



Exploring Science

AND ENRICHING MINDS

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I always felt that as parents, we have this strange sense of nostalgia or more aptly 'Deja vu' when our own children have to sit for school or national exams. The gruelling revisions and pressure to do well can result in both child and you facing elevated levels of stress and anxiety.

However, revisions do not necessarily have to stir up such emotions anymore. At the Dyslexia Association of Singapore (DAS), our mission is to help our students achieve and to build their self-confidence.

DAS is extremely delighted to launch our Science Explorers Short-Term Programme in 2018, for both Primary 3 and 4 students. Through the inquiry-based learning (IBL) approach, students will get to explore, discover, investigate, evaluate and elaborate on Science as an experiential learning in their daily lives, society and the environment.



Unlike a narrative text, a Science text is an example of an expository prose, which includes different text structures and vocabulary (Gajria et al., 2007). This becomes a huge struggle for students with learning difficulties to read and comprehend it, as they do not have enough prior knowledge, unable to derive inferences and to implement meta-cognitive strategies during the reading process (Baumann, 1984; Dexter & Hughes, 2011; Snider, 1989). They also have issues in identifying main ideas and describing details from the text too (Kim, Vaughn, Wanzek, & Wei, 2004). Therefore, having difficulty with the specialised vocabulary used in the Science text, problems in trying to recall facts and formula, issues with sequencing information in the respective order are some of the key challenges faced by our students with dyslexia when learning Science in the mainstream schools.

Moreover, these challenges occur, as dyslexia is a specific learning disability that is neurobiological in origin and thus, a deficit in the phonological component of language is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction (Lyon, Shaywitz, & Shaywitz, 2003, p.2).

The Ministry of Education in Singapore has introduced major curricular revisions in the Singapore Science Curriculum. In addition, the Science teachers from the mainstream schools have been widely encouraged to use the inquiry-based instruction in their Science classrooms. Koh & Lee (2007) suggests that many of the Science teachers believe that the inquiry-based instruction

is an unrealistic option due to limitations in their curriculum, lesson planning, teaching and assessment competency. Hence, a lecture-style of teaching with lack of open-ended questions is usually the preferred approach in a typical Science classroom.

As an educational therapist who teaches Science at the DAS, it is certainly a great responsibility and challenge to pave the pathway for student engagement with the aim of creating meaningful lessons, to develop their knowledge and skills that they need to function in today's world. How can we provide opportunities for students to move beyond being passive recipients of knowledge to becoming their own builders of knowledge who are capable of innovative and creative solutions to real-world problems? How will they learn to adopt a scientific attitude? How do we instill the knowledge and conceptual understanding of Science in our students?

Therefore, the pedagogical approach of inquiry-based learning has been the key to these questions, which has led to 11 Science Explorers' Workshops conducted for our Primary 2-6 students in 2017 at the DAS! It was indeed a great learning experience from conducting Science experiments to group presentations on their research findings from the iPads during the workshops. We were glad to receive enquiries from parents such as, "when is the next Science Explorers' Workshop?", "are there any recent developments for Science at the DAS?" and "will Science be an upcoming programme at the DAS?" The parents were also happy that their

children could bring home their Science experiments to share their experience with them.

Inquiry-based learning in our upcoming Science Explorers Short-Term Programme supports our students to become thoughtful, motivated, collaborative and innovative learners capable of engaging in their own inquiries and thriving in a world of constant change as well as helping them with the Science literacy, understanding of the science processes and vocabulary knowledge (Lindberg, 1990). As such, the Science lesson will be focused on student-centred learning. The educational therapist will be the facilitator who will be responsive to the students' learning needs and knows when and how to introduce students to ideas that will move them forward in their inquiry with multi-sensory activities, to be structured and organised, have inbuilt reinforcements and also the application of their knowledge and skills to answer Science exam questions. Together, both educational therapist and our students co-author the learning experience and wide understanding of personally meaningful content and ideas (Fielding, 2012).

The most exciting part of our Science Explorers Short-Term Programme will be the collaborative partnership between DAS and Parents! Yes, we will be sharing with you on fun experiments that you can conduct together with your child in the comfort of your home and wonderful Science resources that you can use to reinforce your child's learning. Subsequently, we also look forward to your sharing sessions with us on the Science experiments and resources.

*Together, let us
'Explore Science and
Enrich Our Minds!'*



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BE A PART OF THE DAS PARENTS' SUPPORT GROUP



Benefits of DAS Parents' Support Group (PSG):

Be more engaged

As a PSG member, you are more likely to be an informed and involved parent. You will also be building rapport with educators and supporting DAS's initiatives.

Be part of a network

We understand that parenting a child with learning differences is challenging. The PSG provides a platform for you to share ideas, concerns and experiences with other parents.

Increase your knowledge

Gain valuable experiences and grasp new opportunities, to support your child more effectively.

Make a difference

Provide DAS with feedback to make positive recommendations for change in our organisation.

Be a role model

By becoming a PSG member, you will demonstrate the importance you place on education and enhance your bond with your child.

If you would like to join the PSG, please contact the Centre Managers.



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