

inside this issue...

THE NEW DEFINITON OF INTELLIGENCE

MATHEMATICAL LITERACY

EMOTIONAL SCHOOL SUPPLIES

WHAT ARE ALL THESE PARENTS THINKING AND WHY?

TEACHING FOR UNDERSTANDING

MISSION CONTROL GAIL BAKER

ONE GREAT SALAD!

One day last June two very excited children proudly entered my office. They were carrying a plate of salad, but this was no ordinary offering of lunch for the Principal. This was the annual culmination of a math unit on measurement.

These Grade 3 students had studied the meaning of "perimeter", a math concept that describes the continuous line forming the boundary of a geometric figure. They had also learned about "area", which is the mathematical measurement of a surface. They had become fluent in the language of this mathematical thinking and practised the examples in many ways, including in their school garden. The salad for me was their final proof.

The most important type of learning connects academic subject matter to the children's own lives. It leads them to synthesize math lessons with other problem-solving scenarios. The integration of ideas with context motivates learning and the results are highly rewarding. The mathematical process to decide the actual area of their school garden is meaningful and therefore more memorable than the pen and paper process used to solve theoretical problems on a worksheet.

Without understanding, application is limited. Knowledge and skill do not translate automatically into understanding. Understanding emerges when students engage deeply and thoughtfully in a particular discipline or subject area. This is a core focus for the Lola Stein Institute and for teachers at The Toronto Heschel School. We



COLUMNS

MISSION CONTROL

PAGE 01 **TEACHING FOR UNDERSTANDING; ONE GREAT SALAD**

BY GAIL BAKER

EDITOR'S DESK

PAGE 04 UNDERSTANDING IS THE ISSUE

BY PAM MEDJUCK STEIN

AWE & WONDER

PAGE 06 WHAT DOES IT MEAN TO THINK? PART ONE

BY GREG BEILES

NURTURING NATURE

PAGE 08 THE TEACHING GARDEN

BY ELLEN KESSLER

FEATURED ARTICLES

ETHICAL THEMES

IN EARLY YEARS EDUCATION PAGE 10

BY JORDANA MEDNICK

MATHEMATICAL LITERACY

PAGE 12 TEACHING FOR UNDERSTANDING IN MATH CLASS

BY MALKA REGAN & RICKI WORTZMAN

THE LANGUAGE OF LEARNING

PAGE 14 A METHOD IN JUNIOR HIGH CONNECTION

BY DANA COHEN EZER

FIVE KINDS OF SMART PAGE 16

BY MEGAN O'TOOLE, NATIONAL POST

THE FAMILY AT SCHOOL

THE EMOTIONAL BACKPACK

PAGE 18 SCHOOL SUPPLIES

BY JENNIFER KOLARI

PARENT PARTICIPATION

WHAT ARE ALL THESE PARENTS THINKNG AND WHY? PAGE 20

BY MICHELLE SHULMAN

A SENSE OF GUARDIANSHIP

ENVIRONMENTAL EDUCATION IS FOR THE WHOLE FAMILY PAGE 22

BY FLISSA KLINE BERER

THE LOLA STEIN INSTITUTE THINK, THE LOLA STEIN JOURNAL

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THE LOLA STEIN INSTITUTE

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Greg Beiles is Director of Curriculum and Training at The Lola Stein Institute and Vice Principal, Curriculum, at The Toronto Heschel School. Greg believes children are active builders of knowledge and empathy, and that a child's perspective is shaped more by how learning is structured than by the specific content at hand.

Ellen Kessler is a Co-Founder of The Toronto Heschel School and leads its award-winning nature and ecological programme. Ellen is a math and science teacher who blends commitment to Jewish observance with love for the natural world and children.

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Ricki Wortzman, M.Ed., has taught JK through Grade 8 and coauthored texts in mathematics, science, language arts and the arts; and trade books for young children. She now coaches new and veteran teachers and conducts workshops for educators.

lead the children to employ their newly learned skills and knowledge in thoughtful, practical and satisfying ways.

We encourage the students to "perform" their understanding by involving them in carefully structured year long activities. They creatively and critically apply knowledge learned in one area to a meaningful practical situation. This transfer of learning takes them beyond what they already know.

We engage the students to "perform" their understanding by involving them in carefully structured year long activities.

Focus on student understanding finds a comfortable home in the Heschel salad project. The Grade 3 children had to determine the number of students and staff at the school, then apply knowledge learned in their measurement unit to decide how many lettuce seeds to plant, and what perimeter and area the garden required, given the spacing need of each seed. They then planted the seeds and tended the growing plants throughout the year.

During these activities, where the children act on their understanding, our teachers carefully observe their students. The attentive teacher quickly sees whether each student is able to apply the math skills to this practical arena or not. Struggle shows itself.

In a Teaching for Understanding framework, teachers reflect on their practice and continually ask themselves: Are the activities that I set for my students working to help build their own understanding? Is my assessment of their skills and application ongoing? Am I fully informed on their progress?

Ongoing assessment delivers a more accurate picture of student progress, at any point in the curriculum, than does the occasional quiz. Continual evaluation in different learning situations facilitates earlier teacher intervention, whether for enrichment, focused support or remedial attention. Opportunities to enrich are as crucial as any in the classroom.

Brain research shows that students learn in many ways; many ways of taking in information and many ways of expressing an understanding. For this reason, teachers must vary how they deliver a lesson. When teachers select different entry points in their teaching, i.e. through narrative, logic, art, or analogies, each student is more likely to connect to the material in a way that is meaningful to him or to her. Also by varying the activities where the learning is applied (the performances of understanding) students receive wider opportunity to discover ways that learning makes sense to them and to express their understanding.

This way of teaching and learning requires more effort from the teacher. It is much easier to give kids a quiz than to prepare a performance of understanding. Teacher inspiration and personal development are integral to student learning.



For students more advanced in their math understanding, the teacher can readily provide more complex problems. For example, those students might be asked to differentiate the area and perimeter by class size or, later, to estimate the amount of salad that might be consumed based on the age of a person, and given the number of people in that age group in the school. Interestingly, some students, who were having difficulty grasping the math lesson in class, click to the concept and "get it," once they have the chance to experience the mathematics in a practical situation.

A quiz may tell who remembers facts about a topic but an activity which is a performance of their understanding will ensure that students understand what they have learned.

We want our students to actively use their knowledge to make predictions and sound judgements and to feel empowered to apply their learning to new situations. Excellent teachers know that this prepares students for future learning. Excellent parenting searches for this in a school. And I know that next spring I will taste another delicious salad.

03

UNDERSTANDING IS THE ISSUE



We take the important step past critical thinking.

think magazine aims to advance our readers' understanding of education, particularly Jewish education. The theme of this issue is the meaning of understanding. What is true understanding? How do we gauge understanding? Most importantly, how can we promote understanding in our students?

Searching for a strategy for survival in exile, the Dalai Lama asked two visitors how the Jewish people survived over 5000 years of exile. Two different visitors to the Dalai Lama, Nobel Prize winner Elie Weisel, and Israeli architect Iftach Aloni, told me they answered, "We carried a book."

This book, The Torah, contains a code of practice, an ethos and a story. The Jewish people used these elements to learn survival, strength and success, despite the odds history threw at them.

The practice codified in biblical times, reflected the Jewish people's understanding of the world around them. Temple sacrifice was a recognized performance of respect and duty, bringing with it focus and discipline. The ethos of monotheism evinced morality that respected life and humility, and forbade false gods. Abraham continued in trust to the summit of Mt. Moriah even as he feared great loss. His convictions held firm. Also, seeing the Golden Calf, Moses threw down the Ten Commandments, realizing truth could not survive in a disaffected crowd. If the people were not open and ready, they could not receive what he wanted to share. Bible stories call for interpretation and scholars have answered creatively throughout the ages.

Our pursuit of effective education follows the three cornered Jewish paradigm. We combine practice, a code of ethics and the creative spirit. This time-tested way is reflected in the recommendations of leading educators, educational psychologists and neurophysiologists. It takes students the important step beyond critical thinking. When we ground disciplined habits of mind and heart in moral education, and then creatively

pursue interdisciplinary study to reflect the complexities of our students' identities and their society, the result is meaningful and enduring learning. The paradigm works.

In this issue our writers show how the three elements of practice, ethics and creativity combine to strengthen education. Gail reflects on how students perform structured activities to deepen their knowledge and understanding of lessons learned. Ellen describes how mindful stewardship of a garden fosters students' respect and care for their world.

The three elements that helped the Jewish people survive and flourish are put to good use as a learning matrix today. Practice, ethics and creativity combine to deliver great education. Greg explains how the theory of multiple intelligences offers educators practical methods to reach all children effectively and respectfully. Malka and Ricki present mathematical literacy as a threshold of comprehension, a prerequisite to disciplined strategic thinking. Jordana highlights the role of ethics in early years education and explains how biblical themes provide an orientation for integrated thinking. Dana writes about the onus on teachers to creatively connect their students to content.

In our new section, The Family at School, Jennifer provides a list of emotional school supplies to ensure students get the best from their day at school. Michelle looks at the parents who engage with their children's school and notes how their participation reveals the depth of their understanding. Elissa shares the impact that integrated environmental studies and ecological ethics have had on her family.

The three elements that helped the Jewish people survive and flourish are put to good use as a matrix for learning today. Practice, ethics and creativity combine to deliver great education.





What could this mean for your child?

05

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WHAT DOES IT HINKS

What does it mean to think? Progressive educators today agree that the goal of education is teaching children to think. But what exactly does teaching for thinking, or a "cognitive" approach to education, really mean? In the next few issues of think, I will explore this question from different perspectives. In this issue, I focus on professor Howard Gardner's theory of multiple intelligences and how it reframes our ideas about thinking and how we teach.

In 1983, psychologist Howard Gardner, of the Harvard Graduate School of Education, published his now famous book *Frames of Mind*. The book stoked a millennia-old discussion about how people think – a topic that has concerned philosophers and educators from Socrates and Aristotle to Rousseau and Piaget. Gardener wrote to combat the narrowing of the definition of intelligence, especially in the United States. Intelligence had become equated with success on standardized tests that focused on knowing certain facts and on a narrow band of linguistic and mathematical reasoning.

Gardener argued persuasively that the human mind operates through more than one way of thinking. He called this idea a theory of "multiple intelligences." The theory states that human beings perceive, process, integrate, and express knowledge in many different ways. Gardner identified seven unique intelligences: linguistic, mathematical-logical, visual, musical, kinesthetic, interpersonal, and intrapersonal.

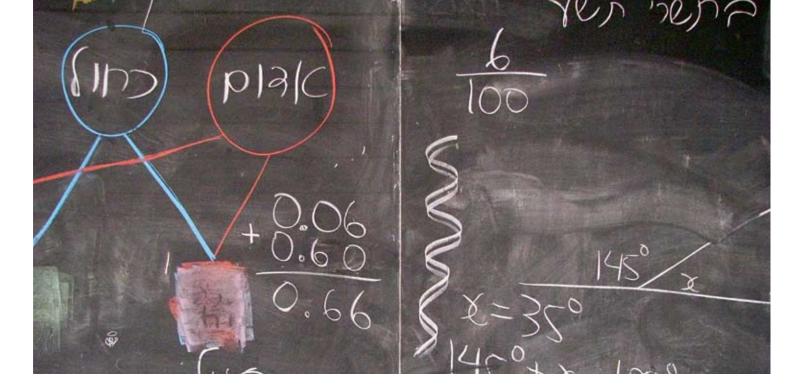
Early adopters of Gardner's theory sometimes used it in an overlysimplistic way by labelling children with one or another of the intelligences: "Suzy is a visual learner, while David is a musical learner". A more sophisticated understanding is that each of us thinks using a unique combination and ratio of intelligences—some more prominent than others—but all interacting in complex and dynamic ways.

In our work at the Lola Stein Institute and The Toronto Heschel School, we develop curriculum, pedagogy and forms of assessment that take into account the dynamic way that intelligence works. We use this approach across the entire curriculum, from math to science, from reading to Torah.

One illustrative example is second language learning, which I'll use here to show how a multiple intelligences approach to education enhances the delivery of curriculum for all students.

A multiple intelligences approach to education enhances the delivery of curriculum for all students.





Learning a language involves much more than memorizing words and writing dictation. To learn a language children must first be able to listen well and perceive tones and rhythms. This is why songs, nursery rhymes and poems are used to teach children their native language; this is also why they are excellent tools for teaching second languages.

Language is also a kinesthetic process. When children are first learning to speak they tend to babble. Babbling is the way children train their mouth, throat and tongue as required by their language. When children learn a second language it is critical that they have many opportunities to speak that language, even if they are stumbling through at first. Moreover, when children are encouraged to dramatize or "perform" words through hand motions and full body expression, they develop a sense of agency and confidence in that language.

Language also has a strong mathematical-logical component. While all languages make use of logical patterns in their grammar and syntactical structures, a language like Hebrew, with its root based system, is especially mathematical. Visual elements – the shapes of letters – are of course important; but introduced too early or emphasized too much (as often happens) this aspect of language learning can dominate and suppress the others.

Profoundly under acknowledged is the "interpersonal" or their social dimension of language learning. We learn languages because we like to communicate. Language learning will be successful when students have many opportunities to use a new language in social situations. We encourage teachers to emphasize dialogues, questionnaires, and games, rather than depend too much on prose texts.

Equally important is the "intrapersonal" dimension of learning, in which language is internalized as part of identity. At a Jewish school, we realize that developing relationships with students through Hebrew is the best way to help them love the language. Chatting with students in the hallways, outside of class, and in the playground, using even rudimentary Hebrew, is a great way to form a unique bond between teachers and students.

A similar multiplicity of methods can be applied to teaching math, science, art, music, or any subject. Students learn through their five senses, their bodies, and their relationships, as much as they learn through reading and writing.

We want to nurture the thinking of all students and offer each of them the widest opportunity to learn.

In the Torah we learn that the locus of thinking is not the head but the heart. To build the miskhan – the tabernacle-God called upon every person with "hokhmah b'libo" – "intelligence in his/her heart" (Exodus 36:1-2). In this context the term "intelligence" refers simultaneously to willingness, skill, and comprehension.

Reflecting on this reminds us that thinking is complex. We want to nurture the thinking of all students and offer each of them the widest opportunity to learn. To achieve this we must adopt a nuanced and sophisticated view of what it means to think.

07

TEACHINGGARDEN

SCIENCE, TEAM WORK & FULFILLMENT

The Teaching Garden is a profoundly effective tool to establish students' ecological literacy. It offers abundant educational opportunities and provides a window into the majesty of the universe.

Calls to protect the environment resound. Children are our promise. They are the future guardians of the earth and they need to grow up mindful of the preservation of their world. A Teaching Garden at school enables children to learn about the environment, for the environment, in the environment.

A Teaching Garden was cultivated at The Toronto Heschel School and The Lola Stein Institute has developed this model programme into a teacher training workshop for the community at large. On September 2, 2009, the Teaching Garden Workshop was offered to the public for the first time, as part of The First Annual Lola Stein Symposium. While scheduled to run twice during the day-long seminar, demand from registrants from Toronto public, private and Jewish day schools required a third run late in the day. Participants collected under the giant sunflowers, engaging in activities surrounded by huge beets and a wide range of organically raised vegetables. It was science, environmental ethics and Judaic studies in action together.

The Teaching Garden serves education academically, spiritually and philosophically, allowing teachers to render academic topics tangible and meaningful to their students. The Teaching Garden is an invaluable springboard across the curriculum all year long.

The Teaching Garden is an invaluable springboard across the curriculum all year long.

The message is to protect the world we live in and appreciate our natural inheritance. For schools, such as Jewish and Catholic schools, where the Bible is a point of departure, the Teaching Garden becomes a place to better understand humanity's most basic mandate: "to till it (the Earth) and to tend it" (Genesis 2: 15).

Through a Teaching Garden, educators lead students to embrace the skills of caring, responsibility and wonderment. Students learn the results of consistent stewardship and the consequences of lack of diligence. They witness the impact of weather and factors beyond their control and learn to adapt.

Through a Teaching Garden, educators lead students to embrace the skills of caring, responsibility and wonderment. Students learn the results of consistent stewardship and the consequences of lack of diligence.

The value of a Teaching Garden as an educational tool, lies in its breadth. Educators can start with ecology, biology and meteorology, but the lessons extend further. Children learn collaboration as they share the work and its rewards. They learn about life as their produce grows. This kind of deeper learning serves to protect and preserve the world.

The Teaching Garden provides diverse academic disciplines with experiential ("hands on"), multi-sensory learning possibilities. Tending plants, students study the science of plant growth, soil and the mechanics of composting. They design and conduct experiments with soil and seeds, practice asking questions, making hypotheses, observations and conclusions. Preparing the garden, students deal with the mathematics of measurement and data management.



The vegetable crop provides context for lessons on nutrition and ecology, including the food chain and origins of the foods they eat. Work in the garden offers students insight into their history lessons about pioneers, who also toiled the land and depended on it for their very survival. Challenge and fortitude become clear.

The Teaching Garden integrates with the overall curriculum, grounding student knowledge, enhancing its relevancy and meaning. As they tend plants, the children observe cause and effect in action. The study and cataloguing of varieties of insects heighten observational skills. As an outdoor (or indoor) learning space, the garden fosters imagination, creativity and innovation which are key components in literacy and visual arts. As they pursue a bountiful harvest students learn to question, to apply past knowledge to new situations, and to find creative answers to problems.

The Teaching Garden also provides a unique forum for community building where students, teachers, parents and neighbours work together in its care. Collaboration fosters a student's sense of leadership, responsibility and empathy. Social competence and confidence flourish through effort and achievement.

Children see for themselves how diligence, knowledge, and nature combine, how science, team work and fulfillment come together. A good school nurtures knowledgeable children who are intimately engaged in the awe and wonder of life.

The Teaching Garden Workshop is led by Ellen Kessler, Director of the award-winning Environmental Studies Programme at The Toronto Heschel School, and Avee Helfand, a teacher at The Toronto Heschel School. The Teaching Garden training workshop is available to all schools through www.lolastein.ca

ETHICAL THEMES IN EARLY EDUCATION

"It's the tree of life for those who hold fast to it, and all its supporters are happy. Its ways are ways of pleasantness, And all its paths are peace."

PROVERBS 3:18, 17

The Torah is the greatest treasure of the Jewish people. Among its many meanings, the word "Torah" refers to the Five Books of Moses: Genesis, Exodus, Numbers, Leviticus, and Deuteronomy, known also as the Chumash.

Chumash stories nourish a kindergarten student's social, emotional and intellectual development beautifully. Education based in Chumash enhances the child's Jewish identity as this kind of learning engenders a relationship with the Bible and God from a young age. This is the core of the early years programme at The Toronto Heschel School.

The ideas and values that emerge from the study of Chumash are essential to a young child's development. The method is to select age appropriate and personally relevant concepts from the Chumash. They are then used as weekly ethical themes across the kindergarten curriculum. In this way the ethical values integrate into the lives and learning environment of the young students. Some ethical themes in kindergarten are:

WE ARE PARTNERS WITH GOD IN CARING FOR THE EARTH AND ALL LIVING THINGS:

WE ARE RESPONSIBLE FOR HELPING AND CARING FOR OTHER PEOPLE;

PEOPLE CAN LEARN AND GROW IF THEY MAKE MISTAKES;

PRAYER IS A WAY TO TALK TO GOD AS AN INDIVIDUAL AND AS PART OF A GROUP.

Early years teachers at The Toronto Heschel School begin each week sharing a Chumash story with their classes, using dramatization, puppets or props. The children learn the history of their people and connect to it on a personal level. The ethical value in focus takes on deeper meaning. The Torah tells the story of the Jewish people's relationship with God, and studying these stories enables children to recognize God as an active force in their own story.

The Chumash stories link the young students to the vastness of the Jewish experience and connect them to the larger world around them. For example, when children hear how the brothers, Jacob and Esau, reconciled after so many years apart, they begin to understand the importance of carefully maintaining their own sibling relationships.

The ethical values integrate into the lives and learning environment of the young students.



It is a meaningful way to begin student life.

With Chumash stories at the forefront of the week's plan, we blend the ethical themes into lessons in language, math and science.



One important goal is to provide kindergarten students with the tools they need to become independent readers of Torah text. They begin seeing themselves as "Torah scholars," asking questions about the texts and grappling with answers, just as Jewish scholars have done for countless generations. We encourage our students to make up their own stories too, developing their own midrashim, either verbally or through art or play.

With Chumash stories at the forefront of the week's plan, we blend the ethical themes into lessons in language, math and science. When studying the story of Creation the children consider the related topics of sorting and sequencing, light and shadow, animals and insects, and the human body. The story of Noah leads to learning about water and flotation, colors and rainbows, and *Tikkun Olam*. The narrative of Abraham and his descendants carry the class into thoughts about generations, family trees, and hospitality.

The Torah is full of rich characters and interesting plots. The children act out the stories and pretend to "be" the different characters and animals, imagining the various roles and situations. The activities lead the children to evocative questions. How did it feel to be Noah? Why did he do what he did? How did it feel to be a lion? Why do you think you enjoy pretending to be a lion?

When we study Jewish values that are woven throughout the Torah and merge the ethical themes with other academic subjects, the children begin to ponder the world around them. It is a meaningful way to begin student life.

MATHEMATICAL LITERACY

TEACHING FOR UNDERSTANDING IN MATH CLASS

Yours is not to reason why, just invert and multiply! You may remember this rhyme which suggests that only the mathematically talented can reason and understand. It could also mean that math doesn't make sense and so we should simply remember 'what to do,' but not why or how we do it.

These beliefs were once widely held. Traditionally, mathematics programs emphasized quick and accurate paper and pencil calculations. We still value these skills but know that to be successful in the 21st century, students must also understand. They must learn to think numerically.

They must learn to think numerically.

The best math teachers now focus on students' numeracy skills, teaching them to be mathematically literate. They make sure students understand the why and how. Learning mathematics is more than manipulating symbols and numbers. It involves fluency with how numbers combine, break apart, group and regroup as well as investigation into the relative size of numbers and the relationships among them.

Research into how students develop mathematical understanding shows that, "understanding is never anall-or nothing proposition. It depends on the existence of appropriate ideas and on the creation of new connections." (Van de Walle & Lovin, 2006) Teachers must sequence and structure lessons so that students develop solid number sense. When new notions and skills are introduced, they must be connected to existing ideas rather than taught in isolation. The goal is overall numeracy, not the singular task at hand.

Our students develop a toolkit of mental math strategies. Visual images, concrete materials, strategy games and practice materials are presented in a carefully thought out sequence. Teachers ask students to represent a problem in different ways, in different contexts and for different ends. Multiple representations help develop strong number sense. They allow students to approach calculations flexibly and creatively and to notice when, in the "real world", a calculation is required.

Students are expected and supported to communicate their learning. The teacher gains insight into their reasoning as students ask questions and share solutions using words,

Let's think about dividing fractions a bit more to see what understanding can look like. $\frac{1}{2} \div \frac{1}{4}$ becomes $\frac{1}{2} \times \frac{4}{1}$ which equals $\frac{4}{2}$ or 2. Why is the answer, the quotient, greater than the number we started with? That's not how division works with whole numbers! Rather than applying a formula, let's make some sense of the mathematics. $6 \div 2$ can mean: how many groups of 2 are there in a group of 6? When students relate that understanding to $\frac{1}{2} \div \frac{1}{4}$ they think about how many quarters there are in one half and they find there are 2. They can add meaning through a story or drawing and use their understanding to solve real problems in their world.

12 THE LOLA STEIN INSTITUTE



pictures, numbers and symbols. As they listen to each other the students begin to appreciate that often there is more than one way to solve a problem.

As they listen to each other, the students begin to appreciate that often there is more than one way to solve a problem.

The ethics of reciprocal dialogue factor into group problem solving. Students evaluate approaches and consider which is more efficient. In doing so they further develop numeracy skills. Teachers supervise as the students grow as problem solvers able to articulate and defend the thinking behind a position. When students ask themselves "Does this answer make sense?" they develop confidence in their capacity to evaluate their own reasoning and that is the work of mathematicians.

Numeracy skills are used to solve problems and make sense of the world. At The Toronto Heschel School numeracy skills are utilized daily by students through their ongoing school energy audit. They evaluate techniques to save energy, quantifying their results such as the effect of waste free lunches.

When students understand, they start to trust their thinking. They can use the math they know to figure out what they don't know. They display their understanding by applying mental math and computational skills to new situations using numbers and operations that make sense. Mathematically literate students are flexible and creative thinkers who approach and solve real world problems with curiosity and confidence.

Students see that numeracy skills are valuable to mathematics and to non-mathematical pursuits as well. Applying ground rules, formulae and logic to new situations is a life skill of wide application.

the LANGUAGE of A METHOD IN JUNIOR HIGH CONNECTION



My task is to bring my students to understand that history has everything to do with them.

To explain my enthusiasm and my students' successes I travel through a series of vignettes from the school halls. I describe students studying natural sciences through close examination of their own environment, linking ecology to social action and Jewish ethics. I point out students learning geometry while appreciating Wassily Kandinsky's beautiful triangles. I tell anecdotes about how students dramatize the Chumash, and write poetry and songs about biblical characters as they absorb Nevi'im, The Book of Prophets.

In Junior High, science and Talmud merge during a classroom unit on the seasons. Art and mathematics blend. Civics students meet the principles of democracy through the ethics of Talmudic dialogue. Nonetheless, how we teach is as relevant to our success as what we teach.

To engage the interest and attention of our students, the onus is on us, the teachers. We must present content in ways that work and help our students connect to the material. Michael Rosenak, the renowned visionary in Jewish education from Hebrew University, describes teaching complex content as a challenge likening it to speaking a foreign language. If content does not speak to students in a relevant way, they can easily become confused or disenchanted. Our job as educators is to teach students in a "language" they understand and in ways pertinent to their lives.

At the start of each school year, I can usually predict how my students will respond to their first Grade 7 Civilizations class. I tell the students they'll be studying the Babylonian Exile of 536 BCE and I am met with deep sighs and blank stares. Ancient history does not excite them. After all, in today's fast-paced world of iPhones and Facebook, what does history have to do with them? My task is to bring my students to understand that history has everything to do with them.

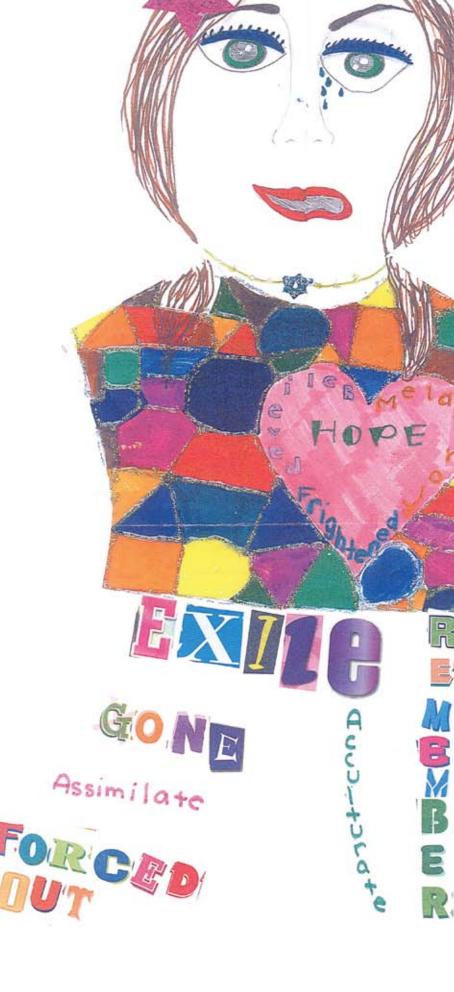
Rather than citing historical dates, I use Polish painter Samuel Hirszenberg's 1904 portrait, "Exile," as a springboard for classroom inquiry. Hirszenberg depicts the experience of the Babylonian Exile in his haunting painting of families carrying everything they own on their journey from Judah to a foreign land. As students share their interpretation of this powerful painting, dynamic conversation replaces the blanks stares.

In this example I am using visual art as an entry point because its dramatic content invites my students' analysis. I choose to start our study of exile through the sensibilities of the displaced person, not through dates. The animated classroom conversation tells me that the emotive portrait speaks a language my students understand; it has engaged their own methods of interpretation. Twelve-year-olds can sense the anguish of the journey I am presenting to them. The Babylonian Exile now speaks to them.

From this basis of understanding, my students examine the historical subject matter in more depth by dissecting primary texts that detail the exile. Finally, I encourage them to reflect on the implications of what they have found and to ask questions that render the topic relevant to them personally. What does an exile do to people? Does exile exist in our contemporary world? Have other cultures or religions been exiled in ways similar to the Jewish experience? Through class discussion generated by these questions students grasp that history is cyclical, and that diverse cultures often meet similar occurrences.

I utilize whatever discipline works to translate the topic at hand into a language that has relevance to my students.

This integrated model of teaching inspires me. I utilize whatever discipline works to translate the topic at hand into a language that has relevance to my students. We motivate our students by presenting curriculum in a meaningful way. Next we assist them to think broadly and critically and finally, we encourage them to identify their discoveries and share their interpretations. In this way, we employ Professor Rosenak's theory; we make classroom content relevant to the students, and they can make meaning and transfer the knowledge into the real world.



15

FIVE KINDS OF SMART;

CHILDREN HAVE VERY DISTINCT THINKING SKILLS: EXPERT

Howard Gardner, the Harvard psychologist and education guru who revolutionized thinking about the way we learn with his multiple intelligences theory, has an even more challenging concept for teachers heading back to the classroom.

While multiple intelligences dictated different teaching methods for the different styles of learners in each classroom, his latest "five minds" theory suggests that every lesson needs to develop the distinct mental abilities he says human beings need to succeed.

These are distinct thinking skills -- the disciplined mind, the synthesizing mind, the creating mind, the respectful and ethical minds -- that, he says, are often not stressed enough in traditional learning environments.

"To measure performance, we need to expose students to new examples -- news articles, scientific findings -- where they have not already been taught a prescribed response or analysis, and see whether they can make sense of them," he said in an interview.

Unfortunately, he said, too many schools today are stuck on more traditional methods of teaching and assessment, with an unhealthy emphasis placed on standardized testing that allows for only one correct answer.

Mr. Gardner explained his theories, for which he has become widely renowned and named one of the world's 100 most influential public intellectuals, in an interview before delivering an address at a Toronto education symposium this week.

Under the multiple intelligences theory, a child who struggles to comprehend basic math problems may be just as brilliant,

or even more so, than a youngster who breezes effortlessly through pages of calculations. The important distinction is in the type of intelligence each child possesses. The struggling child may, for example, come alive with understanding when the same mathematical material is presented in a different way; perhaps through language or song.

In the simplest terms, the multiple intelligences theory says the mind is better thought of as "a number of relatively independent computers, rather than one general purpose computer." It posits that human beings possess many different types of intelligence, from linguistic, to mathematical, to musical, and many more. He even finds a place for existential intelligence, which he deems "the intelligence of big questions." In an educational setting, the natural fallout of his multiple intelligences theory is increasingly individualized instruction.

That practice dictates educators should learn as much as they can about each student, teach in the specific ways they can learn, and assess in ways that children can show their knowledge. It also leads to finding a variety of ways of teaching a single topic.

"You know what it is to understand something," he said. "Because if you understand anything well -- your job, where you live, your family -- you can represent it in lots of ways. You can talk about it, you can joke about it, you can make a play, you can draw it, you can make a diagram, you can make a formula."

Gail Baker is a longtime follower of the Harvard professor's research. She is also director of the Lola Stein Institute, the research and development arm of Toronto's Heschel Jewish day school, which hosted the recent symposium at which Mr. Gardner spoke.

The school's curriculum, modeled after Mr. Gardner's theories, moves beyond rote learning to focus on "big questions," such as how students fit into Canadian society, Ms. Baker said -- and teachers deliver material in a plethora of fashions.

"We can stand up at the front and talk. We can start with a piece of art. We can start with a kinesthetic activity. There are so many ways as an entry point and the more ways you do it, the more opportunities you're providing for children to access that information," she said. "It's no longer acceptable to take a history textbook and just rhyme off the causes of World War Two and what led up to them. That's just not acceptable in good schools anymore."

Stanley Katz, an expert on cultural policy at Princeton University who taught Mr. Gardner in his Harvard days, says his former student has been a great advocate for art education by showing how children learn aesthetically as well as logically. This is a natural result of a theory that promotes teaching to the individual student, not the classroom as a whole.

"This is of course diametrically opposed to what's done all over the world," Mr. Gardner noted. "Everybody's forced to go through the same lens, the same eye of a needle, and if they can't learn that way, tough noogies."

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THE FIVE MINDS

The Disciplined Mind has expertise in at least one subject, knows something well and works on it.

The Synthesizing Mind has the capability to sort through the daily deluge of information and come out with a coherent narrative.

The Creating Mind is innovative, thinking of new questions and answers, having new ideas.

The Ethical Mind thinks about responsibilities to others.

The Respectful Mind cultivates respect, has emotional and interpersonal intelligence.

UNMASKING CHARACTER

IN THE BOOKS OF SAMUEL I & II



EARLY SHAUL - OVERCONFIDENT WARRIOR

SORROWFUL HANNAH

ARROGANT GOLIATH

DISTRESSED ELI

17

the EMOTIONAL BACKPACK

Our child carries a backpack filled with pencils and notebooks. He or she needs these supplies to handle tasks at school. Your child also totes a bundle of emotional supplies which are the skills and attributes equipping him for a day at school. This is the Emotional Backpack: school supplies your child uses to focus, to understand, to learn; and to experience social, academic and emotional success.

THE EMOTIONAL BACKPACK SUPPLY LIST:

REST.

Children need a well-rested body. Early bedtime captures critical hours when children grow and replenish. Chronic fatigue damages a child's potential, interfering with the ability to regulate emotion and to focus. Children need 10 to 13 hours of sleep depending on their age, teens need at least 8 to 9.

CONFIDENCE.

Build your child's confidence by loving him or her well. Make him or her feel delicious. Look in his eyes. Hold her face in your hands and let her know several times a day that she is so loved. Set fair and reasonable limits and try, whenever possible, to respond, not react, to your kids.

A WILLINGNESS TO MAKE MISTAKES.

A child's ability to try new things is essential to learning. He must persevere even after failure. Love is not conditional upon success. Your child will improve at taking risks when you praise effort, not results, ensuring he or she feels loved always. Tell your kids how you learned from a mistake. Do not be hard on yourself in front of them. It's a highly contagious bad habit.

RESILIENCE.

The ability to handle life's ups and downs is a critical life skill. Strong, predictable, and nurturing parents produce resilient and emotionally organized children. If we solve all their problems for them, they may not develop the emotional hardware necessary to handle what life throws at them.

JOY.

This emotional supply is so important. Happy children learn better. When children are stressed, worried or upset, their learning is compromised. Have family members constantly take stock of what they are grateful for and talk about it. Make sure life has time for play. Tickle, giggle, treasure each other, have a picnic in the living room, make time to be silly; this is the language of children.

LOVE.

Show your children they are lovable. Don't just tell them you love them. Feeling loved builds resilience, a cohesive sense of self and security. Leave little notes reminding them of what is special about them in their lunch bag or on the bathroom mirror. Let them hear you telling fun loving anecdotes about them to friends and family. Let them know you love to be in their company.

TRUST.

Listen to your children's words and reflect on what they are saying before correcting or commenting on behavior. This builds trust and helps them consider their own behavior, not yours. They will grow comfortable to talk to you, even when they make mistakes, and see your love is unconditional. This also helps them build other solid relationships with friends, teachers, coaches and camp counselors.

EMPATHY.

The capacity for empathy is essential to good social health. Empathic children build quality friendships and work better in groups. Children's capacity for empathy grows as they experience empathy.

UNDERSTANDING.

When children feel understood they become more caring and understanding toward others. They are more able to entertain the ideas of others, and become generally more open minded.

PEACE OF MIND: SMOOTH MORNINGS.

A good morning routine helps start the day on the right track and gets the family to work or school feeling upbeat. Kids who arrive agitated and upset often overreact to little things and this blocks learning and positive social experiences.

19



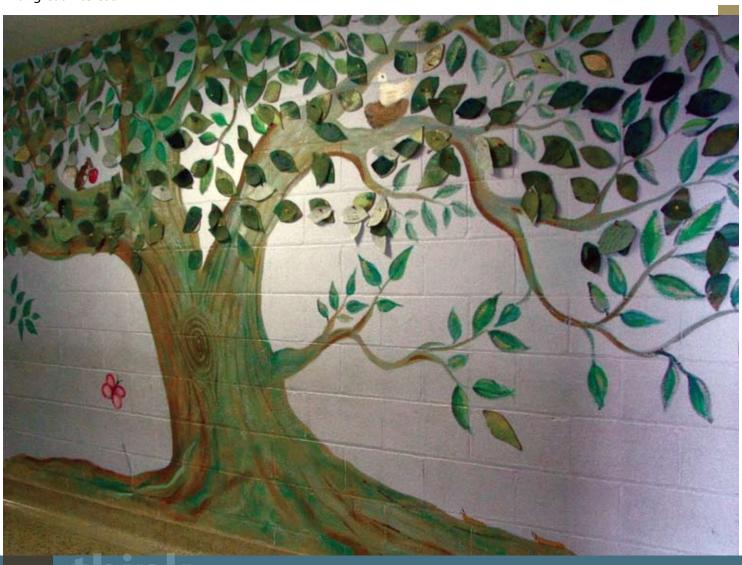
what are all these PARENTS THINKING & WHY?

Last year, a survey explored Jewish day school performance. It was sponsored by the Partnership for Excellence in Jewish Education (PEJE), a pre-eminent American agency, and went to families across North America whose children attend Jewish day school.

The Lola Stein Institute develops curriculum and teacher training, so we are interested in parent perspectives on education. Given that the institute is based at The Toronto Heschel School, we examined the school's survey results with great interest.

The findings relating to our parent community stood out. In all of North America, The Toronto Heschel School scored the highest for a sense of community and amongst the highest for parent volunteers and for parents who completed the survey. What do these scores mean?

The level of parent participation tells us that parents at The Toronto Heschel School have thought deeply about education; that they appreciate the school's care for their children; and that they are committed to help.



20

1. WHAT MAKES THESE PARENTS CARE?

They have important goals for their children. The reason they care is the same reason five educators established the school 14 years ago, that is, to give children academic learning at the highest standard, through the most effective methods, and all within a Jewish day school.

Teachers attend to each child, addressing strengths and challenges to maximize each student's educational potential. The school leadership keeps teachers inspired through high level teacher enhancement.

The school goes beyond standard curriculum. Students address big questions, develop thinking skills, mindfulness and the ethical orientation of a dynamic Jewish identity. The curriculum exceeds the learning of rituals, holidays and connection to the State of Israel. These aspects of Jewish life are important and yet insufficient. Each child is tought to be a conscious, self-reliant, Jewish thinker. Parents see this and appreciate it.

2. WHAT ARE THEY THINKING?

These parents have thought about education. They consciously "chose" a specific educational profile for their children, sidelining circumstantial factors such as proximity, synagogue affiliation or alumni connections. Over the past 15 years across North America, leading, forward-thinking schools have reoriented their educational models towards integrated studies. Nonetheless, almost all other Jewish day schools have remained rooted in traditional learning. Toronto Heschel parents noticed.

The North American Jewish child has an integrated identity. He is a Jewish Canadian or an American Jew and his schooling should reflect this. Integrated Jewish education at The Toronto Heschel School suits this blended identity. The "Jewish" is not divided from the "general." Course work is resequenced from Ministry guidelines to correspond to the Jewish calendar. Integrated Jewish studies connect Jewish and universal themes, synthesizing the various topics for greater relevance and insight.

Jewish history is contextualized within world history. Ecology is based in Judaic text. Civics students learn that Jewish voters have multiple priorities and the dilemmas are considered through Jewish ethics.

It makes sense. Parents know the world today demands new skills. Beyond remembering facts, their children must be able to synthesize information, to apply knowledge and to think critically and independently. Parents see that The Toronto Heschel School provides these skills.

The school's respect for the child engenders the parents' respect for school.



3. WHY DO THEY TAKE ACTION?

They witness how their child matters at school, the whole child. The school's respect for the child engenders the parents' respect for school.

When parents understand that empathic, respectful care permeates the school culture, they step forward. The result is an outstanding volunteer corps.

Parents see Mitzvah Day, one parent's idea that spread across Toronto. They attend Learning Circles led by other parents. Parents chat, wait and borrow books at Cafe Shalom, a coffee house at school, set up and managed by parents. Corridor murals are painted by parent artists. Gardens are tended by parent gardeners. The imprint of parent effort is everywhere.

When parents see world-class education is available to their child, they act. Enrollment at The Toronto Heschel School is a parent's performance of understanding.

21

A SENSE OF GUARDIANSHIP

ENVIRONMENTAL STUDIES FOR THE WHOLE FAMILY

We must train our children to address the requirements of the society they inherit. Their educational experiences should reflect the physical world.

It's clear to me that our children must become guardians of the environment. Their generation has to live with the consequences of the actions of previous generations and chart a new course towards environmental rehabilitation. How do we prepare our children?



The students have the opportunity to "walk the talk."

An environmental ethos pervades all aspects of the curriculum at The Toronto Heschel School. The students have the opportunity to "walk the talk." In so doing, they begin to see themselves as full participants in the world and as committed protectors of the earth.

In my view, the Heschel Teaching Garden offers an unparalleled opportunity for environmental education and personal growth. It is the place that has most captured my children's imagination and inspired their efforts. Their plants grow and they mature with them.

When educators all over North America bemoan the fate of disengaged boys at school, my sons relish the active, messy, hands on learning that the garden provides.

As the mother of four boys, I aspire to raise my children to become engaged, responsible, nurturing, satisfied adults. Working in the Teaching Garden, my children are exposed to principles which are core to my parenting goals. They learn the value of caring for something. They learn that through their own actions they can sustain life. They see it through the fruit (and vegetables) of their labour.

In a world where immediate gratification is commonplace, work in the garden teaches that valuable returns come through patience and perseverance, that things take time. At a time when educators all over North America bemoan the fate of disengaged boys at school, my sons relish the active, messy, hands-on learning that the garden provides. My urban children work, as a collaborative team, with their teachers and parents, to till the earth. It is the place where their learning comes to life!

As a parent, I find it inspiring to witness how environmental interest, knowledge and commitment integrates into my children's world view. The language and behaviour of conservation, learned at school, now inform our practice at home. Through their immersion in environmental education, a sense of guardianship and ecological participation have become second nature to my boys. They are students, but they are also environmental educators to my husband and to me. These are such important lessons to learn from our children.

As students at The Toronto Heschel School learn the science underlying composting, the ethics inherent in waste reduction and the mechanics of plant growth, they are truly living the Jewish value of *Tikkun Olam*, the imperative to repair the world.



WE OFFER **WORKSHOPS** THAT INSPIRE **EDUCATORS**



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PLEASE CONTACT US FOR INFORMATION ON HOW TO CUSTOMIZE A SELECTION OF WORKSHOPS FOR PRESENTATION AT YOUR SCHOOL OR ORGANIZATION.



LOLA AND MANNY STEIN

LOLA STEIN

Lola Stein z"I was an early female pharmacist in South Africa, but her very special talent was in hospitality and friendship. She cared for family and friends, at home and abroad, individually, uniquely and lovingly. One friend chooses to honour her memory in a way that also reaches out to many.

The Lola Stein Institute reaches teachers close to home and afar. The Institute began within The Toronto Heschel School in 2003 and has expanded its educational leadership more broadly thanks to international recognition of its excellence in teacher training and curriculum development. It now offers workshops locally and internationally, customizing the delivery of its attention and expertise uniquely to each school.



"We at Havergal College are grateful to the Lola Stein Symposium. Gail Baker's inspiring introduction to the Symposium was an appropriate launch into another academic year for all schools. Our entire administrative team attended Dr. Gardner's talk and many of us participated in the following day-long symposium. Thank you, Lola Stein Symposium! "

~ Dr. Susan R. Groesbeck, Principal, Havergal College

"This teacher training has pointed us in the right direction and inspired our teachers to move forward..."

~ Leia Ger-Rogers, Principal, Kehila Jewish Community Day School, Hamilton, Ontario

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