Director’s Column: A Love of Learning Starts with Play

By Jennifer Winters, Director

In play, the child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself. As in the focus of a magnifying glass, play contains all the developmental tendencies in a condensed form and it is itself a major source of development. —Lev S. Vygotsky

A young child’s love for learning starts with play. Play is a vital part of the cognitive, social and emotional development of young children. But play has been and continues to be under attack. For decades play and its many benefits to young children have been unintended casualties of some educational-reform efforts.

In the historic Space Race, which began in 1957, Russia beat the United States in putting a man into space with the launch of Sputnik. In a response similar to many at the time, Admiral Hyman Rickover (the father of the nuclear Navy) stated that Russian children are busy learning mathematics while American children are finger painting. Reactions like this fueled a perception of national embarrassment, which in turn bolstered the movement in education to focus on the “three R’s”—reading, writing and arithmetic (Dorothy G. Singer, Roberta Michnick Golinkoff and Kathy Hirsh-Pasek. Play = Learning: How Play Motivates and Enhances Cognitive and Social-Emotional Growth). More recently, the No Child Left Behind Act of 2001 resulted in school districts across the country scrambling to push standards once common for first graders down to kindergarten, and skills and standards expected in kindergarten down to preschools. Fast-forward to July 2011 when the federal government launched “The New Race to the Top.” “This program is a $500 million competition among states for early-childhood education aid based on their success at developing rating systems for their programs, crafting appropriate standards and tests for young children, and setting clear expectations for what teachers should know” (Michele McNeil, Education Week). While it is certainly a positive step to raise standards in early childhood education, we find it probable that the Race to the Top, or any program aimed at “pushing standards down” will be fraught with the same pitfalls that ensnared No Child Left Behind, specifically the emphasis on measuring and testing children’s cognitive abilities, with little or no attention paid to their social, emotional and physical development.

All too often, well-intended politicians, educators and parents mistakenly think of play as the opposite of work. This notion is very risky when it comes to early childhood education, often resulting in the belief that play can’t possibly be the direction taken in our quest to give young children the best start for their educational journey. This misconception is only too often reinforced in our media and our culture. As an example, this summer I heard the following sound bite during a major network’s morning news show: “Coming up next, how to sneak learning...
into your child’s play.” They could just as easily have been touting a compelling story about learning through play, but they never do. Despite decades of research in child development supporting how children learn through play, with a great deal of it taking place at Bing, many continue to grapple with the idea that children really develop the cognitive, emotional and social skills needed to create a love of learning in a play-based environment. At Bing, this only serves to make our mission and our message more important.

According to David Elkind: “When play, love and work are all involved, learning and development are the most effective. Play is not a luxury but rather a crucial dynamic of healthy physical, intellectual and social-emotional development at all age levels. During infancy and early childhood, play is the dominant and directing mode of activity; love and work are secondary.” (The Power of Play) While the cliché “play is children’s work” may sound trite, it is actually quite accurate, as evident in this incident observed in East room one afternoon:

A four-year-old girl is using metal dishes and water on an outside table. Other children surround her and are working on various “cooking” projects. She holds and examines carefully a cup of pale purple water with bits of dirt and bark in it.

She then exclaims in a loud voice, “This white pearl tea is preposterous! It tastes like tree bark!” She quickly dumps out the water and refills the cup, extending her arm while holding the cup as if to engage in various “cooking” projects. The teacher helps keep the play going by adding props when needed (extra water, pans and spoons) and through open-ended questions and statements such as “What do you need next?” and “I see you needed a lot of strawberries [which are actually small acorns] for your pie.”

Clearly, this child is acting out what is on her mind, what she knows from her real life experiences (both parents happen to be chefs). However, in this brief scenario she works out the basic tenets of following a recipe, employing measurement strategies and carefully examining the cup to see if it is exactly the measurement she needs for her recipe. She displays a rich vocabulary and a basic knowledge that there are flavors in tea and set amounts of ingredients in the recipe. She demonstrates hand-eye coordination as she pours and measures her tea. Also, she engages in symbolic play—using one thing to represent another—acorns for strawberries and purple water for tea. This ability to think about an object that is not present (the tea or strawberries) and use something else to represent it (colored water with bark or acorns) is a step in learning to think abstractly. This play experience was also a very emotionally satisfying activity for the child. It allowed the child to explore a range of emotions. For example, she explored the feeling of being dissatisfied (dare I say outraged?) with the tea, then coped with this feeling in a constructive way to fix the situation. The ability to stay focused for 45 minutes in an activity that she initiated is also significant. Remaining focused is a crucial component of developing a disposition for learning.

Young children have deep needs to play out events and ideas in their lives. Play is a fundamental and basic right for every child, and preventing play can be harmful to a child’s overall development. A recent study examining mothers’ attitudes toward play in 16 nations across five continents sounded an alarm that play is disappearing from their children’s lives. Another significant finding of the study was that mothers felt their children were being asked to grow up too fast and thus missing out on experiential learning that comes only from unstructured time to play (Dorothy G. Singer and Jerome L. Singer, “Children’s Pastimes and Play in Sixteen Nations,” American Journal of Play). Adults don’t intentionally disallow play, but often get so caught up in making sure children are prepared for the next step that they forget that they are just two, three, four and five years old and that they are in the “here and now” and need to be treated as such (Karen Robinette, “How Play-Based Nursery Schools Prepare Children for Kindergarten,” The Bing Times). Academic skills (i.e., the three R’s) will come but we need to recognize that for preschool age children these emerging skills are best learned through play. However, if play is not viewed as the powerful vehicle for learning in young children that it has been shown to be, it becomes sacrificed in the efforts to push the teaching of skills once reserved for kindergarten down to nursery school. And young children will lose very much. They will be denied experiences that come only from play, including chances to work out life events, and they’ll miss precious opportunities to develop a disposition for learning that will last a lifetime.

At Bing we are cognizant of what children and parents will be facing in their educational journey and we are committed to providing children the strongest foundation to solidify this love of learning. For young children, these skills include the cognitive, social, emotional and physical. Attitude formation begins early in young children, so it is essential they have repeated opportunities to engage in spontaneous play, using their creative, imaginative and curious selves. Fostering children’s interest and motivation, their analytical abilities, the ability to be engaged and focused in an activity that they choose are some of the basic building blocks that will fortify this emerging disposition towards learning. With experienced and dedicated teachers who are well-educated in child development, we know that the children who come through our doors will be respected and supported as they grow and develop into competent young people. We understand that learning is not a race about getting there first, it’s about developing the skills to stay on the track the longest. At Bing we are committed to making the most of our opportunity to get young children started on their road to lifelong learning, and that is best done through play.
A child runs up to you with a painting still wet. You hold it up and think what to say. A maelstrom of blue and red covers the paper.

Praise the process, not the person, proclaims Professor Carol Dweck, an eminently social and developmental psychologist at Stanford. Her return to the Bing community inspired much advance interest that Director Jennifer Winters decided to change the venue of the 2011 Distinguished Lecture on May 10 to the vast Cemex Auditorium in Zambrano Hall at the Knight Management Center, new home of Stanford Graduate School of Business.

Such a setting was not unusual for Professor Dweck. She has spoken widely to members of the corporate world, so revolutionary are her theories on ways to motivate children.

Dweck’s mission, or as she would say, the effort she is making through her passionate, dedicated labor, is to counter the self-esteem movement, which handed out verbal trophies (and sometimes real ones) to children for everything they did, hyperbolically praising their intelligence and abilities.

This kind of praise, which puts the adult more in the role of judge than of guide, actually undermines children’s self-esteem.

Dweck talked about “heaping praise onto children” to describe the burden of person, or intelligence, praise.

What is wrong with “global, person intelligence, brilliance, perfection, specialness praise”?

The main problem is that “children become afraid of making a mistake, afraid that if they do, you won’t think they’re so smart and special anymore. So they start shying away from hard tasks and get stuck in their comfort zone.”

“It can also be addictive,” Dweck stated. “And if you give children too much of it you’re taking their achievement away from them; you’re making it your thing rather than theirs.”

Ironically, global, person praise is limiting. Whether directed at intelligence, talent or other abilities, it tells a child “that’s what I value you for” and “you have a certain amount.”

Once children deem that qualities like intelligence or other natural abilities are fixed, they become vulnerable to forming what Dweck terms a fixed mindset, believing they have no control over their potential.

If intelligence is seen as “carved in stone,” as Dweck writes in her book Mindset: The New Psychology of Success, children will assume that if they need to try hard, they must not be intelligent. Or, they will infer that if they really are so bright then they must not need to work hard. The belief that heightened ability obviates the need for effort is “one of the worst beliefs children can have.”

“It’s the case often that kids who have natural ability learn to coast on that ability—they have never been required to work as hard as others to learn how to go beyond what comes naturally. And when they have to later,” Dweck said, “and they all have to, many are not able to do it.”

Evolving athletes who were number one as teenagers but never managed to sustain their talent through dedicated labor, Dweck declared that “one of the greatest gifts we can give our kids is the ability not just to find out what they’re passionate about but to push beyond their initial ability.”

The right kind of praise makes this possible.

Dweck’s work conveys that children who receive person praise—“you are so smart, you finished that puzzle”—lose interest in challenging tasks. They avoid risk in order to “look smart at all costs.” The cost is that they become “non-learners.”

How then do children become “learners”?

There’s an ideal mindset Dweck characterizes as a growth mindset that can develop with process praise. Its “cardinal rule is learn, learn, and keep on learning.”

Process praise narrates the activity—you worked for a long time on that puzzle and put the pieces together. (This example of process praise and those following in italics derive from interactions between Bing Nursery School teachers and their students).

Children praised for engaging in the process of figuring out a puzzle—I saw you were really thinking about where that piece went. At first you didn’t know but then you rotated it and matched up the edges—relish challenging puzzles and choose difficult tasks. Here, the emphasis is on their learning, growing, and experiencing the charge in their brains as neurons connect and form.

That spark is the source of the bright eyes of the baby in the photograph Dweck showed to illustrate an openness and splendor that never has to diminish.

Acknowledgement

Bing Nursery School would like to thank Jennifer Paley, writer and parent of Nicholas Baker, for contributing an article on this year’s Bing Distinguished Lecture.
Yet it does.

Dweck’s work at Bing Nursery School reveals that children as young as three-and-a-half and four already express a tendency toward a growth or a fixed mindset.

In one study, which involved four-year-olds enacting scenes with puppets, children who received person praise immediately exhibited a fixed mindset.

Once a child chose a puppet, the researcher used a “teacher puppet” to ask the “child puppet” to do a set of pretend drawings.

Children whose puppets were given person praise, “you are a good drawer,” in response to their first set of pretend drawings were “unwilling to take on difficulty and unable to cope with it” after the teacher puppet pointed out “mistakes” in subsequent pretend drawings (for example, an omission of wheels on a bus).

Ultimately, all the child puppets successfully rectified these “mistakes,” but in the meantime those told they were good drawers “felt they weren’t good at drawing.”

“They evaluated themselves negatively,” Dweck recounted, “and they stopped persisting.”

This discovery is especially poignant in light of Picasso’s observation, “It took me four years to paint like Raphael, but a lifetime to paint like a child.”

If person praise can blight a child’s creativity, even in a pretend scenario, it also has the power to subvert a child’s confidence. Young children who feel judged for making mistakes tend to think “they’re not a good kid when something goes wrong,” Dweck explained, and in a fixed mindset they believe that “that badness is a stable trait.”

Given the gravity of these findings, Dweck set out to determine whether process praise given to children as young as ages one to three could predict a growth mindset.

A longitudinal study she recently completed in collaboration with the University of Chicago shows that children accustomed to process praise as babies and toddlers did display resilience and a desire for challenge five years later.

How else can a growth mindset burgeon in children?

Attitudes can be influenced by example. During the question and answer session one audience member expressed concern about a propensity toward perfectionism in children.

“First, I would stop praising perfection,” Dweck advised. “I would start saying, ‘I want to see some mistakes.’” And, adults can broadcast their own mistakes.

If adults model perfectionism, children will internalize that way of being; however, when adults are process-oriented, children learn to recover from setbacks and even to embrace and enjoy struggles.

Dweck commented, “Rarely do you come home at the end of the day and say, ‘Honey, I had the most amazing struggle.’”

But with a growth mindset that values learning from experience children are able to cope with the struggles that inevitably accompany life.

“Struggle means you’ve committed to something you value. It should be something we’re proud of,” Dweck asserted, “not something that we hide. Persistence in the face of setback: that is really something to praise, the strategies kids use when they’re trying to solve something, the choices they make, like choosing difficult tasks when they’re doing a project.”

What happens when there is no struggle and a child completes a task quickly and easily—and then is praised for it?

“‘You did that so quickly and easily,’” Dweck dramatized. “‘That’s impressive.’”

“Why is it impressive?” she asked. “They already knew how to do it.”

Applauding effortlessness in children “can sabotage their challenge-seeking and resilience in the future.”

“What are they going to do in life that’s going to impress people without their working hard?” Dweck inquired.

Her answer: “Very little.”

Dweck offered an alternative message. “You did that so quickly and easily. I’m sorry I wasted your time. Let’s do something you can learn from. Let’s do something that’s fun.”

That way, children are always aware that they can surpass their current ability, and they won’t be satisfied defining themselves by labels like “talented” or “gifted.”

Another audience member asked about gifted programs. Dweck responded that as long as these programs encouraged a growth mindset they would not jeopardize a child’s will to learn.

The risk is that a child who is too invested in being identified as gifted may not gravitate towards challenges out of fear of not appearing smart.

Even giftedness waxes and wanes, Dweck remarked. “The literature is littered with child geniuses who lost their edge. The prodigies were good at things, but many of them never learned how to pursue things on their own or push beyond their comfort zone.”

And, she reiterated, it’s important for children to understand that intelligence and effort are not in conflict. In fact, effort plays a prominent role in “creating talent and intelligence.”

Talent is merely “a starting point.”

Along with effort, qualities such as persistence, perseverance, and resilience are all critical for any natural ability to flourish. These are the attributes that spring from a growth mindset.

Dweck’s research demonstrates that both seventh graders and pre-medical students performed better when they applied a growth mindset to their coursework.

The seventh graders were motivated to study hard so that “they could make neurons grow” after interacting with Brainology, an online workshop Dweck created that acquaints children with the concept of new neural connections made through learning.

Those pre-med students with a growth
mindset looked for conceptual themes within the subject matter, worked together in study groups, and sought out the teaching assistant or the professor for help when needed. Channeling effort into learning, they proved more effective on the final exam than those students with a fixed mindset who studied solely for exam results.

Excellent results stem from striving for profound understanding of the material.

Children are “born with such an irresistible exuberant desire to learn,” Dweck affirmed. They eagerly embark on “looking around the world, learning to walk.”

The way to nourish that innate enthusiasm is to appreciate their endeavors and “go into it with them and understand and share what they’re doing.”

Appreciating their pursuits—you drew a large circle in the center of the page, with lots of lines extending outward; you used both hands to climb onto the swing by yourself—communicates to children that their effort is important.

A member of the audience suggested video recording a child beginning to read and then unfurling the recording in the future. Dweck seemed delighted by this idea.

“Take them back to where they were at the beginning,” Dweck enthused, “and show them how far they’ve come. I think that is often invisible, and it’s very exciting when it’s made visible.”

Highlighting their progress through process praise—you used to sound out each letter and now you can read that word (as opposed to person praise, “you are a great reader”)—will galvanize children because it turns learning into a continuum of effort and improvement (as opposed to “the natural product of brilliance”). And that is when motivation takes root.

How does self-motivation thrive?

In addition to process praise, Dweck proposed another option: no commentary at all.

In response to a question, “How do you emphasize a child’s internal feelings of working hard?” Dweck answered, “You let them experience the internal feelings of working hard.”

In research studies it is complicated to offer no feedback, but “in real life hands-off is often better. The child is enjoying something, let them enjoy it. They’re working with something, let them work with it. We don’t need to co-opt everything.”

Dweck continued, “As much as possible the process should belong to the child. All you can do is teach them how to gain and maintain their own self-esteem through the love of challenges and the knowledge of how to persist and the thrill of mastery. These are things they can take with them wherever they go.”

When children do seek feedback from adults, an appreciation of their efforts—It looks like that block was very heavy. It took a lot of effort and you lifted it—reflects the activity back to them, inviting them to bring in their own subjectivity.

For those who may tend toward a fixed mindset themselves, or who may have praised children’s talent or intelligence in the past, Dweck underlined that mindsets can change. Neuroscience and cognitive psychology have found that the mind is malleable, in both children and adults.

And a growth mindset can be taught.

Dweck asked members of the audience to give one another an anecdote in which a fixed mindset manifested itself. The room was astir as people confessed to such missteps as pretending to have read a book in order to appear knowledgeable or believing that a “talent” could not be further cultivated.

In a growth mindset, mistakes like these would be recast as opportunities to evolve.

That’s how children’s confidence develops. Their belief in themselves is tantamount to their belief that their natural abilities are dynamic.

Extending her research into the study of willpower, Dweck establishes that Stanford students who believe that willpower is an unlimited resource are able to draw on it to stay more focused, and, for example, not to procrastinate during exam time.

From nursery school to college and beyond, in Dweck’s vision praise is specific so that the mind can be limitless.

The child awaits a reaction to the painting. I see a lot of blue and red paint. This part is purple where the two colors came together. Look at those brush strokes! You moved the brush all around the paper.

Although a lot of the research I’ll talk about was with older children, we find many, even most, of the same things with younger children.

One of the ways we studied mindsets extensively is in the context of the transition to seventh grade. We look at transitions because that’s when students encounter difficulty, and that’s often when mindsets make a huge difference.

We followed hundreds of students across their transition to seventh grade, and we measured their mindsets at the beginning; that is, by asking whether they thought intelligence was something fixed or something that could be developed.

Our first finding was that those who endorsed the fixed mindset said “looking smart was the most important thing.” For example, they agreed that “the main thing I want when I do my schoolwork is to show how good I am at it.”

But the ones who endorsed the growth mindset said “it’s much more important for me to learn things in my classes than it is to get the best grades.” They cared about grades, but they cared even more about learning.

When we looked at those seventh graders over the next two years, even though both groups entered seventh grade with identical math achievement test scores their grades jumped apart by the end of the fall semester and continued to diverge over the next two years. The students with a growth mindset achieved the stronger performance.

A Brain Wave Study: “Tell me when I’m right” vs. “Teach me something new”

More than any other study we’ve done, this one shows how a fixed mindset turns students into non-learners.

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Professor Dweck describes some studies that illuminate the way mindsets work

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October 2011  The Bing Times  5
them with a cap full of electrodes that measured signals from different parts of their brain, and we were especially interested in the part of the brain that told us they were harnessing their attention to receive important new information.

Once they were wired up, we put them in front of the computer, and the computer asked them a long series of very difficult questions like “What’s the capital of Australia?” (Most people say Sydney or Melbourne but it’s Canberra).

The students typed in their answer. A second and a half later the computer told them whether their answer was right or wrong, and a second and a half after that the computer told them the right answer.

When we looked at the brain waves we saw that the students who had a fixed mindset entered a really strong state of attention to find out whether they were right—and that was it. Their job was done.

But the students in a growth mindset entered a strong state of attention to find out whether they were right or wrong and then entered another very strong state of attention to find out what the right answer really was.

Later, we gave everyone a surprise retest on the items they had gotten wrong, and we saw that the students with a growth mindset scored significantly higher than those with a fixed mindset because they cared about learning.

If you extrapolate this to life, you have one group going around the world saying, “tell me how great I am, tell me how smart I am, tell me when I’m right.” But the other group is going around and saying, “tell me when I’m wrong, teach me something new, tell me something I don’t know.”

And you can see over time how one group, the growth mindset group, would really accrue a more substantial body of knowledge.

How Praise Operates: “Our language tells children what we believe and what we value”

Let me tell you about our work with the pre-adolescents. We brought fifth graders to a room in their school and gave them ten problems from a non-verbal IQ test in which they were asked to complete the matrix with the pattern that completes the series going both down and across.

The initial problems were pretty doable so most kids did well, and after they finished the ten problems we gave them feedback.

A third of the kids got intelligence praise: “Wow, that’s a really good score. You must be smart at this.”

A third of them got process praise, and that refers to the process the child engaged in. In this case we praised effort: “Wow, that’s a really good score. You must have tried really hard.”

And a third group got something like “good job”: “Wow, that’s a really good score.”

I won’t talk a lot about this last one because it was in the middle—not as good as process praise but not as bad as intelligence praise.

What happened?

Our results were so striking we did the study six times, with kids from different backgrounds, from different regions of the country, and we found the same thing over and over. What I’m going to tell you is a composite of the six studies.

The first thing we found was that, yes indeed, praising intelligence put kids in more of a fixed mindset compared to praising effort. But the most amazing thing was that praising intelligence instantly turned the children into non-learners.

After we praised them we gave them a choice. “What do you want to work on now?” We offered something in their comfort zone where they’d be sure not to make mistakes, they would do well, and essentially not risk the intelligence label they had just been given. We also offered a task that was hard and different; they might make mistakes and get confused, but they’d learn something important.

The majority of the students praised for intelligence wanted the task in their comfort zone so they would not put themselves at risk of losing that positive judgment. But the overwhelming majority of students who were praised for their effort chose the difficult task they could learn from—over and over. It was quite a striking and consistent finding.

Later we gave everyone a very difficult set of problems, and here we found that any confidence that had been instilled by the intelligence praise was short-lived. As soon as the problems became difficult the students praised for their intelligence lost their confidence.

If success meant they were smart then this struggling meant they were not. They stopped enjoying the task, they didn’t want to take it home to practice, and then when we looked at their performance—even later, when the problems became easier—it kept declining.

But when we looked at the students whose process was praised we found that they maintained their confidence, remained engaged during the difficult problems (many said those were their favorites), and kept gaining in performance on this IQ test.

The story doesn’t end there. We told the students that we were going to take this research to another school. “Would you fill out this paper,” we asked. “Don’t put your name on it, but write a note to a student in another school, telling them about your experience.”

We also left a little space for the students to report their scores. What we found was that about forty percent of the students praised for intelligence lied. And only in one direction! Now wait a minute—it was anonymous, the note was to someone they would never meet. Why would they lie?

I think it means that, within a fixed mindset when your intelligence has been praised, admitting that you did poorly on something, that you made mistakes, is so undermining, so humiliating, you can’t even admit it to yourself.

I don’t think that’s how we want our kids to be. When they don’t understand something, when it’s difficult, when they’re struggling with something new—that should not be a time for them to hide it. It should be a time for them to address it or to ask for help or instruction.
Multitasking often has drawbacks: Gains in efficiency may be canceled out by losses in accuracy, comprehension or production quality. Language learning, however, is definitely “a time when multitasking is good,” says professor Michael Frank, PhD, a recent addition to the Stanford faculty. This past fall, Stanford and Bing Nursery School welcomed Frank, a new assistant professor in the Department of Psychology (with a focus on developmental psychology) and a new faculty sponsor of research here at Bing. Frank’s particular focus is the development of language, and he shared his research on early language learning with the Bing staff during a development day on October 11, 2010.

Frank presented two common models for word learning: associative learning and intentional learning. According to the associative model, young language-learning brains count how many times a word and an object co-occur, and the pairings with the “highest counts are the ones that win.” Intentional learning gives the language-learning brain a bigger job than mere statistical calculation—suggesting that the young language learner draws data from the intentions of the speaker as well as the words and their context. Intentional language learners may learn from experience that “Mom [or Dad] only talks about some things” and that “Some words don’t talk about things [or] refer to the real world” at all; this intentional information may be gleaned from a gaze, gestures and other non-verbal forms of communication. Frank argued that language development combines both associative and intentional learning. He stated that young children learning language multitask—counting associations and considering intentions at the same time—which allows them to gain language abilities with remarkable speed and accuracy. So, in language learning, multitasking provides a powerful advantage.

How does multitasking play out in the process of learning language? “A short, ambiguous message can convey a lot to a perceptive listener” through contextual information, said Frank. Linguistic philosopher H. Paul Grice developed a set of rules for normal conversation, stating that individuals making normal conversation will always try to be truthful, informative, relevant and unambiguous. If young language learners assume that this is true of the speech of their parents and other caregivers, they can exploit these assumptions to gain as much information as possible from the non-verbal and physical context surrounding spoken words. For example, if an adult uses a new adjective to describe one object in a set of several objects, the child can use the adult’s gaze to tell which object is relevant to the spoken words and compare this object to the others in the set to see how it differs from them (assuming that the new adjective is informative in a way that will allow the child to discriminate in comparison to the other objects). In a previous study of three- to four-year-olds, Frank and his colleagues have found preliminary evidence that children do assume speakers to be informative, even when they use novel words. This set of assumptions about language and its context is what allows children to multitask, providing the background for Frank’s theory of how multitasking affects language learning.

Frank suggested that children learn language through a dual process that relies on using words to figure out a person’s intention, and on knowledge of how people think to figure out the meaning of new words. Associative and intentional learning both play a role as children learn language through hearing combinations of familiar and novel words and from non-verbal indications of intention. This is a complex and circular process, as understanding words helps learn intentions and understanding intentions helps learn words. To dissect this process, Frank seeks to tease out how accompanying non-verbal information (touch, gaze, gestures, pointing) and the structure of parent-child and other adult-child verbal interactions play out. He seeks to understand how interaction prepares children to learn new words, and how familiar words help them get their bearings. Familiar words can give a meaningful context that helps language learners determine whether a novel word is a noun present in the current environment, a verb about what is happening or some other kind of word entirely.

In Frank’s current studies he presents children with “pinwits” (fictional worm-like creatures made with craft sticks that have varying skin textures and patterns), uses novel adjectives to describe them and observes whether children associate the new words with skin or with pattern. Above all, Frank’s approach to language learning is based on the “perspective of interaction mattering,” the perspective—backed up by extensive evidence—that children learn not only from the auditory stimulation provided by speech but also from the interactive process of conversation with other human beings.
Every day we are faced with countless decisions in life. We make choices that affect our long-term and short-term goals. These decisions are sometimes driven by our impulsivity or after much thought and consideration. At Bing’s spring staff development day, Samuel McClure, PhD, an assistant professor at Stanford University in the Department of Psychology, shared his research study on neural mechanisms of time discounting, which gave insight into decision-making.

McClure has been interested in understanding neural behavior and how decisions come about. He explained his studies, which involved a standard experimental choice called intertemporal choice. According to McClure, an intertemporal choice offers alternatives that are available at different points in time. Would it be more beneficial to get something now or get something later? An example would be, “Would you rather have $10 today or $11 tomorrow?” Or, “Would you rather have $10 in a year or $11 in a year and a day?” According to McClure, the results revealed that people tend to be more patient if the choice is way off in the future and become more impulsive when the choice is closer to the present. Therefore, people tend to choose getting the $10 today instead of the $11 tomorrow since it is closer to the present. However, when given the choice of receiving the $10 in a year or the $11 in a year and a day, people tend to be more patient and choose the $11 in a year and a day since the choice is significantly ahead in the future.

McClure’s brain imaging study revealed that thinking of rewards activated different brain networks. The study revealed that when subjects chose the immediate reward, the parts of the brain that were activated were influenced heavily by brain systems linked with emotion. On the other hand, when subjects made decisions for future rewards brain systems linked to emotional regulation were activated. Furthermore, McClure indicated that several variables influence patience. One such variable, called the magnitude effect, occurs because people grow increasingly patient when larger quantities of units of money are at stake. For instance, the equivalent of $10 is 40 quarters or 200 nickels. The larger the quantity, say, 200 nickels, the less impulsive people are in decision-making. In McClure’s study, results revealed that the larger the amount, the larger the perceived risks, and the more willing people are to control cognitive functions that determine their behavior. The significance of this study is the realization that if a person can change the way he perceives the stakes, maybe he can also change how patient he can be. McClure is conducting a similar study at Bing to see if delayed gratification has the same effect on children using the magnitude effect.

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Yard Renovation

In August 2011, Bing School went through an extensive yard renovation—a bridge and pergolas were rebuilt and swings were added. A newly designed structure with a slide replaced the old one in the Two’s classroom. It’s the beginning of a multi-phase project. For more information, see page 26.

Admiring the rebuilt pergola in East Room are emeritus teachers Bonnie Chandler (front row, far left) and Doris Welsh (front row, far right), along with Karen Robinette, head teacher (front row, center), Jennifer Winters, director (back row, right) and Beth Wise, assistant director (back row, left).
What might be an effective way to help children learn about nutrition? Is it possible to teach young children biological concepts about food and nutrition? If so, does it make a difference in children’s food choices? Sarah Gripshover, a 4th-year graduate student in psychology at Stanford University, and her advisor, professor Ellen Markman, PhD, have been investigating this topic at Bing Nursery School over the past three years.

Slim with short hair, bright eyes and abundant energy, Gripshover grew up in Chicago. Both her parents and younger brother are social workers. Gripshover graduated from the University of Chicago with a major in linguistics. She worked as an assistant on a longitudinal research project on language acquisition for three years after graduation. She then decided to pursue a graduate degree in developmental psychology and came to Stanford.

Most broadly, Gripshover is interested in how belief systems guide behavior and how belief systems change over time. Many health interventions avoid merely equipping people with knowledge, reasoning that “knowing what to do” doesn’t necessarily motivate people to actually do it. However, Gripshover is keen on figuring out when and how knowledge can be motivating. There is evidence to suggest that having a coherent, compelling conceptual framework for understanding why and how particular behaviors are beneficial is more effective than just telling people—especially children—what to do without any explanation. Her research program is designed to uncover effective ways of presenting health messages to children in a clear and developmentally appropriate way to make those messages comprehensible and compelling.

Gripshover found Markman’s research on nutrition, which has a strong applied component, an excellent match for her, as she is interested in pragmatic aspects of social science. At Bing, the researchers’ goal is to design an intervention that influences children’s developing biological concepts, which will help them understand nutrition and thereby make sound food choices. The target age of the participants are 4- and 5-year-olds.

**First-year project: using linguistic framing**

Consider the following two sentences: *Milk gives you strong bones* and *Your body uses milk to make strong bones.* The first statement frames milk as the causal agent whereas the latter frames the body as having an active part in the process. Gripshover argued that sentences like *Milk gives you strong bones* can be misleading because food is an inert substance. Rather, our bodies extract nutrients through the process of digestion to make the body grow. She hypothesized that a conceptual intervention framing the body as the causal agent would improve children’s understanding. For example, saying “*Your body uses healthy food to grow*” rather than “*Healthy food helps you grow.*”

The intervention was presented in picture book format with two picture books differing only in whether food or the body was framed as the causal agent. The books are designed to teach children concepts related to nutrition such as the presence of tiny invisible nutrients within food, the ability of the body to take nutrients out of food and the importance of eating many different kinds of food.

Gripshover and her research assistants read the books to children in game rooms (research rooms) and invited them to pack a healthy lunch for a puppet by presenting them with a plate with one kind of food, say, a picture with celery. They then showed children another picture of celery, a picture of carrots and a picture of cheese and asked the children to choose one more item for the puppet’s plate.

Results indicated that children in the intervention framing the body as the causal agent indeed achieved a greater understanding of the importance of dietary variety than children in the intervention framing food as the causal agent.

**Second-year project: story books and snack observations**

In Gripshover’s second year, she and Markman designed a series of five short picture books featuring language framing the body as the causal agent and sought to determine whether the intervention’s effect can last over a longer period of time than one single session, as was the case for the previous study.

Their hypothesis was that presenting children with a coherent, developmentally appropriate conceptual framework for understanding the relationship between food and the body (as they did with pic-

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4th-year graduate student Sarah Gripshover, seated in center, observes children’s intake of familiar and unfamiliar food items at snack time.

The snack table. By Anna Julia Y., 4 years 6 months
ture books) will help children understand the need for variety and balance in their diet that goes beyond overly-simplistic “healthy vs. unhealthy” food categories.

Each of the five picture books focused on one of the concepts featured in the books used the previous year. These books provided rich elaboration of each concept and reinforced the concepts in the other books. For example, one book capitalized on the fact that children have experience understanding the importance of variety in domains other than nutrition. It is easy for young children to see why it might not be okay to make a tricycle out of just lots of handlebars and nothing else, even though handlebars are a good thing to have on a tricycle. Just as a tricycle has many different parts that work together so we can ride it, our bodies need many different kinds of foods with unique combinations of nutrients so that we can be healthy. No one food, however healthy, is enough to make our whole body healthy.

As part of Gripshover’s study, Bing teachers read these picture books aloud at snack time. There were three phases to the study: The researchers observed the children’s snack intake in the autumn quarter, read the intervention books to them in the winter quarter, and observed their snack intake again, as well as their conceptual understanding, in the spring quarter. To measure snack intake, children were presented with familiar and unfamiliar vegetables, cheese, fruit and whole-grain crackers during snack time and observed by researchers. To measure conceptual understanding, children were invited into the game room to help teach a puppet about food.

Results indicated that children were able to attain a sophisticated understanding of food, digestion and invisible nutrients, and this understanding helped them to grasp that different kinds of foods make unique contributions to the body—this is why dietary balance and variety is needed. Observations of children during snack time revealed that children who listened to these storybooks also ate more vegetables during snack time compared to children who did not listen to them.

**Third-year project**

How does the researchers’ conceptual intervention compare with a more traditional intervention to encourage healthy eating in children recommended by the United States Department of Agriculture? Gripshover and Markman launched the next phase of their study to find out.

The same procedures—reading at snack time and later snack observations—were implemented for two groups of roughly 120 children. One group heard stories providing a conceptual framework whereas the other group heard fun, child-friendly stories recommended by the USDA incorporating messages such as “eat more fruits and vegetables.” The children participated in the game rooms, teaching a puppet all about food as in the previous year.

Preliminary results revealed that children in all classrooms increased their vegetable intake from fall to spring quarter. However, children who heard a coherent, developmentally appropriate explanation for why their body needs a wide variety of healthy foods increased their vegetable intake by a significantly greater margin than children in the USDA intervention condition. This shows that the improvement in the intervention condition cannot be attributed solely to other factors such as talking about healthy foods with teachers and peers in a positive, supportive social context. Together, both studies suggest that appealing to children’s natural curiosity about how the world works by providing a coherent explanation is a promising new approach to nutrition education.

What is Gripshover’s own attitude towards food? She enjoys cooking and loves to eat. It is worth spending extra time to make the food tasty, she said, and she enjoys experimenting with whatever ingredients she has at hand. What are her favorite ingredients? Garlic, onion and butter. Her belief? Everything in moderation—just as one of her picture books conveys.

**Next Steps**

Gripshover and Markman plan to use their materials with a wider range of populations, including children from more diverse socioeconomic backgrounds. The researchers would also like to extend these materials to children in kindergarten and first grade.

The researchers are also interested in investigating whether their conceptual materials can boost the effect of other interventions, such as those used by the USDA. There is much innovative research being conducted on the effect of intervention such as making healthier foods the default at school lunch time, and “sneaking” physical activity into children’s daily lives (e.g., in the form of a fun dance). Gripshover and Markman wonder: Would having a conceptual understanding of nutrition help children buy into the health behaviors promoted by these interventions? Does a conceptual understanding lead to a greater feeling of self-efficacy in children who understand both why and how to eat a wide variety of healthy foods?

Finally, the researchers would like to know if this kind of conceptually based intervention could be tailored to other health goals, such as helping children with allergies understand why and how to avoid trace amounts of allergens.
"If you build it, he will come," is the famous line from the 1989 movie *Field of Dreams*. Similarly, if you renovate the Tower House at Bing Nursery School, adults will come. The restoration of the historic building has enabled the school to truly realize a “dream come true,” with the successful launch of the Bing Institute in 2010. This amazing environment, adjacent to the nursery school, is an ideal site for engaging educators and parents to promote quality early childhood education.

The mission of the Bing Institute is to foster a community dedicated to improving the lives of young children and their families. The institute provides professional development for early childhood educators and personal development for parents. Examining the philosophy, program and practices that shape our educational model translates into opportunities for inspiration, shared experiences and stronger commitments to serving young children.

The institute offered parents, Bing teachers and other educators the following in the 2010-2011 academic year:

- **Bing parents** participated in the well-established Parent Seminar Series featuring “The Competence Model” and “Parenting Strategies.” The presentations were held in the Tower House and the format worked well in this setting. The institute also launched informal parent meetings called Coffee Talks. Bing teachers, researchers, parents and community members hosted these conversations. The topics ranged from choosing children’s books to composting and to preparing healthy breakfasts. Parents responded positively to this type of interaction.

- **Bing teachers** engaged in a professional development day (see page 26 for more information) and had ongoing opportunities for their own growth through a number of workshops, and/or by serving as presenters.

- **Early childhood educators** took part in a range of programs. The institute held two evening seminars for local educators on the use of paint and clay. We also hosted a conference about reflective practice designed especially for the Chabad Early Childhood Education Network. Twenty-three directors from this network gathered for three days for sessions related to “Developing Reflective Practice: Opening a Dialogue About Quality Early Childhood Education.” This summer, the institute held two conferences. The first was a repeat of last summer’s program, “Developing Reflective Practice.” The second was on a new topic: “Back to Basic Materials: A Foundation for Curriculum Design.”

For many years, Bing School had been limited in its ability to take an active role in the early childhood education community, in part due to space constraints. As evidenced above, that has changed. Previously, our teachers participated in the field by presenting at conferences and maintaining the school as a model for best practices. Now that we take this step in developing educational programs for adults, we find that we have been preparing for this opportunity for a long time. Our teachers and administrators possess a wealth of information to share and ideas to investigate in this broader community.

Left: Bing teacher Nancy Verdtzabella (right) hosts a parent coffee talk on how to choose picture books for children. Right: Members of the Chabad Early Childhood Education Network document their own learning.
Edith Dowley, the founding director of Bing Nursery School, called upon teachers to consider the children in our programs as “honored guests.” Her ideas on how to accomplish this have permeated every aspect of the program, curriculum and culture at the school since its beginning in 1966. This one simple phrase challenges us to accept and value children for who they are and to focus on their competences rather than highlight their deficiencies.

The effects of shaping school into a place where children are respected, accepted and viewed as competent—now known as the competence model of teaching—start even before children enter Bing. They begin when prospective parents first tour the school to learn about our philosophy and program offerings. The school values parents as capable partners in the development of their children. This lies in sharp contrast to the tendency at some schools to view parents as the root cause of any problems that arise.

Once a child enters the program, the school takes further steps to solidify this collegial relationship. For example, a developmental history meeting takes place between the teacher and parent to give the teacher a more complete understanding of the new member of the classroom. This dialogue forms the basis for the child’s positive entry into the program. For example, learning a child’s play interests at the developmental history interview will assist the teachers who prepare the curriculum and environment. If a teacher knows that Paulina loves animals and is a good caregiver to them, the teacher will capitalize on Paulina’s interests by inviting her to assist with the care of the classroom pets. This focus on each child’s competences will likely smooth the transition into the school setting.

It is essential for teachers to establish
Teachers build a trustworthy and safe bond with each child in the program. Relationships form the foundation for their efforts to support young children as they are introduced to group life and early education.

The overall philosophy at Bing is play-based and child-centered and is designed to meet the developmental needs of young children. The concept of children as “honored guests” is apparent when children enter the classroom and are each greeted warmly by a teacher, as one would when greeting a special guest in the home. The environment is prepared thoughtfully too, as one would expect the space to appear for an “honored guest.”

Dowley designed Bing to offer a safe and stimulating environment that highlights the competences for all children. Her intention was to enable freedom of movement and freedom of choice. When planning and guiding activities at Bing, children’s safety came first and foremost, and still does. Dowley planned for the spaces to accommodate a range of abilities and was a visionary in making the school handicapped accessible, even before laws were enacted requiring this feature. The play yards that Dowley configured reflect her desire for the learning environments to give back to children some of the qualities of life that modern society has tended to take away. For example, a natural setting that included expansive spaces, adequate time to explore the environment and to enable freedom of movement and freedom of choice for the young child.

The classrooms at Bing are all equipped with furnishings and materials that fit the scale of a young child’s body for ease of participation. Specific areas within the environment are designed to promote a particular activity or use of material. For example, the block areas are carpeted and feature shelves of organized unit blocks. Each area of the indoor and outdoor classroom environment is organized to provide opportunities that follow children’s typical play interests, promote skill development and embody the school philosophy. The visual plane is designed to allow the child to see the full range of options from just about anywhere inside or outdoors.

Children need ample time to become invested in the array of materials, activities and social experiences available. An “honored guest” is not rushed, but given the chance to become invested in what interests them. During children’s extended, uninterrupted play, they engage in ways that integrate their physical, social, emotional and cognitive domains. Their capabilities are evident as they gravitate toward opportunities that reveal their interests. For instance, a child may have a depth of knowledge in a particular area, such as trucks. That child may become the “resident expert” in all matters relating to trucks and may be sought out by others who have similar interests and seek to learn more. It is gratifying to be acknowledged for the competences that we possess.

The play-based, child-centered curriculum at Bing uses open-ended, basic materials such as blocks, clay, paint, sand and water. These are materials that do not have a prescribed use. Children begin to use these materials as soon as they enter the classroom and become more skilled with repeated opportunities to explore them. The nature of these materials allows for risk taking, challenges and experimentation. These materials build upon a child’s strengths, interests and abilities and focus attention on what they can do.

Teachers often encourage a child’s participation by capitalizing on the child’s interests—smiling and inviting the child by name to engage in an activity they’re curious about. Specific comments about a child’s work also support children’s efforts. For example, rather than saying “That is a nice painting,” more specific feedback such as “I see you are making brush strokes vertically, up and down on the paper,” demonstrates that the teacher is attending and noticing the child’s competence at the easel.

Showing children that they care about their opinions is another way teachers honor them and support their development. Asking children open-ended questions, those that require more than a “yes” or “no” answer, encourages focused thinking and discussion. When teachers and parents assume this role of a caring adult, they help children gain pro-social behaviors—such as caring about others.

The value of the Competence Model is that it gives each child, as “honored guest,” membership and acceptance within the group, allows trust and respect to flourish between adults and children as well as between the children themselves, and promotes play, engagement, skill development and learning opportunities.
“I like the pig best!”
“No, the cow is best!”
“But my favorite is the chicken!”

As the 2010-2011 school year began, the children in East AM were very interested in expressing their preferences about every type of information presented by the teachers. For example, they wanted everyone to know about their favorite characters in a book, verse in a song and art materials on a table. The challenge for the teachers was how to make sure that everyone was heard. Especially when most of the children would repeat their preference over and over at increasing volume, as if they were involved in a heated debate. Examination of this situation brought another, bigger challenge to the teachers’ attention: How would we take a group of individuals and help them to become a community of learners?

The first strategy the teachers employed was to create a voting system for the children to express their preferences. The teachers made large graphs recording each child’s vote. The graphs provided a visual record of the voting results and made the information more meaningful to the children by making them aware of their classmates’ favorites on both general and individual levels.

Next, the teachers found ways to enhance the voting process. They began asking the children why they voted the way they did, recording the answers and sharing these at story time along with the graph. This activity began to help the children gain awareness of varying perspectives. Not only did they learn who had chosen what, but also what motivated the choice. After reading the African folktale, Anansi, the Spider, children were asked which of Anansi’s seven sons deserved the prize that is found at the end of the story and why. Children came up with responses such as:

“Game Skinner, because he split open the fish and got Anansi out.”

“Stone Thrower, because he saved Anansi from the bird when he put the stone up in the air.”

“Cushion saved father because he’s soft and saved Anansi.”

As the voting activities continued, the teachers started to notice that the children were referencing what their friends had chosen and allowing it to influence their choice. Though the desire to find things in common with a friend is natural, the teachers hoped to produce results that were more reflective of the class’s true interests rather than results that reflected social connections. In response, the teachers instituted a blind ballot system where children’s names were written on a slip of colored paper that corresponded to one of the voting choices. The children dropped the slips of paper into a slot in a box, and the slips were adhered to a graph and counted during story time. These ballots did indeed have an effect: The results of the votes became more evenly spread across the range of choices.

Once the teachers had found a way to satisfy the need to express preferences, they began looking at other ways to foster a sense of community, such as fostering collaborative play. To encourage working together through play, the teachers introduced various set-ups and scenarios that would require several children’s help. For example, the teachers put out play food, carts, baskets, bags and adding machines in the large hollow block area on the patio to promote store-themed play. The activity required a great deal of cooperation and negotiation and was extremely popular. The children needed to assign roles including customers, cashiers, baggers and stockers. They also needed to organize and divide up materials and decide the order of events, e.g., shelf stocking before shopping.

The success of this project inspired the teachers to create other activities that would require collaborative interactions among multiple children. In the unit block area, the teachers arranged a variety of dolls and miniature, wooden playground structures. Over the course of several days, the children built an increasingly elaborate playground/park/fair/pumpkin patch in which all ideas from bouncy houses to pony rides to petting zoos to...
ladybugs, worms and snails. The children looked in picture books to find out what these creatures needed to live and then sought to design appropriate habitats and find food for them.

Not only did the children care for the animals, they also cared for each other. The older children began to relish guiding and teaching the younger children, showing them where to find and how to use materials. For example, making paper wings was a popular activity among many children in the class. The children who were experienced with this process walked new children through choosing paper, folding it, drawing a pattern, cutting out the shape and taping the wings onto their backs. Also, the children participated in cooking projects to make food for snack time. A particularly popular project involved baking a variety of gluten-free crackers, which everyone could enjoy, regardless of wheat allergies.

The cooperative nature of these projects led to many opportunities for problem-solving. Limited space and materials gave rise to complex negotiations over division of resources, length of turns and assignment of roles. How many big sisters can a pretend family have? Can one driver give friends rides in two different carts at the same time? Can a space ship have more than one captain? With teacher support, the children found their own answers to these questions and many more. The paths to these types of solutions can be long and complicated, but they always provide the participants with opportunities to learn about what it takes to be part of a group. Working together to solve problems helped the children to build trust with one another and the teachers.

As our classroom community became more cohesive, the children became very aware of the absence of one of their friends or teachers. They asked questions and created hypotheses about why the missing person was not at school. Often they made cards and drawings that they wanted to send to the absent friend. Written communication was becoming increasingly important to the group.

In response, the teachers introduced mailboxes for the children. They presented them all with small cards bearing photographs of themselves and invited them to decorate their card and/or write their name. These cards were then attached to the front of a series of little pigeonholes in rows on a wooden cart. For weeks the mailbox area was a flurry of activity with children sending and receiving letters and drawings. The popularity of this project led the teaching staff to seek other ways to foster paper communication. A class newspaper, to be read at story time, seemed a good way to expose all the children to the effectiveness of written words for sharing information.

As the year progressed and relationships grew, children became increasingly aware of one another and frequently sought out particular playmates. The teachers decided to examine what the children knew about the concept of friendship. Through asking the children, “How do you show someone that you are their friend?” the teachers were able to ascertain what friendship means to three-, four- and five-year-olds. The answers ranged from simple gestures of affection, such as “Give them a hug,” to deeper expressions of fondness, like “You can share your toys with them” or “You can try to make them feel better when they are sad.”

The skills the children acquired through working on these projects and forming connections with one another will be useful to them throughout their lives. In her book, *Mind In The Making*, Ellen Galinsky, former president of the National Association for the Education of Young Children and president and co-founder of the Families and Work Institute, outlines several of the essential life skills every child needs. The children in the East AM class were challenged to build many of these skills through the work they did this year.

- Two of the first skills Galinsky mentions are focus and self-control, which were required right from the beginning of our project when the children voted and had to wait to express their own opinions and pay attention to what others had contributed.
- Another essential skill is perspective taking, which requires impulse control, observation, listening skills and reflection and is vital to working as part of a group.
- Also on Galinsky’s list is communicating, which involves deciding what you need others to know and how best to get your message across, in addition to understanding what others are trying to tell you. This skill was practiced every day as children interacted in each area of the classroom, made mail for one another and made contributions to share at story time.
- Yet another skill involves making connections. This means not only taking in information but also figuring out how to use it. Examples of this abounded as children learned things about one another’s ideas and preferences and then used this information as they crafted games and storylines that would be appealing to multiple players.
- Finally, Galinsky touts the ability to engage in self-directed, engaged learning. Though some projects may have been suggested by materials provided by the teachers, the work and play in the classroom was really driven by the children’s ideas and decisions. They took projects in directions that the teachers would never have imagined.

As the school year drew to a close, the teachers reflected on the work they and the children had done over the past nine months with a sense of satisfaction. The year started with individuals trying to make their desires and opinions known and to find their place in a group and ended with a new understanding of what it means to belong to a community.
Developing Self-Regulated Learners Through Play
By Adrienne Lomangino, Head Teacher

During a session at Bing Nursery School, children have many opportunities to decide what they want to do and how they want to do it. The open-ended nature of the play materials encourages children to form their own goals about how to use them, or to plan. In other words, Bing classrooms encourage a skill that is key to academic success: a competency known by educators as self-regulation.

But what is self-regulated learning, and what does it look like in play? Although definitions of self-regulated learning vary, they all emphasize the active role that students take in initiating and guiding their learning. Educational researchers describe self-regulation as the capacity to plan, guide and monitor one’s learning behavior and adapt to varying circumstances. Self-regulated learners take an active role in directing their thinking and behavior. Although self-regulation is a complex set of competencies, upon closer examination, young children reveal that they are capable of beginning the path toward becoming a self-regulated learner.

When children get to formulate their own goals, as they do at Bing, they are intrinsically motivated. This internal investment in their activity encourages children’s attention to their progress, known as “monitoring.” Like most skills, monitoring of one’s progress toward goals develops with experience and interactive support. While children will sometimes independently keep track of how their endeavors are progressing, the teachers play a supportive role in prompting children to monitor their activity. Simple questions such as, “How is that working out?” encourage children to thoughtfully attend to their process, and the flexibility in their choice of activities allows them to determine when they are done. They are able to evaluate whether or not they have met their goals.

If an endeavor is not turning out as a child envisioned, the extended time for play provides ample opportunity to try another approach. While sometimes children will independently adopt a new strategy, in other situations they may need a teacher or peer to help think of another way. Detailed examination of children’s play at Bing reveals the active efforts they make to plan, guide and monitor their learning. The following two descriptions of children at play in East PM highlight their self-regulatory activity.

In the first scenario, Alex sits alone at the art table with a paper in front of him. To his left rests an informational book about chickens. The book is opened to a page with a large photo of a hen, a nest of eggs and a number of chicks. Two yellow feathers lay to the left of the book. Alex makes marks on his paper, then says, “Oh, man.” (Monitoring: Alex detects an error in his effort toward his goals. He then decides how to proceed to address the problem.) He flips the paper over, sliding the yellow feathers out of the way. His gaze shifts quickly back to illustration in the book, then returns to the paper as he begins to draw again. (Alex strategically uses a book as a model.) While drawing, Alex explains to me, “I did the red chicken already. And now I’m gonna do the yellow chicken.” (Planning: Alex identifies his self-determined goal.) He turns back to the paper as if to continue drawing, then says, “I get two yellow feathers.” (Metacognitive knowledge: Alex comments on how he has planned to recreate the yellow chicken, demonstrating implicit awareness of his own strategies.) After a few minutes of work, Alex definitively closes the book and shows his paper to a teacher, indicating that he is finished and satisfied with how he has met his goals.

In the final scenario, Ella stands in front of the easel next to the door with her back to the block area. Evan paints at the easel on her left. She looks at the paper while speaking: “I’ll show you a picture of a volcano.” (Planning: Ella states her clear intention for her use of the materials.) A triangle shape is on the paper, covering the bottom 2/3 of the space. Starting at the top point, she paints down in a wavy orange line almost bisecting the triangle shape. About five inches from the bottom, the line fades as the brush runs out of paint. Ella finishes the line but then lifts the brush back to the point where it started fading, painting over it with the same brush in a straighter diagonal line. (Monitoring: This effort to go back over her incomplete line demonstrates that she is monitoring the quality of her work and actively addressing problems.) She dips the brush back into the orange paint cup (which has been in her left hand), swirling it slightly. With more paint on the brush she returns it to the point two inches from the bottom and retraces the line for the third time. (Again, she attends to whether her work is meeting her expectations and corrects herself.) While painting, she darts a glance toward Evan painting at the easel next to her, then returns her attention to her own easel. (Motivational control: She does not allow her attention to get diverted by surrounding distractions.) As she continues to add details to the painting, she nears the end of her work, holding a brush with black paint. Mouth pursed, she makes rapid circular strokes, starting at the top point of the orange “volcano” and moving upward to the right. “That is a volcano exploding.” (Evaluation: Here she expresses her satisfaction with her creation in relation to her original goal.) Within just a few minutes of play, engaged in self-chosen activities that may at first appear mundane, these children revealed multiple efforts to guide their
learning activity. Their intentional approach to their work supports claims that child-initiated learning experiences encourage them to develop competence at thinking independently and directing their learning processes.

Within our society of rapidly expanding knowledge production, individuals need the capacity to flexibly solve complex problems and guide their continued acquisition of knowledge and skills. In order to draw upon prior experiences, knowledge and strategies as flexible problem solvers, students must be able to access these intellectual resources, recognize when they are pertinent, and modify their activity as needed. These qualities are embodied in contemporary descriptions of self-regulated learners.45


Sharing Music with Two-Year-Olds
By Kitt Pecka, Head Teacher

Music is an integral part of our curriculum in the Two’s. Just as parents select specific music when they are expecting a baby and then adapt their music choices to the child as she grows, Bing’s teachers respond to each year’s special group of children. A music curriculum that evolves with children individually and collectively, led by teachers who bring their own backgrounds, creates a music environment unique to each group.

Sharing our music curriculum with the whole family happens in a number of ways. A songbook that includes the lyrics to all songs sung in the autumn quarter goes home for the winter break. Parents often participate in our story times at the end of each school day, which are social and musical occasions.

Over the past academic year, parents shared their love of music with their respective afternoon Two’s classes. For example, parent Tina Smith often played piano to accompany story time. Music time, which comes right after snack, is another wonderful opportunity for parents to share a musical experience with their child, singing and dancing with all their friends and teachers. We enjoyed the contributions of the parents who joined us this year, including Dede and Greg Engel, Eric Free, Debra Pisicone and Dawn Bercow. Sharing this special experience with their children deepens their musical connection.

Music time is not only for singing and dancing, but also for playing instruments. During the week before spring break, tambourines became a part of the curriculum in the afternoon Two’s. The cross lateral motions (across the midline of the body) used to play this instrument are a physical challenge for the children. Large motor activities such as this are essential for left and right brain integration. Parents Guillermín Castellanos and Zeenat Khan sang Here comes Uncle Jesse while playing tambourines, and when they sang The Bear Went Over the Mountain they used the sounds of the tambourine to represent the bear. The children, parents and teachers joined in and danced to an instrumental disco song using tambourines. The upper body movements and footwork added to the difficulty of the activity.

Music contributes to children’s development in many ways. The structure and organization of music, including its melody, rhythm and dynamics, form complex auditory stimuli. This complexity creates neural networks in the brain that are especially effective for establishing memory, auditory skill and recognizing culturally relevant songs and melodies.

Whole body involvement is attractive to preschoolers and further reinforces auditory, kinesthetic and visual skills. Since we are working together as a group, social learning is also involved. Musical activities also create a shared culture in the classroom.

Using instruments in new physical patterns with unusual rhythms keep children coming back for more. All types of learners are attracted to the challenges of music because it offers opportunities for both auditory and kinesthetic learners. When visual stimuli, such as felt pieces or books, are added, visual learners are included as well.

Music is indeed a valuable part of the curriculum.

Photo not available online.

Photo not available online.
The Pedagogy of Sand Play
By Nancy Howe, Head Teacher

Who has lived so many years that he cannot bring back his baby days for a moment and recall the dear delight that once he felt in playing with earth and sand?
—Kate Douglas Wiggin and Nora Archibald Smith, *The Republic of Childhood*

Educators have long valued sand as an important material for exploration, play and learning. In 1847, Friedrich Froebel, German founder of the kindergarten movement, discovered the adaptability of sand as a material for play and built a sand box for his “children’s garden.” In the late 1800s, the sand heaps, sand bergs and sand gardens of Germany inspired the first playground in America, the Boston Sand Gardens. Froebel’s sandbox has withstood the test of time and is an iconic symbol of early childhood. As playgrounds continue to evolve, there is a movement today towards more natural play spaces for children. Sand continues to command a prominent role because of its direct connection to nature and its unlimited potential for play and learning. The large sand pools in each Bing classroom are a testament to our belief that sand is an important, basic material, like water, clay, paint and blocks and essential to any play-based, child-centered curriculum. Nonetheless, parents still wonder, “What is my child learning when she plays with sand?”

Sand is familiar to most children. It is instantly inviting, richly sensorial in texture and, coupled with water, allows children to manipulate and transform it. Sand play is multidisciplinary and provides young children with many opportunities to make discoveries, express their thoughts and ideas, test their theories and gain important physical, emotional, cognitive and social skills. In addition, sand play promotes a strong connection to the natural world, grounding children to a primordial element, one they instinctively want to explore. Fortunately, sand is inexpensive and abundant, thereby making it a readily available play material for children all over the world.

Sand play invites children to be physically engaged. It encourages hand-eye coordination, spatial awareness and large and fine muscle development through tasks like digging, burrowing, scooping, mixing, molding, pouring and sifting, all of which build strength, dexterity and endurance. In addition, it challenges children to be actively involved in meaningful work, to be industrious and to persevere.

As a highly tactile and sensory material, sand appeals most directly to children’s sense of touch. As their hands and bare feet come into contact with its coarse texture, sand can be both stimulating as well as calming, helping to promote self-regulation and sensory integration. Materials like sand and water can affect children’s emotional well-being. When children play with these materials, they often use them to act out and process issues in the real world that they find confusing, frightening, overwhelming or powerless to control. Whether it is a child with food allergies pretending to eat restricted food he has made with sand, or a child who has overheard parental conversations or TV coverage about a recent earthquake or tsunami, open-ended materials like sand allow children to confront and work through their fears and concerns and in the process, gain some degree of confidence, control and emotional security.

**DAVID:** “I’m making a cake.”
**TEACHER:** “What ingredients are in your cake?”

**DAVID:** “Peanuts and eggs! But I won’t be allergic because it’s not real!”

Sand play carries cognitive value as well, providing unlimited possibilities for exploration and discovery. When children play with sand, it enhances their understanding of scientific concepts like weight, conservation of mass, volume and absorption and allows them to employ the scientific method to observe, make predictions and test their theories. It encourages children to experiment, improvise and innovate, to be resourceful, learn from their “mistakes” and problem-solve solutions.

Sand is also an unlikely, non-traditional place for literacy to occur. Over the course of five consecutive days in May, the teachers provided the Center PM children with manila paper, Cray-Pas, Popsicle sticks, scissors and masking tape. From these materials, an outburst of letters, words, ideas and even punctuation flowed through the sand area like so many dynamic rivers. During that week, the signs functioned as a valuable accessory or tool, as compelling as shovels and pails. The signs presented children an opportunity to begin or continue their hands-on exploration of letter and word recognition and formation or alternatively, to dictate their words to the teachers.

Just as important, however, these signs offered validity to the children’s work, enhanced feelings of control and confidence, explained rules and boundaries, consolidated collaboration and shared hopes and dreams. With signs, children learned first-hand that words can be powerful! In addition to the fine-motor work engendered by writing, children were also invited to tape their own Popsicle sticks to the front or back of their signs. The sand then lent itself easily and instantly to burying sticks indepen-
Photo not available online.

Sand lends itself to symbolic representation and is a springboard for dramatic play.

Teachers play an important role in setting the stage for sand play by thoughtfully selecting props and accessories, which may include shovels and buckets, sand molds and cooking utensils, vehicles and rubber animals. Too many accessories can be overwhelming, while too few may not be sufficient to stimulate interest. Sometimes, teachers add novel accessories, like rain gutters, or create a “provocation,” a physical or cognitive challenge that may invite or inspire children to become engaged: digging a deep hole or a riverbed, creating a waterfall or burying an object to be discovered, expanding on the remnants of a project left behind by another group of children. Two restaurant-sized pots became the catalyst for a “soup restaurant.” Large tree branches trimmed from redwood trees in the Two’s classroom transformed the sand area into a forest. Sign-making introduced children to literacy and the power of words learned in a meaningful context.

Teachers can also guide children in the sand area by facilitating and observing. Skilled teachers sense when to step in with open-ended questions that encourage children to think, scaffold their learning and expand their play (“What do you think would happen if…”) and when to stand back and allow children to make their own discoveries. Teachers are also available to facilitate interactions between children as they collaborate, negotiate and problem-solve with one another as well as with materials. They are also involved in documenting children’s sand play through photos, videos, drawings and anecdotes, allowing children to revisit and reflect upon their experiences later. Documentation is also a way for parents to understand the complexities of what their child is learning when they’re “just playing with sand!”

A recently discovered thank-you letter sent by a parent on the occasion of her son’s graduation several years ago serves as a poignant reminder of the value and learning potential of this humble and underestimated material:

“When Luke started Bing, he brought home colorful paintings that I proudly displayed on my office wall. After a few weeks, Luke only brought home sand in his shoes and I worried about what he’d learn by playing outside all afternoon. That was a foolish concern. Between the sand area and the grove, Luke enjoyed so many important learning opportunities—to be a good friend to other children, to share tools, to invent games, to be a gentle leader and a patient listener.”
Exploring Art in West AM

By Peckie Peters, Head Teacher

Macawber is a squirrel with aspirations to be an artist—a fictional squirrel, that is. He’s the main character in a children’s book by the same name, which we read in West AM this January. Macawber’s inspirations come from paintings he sees as he looks through the windows of an art museum from the branch of a tree in Central Park. One day, he decides to try out his skills, and through practice and experimentation discovers his artistic talents and interests. The story was so believable that at its conclusion many children wondered aloud whether it was a true story. The children were intrigued. Meanwhile, as the year began, the children were busy with another art-related activity. They were mixing colors, a pursuit that had taken off the previous quarter. By winter they were mixing with confidence.

As teachers, we saw the possibility of furthering the children’s interest in art and engaging them in conversations about the topic. We started by observing children’s behavior as they engaged with artistic materials. For example, as Kara approached the art table she smiled as she saw the familiar set-up with the table-top easel, a small cup of water, a small rectangular sponge, a paint brush and a limited palette of colors: magenta, yellow, turquoise and white. She sat down and dipped her brush in the magenta and spread it on her “canvas.” She again dipped her brush in water, dabbed it on the sponge, and then repeated the process with the yellow. Her attention was focused on her work and her expression was relaxed, yet thoughtful. Around the table were Tzewa, Ryan and Colin. They each demonstrated the same level of concentration.

As evidenced above, in early childhood children’s learning and creative exploration emphasizes process and repeated experience with materials. Stated eloquently by Stanford professor emeritus Elliot W. Eisner, PhD, “learning is seldom significant when it is limited to a one-time affair. …What are needed are sequential opportunities to work on problems with one material, time to get a feel for that material, and time to learn how to cope with problems engendered by the materials so that mastery is secured.” In setting the stage to expand the children’s artistic experiences, we focused on four components: 1) Making sure that children were involved in activities that were meaningful, 2) Encouraging children to discover various elements of art, 3) Providing them many opportunities to explore and 4) Helping them to see that their experiences were valued.

The activity of painting was meaningful to children as they visited and revisited it. Each week, we supported learning by expanding the array of materials and allowing the children to assimilate their learned skills, while also incorporating new materials. For example, the basic color palette included white, magenta, blue, turquoise and yellow and children mixed their own shades from these colors.

We progressed to the point where the children were creating a vast spectrum of colors by picking from over a dozen choices. Not only did they select the paint to add to their palette, they helped themselves to more when they needed it, carefully squeezing the paint container so it would deliver a reasonable amount.

In looking at artistic elements to emphasize, teachers had to first understand, then break down the components which might be both relevant and developmentally appropriate to three-, four- and five-year olds. Elements of art chosen included emphasis on line, shape, color, texture and space. Focusing on these elements allowed us to give the children the vocabulary they needed to effectively share their work. For example, in one discussion about lines the children shared a variety of ideas: “Lines can be like a pole or a stick” (Polina), “Two lines down with one across is called a double cross” (Charlotte), “There can be breaks in lines” (Anna), or “Lines can have four teeth and look scary” (Rafferty). Rafferty then drew a picture of a “lion” using lots of lines to demonstrate his point.

In addition, the teachers increased the children’s awareness about the tools they used to better understand how different implements serve different functions. Each week we expanded the instruments available, giving children the opportunity to revisit a familiar one or experiment with a new one. We used brushes of various lengths and widths; gadgets which spread paint, others which rolled it or stamped it; sponges; and a variety of found materials. Ben even created a...
brush using natural materials he found outside and added it to the choices available for the group. As the children worked, they verbalized their creative inspirations and observations, sometimes to themselves, other times to another child: “Look, this brush makes a fat line.” “I made this paper stick to the paint,” “Mine looks like feet!” Other children would glance at the work of their peers and often try to imitate it. Clearly, the children’s awareness of their skills was being reinforced by the interest of their friends.

The children’s developing independence and capacity to help each other gave the teachers more freedom to observe them at work and engage them in conversation. Inviting children to talk about their artwork is one of the best ways to help them develop. Not only does it help them to develop their “artistic” language, it also shows them that adults think their art is important. Children need confidence to learn anything, and knowing that we value what they do provides a great boost. Posing open-ended questions and making specific observations encouraged the children to explore further. For example, when a teacher noticed a child had mixed magenta and turquoise to make a pleasing shade of purple, she asked the child: “Do you think you could add another color to that to make the color of your shirt?” (which was lavender) “I could add white,” the child answered quickly and proceeded to mix the new color.

With repeated opportunities to explore techniques and materials, the children developed a belief that they could experiment independently. Sponges became paintbrushes for spreading paint over a large surface. The children discovered that wet paint could be like glue and items could be stuck in it. As they made these discoveries, the teachers invited them to share their processes at story time, enabling them to share their ideas with an audience of their peers. Each day, one or two children demonstrated a technique they had discovered or showed the group how they learned to paint a particular item. This helped the other children realize that they too had capabilities and subsequently inspired them to share their knowledge with the group. Adding technology broadened this sharing experience. Both the overhead projector and the movie camera let the children in the audience see work from multiple angles and on different scales, as it was being demonstrated by a child and often narrated by a teacher. What developed was a shared culture of appreciating art, sharing information and often collaborating on projects.

It seemed that focusing on the children’s interest in painting helped to create a collective mindset that artistic skills and creative confidence could develop with consistent practice and determination. We learned that children perceive and represent their understanding of the world in a variety of ways and if you observe closely, you see that they focus on what is important to them at that moment. Like other areas of child development, the important dimension is the process, not the outcome or product. Providing children opportunities to explore artistic materials and experience a variety of processes helps them to develop a love of art, an enjoyment of different aspects of the artistic process and a growing confidence in their own competence.

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**Learning about Chicks and Eggs**

Children in all of Bing’s classrooms had first-hand experience observing the hatching of chicks this past April. Buffy Baker, a former caregiver of Bing alumni, continues to bring eggs and set up incubators in the classrooms each year. With the teachers’ help, the children marked off the days leading up to the hatching. They observed intently, asked questions and shared their knowledge.

**Excerpts of children’s discussions about eggs:**

**Clifford:** I know turtles and dinosaurs came out of eggs.

**Jack:** I know penguins came out of eggs.

**Misha:** There’s a baby chick [in the incubator].

**Naomi:** It’s [an embryo] so, so, so tiny.

**Aiden:** Did you see that little pink thing? [looking in a scope] It’s a chicken! Can you believe that’s a chicken?

**Tori:** Sometimes it cracks in different days. Then when it comes out its mother loves it so much!

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*These are eggs with its cracks. These are eggs without its cracks. By Perry S., 5 years 3 months*

*Children gather to look through a scope to observe embryos growing in eggs and discuss what they see. Also on the table are reference books, magnifying glasses, wooden eggs and paper and pencils.*
Mole thought his happiness was complete when, as he meandered aimlessly along, suddenly he stood by the edge of a full-fed river. Never in his life had he seen a river before—this sleek, sinuous, full-bodied animal, chasing and chuckling, gripping things with a gurgle and leaving them with a laugh, to fling itself on fresh playmates that shook themselves free, and were caught and held again.

—Kenneth Grahame, The Wind in the Willows

During Center AM’s river project, we observed the children’s imagination flowing as they posed questions, created amazing scenarios and learned scientific facts about rivers. Our sand area morphed into a riverbed, and like the character Mole, our children were bewitched, entranced and fascinated by the river.

The river project began during winter quarter when some of the children playing in the sand area poured water down several gutters. When they saw the water flow down and meander, they started to dig and were thrilled to see how the water always followed their digging. Soon many other children joined them, and we had an intricate web of criss-crossing waterways—some just a slow trickle and others gushing streams. With tremendous intensity, the children dug in the sand to create small and large trenches through which water could flow. As water poured into what the children called “dugouts,” it formed interwoven and increasingly intricate rivers and streams, waterways, creating what became known to the children as “river cities” that included waterfalls, dams and islands. From the very beginning, the children were motivated to share ideas, collaborate and work together to create their vision. Social interaction served as a backdrop for this project and allowed for the building of important social skills.

Two such skills were resilience and cooperation. Because the sand area was subject to both the weather and use by the afternoon class, when the Center AM children next returned to Bing the rivers were invariably changed. This fascinated them but also gave them the opportunity to work with others to build new waterways. The Center Room children interested in the river project carried clipboards to ask for help with digging rivers, and other children added their names in the “yes” or “no” columns. For example, Adam said, “Let’s sign up for people to come here. I want to dig so write ‘YES’ for me!” Some children who did not work directly in the sand area collaborated by using paper to make river blueprints, observational drawings and paintings.

The children also gained confidence in their ability to problem-solve, yet another vital social skill. They learned to articulate a problem, discuss the issues with their peers, ask teachers for help, and consider solutions. For example, the children noticed that as the river widened it was impossible to jump across. This led them to discuss the possibility of building a bridge. As islands emerged, the need for bridges came up again. That sent them to visit the shed of Wilhelm Grotheer, Bing’s carpenter, with a letter asking him to cut planks of different sizes. The children explored balance as they later crossed the plank bridges, helping each other by showing ways to cross.

The children used basic and found materials like blocks, clay and paint to express their understanding and play out their fascination with waterways. Long and short rivers emerged in the block area. Children named their block rivers and used them in their dramatic play scripts. Long pieces of fabric were integrated so children could create their own waterways, bridges and shorelines. In the redwood grove, the children created boats with the hollow blocks and used them in dramatic play revolving around river travel. Children incorporated fish and sharks in these rivers, retelling stories that we had been reading at story time.

Dramatic play superbly supported emergent literacy. The children enjoyed enacting the stories from books read in class like One Dog Canoe and Humphrey the Lost Whale. The re-creation of these tales in the sand area and throughout the classroom was rich and satisfying to these groups as they experimented with scripts, language and sequence of the storylines.

Additionally, the children learned river vocabulary both through books and by talking with teachers and peers. Their play was enlivened with words like paddle, meandering, waterfalls, dams and shoreline. These words carried deep meaning to them as they sat on the banks of their rivers, narrating stories about fishing, whale rescue and their river travels.
The children enjoyed creating a lush forest along the banks of the rivers by planting fallen tree branches. Large groups of children gathered and shared the river space as they played out their scripts. For example, Chetan built the Titanic with unit blocks and later with cardboard. When he brought the cardboard boat to the river in the sand, he said, “My Titanic is going on the river. Here is the iceberg. The ship cannot go anywhere. Look, it is filling up with water. Now it is going to sink. The Titanic needs to make it through the bridge. Now it made it through the bridge.”

Teachers shared the “River Bulletin,” a daily classroom newspaper, at storytime. It documented the happenings in the sand area. Explaining what they were doing and seeing made the children’s implicit learning more explicit and aided focus and motivation. The children enjoyed hearing their own words read back to them, and felt validated for participating: Finn: “It’s getting dry because it’s getting sponged.”

Nicolas: “Look, the sand is leaking. The water goes through when the sand breaks.”

Billy: “Are you making a down river?”

Jack E.: “No, I’m making a down waterfall.”

The children also pondered scientific concepts such as which materials float and which sink. Turner noticed that children’s boats made out of cardboard were soaked with water and were not floating. He suggested, “Water and paper do not mix.” He said that we needed metal and wood and he was reluctant to put his paper boat in the water. He thought about it and when he saw a plank that did not sink he put the plank in the water and put his boat on top of the plank. When his boat floated on the plank, his face showed joy and satisfaction. It was truly the joy of discovery.

All the young scientists in this mixed-age group (3- and 4-year-olds) confidently expressed their views about rivers. The engagement with rivers strengthened their ability to observe, reflect and hypothesize about their experiences. This is just the beginning of the scientific process, which hone critical thinking skills. As the children worked together, they enjoyed conversations that reflected their understanding about rivers. Below are a few examples of the children’s comments:

Summer: “The wind moves them.”

Coco: “A river doesn’t have waves, an ocean has waves.”

Sophie: “First snow melts and then it comes into a river and then it turns into snow again. And then it never comes back to snow again.”

Billy: “Water can’t go up because water is down low.”

Shen: “All kinds of rivers are different. Some rivers go down and up. Some go to the waterfall. Some rivers go zigzag and over. You have to swim across the river if there’s no bridge.”

David: “It’s the Nile River. If we dig up this, we’ll make the Mediterranean Sea! On one side we’ll make the pyramid. The Red Sea is over there. It’s smaller.”

Our culminating event was a field trip where the children observed a neighborhood creek and compared it to the rivers in the sand area. Different routes were discussed, and the children made predictions about the creek. Anya hypothesized that “We are going up the creek because it is getting wider. It fills up because the rain comes and fills it up.” Mia said, “This does not dry up like our river. It goes into the sand.”

The visit to the creek broadened the children’s awareness of waterways. Some very interested participants of the project were excited to share their knowledge of rivers with their families on outings.

Projects promote curiosity and learning. They bring joy and satisfaction. Children learn in different ways, and the river project provided an avenue for every kind of learner. This kind of synergetic group learning through river play enriched the children’s experiences. The excitement about this interest in rivers offered an opportunity for our group to explore a wide range of life skills that are relevant and valuable for each child’s growth such as:

• Being intellectually engaged, absorbed and challenged by recognizing their interests and taking initiative.

• Having confidence in their own thinking and questioning.

• Being involved in sustained investigations and extended interactions (e.g., conversations, exchange of views and planning).

• Encouraging others by making suggestions and expressing appreciation of their efforts and accomplishments.

• Applying their emerging literacy in purposeful ways.

• Developing feelings of belonging to a group and identifying with others.

• Knowing the satisfaction and joy that comes from finding solutions to overcome challenges and setbacks.

The river project was an in-depth investigation that enhanced collaboration both for the children and the teachers. Many children posed questions, gave suggestions and encouraged each other throughout the process. As the teachers helped facilitate this process, we also embarked upon our own journey of observing, listening and documenting, related not only to the project topic but also to how children learn. The love for rivers continues even today in Center Room as we continue to explore more possibilities!
Children come to school with a wealth of knowledge gained from their home environment. This past year in the West PM classroom, children’s in-depth knowledge about sports and games spawned great interest in the topic and prompted discussions about rules as they engaged in various games. These discussions formed the basis of our curriculum and provided us with an opportunity to facilitate the development of self-regulation skills. As children enter school they begin to monitor their behavior with the help of an adult in what we call teacher-regulated activities, in which teachers help children control their behavior and sustain their focus. As self-regulation skills develop over time, teachers can lessen teacher regulation support and help children learn to control themselves even when a teacher is not present. Thus, self-regulation means that a child can voluntarily engage in social interaction or play with or without an adult present.

According to Lev Vygotsky, a Russian psychologist and an influential educational theorist, games with rules provide an opportunity for self-regulatory development. He suggests self-regulation in play becomes possible because the child’s need to follow the rules of play overrides his or her own desires. In early childhood, such play takes the form of make-believe play, in which children act out different roles. Sports and games emerge in late preschool years and children practice this type of play mainly at elementary school age.

Vygotsky writes: “At every step the child is faced with a conflict between the rule of the game and what he would do if he could suddenly act spontaneously. In the game he acts counter to what he wants. . . . He achieves the maximum display of willpower…” (“Play and its role in the mental development of the child,” Soviet Psychology, 5, 6-18.)

In the following anecdote, the children are faced with such a conflict. One child desires to kick the ball first, showing a lack of awareness of the rules of the game of soccer, much to the annoyance of the rest of the group:

CHILD 1: “You can’t shoot first! That’s not fair. It’s cheating.”
CHILD 2: “HEY! I’m first, not you.”

Child 2 turns to Child 3 and excludes him from the game by taking the ball and turning his back on him.
CHILD 1: “He doesn’t know how to play soccer. He can’t play.”
TEACHER: “Can you help him understand the rules?”
CHILD 1: “There’s only one goalie, and you have to shoot it from there.”
CHILD 3: “And I’m the one who tells you if it’s a goal. I shout ‘GOAL!’ It’s only a goal if I shout it.”
CHILD 1: “But it has to go in the net.”

“There’s only one goalie” and “if it goes in the net that’s a goal,” are both clear examples of known and accepted rules. It was evident that Child 1 and 3 were in agreement as to how many goalies were needed and who got to shoot the ball. However, frustration seemed to occur when Child 2 attempted to alter the rules during this social interaction. His desire to kick the ball first was not accepted by the group and disrupted the play. Child 3 was accepted back into the play when the teacher helped the group acknowledge each other’s ideas and work through them. Asking the right question at the right time such as, “Can you help him understand the rules?” established a context for more intentional behaviors.

Such conflicts in play are important moments in the classroom. They provide the children with repeated opportunities to work through difficult situations. This builds up resilience and helps them become aware of their own actions. It is through developing this awareness that children move from reactive behaviors to intentional ones.

In order for the children’s intentional awareness to develop, they must participate in interactions in which their behavior is guided by others. Children often notice the actions of others, especially if they are breaking the rules, even when they themselves do not notice if they are breaking the same rules. In others words, they apply the rules to others before applying them to themselves. This is the first step towards generalizing the rules and is a necessary part of development. It is at this stage that a teacher can guide the child’s behavior in ways he or she is not yet capable of doing independently.

In this soccer game, for example, asking the children to clarify the soccer rules rather than dictating them helped the children develop the tools that will lead to self-regulation. When an adult makes all the rules and prevents the child from exercising his or her will, their relationship becomes one of inequality that prohibits autonomy.

At Bing we want to contribute to the development of autonomous, self-regulating human beings who can make decisions based on the perspectives of all involved. That is why, when supporting children through these conflicts, compliance is not our primary goal. Rather, we welcome and encourage children’s attempts to think about real problems and frustrations they encounter in working as part of a community. The teacher’s desire is to enable children to accept their own ideas in relation to others and work through them in a supportive and safe learning environment. As teachers we acknowledge that the search for the right answers is not the central focus of this teaching. We suggest, however, that this exploratory journey will increase self-regulation skills and help prepare children for the next stage of their development.
As a child, I fondly remember listening to record albums of children’s stories. This early experience gave me an opportunity to create the characters in my mind, to listen intently to the words and music and to experience the instruments’ subtle variations in pitch and tone. There was always an unidentifiable instrument that would pique my interest and enable me to make a connection between music and storytelling. This increased my listening ability, tapped into my creativity and began a love for storytelling and music.

The skills that are necessary to attend to a story are very different from the listening skills needed to listen to a song. The listener is transported on a journey through a story that has many characters, actions, changes, scenarios and emotions. The act of listening to and following the beginning, middle and end of a story is also a pre-literacy experience that builds comprehension and understanding. Listening to stories also increases auditory attention and builds a rich creative experience for the child.

After recording four music CDs at Bing, a parent suggested making the next CD one of stories that could be enjoyed on long car trips or commutes to school. Remembering the record albums with their vivid musical sound effects and enchanting tales, I began visualizing how to do this with the next CD. Calling upon our talented current and alumni parents and a few local guest artists, we recorded stories that had both a musical element and strong accompanying text. The result is “Happy Tales from Bing.”

The narrative expertise of Bing teachers Todd Erickson, Lars Gustafson, Mark Mabry and Sarah Wright, and Bing parent Virginia Gutiérrez-Porter, went into recording and producing familiar stories such as The Three Little Pigs, The Gingerbread Man and Goldilocks and the Three Bears. We added a popular folk tale from Panama titled Conejito and a Chinese tale that is similar to the Three Little Pigs, called Little Rabbit. The Little Red Hen was included as both a song and a story, and we added two popular songs: I Am A Fine Musician and Hush Little Baby.

Some of our gifted musicians included husband-and-wife duo Jeff Nuttall, of the St. Lawrence String Quartet, and Livia Sohn, concert violinist. Talented bassist and alumni Bing parent Saúl Sierra joined us, as well as local jazz-guitar legend Rick Vandivier; alumni parent Evan Brooks, chairman of the Stanford Jazz Workshop and co-founder of Digidesign audio technology company; and Bing parent, actress and vocalist Angel Burgess. Martin Fraile, former assistant director of the Stanford Symphony Orchestra, transported a full marimba to Bing to play in the Three Little Pigs. Former Bing teachers Michelle Forrest and Matt Linden (also a current Bing parent) returned with violin and banjo in hand to be a part of the project, and current teacher Minjao Bae played flute and ocarina.

One of the most touching experiences in the project began when Bing alumna and current Stanford student Audrey Proulx participated in the project. Knowing her love of music and storytelling since early childhood, I asked Audrey if she would like to write a song with lyrics for The Three Bears. She sent back an entire composition, which she performed at Bing during our recording session.

The song I Am A Fine Musician featured alumni parent Karen Such performing vocals, with guest musician Michael Goldman on bassoon, Marina Dantcheva on violin, Sheri Luevano on percussion and Matt Linden on banjo. Another highlight of the CD was the song/story of Little Rabbit, lovingly presented by three generations of both Dan and Shelly Chu’s family and the Higgins-Chen family. Jindong Cai, director of the Stanford Symphony Orchestra and alumni parent, sent a fantastic group of musicians to Bing to accompany the song with Duny Lam on yangqin, Yongping Tian on the erhu, Jun Gao on dizi and Audrey Proulx on the violin. We have also been very fortunate to have an extremely talented producer, sound engineer and recording artist, Lars Hidde, from Rivery Sound Studios in Los Gatos. He and I co-produced all of our Bing CDs, which are recorded right here at Bing!

This CD was produced with generous donations from the Arrillaga family and the Rebecca and Eric Stein family, and the proceeds will go directly to the scholarship fund at Bing. The new CD will be available at the 2011 Harvest Moon Auction on Saturday, November 5. All of our CDs can be viewed on the Bing website at http://bingschool.stanford.edu and purchased in the office at Bing.
Fall Staff Development Day
By Nancy Verdtzabella, Teacher

This past fall, Bing Nursery School teachers spent a day discussing and practicing ways to study their own teaching methods. The technique, called reflective practice, was the focus of the Fall 2010 Staff Development Day.

Beverley Hartman led the program, inspired by last summer’s explorations on this same topic at the inaugural sessions of the Bing Institute. Hartman is the director of the institute, which offers training to early childhood educators.

At the fall development day, Hartman encouraged the teachers to work in small groups and to focus on the display boards in Bing’s classrooms. The primary objective was twofold. On one hand, teachers would better understand the issues affecting the display boards’ use. On the other hand, as they discussed the displays, teachers would learn to apply reflective practice concepts.

Hartman outlined seven key types of inquiries for reflecting on practice:
• What is currently being done?
• Why is this being done?
• What are different ways of looking at an issue?
• What details and information are not obvious?
• What are each person’s assumptions?
• What is another way to think about the subject/situation at hand?
• Why might one hold on to a specific idea, or resist change?

These questions helped individuals to create transparency about their own thinking as well as recognizing other perspectives that may be at work amongst the teaching teams.

Throughout the day, staff applied these questions toward improving their thinking and communication, which helped to create a climate for open and engaging conversation. Not only did these reflective practice exercises encourage the teachers to find inspiration for exploring the intent of their display boards, it also gave them first-hand experience in the art of reflective practice, which is a valuable tool to guide educators in examining their teaching methods and intentions on a regular basis.

Winter Staff Development Day
By Seyon Verdtzabella, Teacher

The beautifully designed and spacious yards at Bing Nursery School would not exist without the vision of its founding director, Edith Dowley, PhD, a Stanford professor of education and psychology. When Dowley had the yards created in the 1960s, she had the architects kneel down to see the environment from a child’s perspective. A tree was planted for each child and a carefully planned outdoor environment was designed. Dirt was brought in to create hills for children to run up and down.

Our winter staff development day, Tuesday, Feb. 22, 2011, was devoted to working with playscape designer Leon Smith on initial plans for improving our outdoor play areas, while staying true to Dowley’s vision. Smith works with Rusty Keeler at Earthplay, designing custom natural play environments for preschools, childcare centers and communities around the United States and overseas.

In the preliminary planning effort, we considered: What are the children’s major outdoor play activities? What elements do teachers enjoy or appreciate about the play yards? What do teachers want to improve? What elements would teachers like to see included in the outdoor environment? Preceding the group discussion, Chia-wa Yeh, a head teacher and the research coordinator at Bing, shared a DVD of historical images of Bing landscapes. Smith facilitated the rich discussions to follow and engaged the collective creativity of Bing staff using slides of natural playscapes across the country, brainstorming activities, conversations about community and natural resources, and an appeal for everyone to share his or her dream about ideal playscapes.

Teaching teams from each classroom met to further collaborate on designs for their rooms. Through subsequent sketches drawn on detailed maps of each yard, designed and handcrafted by teacher Stephanie Holson, all staff enjoyed showing their visions of the new Bing playscapes.

After the workshop, staff with a strong interest in the process carried on with meetings, considering current licensing requirements for center-based nursery schools and addressing the needs of each classroom.

Changes became visible this summer, when after 46 years the pergolas in West and East room yards were replaced. The bridge in West Room was rebuilt as well. A new play structure replaced the old one in the Two’s yard complete with a new slide and a tunnel. The re-design and implementation will continue this year through the efforts of Bing staff and the generous support of Stanford University to ensure that its playscapes remain as beautiful, natural and inviting as possible.

(For photos of the yard renovation undertaken this past August, see page 8.)
“W e need are people at the front lines who can be constantly reflective about the needs of young children” (D. Castleberry). This quotation is from a presentation that Bing teacher Laura Berquist delivered about observational and anecdotal note-taking during this spring’s staff development day, held in April 2011. Castleberry’s statement nicely summarizes the importance of such days for Bing teachers and staff. The day’s primary focus was using teachers’ skills as observers of children in combination with the surrounding community’s resources to stay attuned to the needs of the children in our classrooms.

The day began with a talk from Douglas Fredrick, MD, a clinical professor at Stanford University and pediatric ophthalmologist at Lucile Packard Children’s Hospital. He spoke about preschoolers’ vision, including when and how it is assessed, and the classroom symptoms that could suggest vision problems. Fredrick also discussed a variety of problems and their treatments, from refractive error (near- or far-sightedness and astigmatisms) to amblyopia (dull vision). Because of children’s great ability to adapt, vision problems are easily missed in preschoolers, Fredrick explained. He also conveyed that children’s vision is different from that of the adults, as children do not typically acquire “normal” adult 20/20 vision until age four or five at the earliest. In fact, most preschool children have 20/40 vision. The distance a child can see is not as important as their eyes’ symmetry—the ability of both eyes to see the same way and same distance, Fredrick emphasized. He also highlighted the importance of referring parents to their primary pediatrician to screen their children’s vision starting at age three.

Next the staff received an update from Samuel McClure, PhD, an assistant professor in psychology at Stanford. McClure introduced his newest research about the mechanisms of time discounting that is being conducted at Bing. The new study is based loosely on the famous “marshmallow study” involving impulse control in children. (See page 8 for more information).

After breaking for lunch, Berquist spoke about observational and anecdotal note-taking in the classroom. As skilled observers of children, Bing teachers can use note-taking to chart children’s progress throughout the year. Berquist concluded with details about methods of note-taking and recordkeeping.

The day concluded with a discussion with Sonali Bhagat, speech-language pathologist, and Kianna Collier, occupational therapist, two staff members at Children’s Health Council. They presented a thorough overview of the Children’s Health Council’s resources for teachers and families, detailing the populations the organization serves, and explaining its vast number of programs.

This spring’s staff development day provided a great chance for staff members to learn from a variety of community members about the multitude of resources that are locally available. It was also a good opportunity for the teachers to pause and reflect, as Castleberry suggested, on how to best meet the needs of young children.

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**Visitors from Abroad**

From left, clockwise: Sixteen early childhood educators and administrators of preschools from Taiwan visited Bing Nursery School this May. Bing staff members pictured are Jennifer Winters, director (back row, fifth from left), Beverley Hartman, director of Bing Institute (back row, second from right), and Chia-wa Yeh, head teacher (back row, far right). Eleven administrators and educators from the Poppins Nursery School in Japan visited Bing in October 2010. Bing staff members pictured are Beth W ise, assistant director (back row, fourth from left), Beverley Hartman (back row, third from left) and Chia-wa Yeh (front row, far left). Eighteen early childhood educators and administrators of preschools from Chengdu, China, toured Bing Nursery School this July. Bing staff members pictured are Jennifer Winters (back row, eighth from left), Beth Wise (back row, ninth from left), and Chia-wa Yeh (front row, far left).
I
n November 2010, eleven Bing teachers made the trip to Anaheim to attend the largest early childhood conference in the country, the annual conference and expo held by the National Association for the Education of Young Children. The three-day event drew teachers, consultants, teacher educators, researchers and policy-makers from all over the country, and provided an excellent forum for Bing teachers to learn more about current ideas in the field, and to share their experiences and perspectives in workshops and presentations.

The conviction that this is a critical time for the field permeated the NAEYC conference, both through actions of the organization itself and in individual workshops. Many Bing teachers attended forums led by NAEYC committees to publish official position papers on two significant sources of controversy and concern in current education: the importance of play and the role of technology in the lives of young children. The organization has also created a Center for Applied Research, advocating a stronger link between the academic world of early education and development; the new knowledge. Bing serves both as a grammar that could benefit from valuable teaching team's creative use of the school's opportunities in these areas. As a play-based nursery school, the program offers an opportunity to maintain an open dialogue with the research community.

Three Bing teachers made presentations at the conference. Head teacher Mark Mabry worked with friend and former colleague Carolee Fucigna, now teaching pre-kindergarten at the Nueva School in Hillsborough, Calif., to explore the evolution and the value of social play communities in early childhood classrooms. With distinct perspectives, Mabry and Fucigna discussed how in each of their classes children's social play is one of the most important avenues for learning. The speakers portrayed the value of play from the children's point of view. Paying attention to children's perspectives helps teachers understand the value of play in their lives.

Head teacher Adrienne Lomangino and teacher Colin Johnson described a classroom photography project that designated a digital camera for children's use during the 2007-2008 school year. Throughout the year, teachers marveled at how skilled children became with the technology and explored the ways children could capture their perspectives through photographs that illuminated their interests, thoughts and understanding of the classroom community. The presentation allowed the Bing teachers to share their work with the early childhood community and provided an opportunity for further reflection and professional development.

The NAEYC conference also helped the Bing teachers form strong ties with the greater early childhood community. As educators push for open dialogue within the field and urge practitioners to continually reflect upon their work with children, teachers are finding new ways to share and learn from each other. Beverley Hartman, director of the Bing Institute, recognized the conference as an excellent opportunity for a “mini reunion” of early childhood educators who had gathered last summer for the inaugural sessions of the institute. At the Bing Institute “we opened a dialogue about quality education through the lens of reflective practice,” said Hartman. “This interaction started a community that continues to be in touch through an online presence. One participant had traveled from Hong Kong [to the NAEYC conference] and that underscores the value of the opportunity to meet face to face. It was so engaging that we plan to make a reunion an annual event at the conference.”

As a whole, the teachers came away from the conference feeling extremely fortunate to work with young children at such an integral time—especially at a school like Bing where creativity and exploration are valued and encouraged for both children and staff. The opportunity that this provides is inspiring, and there is much work that can be done to improve not only the lives of the young children who we see every day, but of a much greater community of children beyond our own classrooms.

Visit from Recipients of Johns Hopkins Teaching Award

Twenty-nine recipients of the 2010 Johns Hopkins University teaching award toured the school in February. Bing staff members pictured here are Jennifer Winters, director (back row, fifth from right), and Beth Wise, assistant director (back row, sixth from right).
I like shorelines, weather fronts, international borders. There are interesting frictions and incongruities in these places, and often, if you stand at the point of tangency, you can see both sides better than if you were in the middle of either one.

—Anne Fadiman, The Spirit Catches You and You Fall Down

Standing where the edges meet, observing the frictions and incongruities of learning, is a situation in which we rarely find ourselves as teachers. The job, by its very nature, places us right in the center, allowing us limited time to step back to the edge. We, the teachers, are slap-bang in the middle of the learning action. Positioning ourselves metaphorically where the edges meet provides a very different viewpoint; a place of discovery, a place to reflect, rethink and re-define our role and work in an intentional way.

Research that concerns itself with this “reflective process” was the focus of the work presented by Kristie Brandt, PhD, in her two-day workshop: “Facilitating the Reflective Process.” Brandt is director of the Parent-Infant & Child Institute, a Child Trauma Academy fellow and an assistant clinical professor of pediatrics, visiting faculty, at U.C. Davis School of Medicine. The conference, organized by FIRST 5 Santa Clara County, was held December 6-7, 2010, in San Jose. Brandt promoted the importance of reflective practice and invited us to stand on the periphery to challenge our assumptions and think with intention about our own teaching practices.

During small group discussions, we engaged in role-play situations that helped us uncover cultural assumptions and form questions about our own bias in our work. Questions that seemed easy on the surface led to more difficult questions and a more dynamic dialogue. Brandt suggested that the cycle of questioning is necessary for discovery and understanding. As John Dewey, the esteemed educator, stated, “We don’t learn from experiences, we learn from reflecting on our experiences.” (How We Think)

To make sense of the potential of reflective practice in our work and to determine the direction of our inquiry, the workshop encouraged us to stop and analyze our own personal profile—that is, who we are and what we bring to our experiences. Brandt advocated the need to create a space to develop self-awareness and considered its application to our work as professionals. With an increased sense of self-awareness, she suggested, we will be more skillful at understanding others’ perspectives. “Reflective practice is a deeply meaningful journey seeking new awareness, new understandings of ourselves in the context of our work. It is not a destination…it is a state of being.” (Facilitating the Reflective Process)

Over the two days, in the safety of the group, we explored our own bias and developed skills that will help us wrestle with complex issues. Our challenge now is to dedicate more time to deliberately engage in this process on a regular basis. We have come out of this experience trusting that further development in this discipline will move us toward a greater level of understanding of ourselves, and the children and families we serve.
Learning and the Brain Conference
By Chia-wa Yeh, Head Teacher and Research Coordinator

What skills are needed to become productive citizens as advances in technology and globalization continue in the 21st century? What does research on the brain tell us about how neural networks affect learning? How can technology better facilitate learning for individuals with different learning needs? These are some of the topics discussed at the Learning and the Brain conference held February 17-19 in San Francisco. Approximately 2,000 educators, psychologists and clinicians attended the conference, including Bing teachers Parul Chandra, Nancy Howe and myself. The conference, which examined the effect of technology on students, is one of several organized annually by Public Information Resources, Inc. to connect educators to neuroscientists and researchers.

One of the conference’s keynote speakers was Tony Wagner, PhD, professor of education at Harvard University and author of The Global Achievement Gap, who highlighted the following survival skills for careers, college and citizenship:

- Critical thinking and problem-solving
- Collaboration across networks and leading by influence
- Agility and adaptability
- Initiative and entrepreneurship
- Effective oral and written communication
- Accessing and analyzing information

Curiosity and imagination

Wagner, a former high school English teacher, visited many schools while researching his book. He observed they were failing to prepare students for college and work. Central to what plagues K-12 schools, said Wagner, is the pressure on educators to teach to the test. Rather than actively engaging in the learning process, students learn to “do school,” by rote memorization, for instance.

Yet, the 21st century workplace is characterized by perpetual change, restructuring and teamwork across the country, and even the world. The ability to learn continuously, think critically and collaborate with people of different backgrounds in terms of culture, race and religion is therefore essential, he said.

Wagner is familiar with Bing, having visited last fall, and has said that in some ways it can serve as an exemplar for schools of many kinds. During a talk for the Common Ground Speaker Series while he was in the area, he proposed modeling high schools after elementary schools—or even nursery schools like Bing—to promote collaborative and project-based learning.

Another Learning and the Brain talk relevant to early childhood educators addressed how different parts of the brain impact learning. David Rose, EdD, lecturer in education at Harvard University and chief education officer of the Center for Applied Special Technology, gave an update on Universal Design for Learning (UDL), which uses technology to assist learners with different learning styles. Though Rose focused on reading as an example, the UDL approach can be applied to all areas concerning learning. For example, visual learners are drawn to graphic presentations whereas auditory learners benefit from hearing a text read aloud. Technology can make it easy for users to access multiple modes of representation.

Rose outlined three neural networks in different areas of the brain that relate to learning: recognition networks, which take in information through sight, auditory input and other sensory systems; strategic networks, which plan, organize and initiate purposeful actions on the environment; and affective networks, which monitor internal and external environment and set priorities and motivate learning and behavior. It affirms Bing’s approach of providing an intellectually stimulating and emotionally supportive environment.

Rose described one of his own experiences—taking a dance class at his wife’s suggestion—to show the impact of affective networks. He lagged behind in class, which led the teacher to treat him differently, including speaking to him in a louder voice and moving him into a small remedial group. Rose became withdrawn and started making excuses to avoid attending the class. The experience underlined the importance of positively activating the affective network, which motivates one for learning.

Providing multiple means of representation, multiple means of action and expression as well as multiple means of engagement are important for creating learning experiences that address the needs of individuals with different learning styles, said Rose. His attention to the varying needs of different types of learners echoed Wagner’s call to model high schools after elementary and nursery schools. It also supported Bing’s use of basic materials—blocks, clay, paint, sand and water—and its play-based curriculum, which provides an environment rich in multiple mediums of expression. A child who is interested in studying worms, for example, can learn about them in many ways: digging for them, drawing pictures of them, making clay sculptures of them and listening to stories about them, to name just a few.

The Bing teachers learned a great deal from these and other presentations at the conference. We left reinvigorated and ready to apply what we learned to our work with children.
Kindergarten is a child’s garden, a place where children grow. Many parents of preschoolers wonder if their child will be ready to blossom there. Bing parents pondering this question attended the school’s annual kindergarten information night, held December 2, 2010. A Q&A session with a panel including kindergarten teachers, elementary school principals, Bing teachers and a pediatrician was the evening’s main event.

Bing’s director, Jennifer Winters, opened the evening with a 10-minute video, “Kindergarten Readiness,” produced by First 5 Santa Clara County, Santa Clara County Partnership for School Readiness and the Santa Clara County Office of Education. (The video is available online at http://vimeo.com/10120074.) After the video came opening comments from two kindergarten principals and a pediatrician.

Bill Overton, Ohlone Elementary’s principal, said it’s normal for parents to want reassurance they are doing the right thing. Referring back to the video, he said that the skills listed represent an ideal child’s abilities—not those that most have in reality. The ability to tailor instruction to children’s skills is the sign of a good teacher, he said. He went on to say that elementary school is not perfect, that it is a training ground for how to navigate the world. Kindergarten is where children learn to be independent, resilient and optimistic and to learn from adversity. Kindergarten is a “great opportunity to get the lessons they will need in life.”

Mary Pat O’Connell, principal at Lucille M. Nixon Elementary, said that teachers want children to like being at school. She also said that life is not a race, and parents should not be anxious about when their child masters certain skills. Parents should pay more attention to things such as whether their child has friends and is comfortable at school. While the media focuses on national test scores, Palo Alto schools still emphasize “purposeful play” in kindergarten, according to O’Connell.

Sabrina Braham, MD, a Palo Alto Medical Foundation pediatrician and Bing parent, discussed the developmental screening conducted at a 5-year-old’s medical check up. The major areas assessed are gross motor skills, such as sitting and walking; fine motor skills, like gripping a pencil; language abilities, including verbalizing needs and understanding directions; cognitive abilities, such as counting; and social-emotional skills, such as forming relationships with peers and adults. Chronic health issues are also addressed at the 5-year-old check up to ensure they are well managed before elementary school begins.

Many factors can greatly influence children’s development at this age, she said. Ideally, 5-year-olds should regularly sleep 10 to 12 hours a night. Weaning children from napping helps make this possible. An energizing diet with complex carbohydrates and protein also encourages development. Limiting screen time (time spent at computers or watching TV) also helps.

The Q&A session panelists were Bing teachers Nandini Bhattacharyya, Todd Erickson, Adrienne Lomangino and Peckie Peters; Nixon kindergarten teachers Jody Harrier and Stephanie Han; elementary school principals Overton and O’Connell; and pediatrician Braham. A condensed and edited account of the conversation follows.

What are some tips for parents who want to work with the kindergarten teacher to help their child succeed?

HARRIER: Talk to the teachers. Teachers have an open door policy with phone numbers and emails, and they will get to know your child very quickly. Sometimes the teacher makes the first contact since they want to be available to help all children. OVERTON: Model by having direct communication with the person who is involved. If you are not satisfied with the answer, go to a higher authority.

What is a Young Fives program?

O’CONNELL: Young Fives is a program in Palo Alto that builds the skills needed to start school, giving the child extra time while also working with the parents. An assessment is done for children entering kindergarten to determine if they should attend Young Fives. This program will be expanded to accommodate children affected by the kindergarten age change, starting in fall 2012. Currently, children entering kindergarten must be 5 on or before December 2. For each of the next three years the age cut-off will advance

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**Visitors from the San Francisco Symphony**

Oliver Theil, Bing parent and director of public relations for the San Francisco Symphony, and Diane Nicholeris, SF Symphony violinist and coach of the SFS Youth Orchestra, led a music demonstration in the atrium at Bing. Theil introduced the concept of symphony using the book *Zin! Zin! Zin! a Violin*. Nicholeris demonstrated techniques evoking different emotions, answered children’s questions and played pieces by Mozart.
one month, until in 2014 children entering kindergarten will be required to be 5 on or before September 1.

What should children “know” by the end of kindergarten?

O’CONNELL: The California Content Standards (http://www.cde.ca.gov/be/st/ss/) lists the exact areas that are to be mastered in kindergarten, though children can move on to the first grade without mastering them all. Furthermore, it’s important for children to have acquired certain social-emotional skills even though they’re not included in the standards.

HARRIER: Every child enters kindergarten with a different set of skills, and we [Palo Alto] do not expect all children to leave kindergarten with the same set of skills. Children start where they are and progress from there.

What is a typical kindergarten day like?

HARRIER and O’CONNELL: First there is drop off and saying goodbye, followed by singing and movement and learning about their body, then 5-7 minutes of whole group work, for example, learning math or colors. Next is table time with three or four table groups working on the same thing, then Big Books (when the teacher reads to the class from a giant-sized book so all can see) and sometimes Daily Newspaper (when the class works together on their daily journal). After these activities comes art, followed by time for children to choose their own activities, for instance, playing with blocks or Legos, or painting. As the year progresses, activities may last longer. In addition, the day includes snack, recess, story time, science units, and occasionally individual or small group instruction.

What are the key things we should be doing now as parents?

LOMANGINO: While children learn through play at Bing, learning to ask for help and eventually learning how to solve problems independently is an important part of that process. Children begin to take on more and more responsibility through the year. We encourage them to make social connections, which also encourages their language development.

BRAHAM: Sometimes I felt that the more time I spent here [at Bing] the more skills I learned for working with children—even more than all the books I read in the library during my pediatric training. If you come and sit at a snack table, you can observe the teachers facilitate and model for the children.

BHATTACHARYA: Don’t talk too much about kindergarten in front of the child when it’s still many months away. Be aware that it might make them anxious.

OVERTON: Give the child responsibilities at home, help them be a self-advocate, help them with problem solving and with empathy.

PETERS: Part of what we have to do is step back. This is part of their life which we should not anticipate with a lot of anxiety. Don’t worry about preparing them as much as just spending time with them.

ERICKSON: Create some time to listen, and focus less on your own agenda as a parent. Make one-on-one time and follow their lead in play.

There are so many choices of schools in this area. How do you decide which fits your child?

O’CONNELL: There will be information nights. Identify what will make you happy, make you feel comfortable and what is a good fit for you. Don’t ask your child, but rather make the choice that you feel comfortable with.

OVERTON: Go to the school websites, go to information nights, visit if you can and get to know the school. It is important that the parents are supportive of the school.

ERICKSON and LOMANGINO: Use the Bing teachers as a resource for helping you make your decision. They can give you information about your children and what kind of learners they are. Most children will do well in a range of situations.

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Family Performance with Ballet Afsaneh and Mongolian Masters


Photography by Boris Feldman, alumni parent
The 2010 Harvest Moon Auction raised over $300,000 for the Bing Nursery School Scholarship Fund, which provides financial aid for approximately 20 percent of our children. Our theme for the 22nd annual event, held Nov. 13, was “Come and Take a Magic Carpet Ride,” and the magic began as guests passed between the two camel sculptures “guarding” the entrance and into rooms draped with richly colored fabrics, evoking the spirit of One Thousand and One Nights. As in past years, Helen and Peter Bing supported our fundraising efforts with a generous gift of $50,000. Bing parents and supporters also offered financial donations as well as their time, talent and enticing auction items.

The event took place at Stanford’s Arrillaga Alumni Center in McCaw Hall. Tables festooned with jewels and richly woven tapestries displayed auction items ranging from culinary delights, adventures and getaways, class gifts plus more. Thick Persian rugs and a palace archway welcomed the guests to an evening of conversation, bidding, entertainment and delectable falafel, hummus and other Middle Eastern food provided by “The Other Woman” catering company.

The evening was accentuated with the exceptional vocal talent of Anthony Liatsis and Bing parent Angel Burgess. Throughout the event, a slideshow of photos of Bing played on a large screen. Photos of Bing past were provided by Charlene Dowley, sister-in-law of Bing’s founding director Edith Dowley. Over 200 current photos were provided by Bing teacher and research coordinator Chia-wa Yeh, and teacher Quan Ho.

Another Bing teacher, Todd Erikson, used his dazzling DJ skills to keep the crowd entertained and moving throughout the evening. We deeply thank the parent volunteers who worked tirelessly for months to create an event that was truly memorable. Bing parents worked extensively on every auction detail through months of planning, solicitation of items, displays, decorations and more.

During the live auction, attendees bid on items such as tickets to the “Tonight Show with Jay Leno Live”; an Italian dinner party with Bing teachers Lars Gustafson and Colin Johnson; a handmade playhouse palace fashioned by Bing’s carpenter, Wilhelm Grotheer, and painted by teachers Betsy Koning and Stephanie Holson; and the popular “Fund a Scholarship” cash donation.

Other items auctioned off included an evening discussion with author Po Bronson; a train trip with teachers Peckie Peters and Karen Yamamoto; the ’60s Themed “Mad Men” Dinner Party; an Iranian Dinner at Shalizaar Restaurant; the famous Bing Campout and other very generous donations. In addition, parents created over 40 beautifully packaged theme gift baskets, which were a highlight of the auction.

We express our deepest appreciation to our auction co-chairs, Allison Kluger and Patricia Smith, for months of planning, organization and positive leadership to create a truly successful and enjoyable auction. We wish to thank our enthusiastic auctioneers and Bing parents, Nate Olmstead and Warren Packard, for making the live auction “come to life” through their energetic and appealing performance. We look forward to seeing you at this year’s auction, “Sail the 7 Seas” on November 5, 2011!

The annual fund is an important part of the school budget. The campaign helps us close the gap between tuition and the actual cost of delivering the exceptional programs we offer. We depend on this fund to support staff development, additional assistant teachers in each classroom, specialists and scholarships. No gift is too small or too large. Our goal is for every family to participate in supporting the school. Please join us as we maintain the excellence that makes Bing such a special place for young children. A big thank you to all.

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<th>Harvest Moon Auction 2010</th>
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<td>By Beth Wise, Assistant Director</td>
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<th>2010-2011 Annual Fund Report</th>
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<td>Thanks to the contributions of Bing parents, friends and our staff members, we met our goal of $300,000 to help support our annual budget. We’re deeply grateful for this generous support. We would like to extend a warm round of thanks to the parent fundraising chairs Emmalyn and Art Shaw, Aileen Lee and Jason Stinson, Katy and Erik Straser and Susie and Gideon Yu and their committee members for their efforts and support. In 2010-2011, the participation of our current Bing families reached 52 percent. In 2011-2012, we are striving for 100 percent participation!</td>
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