of place becomes part of their identity. It is important to give children plenty of time to develop those deep attachments to place, whether that's a favourite park, a cottage, a camp or other outdoor place with special memories.¹⁷

Interconnectedness

Children benefit from many opportunities to learn how our lives are connected to the lives of other people and other living things. We share the same air, the same water – the food we eat contains nutrients that have been shared by many others for many years.¹⁸

This understanding reinforces the innate need to belong. Stewardship involves understanding that we belong to a community that extends far beyond our close friends and relatives. Let's encourage our children to get to know and love our "Neighbourwood."¹⁹

Mentors are important at all ages

Both in research and discussions with community leaders, it is evident that having access to a caring mentor is critically important in developing stewardship. In the early years, this is usually a close relative – a parent or grandparent who spends time with the child, exploring together and sharing the delights of discovery.²⁰ As a child grows older, the mentor is often a teacher or other youth leader who becomes a trusted and admired role model.²¹ While having knowledge to share with a child is helpful, it's more important to share an interest and to spark curiosity.²²

¹⁷ Gruenwald (2003). "The best of both worlds: a critical pedagogy of place."

¹⁸ Beckford & Nahdee (2011). "Teaching for Ecological Sustainability: Incorporating Indigenous Philosophies and Practices."

¹⁹ Kenney & Puric-Mladenovic (2014). *Community engagement in urban forest stewardship: Neighbourwoods© approach.*

²⁰ Wilson (2007), cited in Dowdell et al (2011). "Nature and its influence on children's outdoor play."

²¹ Wells & Lekies. (2006). "Nature and the Life Course: Pathways from Childhood Nature Experiences to Adult Environmentalism."

²² Louv (2008). op. cit.

Overcome fears together

Not everyone feels comfortable and safe outdoors – especially in natural areas. Building comfort and security outdoors is something you can learn, with patience. Learn the real dangers (falling over cliffs, drowning etc.) and learn how to handle them (stay away from the edge, learn how to swim etc.). Fear of the dark, animals, bugs, snakes etc. can be overcome with patience. Working on our own fears as adults can help our children become more confident and less anxious and fearful. Remember that getting scrapes is a normal part of growing up, and letting children take reasonable risks (jumping, climbing) helps them to stretch their abilities and learn their limits. Learning to overcome fears literally opens the doors to a world of wonders.²³



Encourage independent mobility

There is a great deal of research pointing to the importance of giving children opportunities to travel on their own, which the experts call “independent mobility.” Travelling a regular route alone is an excellent way to sharpen skills of observation, enhance interest in, and knowledge of the environment, as well as promote a sense of security.^{24,25} Children

permitted to travel regular routes alone, also tend to play outside more frequently, leading to the host of benefits previously mentioned, such as stress reduction, creative thinking, problem-solving and increased self-esteem.

While very young children cannot be expected to understand the dangers of traffic, for example, older children who demonstrate awareness, understanding and basic safety should be rewarded with corresponding degrees of freedom of movement. This is a particularly difficult concept for today’s cautious parents to understand. The 2015 report from Participaction called *“The Biggest Risk is Keeping Kids Indoors”* is a well-documented examination of the risks and benefits of independent mobility.²⁶

²³ Participaction (2015). op. cit.

²⁴ Risotto & Tonucci (2002). “Freedom of movement and environmental knowledge in elementary school children.”

²⁵ Pacilli, Giovanelli, Prezza & Augimeri (2013). “Children and the public realm: antecedents and consequences of independent mobility in a group of 11-13 year old Italian children.”

²⁶ Participaction (2015). op. cit.

Limit screen time

Another recurring recommendation, both in research and feedback from community leaders, points to the benefits of limiting screen time – television, computer and cell phones. Too much screen time severely limits physical activity, social and creative development as well as causing a sense of separation from the natural world. While technology can offer many benefits, too much of it can be toxic to healthy development.²⁷

Creative Expression

The arts provide one of the most powerful ways of developing the moral aspect of humanity, a foundation of mental health. Research refers repeatedly to the importance of providing opportunities at all ages to express feelings. Discussion, painting, drama, stories, dance, poetry, photography, sculpture and music are a few examples of the ways we express ourselves and learn from others. While young people may prefer certain ways of expressing themselves at various ages, creative expression overall remains an important factor in healthy development throughout life.^{28,29}

Action

Everyone, no matter what their age or ability can do something positive for the world around them. Tending a garden, raising butterflies, caring for a natural area, reducing our energy consumption, are just some of the simple ways we empower our youth to make a positive impact right here at home. Remember the idea of agency. Kids can solve a problem provided they are given the right tools and strategies for their age. Every positive action leads to a sense of hope. And every bit of hope is empowering. As kids grow older they can begin to explore the idea of sustainable living: reducing their carbon footprint, exploring alternatives to fossil fuels, exploring product life cycle and social justice issues.^{30,31,32}

Joy is contagious

All of the suggested activities are grounded in the knowledge that great joy can be found in nature and being outdoors, and that joy is contagious. Laughter is an excellent way to relieve stress, and a sense of fun is infused through all the benchmarks in this document. The *Pathway to Stewardship* is an enjoyable journey for every child and their mentors.

All of these basic principles are important throughout childhood, as we travel together towards a culture of stewardship. The following chart summarizes key stewardship themes for specific age groups, as well as those that recur at every age.

²⁷ Louv (2008). op. cit.

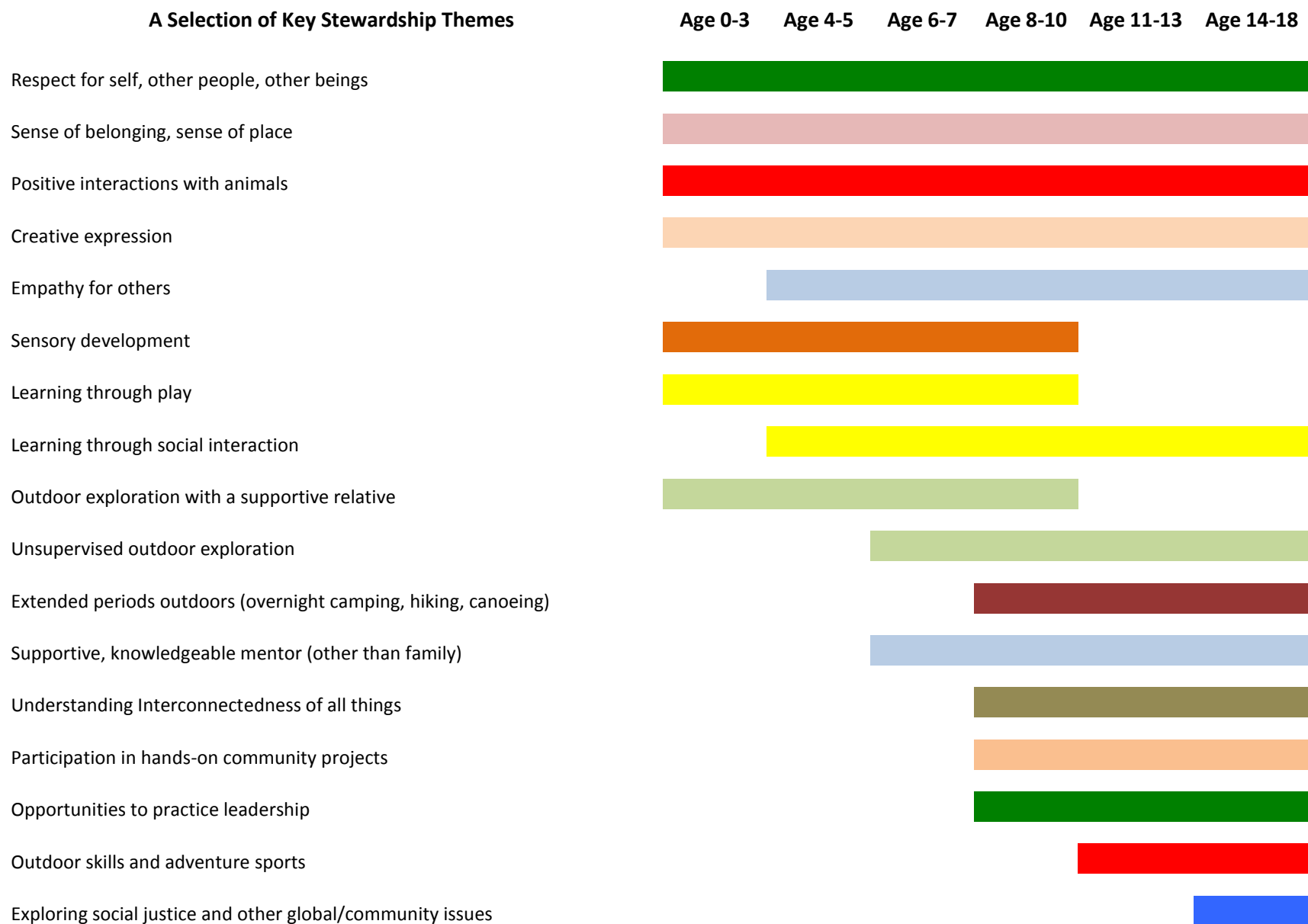
²⁸ Pennsylvania Land Trust (n.d.). *Nature Play: Nurturing Children and Strengthening Conservation Through Connections to the Land*.

²⁹ Wilson (2007). "Fostering Goodness and Caring: Promoting Moral Development in Young Children."

³⁰ Staniforth (2004). "Leap into Action: Simple Steps to Environmental Action."

³¹ Kozak and Elliot (2014). *Connecting the Dots: Key Strategies that Transform Learning for Environmental Education, Citizenship and Sustainability*.

³² Hungerford & Volk (1990). "Changing learner behavior through environmental education."



Ages and Stages

This framework for stewardship grows from the understanding that children's development follows a pattern, in the same way that a seed first sends down a root, then a shoot, leaves and then expands to more complex structures.

Not every child develops in exactly the same way or at the same rate, and this is natural. The principles and benchmarks that follow are based on broad trends of child and youth development, recognizing the foundational blocks that must be in place before we teach larger, more complex stewardship concepts.

How to Use the Framework

In the following pages, each age group begins with a few important *principles* that underpin each benchmark. While there is some overlap between age groups, the overarching principles shift as children grow and develop different skills and interests. We can all be more effective mentors for young people by being aware of these fundamental principles that encourage stewardship at various ages and stages.

The core of this document is the *benchmarks*, or specific achievements, for each age group. To be as simple and accessible as possible, there are a small number of benchmarks for each group. Flowing from the benchmarks are suggested *activities* – various ways in which the benchmarks could be implemented. We recognize that every school, organization, and family has unique circumstances and there are different resources available to them. The goal is to provide every child in the Greater Peterborough Area with the opportunities, skills and resources to achieve each benchmark. If each child can complete these challenges, our community will be better prepared with hope, strength and commitment to forge a more sustainable tomorrow.

While these benchmarks are geared towards children and youth, they are also meant to be a challenge for every adult who interacts with children:

How can we work together to give these experiences to as many children as possible?

When families, schools and the broader community collaborate on a common goal, the influence on children is enormous – a powerful force for positive change.

School - These benchmarks integrate with the Ontario School Curriculum, so classroom teachers from all school boards can play an important role in endorsing and using the *Pathway to Stewardship*.

Family – Home life has a profound influence on child development. Parents, grandparents and other relatives will find lots of enjoyable family activities in the document, with great benefits for everyone.

Community – Understanding the well-documented principles and benchmarks in this framework will help community groups and services design effective programs for children and youth, and strengthen existing services. Wherever there are gaps in available community resources and services to support the framework, opportunities emerge for future program and resource development.

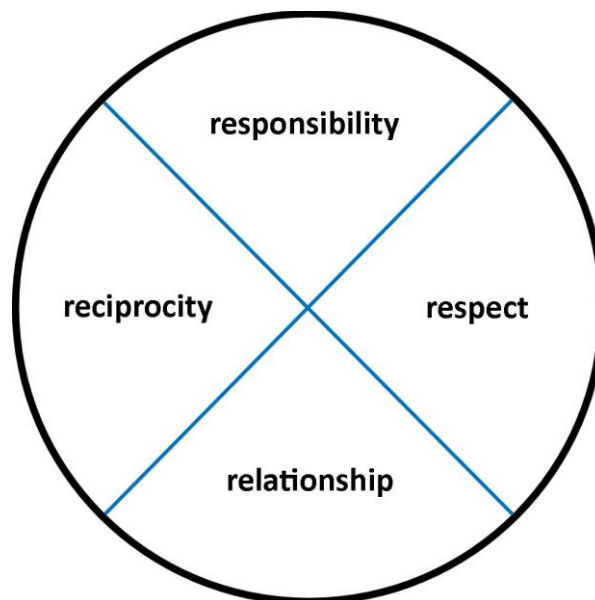
Benefits of Combining Ages

This framework is organized around specific ages and stages of development, similar to the way schools and other community services are structured. However, there are mutual benefits to encouraging children of different ages to interact in playing/learning, celebrating and planning projects together.

Children have a natural affinity for learning from friends older than themselves. Similarly, giving older children opportunities to mentor younger ones, can help develop leadership skills, empathy and compassion. Community Elders, both Indigenous and non-Indigenous have a vast wealth of experience to share with youth, and building relationships across broad age spans is another fundamental concept of this framework. We are particularly grateful to representatives of Indigenous communities for reminding us of this important consideration.

The Wisdom of Indigenous Teachings

Canada is finally at a stage in its history where Indigenous voices are being given the respect and consideration they deserve. There is a strong link between this attempt to develop a guide for stewardship, and the First Nations cultures for whom reverence for the natural world is the very foundation of existence. There is much yet to be learned, but Indigenous teachings provide very powerful concepts and symbols that can help all of us in our quest for a just and sustainable future. A beautiful and very appropriate symbol to represent this journey emerges from the teachings of the Indigenous medicine wheel.



from Nicole Bell (2013)

Another representation of the journey integrates the stages of development as progressive steps towards the goal of stewardship:

stewardship, wisdom, sharing, community



skill, leadership, agency, justice



knowledge, hope, desire, compassion



empathy, discovery, connection, caring



awe, wonder, respect, exploration

These concepts are reflected in the following stewardship framework.

STEWARDSHIP BENCHMARKS FOR PRESCHOOL CHILDREN (BIRTH TO 3 YEARS)			
CORE STEWARDSHIP PRINCIPLE	BASIC BENCHMARK	POSSIBLE ACTIVITIES	EXISTING COMMUNITY RESOURCES
Regular visits to green space benefits everyone. <ul style="list-style-type: none"> • Provide opportunities to explore • Tap into a child's natural curiosity and sense of wonder; have fun together • Visit the same place frequently • Dress comfortably for all weather conditions • Provide time and space for imaginative play and engagement 	1. Explore outdoors together at least one hour per week.	<ul style="list-style-type: none"> • Turn over rocks to see what is underneath; watch ants, beetles and other bugs to see where they go • Dig in soil, wade in water, pick up sticks, roll in the grass, squeeze and play with mud • Encourage climbing, jumping, hopping • Use positive and affirming language • Provide experiences rather than "teaching" – let the child lead the discovery • Encourage imagination, make believe 	<ul style="list-style-type: none"> • Local parks and trails • Local natural areas • Nature playscape at Camp Kawartha Environment Centre • Ecology Park • Riverview Park and Zoo • Conservation areas • Private yards • Parent-Child Mother Goose • Peterborough Family Resource Centre • Pick-your-own farms (e.g. McLean's Berry Farm) • Camp Kawartha Environment Centre (Oaks and Acorns Program) • Ontario Turtle Conservation Centre • Peterborough Humane Society • Local farms • County Fairs, petting zoos • Indian River Reptile Zoo • Jumping Mouse • Kawartha Choice • Think Outside
Guided positive interactions with animals help children understand the needs of other living things. <ul style="list-style-type: none"> • Encourage a sense of respect for all living things – this is a precursor to developing empathy; • Use "what" questions e.g. what is the animal doing, what does it need, what sounds does it make, what do you think it is feeling today? 	2. Have positive experiences with animals at least twice each month.	<ul style="list-style-type: none"> • Care for pets; talk about what they need to be happy and healthy • Follow a bug for as long as you can; what is it doing? • Visit farms and zoos • Watch worms • Put up a stick-on window birdfeeder • Watch birds, squirrels and other wild animals • Read books with stories and pictures about animals 	
Sensory exploration is especially important in the early years. <ul style="list-style-type: none"> • Senses help us to make deep connections with the world around us • Parents and caregivers can encourage young children to experience taste, texture, smell, temperature (weather), rhythm and music, colours and patterns (indoors and outside), sounds and language 	3. Exercise the senses every day.	<ul style="list-style-type: none"> • Use focused hearing (cup your hands behind your ears) • Practice being an "all around watcher" – what can you see? • Make mud pies and decorate with flowers, grasses and leaves; sing songs, walk in the rain or snow, smell flowers, splash in mud, feel tree bark, catch bugs, dance together! • Read and look at picture books together, make animal sounds, make and taste foods, pick and taste berries (make sure you know which berries to pick!) • Jump in leaves, play hide and seek • Listen for bird song in the spring and insect song in the fall • Create a sensory garden with plants such as lemon balm, chives, peppermint, bee balm, oregano, lamb's ears • Set up a micro trail – use a magnifying glass to discover the very small things 	

FOR PARENTS AND CAREGIVERS

The preschool years are a busy time for families, when tiny children are totally dependent on adults, and even providing the basic necessities can be very demanding for parents and caregivers.

Luckily, the activities that build a solid stewardship foundation for children in their early years, also have many benefits for parents in reducing stress and promoting physical and mental health. Gentle physical activity outdoors, enjoying each other and the wonders of nature can help put life back in perspective, while helping us relax and regain a positive outlook.

At this age, the attitudes that adults bring to their interactions with children are more important than specific activities. Think about going with the flow, rather than sticking to a prescribed “to-do” list of activities. Follow the child’s natural interests and curiosities, and enjoy playing and exploring together. Remember that a few tumbles and scraped knees are normal and healthy. Try keeping some outdoor play clothes for toddlers, so you can relax when they stomp in mud puddles and play in the dirt. Opportunities for free outdoor play provide many benefits for healthy child development in the early years.

FOR EARLY CHILDHOOD EDUCATORS: A Sample of Links from *How Does Learning Happen? Ontario’s Pedagogy for the Early Years*

The Four Foundations (p 7-8):

- **Belonging** refers to a sense of connectedness to others, an individual’s experiences of being valued, of forming relationships with others and making contributions as part of a group, a community, the natural world.
- **Well-being** addresses the importance of physical and mental health and wellness. It incorporates capacities such as self-care, sense of self, and self-regulation skills.
- **Engagement** suggests a state of being involved and focused. When children are able to explore the world around them with their natural curiosity and exuberance, they are fully engaged. Through this type of play and inquiry, they develop skills such as problem solving, creative thinking, and innovating, which are essential for learning and success in school and beyond.
- **Expression** or communication (to be heard, as well as to listen) may take many different forms. Through their bodies, words, and use of materials, children develop capacities for increasingly complex communication. Opportunities to explore materials support creativity, problem solving, and mathematical behaviours. Language-rich environments support growing communication skills, which are foundational for literacy.

Some Basic Principles (p 10)

- Positive experiences in early childhood set the foundation for lifelong learning, behaviour, health, and well-being.
- Partnerships with families and communities are essential.
- Play and inquiry are learning approaches that capitalize on children’s natural curiosity and exuberance.

Expectations

- Cultivate authentic, caring relationships and connections to create a sense of **belonging** among and between children, adults, and the world around them; nurture children’s **healthy development** and support their growing sense of self; provide environments and experiences to **engage** children in active, creative, and meaningful exploration, play, and inquiry; foster communication and **expression** in all forms. (p 13)
- Connecting to the natural world contributes to children’s mental, physical, emotional, and spiritual health and well-being. Providing daily opportunities to explore, care for, and interact with the natural world helps to strengthen these connections. (p 21)

REFERENCES:

Community Interviews, Forest School Canada (2014), Learning Through Landscapes, Louv (2008), MECEEC (2002), NAAEE (2010), Participaction (2015), Ohio EE (2000), Ontario Ministry of Education (2014). *How Does Learning Happen? Ontario’s Pedagogy for the Early Years*. Pennsylvania Land Trust (n.d.), RSPB (2010), White (2004b), Wilson (2007, 2008)

STEWARDSHIP BENCHMARKS FOR JK and SK (Age 4-5)			
CORE STEWARDSHIP PRINCIPLE	BASIC BENCHMARK	POSSIBLE ACTIVITIES:	EXISTING COMMUNITY RESOURCES
Develop a sense of the awe and wonder of nature by being outdoors in all seasons. <ul style="list-style-type: none"> Explore patterns, textures, materials Follow the child's interest Share names and stories for the things you see Look for treasures in nature Encourage feelings of comfort and safety outdoors 	4. Visit a favourite outdoor place each week throughout all seasons. Talk about what you discovered with a supportive adult.	<ul style="list-style-type: none"> Adopt a tree – get to know one tree and visit this each week through every season. Take pictures, draw it – how does the tree change? Visit an outdoor/nature centre Participate in a nature scavenger hunt Explore a natural area – what treasures can you find? Create a nature table – add things that you find each season – seeds, leaves, buds, special rocks, shells, fossils, feathers Throw a hula-hoop into a meadow. How many living things can you find inside the hoop? Explore under rocks, logs and leaves – what can you find? Look up; what do you see? 	<ul style="list-style-type: none"> Trent Nature Sanctuary, Jackson Park, Millennium Park, Mark S. Burnham Park Peterborough Junior Field Naturalists Otonabee Conservation Peterborough Public Library Camp Kawartha Summer Kindercamp Camp Kawartha Environment Centre Camp Ontario Turtle Conservation Centre Riverview Park and Zoo County Fairs Peterborough Family Resource Centre Parent-Child Mother Goose Jumping Mouse KPR Outdoor Ed. Centres Think Outside Horticultural Societies Gamiing Trail Networks Paddling Puppeteers
Develop empathy by watching and caring for living things. <ul style="list-style-type: none"> Encourage respect for all living things Emphasize the enjoyment of interacting with living things Ask inquiry-based questions: What does this need to survive? How does it move? Why is it this colour? How can we take care of this living thing? 	5. Help to plant or harvest a garden and/or look after an animal.	<ul style="list-style-type: none"> Start a planter box in a window sill Make a bird feeder Set up a simple aquarium. Raise goldfish. Look after a pet rabbit, mouse or other critter Set up a terrarium Create a small food garden or a pollinator garden outside Raise toads, chicks or butterflies 	
Imaginative play is important to child development. <ul style="list-style-type: none"> Allow plenty of time for unstructured, imaginative play 	6. Play in nature for one hour at least twice a week.	<ul style="list-style-type: none"> Make a fort Create a fairy garden Build a simple natural play area Collect twigs, pine cones, bark, sticks 	
Stories, pictures, songs and games help children love and understand the natural world. Focus on a variety of animals; people practising stewardship and/or enjoying nature.	7. Share one nature based picture book, sing a nature song, a nature poem and/or play one game related to nature each week. Do more if you can.	<ul style="list-style-type: none"> Invite environmental storytellers, singer/songwriters, puppeteers into your classroom/home Spend time with people who love nature Bring in live animals (Ontario Turtle Conservation, Wildlife rehabilitation) 	

<p>The arts help children learn to express feelings about themselves and their world. Children need opportunities for creative expression.</p>	<p>8. Create one environmental art project per week.</p>	<ul style="list-style-type: none"> • Participate in nature arts and crafts • Sketch or paint a natural scene near your school or home. Visit it once per season. • Make a bird's nest in the spring. • Make stained glass windows in the fall using leaves, wax paper • Try simple nature weaving. • Make simple nature sculptures out of natural material 	
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FOR TEACHERS: A SAMPLE OF CURRICULUM LINKS

- The three goals outlined in Acting Today, Shaping Tomorrow are organized around the themes of teaching and learning, student engagement and community connections, and environmental leadership. The first goal is to promote learning about environmental issues and solutions. The second is to engage students in practicing and promoting environmental stewardship, both in the school and in the community. The third stresses the importance of providing leadership by implementing and promoting responsible environmental practices throughout the education system so that staff, parents, community members, and students become dedicated to living more sustainably.
- The Full-Day Early Learning–Kindergarten program offers many opportunities for accomplishing these goals. The learning environments for early learning include the schoolyard, fields and trails in the vicinity of the school, and various other outdoor venues. Teaching children to appreciate and respect the environment is an integral part of being active in these spaces. Appreciating the value of fresh air and outdoor spaces, understanding the environmental benefits of healthy practices such as active transportation (walking, biking) and the environmental implications of various food choices, being aware of the impact of using trails, and understanding the health risks associated with environmental factors such as sun exposure and air pollution are all components of environmental education that can be integrated with learning in Full-Day Early Learning–Kindergarten programs. To facilitate these connections, Early Learning–Kindergarten teams are encouraged to take children out of the classroom and into the world beyond the school to help them observe, explore, and appreciate nature.
- Taking field trips to interesting places in the community, inviting community experts to the classroom, and having community members bring in artifacts from the community related to topics of immediate interest to the children are examples of activities that promote learning and bring the local environment into the daily activities of young children. (Page 11)
- Play as a vehicle for learning and lies at the core of innovation and creativity. It provides opportunities for learning in a context in which children are at their most receptive.
- Participate in environmentally friendly activities in the classroom and the schoolyard (e.g., plant and tend to plants; use local products for snack time)
- The EL–K team supports the children' environmental thinking by asking children to consider the impact on the environment when choosing tools, equipment, and material for their designs.

REFERENCES: Chawla (2006), Community Interviews, Dietze, B. Evergreen Interview, Dowdell et al. (2011), Forest and Nature School (2014), Kozak and Elliott (2014), Louv (2008), McKnight (2014) Ohio EE (2000), OME (2009), OME (2010), OME (2014), Participaction (2015), Pennsylvania Land Trust (n.d.), White (2004b), Wilson (2007)

STEWARDSHIP BENCHMARKS FOR GRADE 1 AND 2 (age 6 and 7 years)			
CORE STEWARDSHIP PRINCIPLE	BASIC BENCHMARK	POSSIBLE ACTIVITIES	EXISTING COMMUNITY RESOURCES
<p>Deepen relationships and understanding. This is an important age for beginning to develop a sense of place - an outdoor space that is familiar and special:</p> <ul style="list-style-type: none"> Physical activity continues to be very important. Children need plenty of time for active exploration in the outdoors – jumping, climbing, taking gentle risks with no adult “agenda” Creative play grows from unstructured time outdoors Natural curiosity and verbal skills produce many “why” questions – adult mentors are wonderful in providing simple answers that encourage further discovery and questioning This is also a perfect age to find adult help in overcoming fears, such as snakes, spiders, darkness Continue to develop and fine-tune the senses – looking carefully, waiting quietly, touching gently, listening intently 	<p>9. Choose an outdoor place that is special to you. Visit this at least twice per month throughout a whole year. Talk about and record what you saw. Draw pictures, take photographs, write a story. How did you feel when you went there? How did it change since last time? How many different things can you find there? Which are alive? Which are not alive? What make-believe games do you like to play when you go there?</p>	<ul style="list-style-type: none"> Set up a micro trail. Bring a visitor and guide them through special spots along the way; did they notice something you didn’t see? Use a magnifying glass – observe the veins of a leaf, the colours of a rock, the parts of soil, the petals of a flower Make a colourful mural of all the things you saw in your special spot both living and non-living. Keep adding to this, each time you visit. Play ‘Imagine if’: Imagine if I was a tree, a rock, an ant a chipmunk; Make up a story from their point of view. Make an empty frame from cardboard. Hang this on a branch or on a string in your special spot. Where is the most beautiful view? Name 5 natural sounds you can hear from your special spot 	<ul style="list-style-type: none"> Local Maple Syrup Festivals e.g. McLean’s, Kennedy’s Community Gardens Camp Kawartha Riverview Park and Zoo Local Winter Celebrations: Santa Claus Parades, Winter Carnivals Farmers Markets Camp Kawartha Environment Centre City of Peterborough Parks Otonabee Conservation Kawartha Land Trust Ontario Parks Children’s Outdoor Charter Horticultural Societies Peterborough Public Library (books on gardening, seasons, urban wildlife) Peterborough Junior Field Naturalists KPR Outdoor Ed. Centres Think Outside Ganaraska Forest Centre Nourish Project Art School of Peterborough
<p>Reinforce and expand the developing sense of empathy.</p> <ul style="list-style-type: none"> Children benefit from help in learning how we are the same as other living things, and how we differ; Caring for something alive involves thinking and talking about what it needs to be healthy. What happens to a plant without any water? Can it grow in the dark? What other living things interact with a plant? How do they affect it? 	<p>10. Plant, tend and harvest something you can eat (with help from an adult).</p>	<ul style="list-style-type: none"> Try growing something like beans, lettuce or radishes (which are easier to grow than some other vegetables); Watch your plant(s) grow. Who else visits or eats it? How fast does it grow? How can you help it grow? How did it taste when you ate it? Write a story with the plant talking. If your plant didn’t survive, what do you think happened? What would you like to try to grow next? Watch a rock, a plant and an animal for two weeks; observe each day. How are they the same? How are they different? Which are alive, which are not: How do they change over time? 	

<p>Celebrate Seasons.</p> <ul style="list-style-type: none"> As a child's understanding of time expands, noticing and celebrating seasonal changes strengthens a connection with the world around them. 	<p>11. Find 3 ways to recognize and enjoy the change of each season.</p>	<ul style="list-style-type: none"> Take a picture of the same tree throughout each of the seasons. How is the tree the same? Different? With an adult, make a list of outdoor activities that are unique to each season. During one full year, try at least two of those activities each season with friends or family. Here are a few ideas to get you started: make maple syrup in spring, sleep under the stars in summer, pick apples in fall, build a snowfort in winter; Make a display at home or at school with things that represent each season. Do something special for Earth Day. Celebrate the summer and winter solstice; what fun ways can you find to celebrate the year's shortest and longest days? 	
<p>Recognize that our community consists of other living things as well as people.</p>	<p>12. Who are the critters in your neighbourhood? Get to know 5 plants and 5 birds, 5 insects and 5 different animals that live in your area.</p>	<ul style="list-style-type: none"> Do a neighbourhood scavenger hunt. Can you find 5 different plants and animals/insects/birds living in your area? Draw a map of your neighbourhood – where do you live – where do the critters live? What do you think your critters eat? – can you find examples of these? 	

FOR TEACHERS: A SAMPLE OF CURRICULUM LINKS

GRADE ONE

The Arts (2009)

Visual Arts

- Demonstrate an understanding of composition, using principles of design to create narrative;
- Art works or art experiences on a theme or topic;
- Express their feelings and ideas about art works and art experiences.

Physical Education (2015)

- Demonstrate an understanding of factors that contribute to their personal enjoyment of being active as they participate in a wide variety of individual and small-group activities;

- Student: ... “I love playing outside. When it is really hot, I play under the trees so I am in the shade.” ...

Science and Technology (2007)

- Assess the role of humans in maintaining a healthy environment;
- Investigate needs and characteristics of plants and animals, including humans;
- Assess the impact on people and the environment of objects and structures and the materials used in them;
- Assess the impact of daily and seasonal changes on living things, including humans; Investigate daily and seasonal changes; demonstrate an understanding of what daily and seasonal changes are and of how these changes affect living things.

Social Studies (2013)

- Describe some aspects of the interrelationship between people and the natural and built features of their community, with a focus on how the features of and services in the community meet people’s needs.

GRADE TWO

The Arts (2009)

Drama

- Engage in dramatic play and role play, with a focus on exploring main ideas and central characters in stories from diverse communities, times, and places.

Visual Arts

- Create two- and three-dimensional works of art that express feelings and ideas inspired by activities in their community or observations of nature.

Physical Education (2015)

- Demonstrate an understanding of factors that contribute to their personal enjoyment of being active
- Identify ways of protecting themselves and others, including those with medical conditions, from safety risks while participating in physical activity

Science and Technology (2007)

- Assess ways in which animals have an impact on society and the environment, and ways in which humans have an impact upon animals and the places where they live;
- Investigate similarities and differences in the characteristics of various animals;
- Demonstrate an understanding that animals grow and change and have distinct characteristics;
- Assess ways in which the actions of humans have an impact on the quality of air and water, and ways in which the quality of air and water has an impact on living things;
- Describe some aspects of the interrelationship between people and the natural and built features of their community,

REFERENCES: Brussoni (2015), Community Interviews, Forest and Nature School (2014), Kozak and Elliott (2014), Louv (2008), NAAEE (2010, 2013), OME Curriculum Documents, OME (2014) *How Does Learning Happen?* Pennsylvania Land Trust (n.d.), Sobel (1996), Williams and Brown (2011)

BENCHMARKS FOR GRADE 3 AND 4 (8 and 9 year olds)			
CORE STEWARDSHIP PRINCIPLE	BASIC BENCHMARK	POSSIBLE ACTIVITIES:	EXISTING COMMUNITY RESOURCES
Build self-confidence, ability to make decisions and solve problems through independent mobility.	13. Travel by yourself at least twice a week on a familiar route. This can include walking, riding your bike or traveling on public transit.	<ul style="list-style-type: none"> If you have a dog, planning a route and taking your dog on a walk is a great way to try being outdoors on your own. Ask your parents to help you plan a route to try. How much do you remember from your trips? Make a map, draw a picture, keep a journal. Research one of each wild thing that lives along your route: an animal, an insect, a bird, a wildflower, a tree <ul style="list-style-type: none"> What is its name? What does it need to survive: food, water, space, shelter? What is unique and/or special about your wild thing? Does it have a special connection to another wild thing (a squirrel needs trees for food)? 	<ul style="list-style-type: none"> City Transit Maps City Trail Maps Peterborough Field Naturalists Ontario Federation of Anglers and Hunters (OFAH) Birding websites Avant Garden Shop (for birdfeeder information) Camp Kawartha Brownsea Base at Rogers Cove Park (canoeing lessons in summer) YMCA (swimming lessons) 4-H Clubs Horticultural Societies KPR Outdoor Ed. Centres Think Outside Otonabee Conservation BIKE Community Cycling Hub Gamiing Ganaraska Forest Centre Nourish Project
Explore nature-based recreation. <ul style="list-style-type: none"> Build skills for lifelong fitness and enjoyment of the outdoors 	14. Try at least five different kinds of outdoor recreation that don't require gasoline or electricity.	<ul style="list-style-type: none"> Here are suggested activities to try: swimming, row boating, tobogganing, bicycling, skate-boarding, snowboarding, hiking, skating, tree climbing, building forts, birdwatching, tent camping. Make sure you try each one more than once! Which are your favourites and why? Check out Otonabee Regional Conservation Authority's "Things to do in Natural Areas", or the Ontario Children's Outdoor Charter for ideas. 	
Begin to explore the relationships between humans and other living things.	15. Try each of the adjacent activities. Document your experiences with a journal, a blog, photographs or video.	<ul style="list-style-type: none"> Grow a small garden of your own. This could be a container garden, a food garden, a garden to benefit bees, butterflies or other living things. Write down what you did, what the weather was like, what living things visited, what you learned, what you would do differently or the same if you tried it again. Set up a birdfeeder at home or at school and watch it every day. Write down who visits, what you observe when they visit, how often they come, how they interact and anything else you notice while watching. How many visiting birds can you learn by name? Catch insects: Go to a nearby pond, forest or meadow with a teacher or parent. Bring along a net and viewing jar – catch as many different kinds of insects as you can. How do they move? How do they breathe? Are they camouflaged? What do you think they eat? Put them back in their habitat when you're done. AND OR - Go fishing, Write down where and when you go fishing, what you saw, what the water looked like, what bait 	

		<p>you used, what fish you caught and what you did with them. Find out what kind of fish you caught or saw, what they eat and what eats them.</p> <ul style="list-style-type: none"> • Get to know a habitat. Visit one habitat – a forest, a meadow, a wetland. Walk along one straight line and make a quick list of everything you see, the flowers, bushes, trees, birds, insects. Make a mural of these living things. Include the sun, soil and water. Use string to connect one living and non-living thing to another and show how they are related. For example a tree gets its energy from the sun, nutrients from the soil and water from the rain). It gives food to squirrels and birds. Insects live on its branches and bark. 	
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FOR TEACHERS: A SAMPLE OF CURRICULUM LINKS

GRADE 3

The Arts (2009)

Dance

- Imitate movements found in their natural environment in a variety of ways and incorporate them into a dance phrase (e.g., modify the movements of animals, snow falling to the ground, ice melting, plants growing; connect a series of insect-like movements together to make a phrase).

Visual Arts

- Create two- and three-dimensional works of art that express personal feelings and ideas inspired by the environment or that have the community as their subject (e.g., make a symmetrical sculpture of an insect or a flower, using natural materials such as wood).

Physical Education (2015)

- Actively participate in a wide variety of program activities (e.g., outdoor activities) according to their capabilities, while applying behaviours that enhance their readiness and ability to take part.

Healthy Eating

- Demonstrate an understanding of how the origins of food (e.g., where the food is grown, how it is made) affect its nutritional value and environmental impact.

Science and Technology (2007)

Understanding Life Systems: Growth and Changes in Plants

- Assess ways in which plants have an impact on society and the environment, and ways in which human activity has an impact on plants and plant habitats;
- Assess the impact of different human activities on plants, and list personal actions they can engage in to minimize harmful effects and enhance good effects;
- Assess the impact of soils on society and the environment, and suggest ways in which humans can enhance positive effects and/or lessen or prevent harmful effects.

Social Studies (2013)

Inquiry: use the social studies inquiry process to investigate some of the environmental effects of different types of land and/or resource use in two or more Ontario municipal regions, as well as some of the measures taken to reduce the negative impact of that use.

GRADE FOUR**The Arts (2009)**

- Translate into dance a variety of movement sequences observed in nature.

Physical Education (2015)

- Identify factors that motivate participation in physical activity every day at school, at home, or in their communities;
- Identify ways of promoting healthier food choices in a variety of settings and situations.

Science and Technology (2007)

Understanding Life Systems: Habitats and Communities

- Analyse the positive and negative impacts of human interactions with natural habitats and communities (e.g., human dependence on natural materials), taking different perspectives into account (e.g., the perspectives of a housing developer, a family in need of housing, an ecologist), and evaluate ways of minimizing the negative impacts;
- Identify reasons for the depletion or extinction of a plant or animal species (e.g., hunting, disease, invasive species, changes in or destruction of its habitat), evaluate the impacts on the rest of the natural community, and propose possible actions for preventing such depletions or extinctions from happening;
- Demonstrate an understanding of habitats as areas that provide plants and animals with the necessities of life (e.g., food, water, air, space, and light).

Understanding Earth and Space Systems: Rocks and Minerals

- Assess the social and environmental impacts of human uses of rocks and minerals.

Social Studies (2013)

- Use the social studies inquiry process to investigate some issues and challenges associated with balancing human needs/wants and activities with environmental stewardship in one or more of the political and/or physical regions of Canada.

REFERENCES: Chawla (2006), Christian et al (2014), Community Interviews, Kozak & Elliott (2014), Louv (2008), OME Curriculum Documents, Pacilli et al (2013), Participaction (2015), Pennsylvania Land Trust (n.d.), Rissotto & Tonucci (2002), Stoecklin (n.d.), Wells and Lekies (2006)

BENCHMARKS FOR GRADE 5 AND 6 (10 and 11 year olds)			
CORE STEWARDSHIP PRINCIPLE	BASIC BENCHMARK	POSSIBLE ACTIVITIES:	EXISTING COMMUNITY RESOURCES
Understand the role of energy in our lives.	16. Every living thing needs energy (including you!). Visit a place that uses 3 different kinds of renewable energy and investigate how it operates.	<ul style="list-style-type: none"> • Be an energy detective. Find out at home or at school what kind of energy is used for heating, cooling, lights and appliances. Keep track of how much energy is used each day, each week, each month. How is that energy produced? What are the impacts of that source of energy? Make a plan to reduce the energy you use. Try out your plan and write a story about what happened. • Explore renewable energy sources. What different types of renewable energy are there? (e.g. solar, wind, geothermal, hydroelectric) Find someplace in the local community that uses at least 3 forms of renewable energy. • Tour a hydroelectric generating station. 	<ul style="list-style-type: none"> • Camp Kawartha • Camp Kawartha Environment Centre • Peterborough Field Naturalists • Ontario Federation of Anglers and Hunters (OFAH) • Otonabee Conservation • Kawartha Land Trust • Brownsea Base at Rogers Cove Park (canoeing lessons in summer) • KPR Outdoor Ed. Centres • Think Outside • Ontario Turtle Conservation Centre • Gamiing • Kawartha Nordic • First Nations: Alderville, Curve Lake, Hiawatha, Scugog • Nogojiwanong Friendship Centre • Ganaraska Forest Centre • Peterborough Utilities
Develop more complex outdoor skills.	17. Try at least three new outdoor activities that don't require fossil fuels. Include a sport, a craft and a survival skill.	<ul style="list-style-type: none"> • Try some new outdoor sports. Here are some ideas: canoeing, kayaking, cross-country skiing, archery, snow shoeing, geo-caching • Work with an outdoor expert to learn to identify at least five different wild plants that are easy to find and safe to eat. How can you recognize them? Are there other similar plants? • Learn to make something from natural materials that you can use. Try weaving a mural, making a basket, building a pot, making a necklace or headband. 	
Explore human impacts on the environment through planning and implementing a community project.	18. Create a book, blog or video about a nearby natural area to encourage people to visit and appreciate it.	<ul style="list-style-type: none"> • Use art, photography, literature and science to research and produce a field guide or trip guide • Invite local experts to share what they know about the place – its history, what lives there, its special features • Work with others to produce maps, artwork, stories or poems for your book to reflect what you learned and how you feel about the area • Think of ways to encourage others to visit the space and use the guide you have produced 	
Expand understanding of the relationships between living things and their habitats.	19. Explore biodiversity by finding out what lives in a wetland	<ul style="list-style-type: none"> • With a parent, teacher or leader, go to a pond. Take along a net, magnifier and a pond field guide. <ul style="list-style-type: none"> ○ Dip your net in the pond. Try to find at least 10 different organisms that live there. Use a dichotomous key to help you. Go from the smallest (Daphnia, Hydra) to the biggest (diving beetles, frogs, tadpoles) ○ Learn the calls of 5 local frogs. Visit a wetland at night with a parent or leader and identify which frogs are calling. Go www.frogwatch.ca to report your findings. You're participating in Citizen Science! 	

		<ul style="list-style-type: none"> ○ Explain 3 ways this wetland helps the environment. ○ Find out more about one turtle that lives nearby. 7 out of 8 Ontario turtles are listed as “species at risk” Find out why. Make a turtle poster for the turtle you studied. Tell people what they can do to help protect turtles. 	
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FOR TEACHERS: A SAMPLE OF CURRICULUM LINKS

GRADE FIVE

The Arts (2009)

- Create two- and three-dimensional art works that express feelings and ideas inspired by their own and others’ points of view

Physical Education (2015)

- Demonstrate an understanding of factors that contribute to their personal enjoyment of being active as they participate in a wide variety of individual and small-group activities and lead-up games;
- Demonstrate an understanding of proactive measures that should be taken to minimize environmental health risks that may interfere with their safe participation in and enjoyment of outdoor physical activities.

Science and Technology (2007)

Understanding Life Systems

- Assess the effects of social and environmental factors on human health, and propose ways in which individuals can reduce the harmful effects of these factors and take advantage of those that are beneficial.

Understanding Structures and Mechanisms: Forces Acting on Structures

- Evaluate the impact of society and the environment on structures and mechanisms, taking different perspectives into account (e.g., the perspectives of golfers, local bird-watching groups, families, a school board), and suggest ways in which structures and mechanisms can be modified to best achieve social and environmental objectives.

Understanding Earth and Space Systems: Conservation of Energy and Resources

- Analyse the immediate and long-term effects of energy and resource use on society and the environment, and evaluate options for conserving energy and resources;
- Evaluate the effects of various technologies on energy consumption (e.g., improving our home’s insulation allows us to conserve heat and reduce energy consumption; aerodynamic design can improve the energy efficiency of cars and buses; household appliances designed to make our lives easier use large amounts of energy);
- Identify renewable and non-renewable sources of energy (e.g., renewable: sun, wind, ocean waves and tides, wood; non-renewable: fossil fuels such as coal and natural gas).

Social Studies (2013)

- Gather and organize a variety of information and data that present various perspectives about Canadian social and/or environmental issues, including the perspective of the level (or levels) of government responsible for addressing the issues.

GRADE SIX

The Arts (2009)

Visual Art

- Use elements of design in art works to communicate ideas, messages and understandings;
- Create a digital photo montage that represents aspects of environmentalism.

Physical Education (2015)

- Describe factors that motivate them to participate in physical activity every day at school and during leisure time and that influence their choice of activities;
- Participate in sustained moderate to vigorous physical activity, with appropriate warm-up and cool-down activities, to the best of their ability for a minimum of twenty minutes each day;
- Demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity (e.g. wearing an appropriate and properly fitted helmet when taking part in activities such as bike riding, downhill skiing, or skateboarding).

Science and Technology (2007)

Understanding Life Systems: Biodiversity

- Assess human impacts on biodiversity, and identify ways of preserving biodiversity;
- Analyse a local issue related to biodiversity;
- Propose action that can be taken to preserve biodiversity, and act on the proposal;
- Assess the benefits that human societies derive from biodiversity and the problems that occur when biodiversity is diminished;
- Follow established safety procedures for outdoor activities and field work;
- Investigate the organisms found in a specific habitat and classify them according to a classification system;
- Identify and describe the distinguishing characteristics of different groups of plants and animals;
- Describe interrelationships within species;
- Explain how invasive species reduce biodiversity in local environments.

Understanding Matter and Energy: Electricity and Electrical Devices

- Evaluate the impact of the use of electricity on both the way we live and the environment;
- Assess the short and long term environmental effects of the different ways in which electricity is generated in Canada including the effect of each method on natural resources and living things in the environment;
- Assess opportunities for reducing electricity consumption at home or at school that could affect the use of non-renewable resources in a positive way or reduce the impact of electricity generation on the environment.

Social Studies (2013)

Heritage and Citizenship: First Nation Peoples

- Gather and organize information on global issues of political, social, economic, and/or environmental importance, including their impact and responses to them, using a variety of resources and various technologies;
- Describe characteristics of pre-contact First Nation cultures across Canada, including their close relationships with the natural environment.

REFERENCES: Community Interviews, Fisman (2005), Kozak and Elliott (2014), OME Curriculum Documents, Pennsylvania Land Trust (n.d.), Sobel (1998), Wells & Lekies (2006)

BENCHMARKS FOR GRADE 7 AND 8 (12 and 13 year olds)			
CORE STEWARDSHIP PRINCIPLE	BASIC BENCHMARK	POSSIBLE ACTIVITIES:	EXISTING COMMUNITY RESOURCES
Develop leadership and decision-making skills through planning and conducting projects to benefit the community.	20. Plan, conduct and evaluate any two of the adjacent projects:	<ul style="list-style-type: none"> Plan and map a local day trip for a group using transit, bicycle, foot or boat travel. Mark at least 10 signposts on your map (unique features that identify the route). Take at least two other people on your trip. Write down or record what you did, who came along, how it went, and what you saw and learned on the trip. Geocaching is a fun focus for a trip. Follow a local stream to see where it comes from and where it goes. Do you see any problems along the way (garbage, erosion, pollution)? Meet with a local expert to talk about what you could do to benefit the stream. Plan and conduct a stream rescue project. Document what you did and monitor its success. Plan and manage a school recycling or composting project. Visit other schools to see what recommendations they have; document your project and evaluate your success. Help to care for a living thing over an extended period (a young child, a sick or aging friend or relative, foster a needy animal, volunteer at a wildlife rehabilitation centre, a humane society, a garden or natural area, a farm). Document what you learned. 	<ul style="list-style-type: none"> Camp Kawartha Camp Kawartha Environment Centre City Transit Maps City Trail Maps Peterborough Field Naturalists Ontario Federation of Anglers and Hunters (OFAH) Otonabee Conservation GreenUp New Canadians' Centre Regional First Nations: Alderville, Curve Lake, Hiawatha, Scugog Nogojiwanong Friendship Centre Petroglyphs Provincial Park Ontario Turtle Conservation Centre
Explore relationships and interconnections between human and non-human communities.	21. Learn about at least two other cultures by meeting and talking with someone whose background is different from yours.	<ul style="list-style-type: none"> Research the meaning of "culture". Describe in words, video, drama or artwork how you would characterize your family's culture. What are some things you like about your culture? Is there anything you don't like about your culture? Arrange to meet someone in your community who has come from a different country or has a culture that is very different from yours. Learn about their history, struggles they have experienced, their favourite foods, music they like, ceremonies or other traditions from their culture. Think of a creative way to represent what you have learned from these people. There are four First Nations communities in the Peterborough area. Each holds a pow-wow every year to celebrate their culture, and anyone is welcome to attend. Visit a pow-wow at one of these First Nations: Alderville, Curve Lake, Hiawatha, Scugog. How do you see each of these Indigenous principles represented in the ceremonies – respect, relationship, reciprocity, responsibility. How can these concepts be integrated into your own life? 	<ul style="list-style-type: none"> Gamiing Ganaraska Forest Centre Peterborough Humane Society Lakefield Animal Welfare Society Endeavour Centre Your Healthy House Peterborough Museum and Archives

Explore tools for monitoring ecosystem health.	22. Become a “Citizen Scientist” by participating in a community project to monitor the health of wildlife species.	<ul style="list-style-type: none"> There are many local initiatives to monitor the populations of various wildlife species. Collecting data is an important way to evaluate whether a species is declining or stable. Research some of the current “Citizen Science” projects in your community, and participate in at least one of them. Some ideas include: Frogwatch, annual bird and butterfly counts, turtle sightings, Journey North, Ontario Nature, Ice Watch 	
Expand understanding of sustainable lifestyles.	23. Design your own healthy home	<ul style="list-style-type: none"> Can you design the ultimate energy efficient, healthy home (healthy for the planet and healthy for humans)? Use materials at hand to create a 3 dimensional model. Think about incorporating natural materials, passive solar design, rainwater harvesting, renewable forms of energy, innovative ways to treat wastewater and human waste. Think about natural processes – in what way can your house emulate natural systems? What will happen to your house when its useful life is over? 	

FOR TEACHERS: A SAMPLE OF CURRICULUM LINKS

GRADE SEVEN

The Arts (2009)

Dance

- Construct personal interpretations of the messages in their own and others’ dance pieces including messages relevant to their community and/or the world and communicate their responses in a variety of ways; describe the evolution of dance.

Visual Arts

- Create art works using a variety of traditional forms and current media technologies that express feelings, ideas and issues, including opposing points of view;
- Identify and describe some of the ways in which visual art forms and styles reflect the beliefs and traditions of a variety of cultures and civilizations.

Physical Education (2010)

- Actively participate in a wide variety of program activities, according to their capabilities;
- Demonstrate an understanding of the factors that contribute to their personal enjoyment of being active as they participate in a diverse range of physical activities in a variety of indoor and outdoor environments;
- Identify factors that can affect health-related fitness;
- Demonstrate behaviours and apply procedures that maximize their safety and that of others.

Science and Technology (2007)

Understanding Life Systems: Interactions in the Environment

- Assess the impact of human activities and technologies on the environment, and evaluate ways of controlling these impacts;
- Demonstrate an understanding of an ecosystem;

- Design and construct a model ecosystem (e.g. a composter, a classroom terrarium, a greenhouse), and use it to investigate interactions between the biotic and abiotic components in an ecosystem;
- Identify biotic and abiotic elements in an ecosystem and describe the interactions between them;
- Describe the roles and interactions of producers, consumers, and decomposers within an ecosystem;
- Describe the transfer of energy in a food chain and explain the effects of the elimination of any part of the chain;
- Describe how matter is cycled within the environment and explain how it promotes sustainability;
- Describe ways in which human activities and technologies alter balances and interactions in the environment;
- Describe Aboriginal perspectives on sustainability and describe ways in which they can be used in habitat and wildlife management.

Understanding Structures and Mechanisms: Form and Function

- Analyse personal, social, economic and environmental factors that need to be considered in designing and building structures and devices

Understanding Earth and Space Systems: Heat in the Environment

- Assess the costs and benefits of technologies that reduce heat loss or heat-related impacts on the environment;
- Assess the social and environmental benefits of technologies that reduce heat loss or transfer (e.g. insulated clothing, building insulation, green roofs, energy-efficient buildings);
- Assess the environmental and economic impacts of using conventional (e.g. fossil fuel, nuclear) and alternative forms of energy (e.g. geothermal, solar, wind, wave, biofuel).

Geography (2004)

- Describe positive and negative ways in which human activity can affect resource sustainability and the health of the environment.

Mathematics (2005)

- Collection and analysis of data.

History (2004)

- Illustrate the historical development of their local community;
- Describe and analyze conflicting points of view about a series of historical events.

GRADE EIGHT

The Arts (2009)

Dance

- Use dance as a language to communicate messages about themes of social justice and/or environmental health;

Drama

- Engage actively in drama exploration and role play, with a focus on examining multiple perspectives and possible outcomes related to complex issues, themes, and relationships from a wide variety of sources and diverse communities;
- Identify and describe a wide variety of ways in which drama and theatre make or have made contributions to social, cultural, and economic life in a variety of times and places.

Physical Education (2010)

- Demonstrate an understanding of the components of a range of physical activities and apply this understanding as they participate in a variety of physical activities in indoor and outdoor environments;
- Apply a variety of tactical solutions to increase chances of success as they participate in physical activities.

Science and Technology (2007)

Understanding Structures and Mechanisms: Systems in Action

- Assess the personal, social and/or environmental impacts of a system, and evaluate the improvements to a system and/or the alternative ways of meeting the same needs;
- Assess the impact on individuals, society, and the environment of alternative ways of meeting needs that are currently met by existing systems, taking different points of view into consideration;
- Demonstrate an understanding of different types of systems and the factors that contribute to their safe and efficient operation;
- Identify social factors that influence the evolution of a system.

Understanding Earth and Space Systems: Water Systems

- Assess the impact of human activities and technologies on the sustainability of water resources;
- Evaluate personal water consumption, compare it with personal water consumption in other countries, and propose a plan of action to reduce personal water consumption to help address water sustainability issues;
- Investigate how municipalities process water and manage water;
- Use scientific inquiry/research to investigate local water issues;
- Use technological problem-solving skills to design, build and test a water system device that performs a practical function or meets a need;
- Use appropriate science and technology vocabulary in oral and written communication;
- Use a variety of forms to communicate with different audiences and for a variety of purposes;
- Demonstrate an understanding of the watershed as a fundamental geographic unit, and explain how it relates to water management and planning;
- Explain how human and natural factors cause changes in the water table.

History (2004)

- Describe the factors contributing to change in Canadian society.

Geography (2004)

- Create and use a variety of maps for specific purposes;
- Identify the push and pull factors that influence people to move;
- Explain how the components of culture can be affected by migration;
- Formulate questions to guide and analyze research on migration and mobility (e.g. What barriers exist today for new immigrants?).

REFERENCES: Community Interviews, Louv (2008), Hungerford & Volk (1990), Kozak and Elliott (2014), OME Curriculum Documents, Pacilli et al (2013), Pennsylvania Land Trust (n.d.), Rissotto & Tonucci (2002), Sobel (1996)

BENCHMARKS FOR GRADE 9 AND 10 (14 and 15 year olds)			
CORE STEWARDSHIP PRINCIPLE	BASIC BENCHMARK	POSSIBLE ACTIVITIES:	EXISTING COMMUNITY RESOURCES
Deepen understanding of how modern lifestyles affect the environment. Expand leadership and problem-solving skills by seeking solutions to ecological imbalances.	24. Calculate your Ecological Footprint. <ul style="list-style-type: none"> How does your footprint compare with your friends? How does it compare with Canada and other countries? Find three ways to reduce your ecological footprint and integrate them into your life. Document your experiences in a blog, video or journal, and evaluate your success 	<ul style="list-style-type: none"> Visit www.footprintnetwork.org and follow the directions to calculate your ecological footprint Research how Canadian lifestyles consume global resources, and how this compares with other countries What does sustainability mean? Document some of the ways that Canadians could live more sustainable lifestyles Make a goal for yourself on reducing your ecological footprint. Try it for a month and assess how successful you've been. See if you can reduce your footprint in other ways. Get your family involved too. 	<ul style="list-style-type: none"> Camp Kawartha Scouts Canada Local First Nations: Alderville, Curve Lake, Hiawatha, Scugog Nogojiwanong Friendship Centre Peterborough Field Naturalists Ontario Federation of Anglers and Hunters (OFAH) Brownsea Base at Rogers Cove Park (canoeing lessons in summer) Peterborough Children's Water Festival Activity Haven Senior's Club Local senior's residences Otonabee Conservation www.footprintnetwork.org Gamiing Ganaraska Forest Centre Nourish Project Ontario Ministry of Natural Resources and Forestry 4-H Clubs Farms at Work
Expand skill and confidence in outdoor recreation, responsibility and survival.	25. Explore and develop at least three new outdoor skills.	<ul style="list-style-type: none"> Try learning how to make a fire without matches or paper. Learn about fire safety and how to be responsible with fire when outdoors. Learn about wild/natural foods in your area. Fishing, hunting and edible wild plants can all provide nutrition. Make sure you check out the hunting and fishing regulations in your area. Research the meaning of sustainable harvest. How can the environment provide our needs without being damaged by human impact? Expand your skills with advanced canoeing, kayaking, backpacking, cross country skiing or white water rafting Learn how to find your way in a natural area using maps, compass and/or GPS Learn how to recognize at least two constellations in the night sky in each of the four seasons. Learn how to tell the four directions using clues in the sky. Learn new skills in sustainable food production. 	
Expand abilities to understand and empathize with others while exploring and responding to local social and environmental issues.	26. Volunteer some time to help in your community in at least three different ways. Reflect on what you learned through music, poetry, a blog, journal or poetry.	<ul style="list-style-type: none"> Help someone younger than you to learn outdoor skills or games Help with the Peterborough Children's Water Festival in May Visit someone in a senior's residence and ask them to tell you stories from their childhood Volunteer in a natural area to help with trail maintenance, ecological restoration or control of invasive species Help with a community tree-planting project. Participate in planning, planting, maintenance and monitoring. Do you 	

		think it was a successful project? Would you make any changes in future projects? • Help with ecological monitoring through water quality testing, Frogwatch, bird banding or other local projects	
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FOR TEACHERS: A SAMPLE OF CURRICULUM LINKS

GRADE NINE

Canadian and World Studies (2013)

Geography

- Assess the renewability and non-renewability of various natural resources in Canada;
- Assess the feasibility of using selected renewable and alternative energy sources to augment or replace existing power sources in various parts of Canada;
- Analyse the impact of selected population trends on people living in Canadian communities;
- Analyse the effects of food production practices, distribution methods, and consumer choices on the sustainability of Canada's food system;
- Analyse the effects of individual lifestyle choices on energy consumption and production and assess the implications for sustainability in Canada;
- Analyse the factors that affect the social and economic sustainability of communities;
- Propose courses of action that would make a community more sustainable.

Health and Physical Education (2015)

Healthy Active Living

- Demonstrate positive social behaviours and adherence to ethical and fair play standards that contribute to creating a rewarding and enjoyable environment for participation in physical activities;
- Participate regularly in sustained moderate to vigorous physical activity to the best of their ability for a minimum of twenty minutes;
- Describe the short-term and long-term benefits of developing both health-related fitness and skill-related fitness;
- Demonstrate behaviours and apply procedures that maximize their safety and that of others;
- Explain how active living and healthy eating contribute to a person's physical health and mental, emotional and spiritual well-being.

Science (2008)

- Identify various factors related to human activity that have an impact on ecosystems;
- Use direct observation, computer simulation or star charts to determine the location, appearance and motion of well-known stars and other celestial objects that are visible in the night sky;
- Assess some of the social, economic and environmental implications of the production of electrical energy in Canada from renewable and non-renewable sources;
- Produce a plan of action to reduce electrical energy consumption at home and outline the roles and responsibilities of various groups in this endeavour.

GRADE TEN

The Arts (2010)

Media Arts

- Design and produce original media art works on a specific theme (e.g., an environmental issue) by combining one or more of the principles of media arts and a variety of elements from the contributing arts

Drama

- select and use appropriate forms to present identified issues from a variety of perspectives
- use a variety of technological tools (e.g., light, sound, set design, props, models) to enhance the impact of drama works

Integrated Arts

- integrate media/materials, tools, and techniques from more than one arts discipline to create an integrated art work/production that communicates a specific message

Music

- explain how the study of music has contributed to their personal growth (including the development of their values), their ability to express themselves, their awareness of social and environmental issues, and their understanding of others

Health and Physical Education (2015)

Healthy Active Living

- Demonstrate positive social behaviours and adherence to ethical and fair play standards that contribute to creating a rewarding and enjoyable environment for participation in physical activities;
- Participate regularly in sustained moderate to vigorous physical activity to the best of their ability for a minimum of twenty minutes;
- Demonstrate an understanding of factors that enhance mental health and emotional and spiritual well-being;
- Demonstrate the ability to analyze situations involving conflict within oneself or conflict with others and apply appropriate conflict resolution strategies.

Science (2008)

- Assess, on the basis of research, the effectiveness of some current individual, regional, national or international initiatives that address the issue of climate change;
- Describe the principal sources and sinks, both natural and anthropogenic, of greenhouse gases.

Canadian and World Studies (2013)

Civics

- explain what it means to be a “global citizen” and why it is important to be one

REFERENCES: Community Interviews, Louv (2008), Kozak and Elliott (2014), Lugg (2007), Ontario Curriculum Documents, Pennsylvania Land Trust (n.d.), Sobel (1996)

BENCHMARKS FOR GRADE 11 AND 12 (16 and 17 year olds)			
CORE STEWARDSHIP PRINCIPLE	BASIC BENCHMARK	POSSIBLE ACTIVITIES:	EXISTING COMMUNITY RESOURCES
Advanced outdoor experiences (including planning, leading and evaluating) are important in enhancing leadership, conflict resolution, teamwork and decision-making. Respected mentors/advisors are important role models for these activities.	27. Plan and go on an extended trip in a wilderness area for at least 5 days. Options for travel include canoe, bicycle, skis, hiking, snowshoeing or any self-propelled mode of travel.	<ul style="list-style-type: none"> Decide where and when your trip will take place Decide what type of gear you will need and how you will access it Plan how you will get to your starting point Plan your meals What safety concerns should you consider, and how will you address them? Plan to leave cell phones or other electronic equipment at home (unless used solely in case of emergency) Write about your trip afterwards – what you liked, challenges you experienced and how you dealt with them. What did you learn about yourself and others you travelled with? What would you change for a future trip? What would you do the same? What else did you learn from this experience? What impacts did your trip have on the environment? 	<ul style="list-style-type: none"> Camp Kawartha Ontario Parks Kawartha World Issues Centre Scouts Canada Riverview Park and Zoo Ontario Turtle Conservation Centre Indian River Reptile Zoo Peterborough Humane Society Lakefield Animal Welfare Society Otonabee Conservation New Canadians' Centre Reframe Film Festival BIKE Community Cycling Hub Canadian Canoe Museum
Young adults can develop a sense of collective responsibility through identifying and seeking solutions to local environmental issues.	28. Help to rehabilitate something that has been damaged, such as an animal, waterway or natural area, over an extended period.	<ul style="list-style-type: none"> Learn about what has caused the damage Work with an expert to decide on a suitable plan of action Help to organize and conduct a rehabilitation plan Document the process through a blog, photo essay, documentary or piece of artwork Monitor the project after the rehabilitation and explore its effectiveness 	
Experiential learning – hands-on and in the community- is an effective way to promote leadership, confidence, empowerment and agency. Working with peers helps to harness energy and motivation.	29. Explore a local issue of social justice and develop a plan to raise public awareness and/or motivate public involvement.	<ul style="list-style-type: none"> Identify a local social issue that concerns or interests you. Examples may include homelessness, poverty, racial discrimination or age discrimination Explore the issue with a local expert and/or teacher. What are the underlying factors? How can the community work toward resolving the problem? What skills are needed to make a positive change? What role could young people play in helping? Plan and conduct a response using creative communication (social media, street theatre, photography, film etc.) Propose a solution and explore how to put it into action 	

FOR TEACHERS: A SAMPLE OF CURRICULUM LINKS (Overall Expectations)

GRADE ELEVEN The Arts (2010)

- Demonstrate an understanding of how media arts works reflect personal and cultural identity, and affect personal, cultural, and community values and their awareness of those values.

Canadian and World Studies (2015)

Geography

- Assess quality of life in the selected region, including factors that contribute to quality of life and policies/programs that aim to improve it;
- Analyse issues associated with sustainability and stewardship of natural resources in the selected region;
- Analyse aspects of inequality and economic sustainability in the selected region, including programs intended to promote equality and sustainability;
- Explain how climate, including climate change, and natural hazards affect the selected region;
- Analyse issues relating to natural and human impacts on the environment and the sharing of natural resources between population groups;
- Analyse strategies for the protection of natural and cultural resources that are essential to tourism, and assess their effectiveness;
- Analyse impacts of environmental conditions and concerns on the tourism industry;
- Use a variety of spatial technologies to help them assess human activities and plan and promote the sustainable use of the natural environment, including natural resources, in their local community or area;
- Use a variety of spatial technologies to analyse the impact of human activity on the environment in their local community or area and beyond, and identify possible solutions;
- Use a variety of spatial technologies to analyse global issues related to geography and their impacts on the local community or area.

History

- Analyse how interrelationships with other societies and with the environment contributed to the decline of three or more societies/civilizations, each from a different region and different period prior to 1500.

Health and Physical Education (2015)

- Participate actively and regularly in a wide variety of physical activities, and demonstrate an understanding of factors that can influence and support their participation in physical activity now and throughout their lives;
- Demonstrate an understanding of the importance of being physically active, and apply physical fitness concepts and practices that contribute to healthy, active living;
- Demonstrate responsibility for their own safety and the safety of others as they participate in physical activities;
- Demonstrate an understanding of factors that contribute to healthy development;
- Demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being;
- Demonstrate the ability to make connections that relate to health and well-being – how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others' health and well-being;
- Demonstrate an understanding of various environmental factors that influence personal health;
- Demonstrate an understanding of the components of healthy communities and the factors that affect and sustain health within them.

Native Studies (2000)

- Demonstrate an understanding of how Aboriginal identity is linked to the physical environment;
- Demonstrate an understanding of Aboriginal peoples' strong relationship to the land;
- Explain how Aboriginal peoples' links to the land and to a sustainable environment are part of their cultural identity;
- Explain how Aboriginal peoples' relationship to the land traditionally sustained Aboriginal life in various environments across Canada and continues to be evident in the cultural practices of Aboriginal peoples today;

Science (2008)

Biology

- Analyse the effects of various human activities on the diversity of living things;
- Investigate through field activities the principles of scientific classification, using appropriate sampling and classification techniques;
- Demonstrate an understanding of the diversity of living organisms in terms of the principles of taxonomy and phylogeny;
- Analyse the roles of plants in ecosystems, and assess the impact of human activities on the balance of plants within those ecosystems;
- Demonstrate an understanding of the structure and physiology of plants and their role in natural environments.

Social Studies and Humanities (2013)

Equity Studies

- Analyse a range of social, political, economic, and environmental issues relating to gender in Canadian and global contexts;
- Demonstrate an understanding of the impact individual action can have on equity, social justice, and environmental issues, and of how the media can create awareness of these issues.

GRADE TWELVE

Canadian and World Studies (2015)

Geography

- Analyse strategies and initiatives that support environmental stewardship at a national and global level, and assess their effectiveness in promoting the sustainability of the natural environment;
- Assess ways in which stewardship practices can contribute to the sustainability of human settlements;
- Describe ways in which human societies modify their local environments in order to meet economic, social, political, and other needs, and assess the effects of these modifications on sustainability;
- Use the geographic inquiry process and the concepts of geographic thinking when investigating issues related to the environment and the management of natural resources;
- Assess various strategies used for protecting natural spaces and species, locally, nationally, and globally;
- Assess impacts of human population settlement on natural spaces and species;
- Analyse challenges involved in reducing pollution from human activities, and assess the effectiveness of various methods of pollution reduction;
- Evaluate impacts of various types of pollution on the natural environment and on human health;
- Describe key ecological and biological processes, and explain how they are affected by human activities;
- Assess a variety of strategies for resolving environmental and natural resource management issues, locally, nationally, and/or globally;
- Assess impacts of community land use and infrastructure on humans and the natural environment, and assess ways of reducing these impacts;
- Analyse the role of individuals, the local community, and governments in achieving sustainability, and assess opportunities for personal stewardship and involvement in sustainability initiatives;
- Use the geographic inquiry process and the concepts of geographic thinking when investigating issues relating to the natural environment and sustainability;
- Assess the contributions of stewardship initiatives by groups and individuals to the sustainable use and management of natural resources, locally, nationally, and globally;
- Assess the role of various strategies, organizations, and agreements in reducing the impact of human activity on the environment.

History

- Explain how various social and environmental factors affected the lives of people in two or more societies in different regions of the world and at different times up to the fifteenth century.

Health and Physical Education (2015)

- Participate actively and regularly in a wide variety of physical activities, and demonstrate an understanding of factors that can influence and support their participation in physical activity now and throughout their lives;
- Demonstrate an understanding of the importance of being physically active, and apply physical fitness concepts and practices that contribute to healthy, active living;
- Demonstrate responsibility for their own safety and the safety of others as they participate in Grade 12, Open physical activities;
- Demonstrate an understanding of factors that contribute to healthy development;
- Demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being;
- Demonstrate an understanding of the concept of leadership and of the attributes, skills, and styles needed to be an effective leader;
- Demonstrate an understanding of group dynamics, and apply teamwork skills in a variety of contexts related to healthy, active living;
- Identify and explain the benefits of lifelong participation in active recreation and healthy leisure, and demonstrate an understanding of factors that enable and constrain participation in active recreation and healthy leisure activities;
- Demonstrate an understanding of mentorship and the methods used by effective mentors to contribute to the growth and development of others;
- Demonstrate the ability to help others develop and implement a personal healthy active living plan.

Science (2008)

Biology

- Analyse the role of metabolic processes in the functioning of biotic and abiotic systems, and evaluate the importance of an understanding of these processes and related technologies to personal choices made in everyday life;
- Analyse the relationships between population growth, personal consumption, technological development, and our ecological footprint, and assess the effectiveness of some Canadian initiatives intended to assist expanding populations.

Chemistry

- Analyse the cumulative effects of human activities and technologies on air quality, and describe some Canadian initiatives to reduce air pollution, including ways to reduce their own carbon footprint;
- Evaluate the impact on society, human health, and the environment of products made using organic compounds;
- Evaluate the importance of government regulations, scientific analyses, and individual actions in improving air and water quality, and propose a personal plan of action to support these efforts;
- Demonstrate an understanding of chemical reactions that occur in the environment as a result of both natural processes and human activities.

Environmental Science

- Analyse social and economic issues related to an environmental challenge, and how societal needs influence scientific endeavours related to the environment;
- Investigate a range of perspectives that have contributed to scientific knowledge about the environment, and how scientific knowledge and procedures are applied to address contemporary environmental problems;
- Demonstrate an understanding of major contemporary environmental challenges and how we acquire knowledge about them;

- Evaluate the impact of agricultural and forestry practices on human health, the economy, and the environment;
- Investigate conditions necessary for plant growth, including the soil components most suitable for various species, and various environmentally sustainable methods that can be used to promote growth;
- Demonstrate an understanding of conditions required for plant growth and of a variety of environmentally sustainable practices that can be used to promote growth;
- Analyse selected current environmental problems in terms of the role human activities have played in creating or perpetuating them, and propose possible solutions to one such problem;
- Investigate air, soil, and water quality in natural and disturbed environments, using appropriate technology;
- Demonstrate an understanding of some of the ways in which human activities affect the environment and how the impact of those activities is measured and monitored.

Physics

- Analyse technologies that apply principles of and concepts related to energy transformations, and assess the technologies' social and environmental impact;
- Analyse the social, economic, and environmental impact of electrical energy production and technologies related to electromagnetism, and propose ways to improve the sustainability of electrical energy production.

Social Sciences and Humanities (2013)

Equity Studies

- Analyse a range of historical and contemporary equity and social justice issues and the impact of economic and environmental factors on these issues.

Family Studies

- Demonstrate an understanding of global textile production and its social and environmental impact; Globalization and Social Responsibility;
- Demonstrate an understanding of the impact of globalization on the fashion industry and of strategies for reducing the negative impact of the industry;
- Demonstrate an understanding of the impact of food production on the environment;
- Demonstrate an understanding of practices related to responsible consumerism;
- Demonstrate an understanding of the components of personal well-being, how to achieve and maintain it, and its importance throughout the life course;
- Demonstrate an understanding of how developmentally appropriate environments and experiences promote healthy development in children.

REFERENCES: Beames (2009), Community Interviews, Hungerford & Volk (1990), Kozak and Elliott (2014), Louv (2008), Ontario Curriculum Documents, Pennsylvania Land Trust (n.d.), Sobel (1996)

Working Together

Developing the *Pathway to Stewardship* from a vision to a tangible plan has required a great deal of teamwork, goodwill and dedication. Refining and implementing the plan is the next step in this process, and once again, this will call upon our collective wisdom and cooperation.

The simple, yet powerful benchmarks are designed so that every person in the community has a role to play in promoting and realizing the goal of stewardship. We suggest the following steps in moving forward:

1. Distribute the *Pathway to Stewardship* widely in the Greater Peterborough Area for public comment and suggestions.

We seek feedback from groups and individuals who work with children. Does this strategy make sense to you? Are any clarifications or adjustments needed? Can you see your group playing a role in implementing the plan? If so, what role could you play? Please email peterboroughpathway@gmail.com with comments.

2. Seek official endorsement from local groups and agencies.

Based on public feedback, the document will undergo a final edit. Then, it will be distributed for official written endorsement from community groups, agencies, businesses, and individuals. We hope that school boards and municipal governments will recognize the importance of this initiative and add their endorsement as well.

3. Identify and confirm existing community supports for each benchmark.

Each endorsing organization will be asked to confirm how they can support the plan. Can they provide support for specific benchmarks? Provide mentors? Provide training for others? Provide access to outdoor spaces, equipment or other resources?

4. Identify gaps in existing resources and encourage the development of necessary supports.

While there are many excellent services and resources already available to support the *Pathway to Stewardship*, we have identified a “wish list” of valuable supports and projects that could be developed by local organizations. These include:

- A list of local natural areas suitable for visits by the general public with maps and access points. Which of these have trails or other services? Which are suitable for small children? Are there any fees for using these areas? Are there restrictions on visiting times?
- Access to stewardship mentors and role models. Supportive mentors are critically important to help children enjoy outdoor time, spark their imaginations, learn nature’s mysteries and grow to love the natural world.

Some lucky children already have parents, relatives, family friends, teachers or leaders who play this role in their lives, but we need more people to fill in the gaps. Can we develop a library of mentors? Who is willing to lead a nature hike, tell a story, share a skill, visit a classroom or become a family nature friend?

- A series of regular neighbourhood walks throughout the community. How many people really know their neighbourhood? Do you recognize any of the trees, birds, animals or other wildlife and know what they need to live? Are there any interesting stories associated with your neighbourhood? Do you know your neighbours? Invite residents as well as guest experts to lead a “Magical Mystery Tour” of your neighbourhood. Who can organize this?
- More naturalized areas in public parks. Given the well-documented importance to children of free play in diverse natural spaces, the community needs natural play spaces in every neighbourhood. “Neighbourhood Nature Days” could be held here, with family picnics while the children play together.
- Designated “Nature Play” areas on public and private land. While sensitive natural areas require careful and respectful interaction from human visitors (staying on trails, looking but not picking, leaving things as you found them), communities would benefit from designated “nature play” areas for children, where they can build forts with branches, explore under rocks, play in mud puddles, pick flowers, collect treasures and generally play and explore freely. These opportunities provide enormous benefits for child development.
- Meaningful opportunities for young people to volunteer in their community. Volunteer time is now required for graduation from secondary school, but it can be difficult to find deep learning experiences for young people. Hands-on involvement in addressing community issues important to youth is a critical aspect of developing leadership and stewardship. Community groups, individuals and agencies should make youth involvement an important part of their annual plans. This is not “free labour”, but a valuable opportunity to share skills, build friendships and create a sense of ownership and responsibility in young people towards their community.
- Lists of excellent fiction and non-fiction books to encourage stewardship in children. Parents, teachers and librarians can help recommend favourite picture books that support developing stewardship. Bedtime stories are magical opportunities for parents to deepen bonds with their children, and provide lifelong memories of security, affection and attachment to family and nature. A list of the community’s favourite books for each age would be another valuable resource to support this project.

- Training opportunities for parents, teachers and caregivers to facilitate creative outdoor play. This could include training in the planning and creation of nature playscapes.

5. Develop an implementation plan, which includes recognition of the achievement of benchmarks.

There are many ways the *Pathway to Stewardship* could be implemented - ranging from an ad hoc “do whatever you can” approach to a coordinated, community-wide initiative where every child’s attainment of benchmarks is recorded and each graduating “steward” is given recognition and an award that appropriately marks their significant achievement.

The project may benefit from a website outlining benchmarks, providing contact information for supporting resources, and allowing every young person to enter and track their progress as they complete each step of the *Pathway to Stewardship*. A “Passport” model is one option for implementing these ideas, where every child has a real or virtual passport, which is stamped after the completion of each benchmark.

We suggest creating an implementation team to discuss the next steps in moving forward.

6. Conduct a pilot phase, which includes monitoring and evaluation.

Implementation may benefit from a pilot phase that could test the challenges of using and tracking the benchmarks in selected schools, families and community groups. This would help identify and address any questions or problems in the plan, and make any necessary adjustments before a broader rollout in the community.

7. Roll out the project community-wide.

Some type of headquarters for the project would be required to keep resources updated, expand on the options for benchmark-linked activities, track progress and organize annual celebrations to mark achievements.

8. Monitor, evaluate and adjust as needed.

As this is a unique strategy for promoting community-wide stewardship, it will be important to monitor progress and evaluate impacts on an ongoing basis. Emerging research may suggest adjustment to benchmarks as the project develops.

9. Encourage other communities to participate and develop their own supports and resources.

While the *Pathway to Stewardship* is community-based and designed to launch in the Greater Peterborough Area, the principles of child and stewardship development are the same everywhere. This strategy can be implemented much more widely, and we hope other communities will recognize its potential for positive impact.

Appendices

	<i>Page</i>
Appendix A: References	46
Appendix B: Interview Questions	51
Appendix C: Interviewees and affiliations	52
Appendix D: Interview Results	
Significant Memories	54
Recommendations	57
Responsibility	61
Appendix E: Community Resources	62



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Appendix B:

Interview Format for Pathway to Stewardship Project

Interviewee _____ Interviewer _____

1. **Introduction:** *Members of many different community organizations are working together to develop an “Environmental Framework” of important experiences in a child’s life which contribute to a sense of stewardship of the world. We are reviewing research and interviewing a variety of community leaders in the hopes of learning what a child needs to become a steward – someone who cares about others and the natural world and is able to protect and enhance their well-being.*
2. **Question:** How would you rate your interest in the environment and environmental issues (low, moderate, high, very high)? Can you briefly explain what, at this stage of your life, maintains this level of interest?
3. **Question:** Would you briefly summarize your professional background *(and relevant personal interests?)*.
4. **Question:** What experiences, if any, did you have as a child or youth that were important in creating your interest in the environment, and at what age did they occur?
5. **Question:** Children respond to the environment in different ways, depending in part, on their age. What opportunities and experiences do you believe are most important in fostering future stewardship at these stages of life:
 - a. Preschool children (birth to age 3),
 - b. Young elementary aged children (age 4-7),
 - c. Older elementary children (age 8-12),
 - d. Secondary students (age 13-18).
6. **Question:** Can you suggest how our community could be more effective in raising future stewards? Do you know of any unique initiatives going on locally that are helping achieve this?
7. **Question:** To what extent is it our community’s responsibility to foster stewardship in our children and youth?
8. **Wrap-up:** *Thanks, follow-up, suggestions for other people to interview etc.*

Estimated Interview Time: 30 minutes

Appendix C:

Interviewees and Affiliations (76 total)

Municipal Councils

Henry Clarke (Peterborough Deputy Mayor)
Mary Smith (Selwyn Mayor)

School Boards

Jonathan Berlingeri (Consultant - Peterborough Victoria Northumberland and Clarington Catholic District School Board)
Rusty Hick (Director - Kawartha Pine Ridge District School Board)

Municipal Employees

Paul Hambidge (Peterborough Urban Forest Specialist)
Melanie Kawalec (Peterborough Sustainability)
Mike Richardson (Selwyn Recreation)
Susan Sauvé (Peterborough Transportation)
Richard Straka (Peterborough Planning)
Virginia Swinson (Peterborough Waste Diversion)

Trent University Faculty

Ray Dart (Business Administration)
Paul Elliott (School of Education and Professional Learning) *project steering committee
Michael Fox (School of the Environment, Department of Biology)
Lisa Nisbet (Psychology)
Erica Nol (Biology)
Al Slavin (Physics)
Tom Whillans (School of the Environment)
(see also First Nations, below)

Sir Sandford Fleming College Faculty

Kevin Callan
Mary Lou Lummiss (Early Childhood Education) *project steering committee

First Nations

Nicole Bell (also Trent University – School of Education and Professional Learning)
David Newhouse (also Trent University – Indigenous Studies)

Elementary Teachers

Terry Hobday
Nicola Jennings
Kathy MacMillan-Jones
Sheila Potter *project steering committee
Deryck Robertson

Secondary Teachers

Jon Grimwood
Brent Harrald
John MacMillan-Jones
Pamela Maitland

Trent University Students

Leeanne Bailey
Katelynn Cadreux
Kortney Dunsby
Eliza Nicholson
Alex Parniak
Eric Post
Katie Shaw

Outdoor Educators

Jeff Bond – KPR Outdoor Education
Craig Brant – Camp Kawartha Environment Centre
Glen Caradus – Camp Kawartha, Canadian Canoe Museum
Julie Drain – Riverview Park and Zoo
Neil Fortin – Camp Kawartha
Heathyr Francis (TRACKS and Ganaraska Forest Centre)
Anna Lee
Emily Pearson

Community Organizations

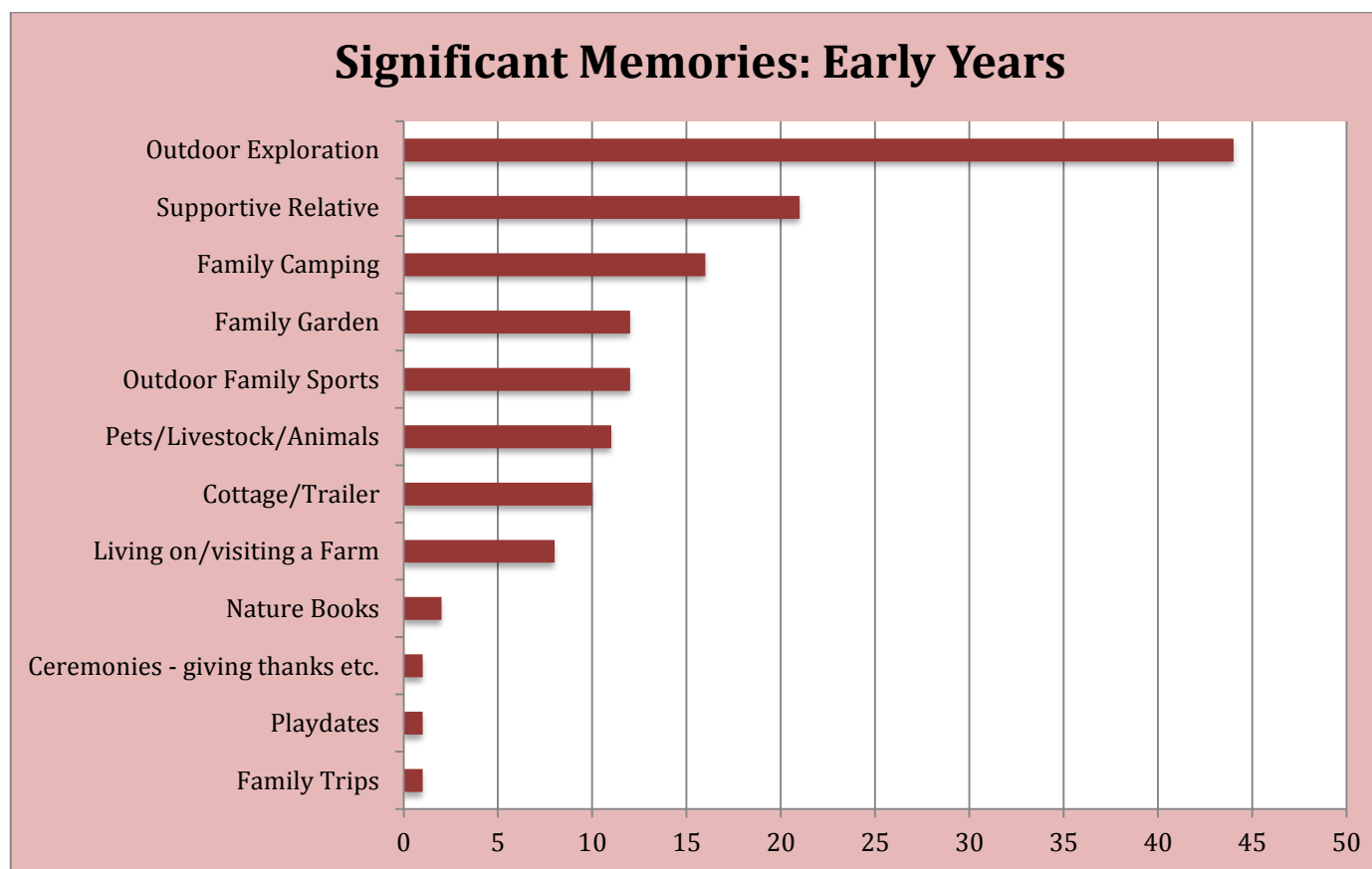
Aimee Blythe (Seasoned Spoon Café)
Donna Chiripuy (Peterborough County-City Health Unit)
Julie Cosgrove (Kawartha World Issues Centre)
Jackie Donaldson (GreenUP)
Anne Gallant (Peterborough County-City Health Unit) *project steering committee
Mike Hendren (Kawartha Land Trust)
Kate Jarrett (Peterborough Public Library)
Barbara Lillico (Peterborough Family Resource Centre)
Lindsay Maxim (Ontario Turtle Conservation)
Jim Moloney (Riverview Park and Zoo) *project steering committee
Tegan Moss (BIKE Community Cycling Hub)
Terry Rees (Federation of Ontario Cottagers' Associations)
Chris Risley (Ontario Ministry of Natural Resources and Forestry – Species at Risk)
Jacob Rodenburg (Camp Kawartha) *project steering committee
Brianna Salmon (GreenUP)
Rosanna Salvaterra (Peterborough County-City Health Unit)
Mieke Schipper (Gamiing)
Ben Taylor (Community Living)
Dianne Westlake (Ontario Horticultural Association)
Gary Westlake (Master Gardeners)
Ben Wolfe (Axiom News)
Kim Zippel (Peterborough Field Naturalists and Harper Park)

Community Activists and/or Independent Professionals

Paula Anderson (Farmer, Indigenous Studies PhD candidate)
Ian Attridge (Kawartha Land Trust, Environmental Lawyer and Trent Faculty)
Sheila Collett (psychotherapist and counselor)
Cathy Dueck (ecological educator, landscape consultant) *project steering committee
Andrew Jobes (Biologist and Yoga instructor)
Drew Monkman (nature writer, retired teacher)
Grant Murphy (water quality consultant)
Brian Nichols (artist, therapist, former ECE director - SSFC)
Linda Slavin (Sustainable Peterborough, Climate Change activist)

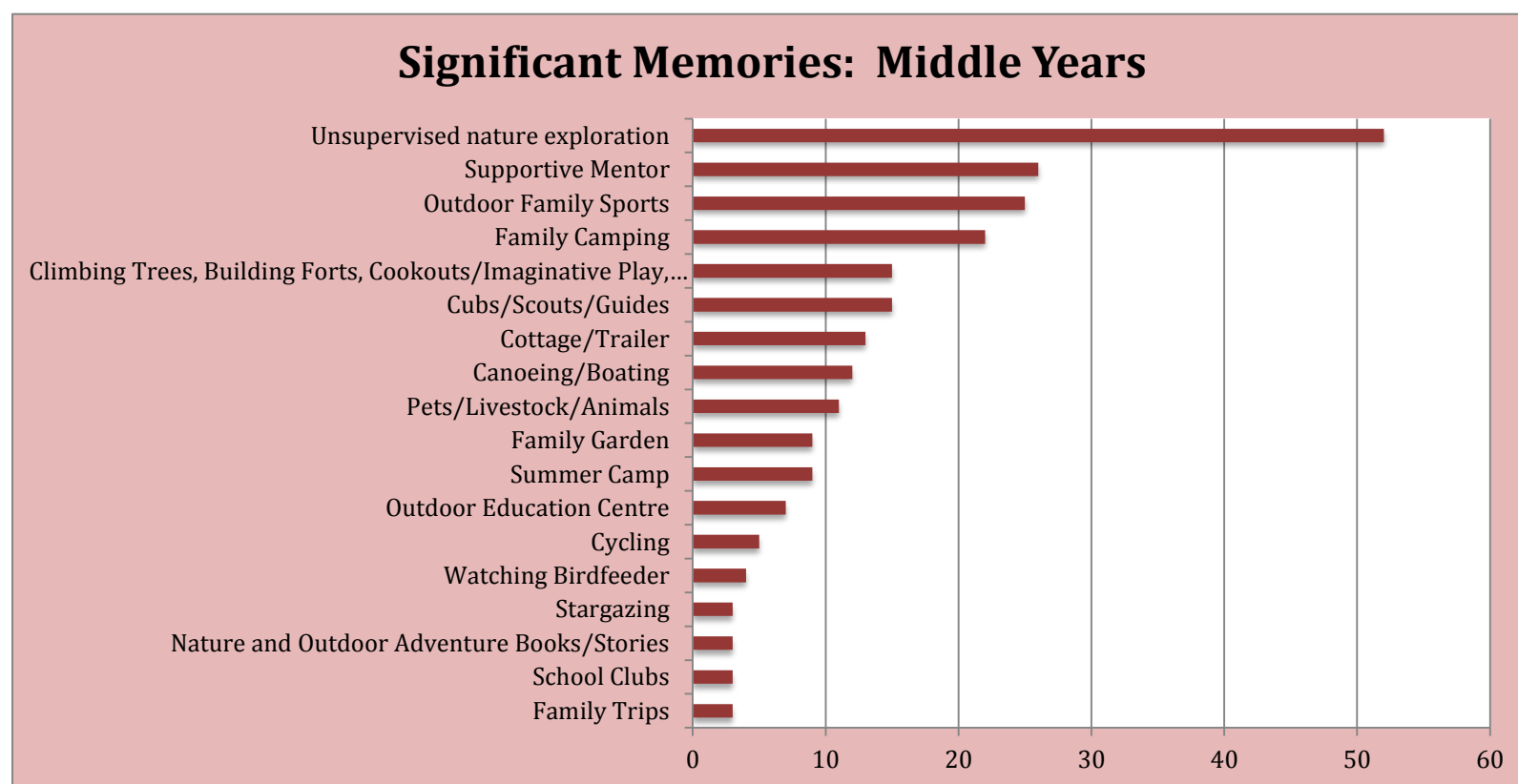
Appendix D: Interview Results

Interviewees (76 in total) were asked to recall which memories from their **early childhood** had a significant impact on fostering their current interest in the environment and environmental issues. Understandably, fewer interviewees could recall memories from their earliest years than from their years of middle childhood.



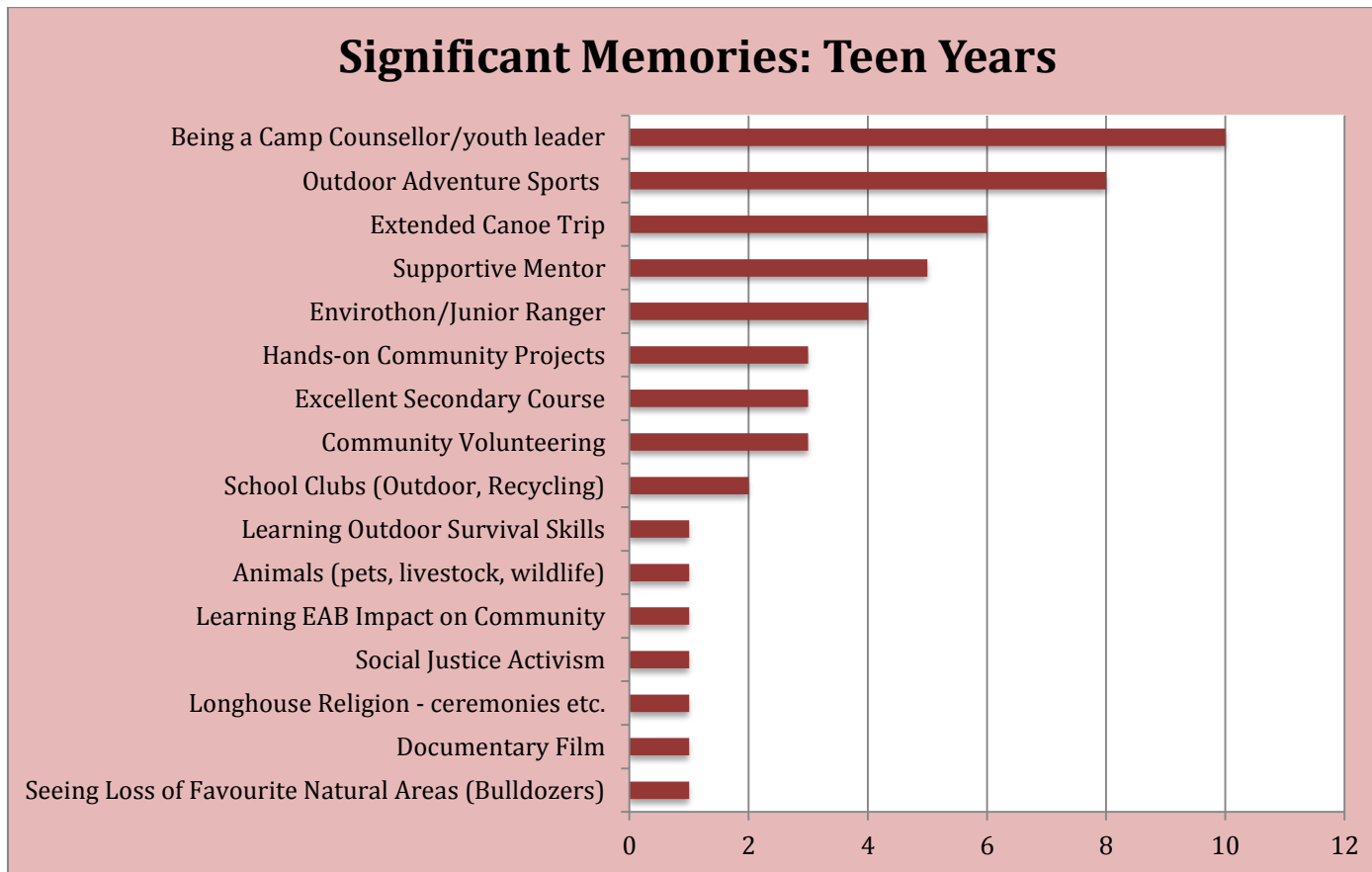
Appendix D: Interview Results (continued)

Interviewees (76 in total) were asked to recall which memories from their **middle years** had a significant impact on fostering their current interest in the environment and environmental issues. This time of childhood provided the richest and most diverse memories for interviewees. In addition to the dominant responses in the chart below, other individual answers included: making maple syrup, nature and adventure television or film, the sounds of nature, seeing the loss of favourite greenspaces to development, ceremonies for giving thanks (Longhouse tradition), keeping records for gardens or birdfeeders.



Appendix D: Interview Results (continued)

Interviewees (76 in total) were asked to recall which memories from their **teen years** had a significant impact on fostering their current interest in the environment and environmental issues. There were relatively fewer responses for this specific age group, as indicated below.



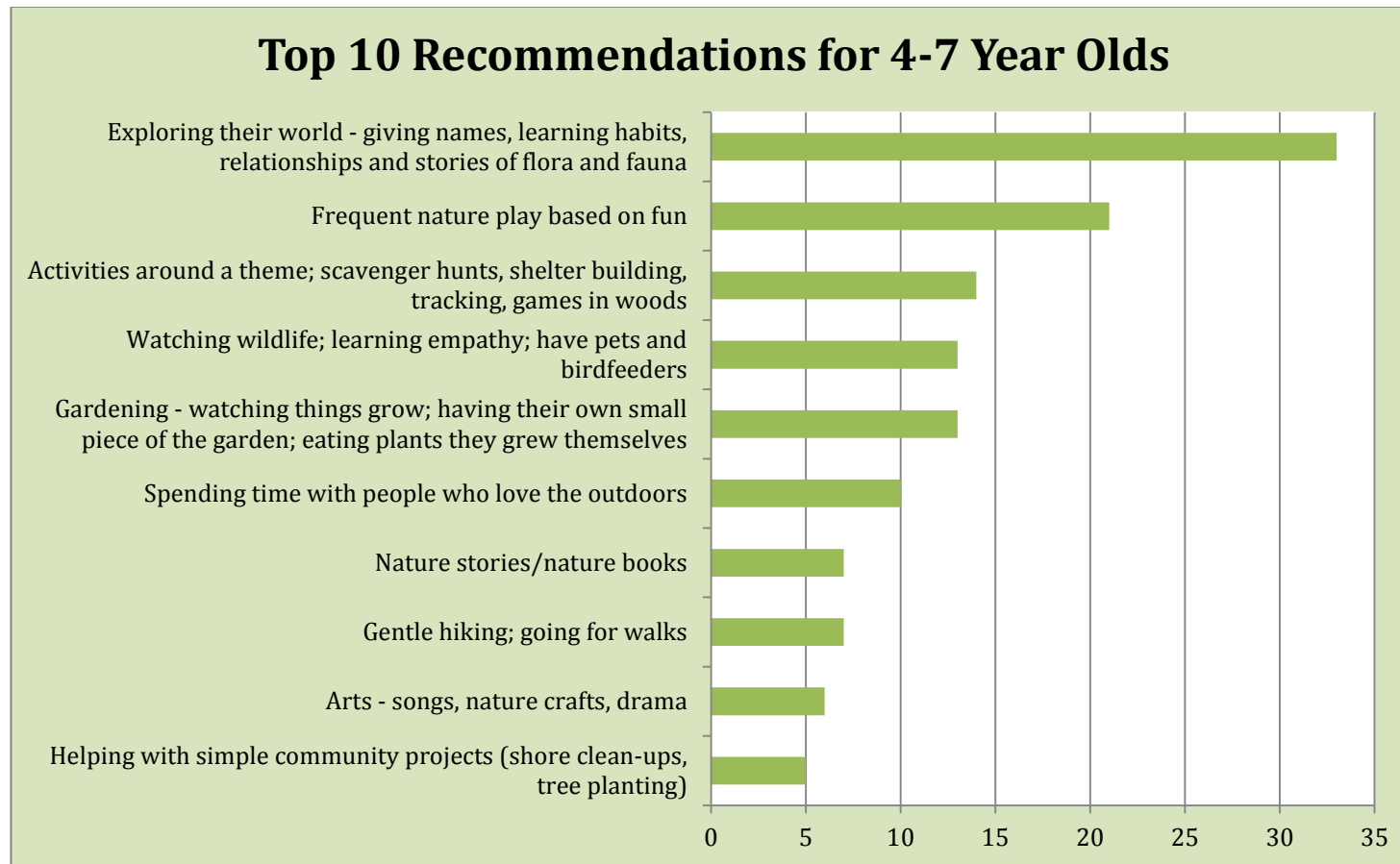
Appendix D: Interview Results (continued)

A total of 47 interviewees had recommendations for today's **preschool aged children** to help promote stewardship. These are the top ten responses.



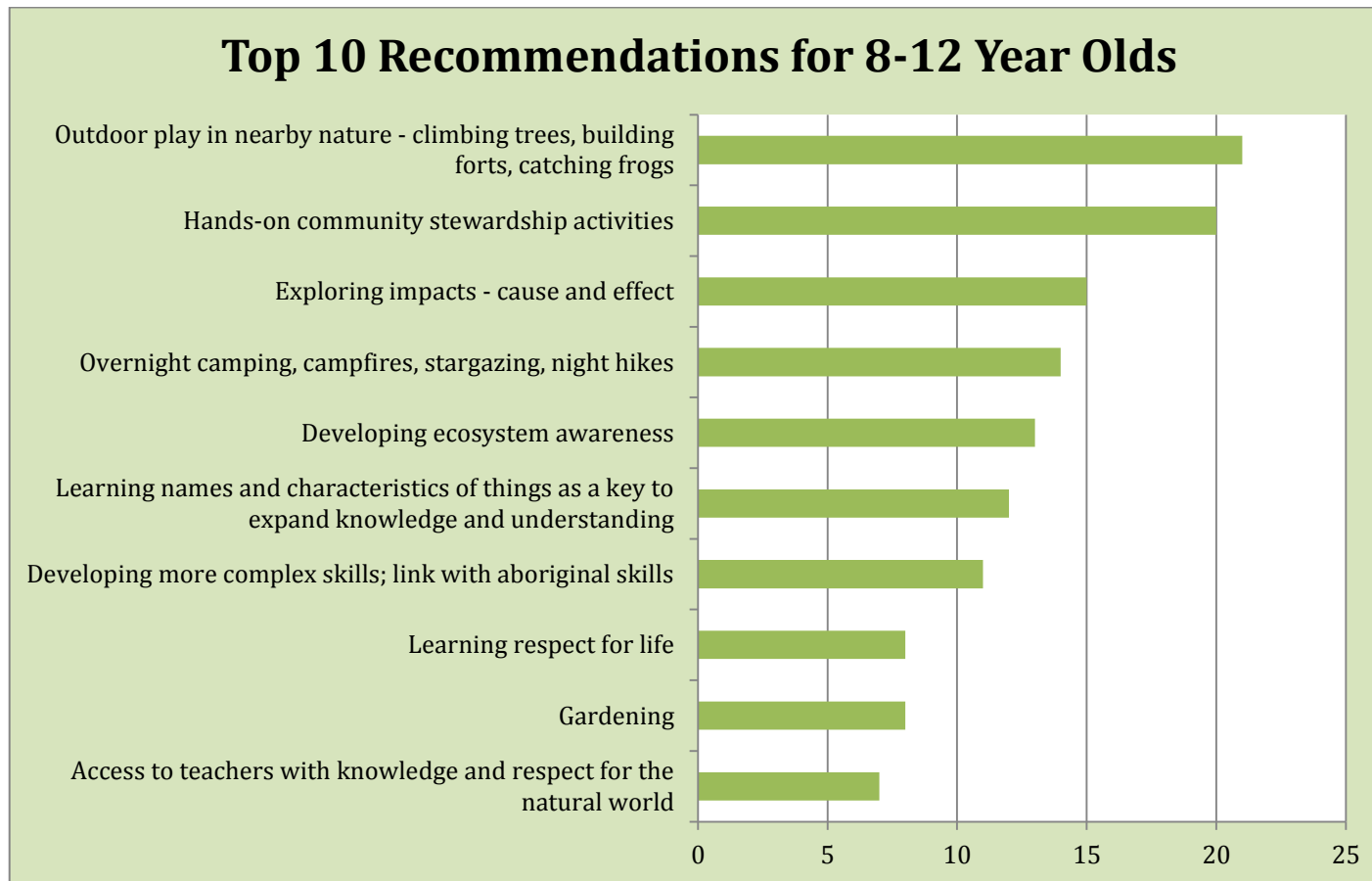
Appendix D: Interview Results (continued)

A total of 56 interviewees had recommendations for today's **young elementary children** to help promote stewardship. These are the top ten responses.



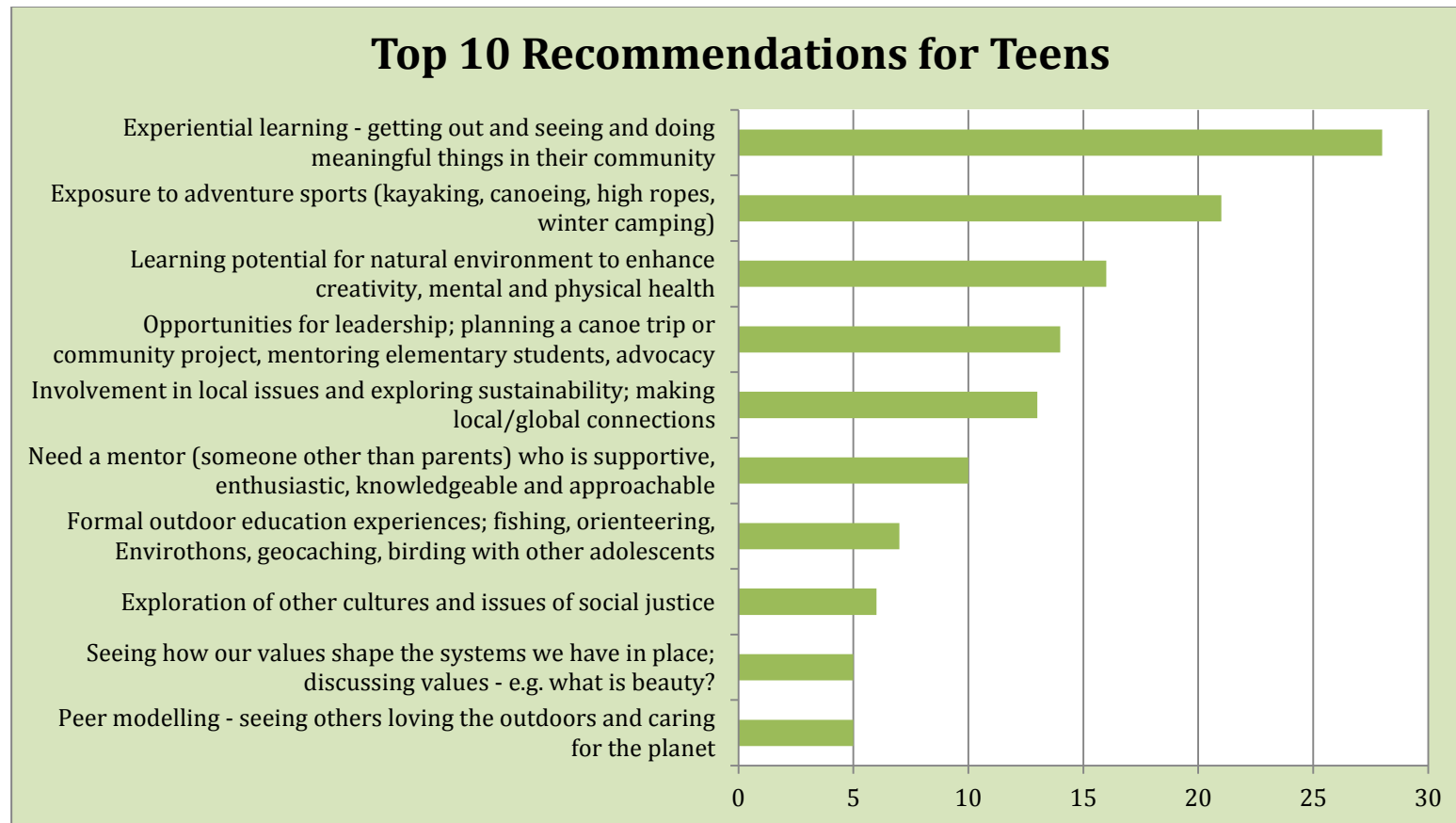
Appendix D: Interview Results (continued)

A total of 55 interviewees had recommendations for today's **older elementary children** to help promote stewardship. These are the top ten responses.



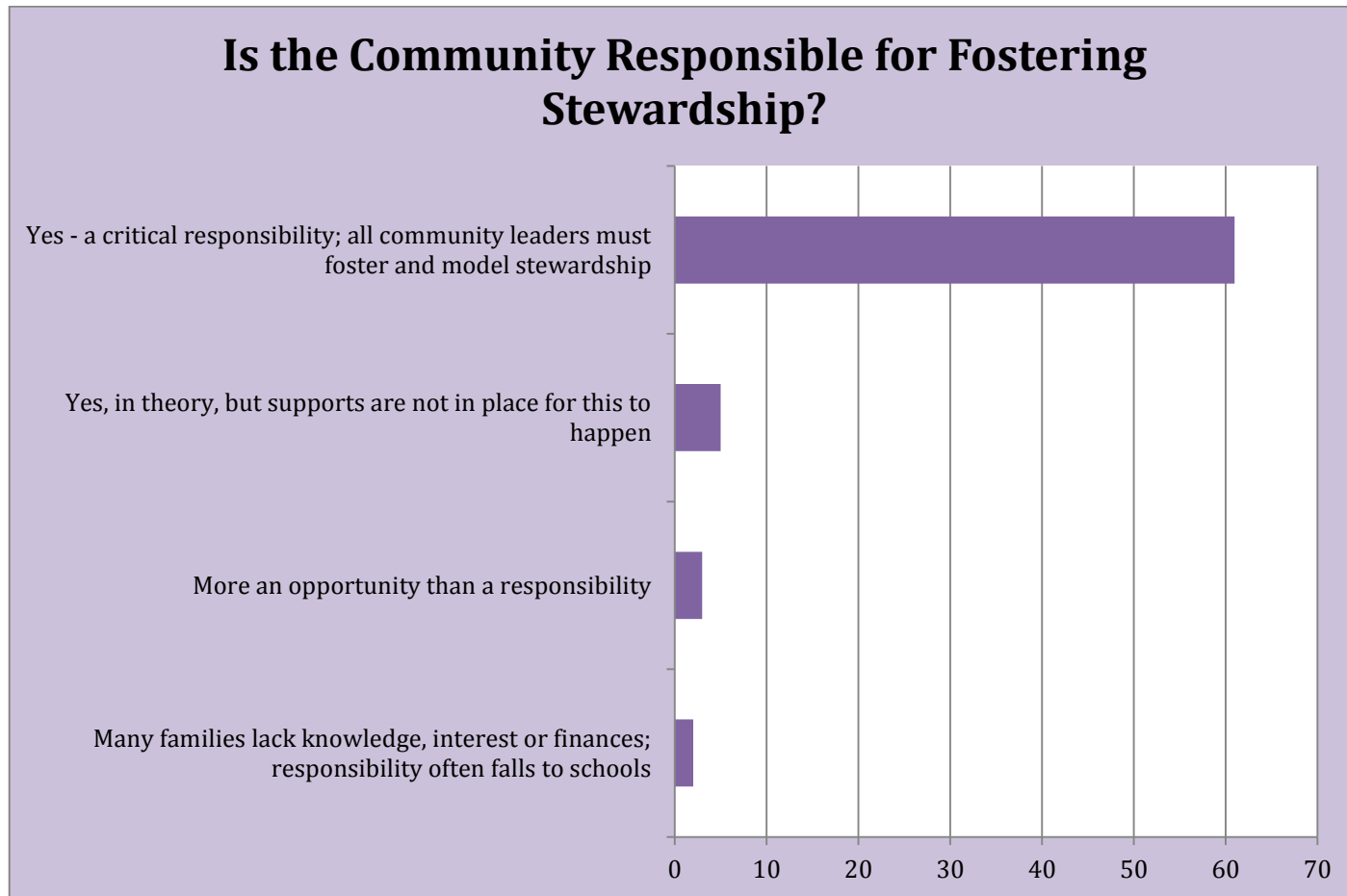
Appendix D: Interview Results (continued)

A total of 57 interviewees had recommendations for today's **secondary aged youth** to help promote stewardship. These are the top ten responses.



Appendix D: Interview Results (continued)

Interviewees were asked to what extent it is the community's collective responsibility to foster stewardship in children and youth. Of 71 responses, these were the results.



Appendix E: Community Resources

Activity Haven (seniors' activity centre)

<http://www.activityhaven.com/>

Alderville First Nation

<http://www.aldervillefirstnation.ca/>

The Art School of Peterborough

<http://artschoolptbo.org/>

Avant Garden Shop (birding and gardening supplies)

<http://www.avantgardenshop.com/>

BIKE (Community Cycling Hub)

<http://communitybikeshop.org/>

Camp Kawartha (Outdoor Education and Summer Camp)

Two facilities (North of Lakefield, and Trent University campus)

<http://campkawartha.ca/>

Canadian Canoe Museum

<http://www.canoemuseum.ca/>

Citizen Science Programs

- **Frogwatch:** <http://naturecanada.ca/what-we-do/naturewatch/frogwatch/>
- **Journey North** www.learner.org/jnorth/
- **Ontario Nature** <http://www.ontarionature.org/protect/species/PDF/>
- **Ice Watch** <http://naturecanada.ca/what-we-do/naturewatch/icewatch/>
- **Great Backyard Bird Count** <http://gbbc.birdcount.org/>
- **Plant Watch** www.naturewatch.ca/plantwatch/
- **Worm Watch** www.naturewatch.ca/wormwatch/

City of Peterborough Parks

<http://www.peterborough.ca/Assets/City+Assets/LIS/Documents/Parks+Location+Map+>

City of Peterborough Trails

<http://www.peterborough.ca/Assets/City+Assets/TDM/Images/August+2012+City+of+Peterborough+Trails+26+Bikeways+Map.pdf>

City of Peterborough Transit

http://www.peterborough.ca/Living/City_Services/Transportation/Transit/Bus_Routes_Schedules.htm

County Fairs:

- **Norwood**
<http://www.norwoodfair.com/>

- Peterborough
<http://www.peterboroughex.ca/>
- Roseneath
<http://roseneathfair.com/>

Cornell Lab of Ornithology

<http://www.birds.cornell.edu/Page.aspx?pid=1478>

Curve Lake First Nation

<http://www.curvelakefirstnation.ca/>

Ecology Park

<http://www.greenup.on.ca/ecology-park/>

Ecological Footprint

<http://www.footprintnetwork.org>

Endeavour Centre

<http://endeavourcentre.org/>

Farms at Work

<http://www.farmsatwork.ca/>

Gamiing Nature Centre

<http://www.gamiing.org>

Ganaraska Forest Centre

<http://www.ganaraskaforestcentre.ca/>

Ganaraska Region Conservation Authority

<http://www.grca.on.ca>

GreenUP

<http://www.greenup.on.ca/>

4-H Ontario

<http://www.4-hontario.ca/4h-in-my-area/>

Hiawatha First Nation

<http://www.hiawathafirstnation.com/>

Horticultural Societies

- Ennismore Horticultural Society
<http://www.gardenontario.org/site.php/ennismorhs>
- Lakefield Horticultural Society
<http://www.lakefieldhort.org/>

- Lindsay Horticultural Society
<http://www.gardenontario.org/site.php/lindsay>
- Norwood Horticultural Society
<http://www.gardenontario.org/site.php/norwood>
- Omemee Horticultural Society
<http://www.omemeeblooms.ca/>
- Peterborough Horticultural Society
<http://peterboroughhort.com/>

Indian River Reptile Zoo

<http://reptilezoo.org/>

Jumping Mouse Nature Education

<http://www.jumpingmouseprograms.org/>

Kawartha Choice (local farms, farmers' markets etc.)

<http://www.kawarthachoice.com/>

Kawartha Land Trust

<http://kawarthalandtrust.org/>

Kawartha Nordic

<http://www.kawarthanordic.ca/>

Kawartha Pine Ridge Outdoor Education Centres

<http://www.kprschools.ca/en/staff/departments/teachingandlearning/outdooreducationcentres.html>

- Warsaw
- Gooderich-Loomis
- Laurie Lawson
- Wilmot Creek

Kawartha World Issues Centre

<http://www.kwic.info/>

Lakefield Animal Welfare Society

<http://www.lakefieldanimalwelfare.org/>

McLean Berry Farm

<http://www.mcleanberryfarm.com>

New Canadians Centre

<http://www.nccpeterborough.ca>

Nogojiwanong Friendship Centre

<http://www.ofifc.org/centre/nogojiwanong-friendship-centre>

Nourish Project (food program)
<http://nourishproject.ca/>

Ontario Children's Outdoor Charter
<http://www.childrensoutdoorcharter.ca/>

Ontario Federation of Anglers and Hunters (OFAH)
www.ofah.org/

Ontario Turtle Conservation Centre (formerly Kawartha Turtle Trauma Centre)
www.kawarthaturtle.org

Otonabee Region Conservation Authority
<http://www.otonabee.com/>

Ontario Parks (Mark S. Burnham, Emily, Petroglyphs, Kawartha Highlands)
www.ontarioparks.com/

Paddling Puppeteers
<http://paddlingpuppeteers.com/>

Peterborough Children's Water Festival
<http://www.pcwf.net/>

Peterborough Downtown Farmers' Market
<http://ptbodowntownmarket.blogspot.com/>

Peterborough Family Resource Centre
<http://www.pfrc.ca>

Peterborough Farmers' Market
<http://www.peterboroughfarmersmarket.com/>

Peterborough Field Naturalists (and Junior Field Naturalists)
<http://peterboroughnature.org/>

Peterborough Humane Society
<http://peterboroughhumanesociety.ca/>

Peterborough Museum and Archives
<http://www.peterboroughmuseumandarchives.ca/>

Peterborough Parent-Child Mother Goose Program
c/o Nauni Parkinson ptbomothergoose@gmail.com

Peterborough Public Library
<http://www.peterborough.library.on.ca/>

Peterborough Utilities (tours of hydro-electric power station)
<http://www.peterboroughutilities.ca/>

Pick Your Own Farms in Ontario
<http://www.pickyourown.org/>

Reframe Film Festival
<http://reframefilmfestival.ca/>

Riverview Park and Zoo
[http://www.peterboroughutilities.ca/Park and Zoo](http://www.peterboroughutilities.ca/Park_and_Zoo)

Scouts Canada
<http://www.scouts.ca/>

Scugog First Nation
<http://www.scugogfirstnation.com/>

TRACKS (Trent Aboriginal Cultural Knowledge and Science Initiative)
www.trentu.ca/ies/tracks.php

Trent University Nature Areas
www.trentu.ca/natureareas/documents/TrailMap.pdf

Think Outside
<http://www.thinkoutside.life/>

YMCA of Central East Ontario (swimming lessons, fitness programs)
<http://www.ymcaofceo.ca/>

YWCA Peterborough-Haliburton (food programs and social justice)
<http://ywcapeterborough.org/>

Your Healthy House
<http://www.yourhealthyhouse.ca/>

