



YOUNG PROBLEM SOLVERS

AS A SPARK-CERTIFIED (COMMENDATION) CENTRE, LIVING SANCTUARY KINDERGARTEN HAS INCORPORATED PROBLEM-SOLVING SKILLS INTO ITS CURRICULUM, AS WELL AS ITS PHYSICAL SPACE.

Once a week, the children at Living Sanctuary Kindergarten (LSK) are given a challenge to face, such as not having enough bowls at snack time. They then have about 20 minutes to brainstorm possible solutions and implement the chosen one.

Problem-solving scenarios and activities are an integral part of LSK's curriculum, and children as young as three years old are engaged. This is to encourage them to think on their feet and learn to work as a team.

"Problem-solving is a 21st-century skill that even young children are capable of learning, and applying in real life. A child who believes in problem-solving tends not to rely on others for solutions, and is more open to giving suggestions," explains LSK's Principal Mrs Elsie Tan-Chua. This approach was one of the unique pedagogical aspects that won LSK the Outstanding Centre for Teaching & Learning at the ECDA Awards 2017.

Planned Opportunities

Incorporating problem-solving into the syllabus is an example of Elsie's curriculum leadership. The curriculum is developed in collaboration with LSK teachers who ensure that the problem-solving scenarios created are developmentally-appropriate. LSK's teachers also play an important role in facilitating the implementation of the scenarios. "Teachers have to pretend that they don't know what to do, and be open and non-judgemental in drawing out ideas from the children," says Elsie.

In LSK, the teachers intentionally create opportunities for the children to practise their problem-solving skills. As a result, they are gradually able to take on bigger challenges. For example, with the guidance of a teacher, each class undertook the planning and organisation of a relay game for the other teachers during LSK's Teachers' Day Celebration 2017. According to Elsie, the children's problem-solving mindset is not just confined to the pre-



GIVE THESE SCENARIOS A GO

- For Nursery level: Children enter the classroom to find that there are not enough chairs and tables for all of them. What should they do?
- For K2 level: Children enter the classroom and see orange juice spilled onto the floor. How can they clean up the mess?

school but is extended to their homes. Many parents have told her that they have been surprised when their children are earnest in helping to solve problems at home.

Thinking Spaces

LSK's commitment to developing children's problem-solving skills is also evident in its intentional learning spaces. The 'LSK Neighbourhood', which mimics a real-world community, includes a clinic, supermarket, ice-cream parlour and hair salon. Here, children engage in purposeful play — be it as a doctor, patient, waiter or customer — and think of solutions as they encounter issues such as a shortage of medicine at the clinic. Another space which has been intentionally set up to engage children in a repertoire of thinking behaviours is the Science Corner. Here the materials and apparatus, which include balance scales, microscopes and test tubes, encourage children to explore, observe, experiment, compare and contrast, and make predictions. Problem statements which accompany the activities prompt children to think deeply and critically. Teachers are always at hand to facilitate children's thinking. ♥



The Singapore Preschool Accreditation Framework (SPARK) aims to help pre-schools raise their quality by serving as a guide and providing quality benchmarks. It also provides recognition and support for pre-school leaders in their effort to improve teaching and learning, administration and management process. For more information on SPARK, visit www.ecda.gov.sg/SPARKinfo



CREATING A CREATIVE PLAY SPACE

TO FOSTER PROBLEM-SOLVING SKILLS, EDUCATORS, PARENTS AND CHILDREN AT ST. JAMES' CHURCH KINDERGARTEN (SJCK) WERE ROPED IN TO HELP DESIGN AND ENHANCE THE OUTDOOR PLAYGROUND AT THEIR GILSTEAD CAMPUS.

St. James' Church Kindergarten (Gilstead) recently transformed its existing playground into an upcycled (the creative re-use of unwanted materials into something new or better), community-built play space. Instead of rebuilding a usual playground, SJCK wanted one that provides innovative and creative play possibilities for the children, while ensuring that the elements in the play space are developmentally appropriate and safe. They decided to leverage on design expertise and, in collaboration with design organisation Participate in Design (PiD) and Lien Foundation, started the initiative called 'Hack Our Play' (HOP). What is so unique about this makeover is that the participatory design process enabled contributions from the children, their families and educators.

A COMMUNITY EFFORT PAYS OFF

SJCK together with PiD first held a series of engagement sessions at the pre-school in Gilstead to gather feedback. Two workshops were also organised for SJCK (Gilstead) educators, children and

The participatory design process led to greater community investment in the playground, and instilled a sense of accomplishment, ownership and pride in the end product. It also served as a good bonding activity between parents and children, and among the children themselves.

Ms Mizah Rahman,
Director and Co-founder of PiD



A tyre structure painted by children and parents



Nursery children building a house to hide from the 'Big Bad Wolf'



Volunteers and parents at the "Co-creation" workshop



Parents participating in the "Crayon Conversations" workshop



Father and child working on a planter together

their families by PID. In the "Crayon Conversations" workshop, children and parents contributed their ideas of play, and what they liked or disliked about various play spaces. In the "Co-creation" workshop, educators, children and parents were invited to help finish building the new play space. "Every person — even a young child — had something positive to contribute to the design process," says Ms Mizah Rahman, Director and Co-founder of PID.

By being involved from the start, the children and their parents benefitted immensely from the entire design experience. "The participatory design process led to greater community investment in the playground, and instilled a sense of accomplishment, ownership and pride in the end product. It also served as a good bonding activity between parents and children, and among the

children themselves," says Ms Mizah. "By working together, educators and families were able to get to know each other better and foster positive relationships," adds Mrs Eudora Lim, Head of K1 Level at SJCK (Gilstead).

KEEPING PLAY ECO-FRIENDLY

The new SJCK (Gilstead) playground is different not only in its participatory design approach, but also in its use of recyclable objects including drink crates, tyres, metal barrels and safety convex mirror frames, as construction materials. Besides adding new value to old materials and helping to lower the project cost, the use of everyday objects also opened up possibilities for children's imaginative play. For example, there is a musical wall made up of hanging pots and pans, which also serves as an 'emergency siren'. In another area, a platform made

out of crates, which is often used as a sand pit or a building space, can double up as a performance stage.

"The ever-changing landscape is a manifestation of the children's ideas," says Mrs Lim. "They continue to collaborate with each other to build a collective structure each time they are there. The children learn to work together and resolve problems, especially when trying to put different types of loose materials together. They absolutely love the new space, and say that it is thrilling and exciting."



A child planting the new play space



Children painting pots and pans with SJCK educators and PID volunteers



Children showing teamwork as they paint tyres together

TWO THUMBS UP!

Ms Adeline Chua and her daughter Vera Tang, a K1 child from SJCK (Gilstead), took part in the HOP initiative. Here is what they have to say:



The new playscape has endless possibilities for children to think and figure out ideas, as opposed to a conventional playground which leaves little room for imagination. It allows for more dramatic play and the development of problem-solving strategies in children. It comes with an opportunity to develop their observation skills, and supports the growth of intellect and body.

Ms Adeline Chua, 40

The new playground has more things than the old one. My favourite part is the tyre structure because it's like a cute playhouse. I can pretend that it's my little house and go in and out of it.

Vera Tang, 5



Engaging the public at Bedok Town Square

THOUGHT AT WORK

PID collaborated with SJCK to conduct extensive research to examine the impact of play design on children's behaviours, the safety and developmental considerations in the choice of materials, and how best to nurture critical thinking and problem-solving skills. This included a literature and case-study review; interviews with play experts; conversations with children, parents and educators; and field observations at existing playgrounds in Singapore.

The key takeaways are as follows:

- ▶ The play space should **include both permanent structures and dynamic, loose elements**. This allows children to exercise creativity in designing their own play environment. The loose parts such as tyres become problem-solving tools, as children figure out how to use an object or carry them from one point to another.
- ▶ The play space should **include elements that value different types of play experiences**, be it playing alone or in a group. For instance, carving out a space with a large umbrella and mat will allow a child or two to break away from a large group to have a quiet moment. By creating a variety of spaces with different number of objects and materials, children can decide the type of play experience they want.
- ▶ The play space should **limit the use of obvious-looking built elements**, such as a ship, a lion or a castle, in favour of neutral or abstract shapes, for instance, crates. Children can then stretch their imagination by interpreting the elements in different and creative ways.

While the HOP initiative re-imagined SJCK (Gilstead)'s outdoor playground, the same design considerations can also apply to indoor

play areas or neighbourhood spaces. "By using everyday loose materials, the play design can be adapted to large-scale projects like HOP or to smaller spaces, such as inside a pre-school or under a HDB void deck," says Ms Mizah.

"If you are looking to design an environment that is both nurturing and developmentally appropriate for young children, a good start will be to read Jim Greenman's *Caring Spaces, Learning Places, Children's Environments that Work!*," shares Mrs Lim. "It is a great book packed with practical ideas and suggestions."

PID is currently developing a HOP toolkit, in collaboration with SJCK and the Lien Foundation. The toolkit aims to provide a starting point for educators and other organisations to create their own community-built play spaces. It will be available online by mid-2018. ♥

HOP IN NUMBERS

128sqm
OF PLAY SPACE

9+ months
FROM PRELIMINARY
DISCUSSIONS TO
OFFICIAL LAUNCH

400+
PEOPLE
WERE INVOLVED
INCLUDING PLAY EXPERTS,
DESIGNERS, EDUCATORS,
VOLUNTEERS, PARENTS
AND CHILDREN

