Little Bang and Bright Sparks newsletter

AUTUMN 2018 | Vol 3

In This Edition

As a grant-funded organisation, Children's Discovery is required to report on the impacts of its program. You can help!

Provide *feedback forms* after each activity - send scanned copies to: **info@childrensdiscovery.org.au**

Share images and stories on our Facebook page: **www.facebook.com/childrensdiscovery**

Tweet **@chldrns_dscvry**

Photo: Adam and Carmen in Melbourne presenting Little Bang Discovery Club at Education Changemakers conference.

This is the third **Children's Discovery Little Bang Discovery Club** newsletter. We hope to keep you all engaged in our 'community of best practice' by sharing news and stories on how Little Bang is running in your service, centre and beyond.

In this issue we showcase some hands-on activities, and provide some helpful hints on running your **Little Bang Discovery Clubs**.

We also highlight news and research that supports out-of-school learning and the important role of libraries. For those services thinking about expanding science club opportunities to older children, we explain how you can buy-in tried and tested workshops, or engage local contractors.

We now have an active Facebook site **www.facebook.com/childrensdiscovery/** and Twitter account **@chldrns_dscvry** that we hope you will connect with and share your successes.

Lastly, we will be conducting our annual telephone poll, calling each service for a 10 minute Q and A to gather evidence of impact that will help shape future directions and improve funding opportunities.

Best wishes,

Adam

Creative Director
Children's Discovery Museum

MEET OUR TEAM

The Children's Discovery Museum has grown. This year we have welcomed two new Project Officers to the team: Phoebe Armitage and Simone Thompson. Phoebe and Simone will be helping to develop new resources and programs, as well as teaching *Little Bang Discovery Clubs* and *Big Bang Science Clubs* in libraries around Sydney.

Phoebe Armitage

Phoebe is a keen science communicator with a passion for early years science programmes and marine education. She is a passionate diver, a hula-hoop enthusiast, and loves all kinds of craft. She especially likes making toys and puppets with moving parts.

Phoebe completed a Bachelor of Science and a Masters in Marine Science, specialising in tantalising green seaweeds. Originally hailing from Auckland, she moved to Sydney in 2014 working as a lab technician at the University of Sydney and delivering fun-filled science birthday parties for children. Last year she ran away and joined the Shell Questacon Science Circus, delivering exciting science shows in schools and communities around Australia. During this time, she also completed a Masters of Science Communication Outreach at the Australian National University. Phoebe has since moved back to Sydney to be near the ocean, and to take up the role of Project Officer with the **Children's Discovery Museum**.

Simone Thompson

Simone recently moved to Sydney from Perth, where she worked in the Discovery and Learning team at Perth Zoo. She discovered her passion for science education through wildlife conservation, teaching curriculum based education experiences to students from K-12. Simone completed a Bachelor of Science in Zoology and Conservation Biology and a DipEd in Secondary Teaching, even travelling to Zambia to complete a five week placement in environmental education. It was here she learnt how simple playful learning experiences can impact a child's perception of the world and their behaviour and led her to explore other areas of science communication, ending up at the **Children's Discovery Museum**.

Simone has a passion for wildlife and the environment and is excited to explore the surrounds of Sydney and NSW. She is especially excited to channel her creativity and enthusiasm into this new field of STEM education.

STEM EDUCATION

Don't feel overwhelmed by incorporating STEM education into your library inventory.

Our hands-on STEM workshops are a seamless way of meeting your community STEM interests and needs.

If you are interested in our products, training or having one of these programs delivered at your library please contact us:

- **Little Bang Discovery Clubs**
- **Big Bang Science Clubs**
- **Spark! or Spark Junior Discovery Boxes**

" STEM is everywhere. Our nourishment, our safety, our homes and neighbours, our relationships with family and friends, our health, our jobs our leisure are all profoundly shaped by technological innovation and the discoveries of science. "
Professor Ian Chubb, 2013

6 TIPS FOR RUNNING THE Little Bang Discovery Club

By Carmen Spears: Carmen is a Melbourne-based STEM contractor: carmen@carmenspears.com

1. INTRODUCE how the Little Bang Discovery Club program works in the first session.

Often parents and children expect a science club to be all explosions, white lab coats and safety goggles. It is worth helping parents and children to see the science in Little Bang activities. Take time in the first session to explain that science is the things we do to learn about our world. An example helps, so you might like to talk about dinosaurs.

In science we collect and sort things (Little Bang session one) – A dinosaur scientist makes a collection of dinosaurs and sorts them into groups. Some dinosaurs eat meat, and some dinosaurs eat plants. Sorting dinosaurs like this helps us to learn about them. We might notice similarities and differences. Do meat-eating dinosaurs have the same sort of teeth as plant-eating dinosaurs? Collecting and sorting is science.

In science we measure and record things (Little Bang session two) – Are meat-eating dinosaurs bigger or smaller than plant-eating dinosaurs? To find out, our scientist will have to measure the dinosaurs. She writes her measurements down to keep track of everything. It will be easy to check her notes to see which dinosaurs are biggest. Measuring and recording is science.

In science we test things to see if our ideas are right (Little Bang session three) – Our scientist thinks that only meat-eating dinosaurs will have sharp claws. But to be sure, she has to measure the claws on all the dinosaurs to test if her idea is right. Testing things to find the answer is science.

In each Little Bang session, we will have a go at these 'things we do in science.' The 4 sessions build skills towards an exciting science fair at the end!

2. BUILD enthusiasm towards the items in the discovery box.

The discovery box is an integral part of the Little Bang Discovery Club. But sometimes what parents see is a whole lot of bits and pieces they might lose. Use the first session to introduce kids to each item in their discovery box. What is it? How do they use it? What might they do with it at home? This creates a positive attitude toward working with the box throughout the program.

3. ENCOURAGE use of the discover @ home worksheets and invite families to share their work in the next session.

Make sure parents understand the @ home worksheets. Of course they don't have to do it, but they won't do it unless they are given a clear invitation. The discovery box and @ home worksheets are an opportunity for families to share science in an easy fun way. Many families love them.

4. TELL them some exciting things that are happening next session.

Give them something to look forward to - 'Next week we are going to use a real see-saw to do some measuring and testing.' Remind parents that the next session will begin with time to share their discover @ home activity. This lets them come prepared to join in.

5. EMBRACE the science fair.

Encourage everyone to bring something to the science fair. It need only be simple – perhaps measuring each member of the family in chopsticks and recording the results in a drawing. Ideas for the science fair can come from anywhere. Suggest things from the Little Bang sessions, discover @ home worksheets, or the Little Bang Book of Discovery. The science fair is also a great opportunity to showcase your libraries collection of science books for children.

6. HAVE FUN. Seriously! If you have fun, the parents and kids will too. Enjoy!

UNDERWATER CRAFT LAB

Project Officer Phoebe Armitage is combining her passion for craft, the ocean and science to transform libraries around New South Wales into underwater wonderlands. The display is a collection of 40 handmade puppets, each one a realistic representation of a different sea creature.

The exhibition is paired with themed craft activities or story time, with the tactile display aimed to encourage a love of the ocean for young children and their families. The **Underwater Craft Lab** will be on display at **SCIENCE WEEK** in Canberra this year. Watch this space for further developments on this project and the opportunity to host **Phoebe's Underwater Craft Lab** at your library.

Resource and Knowledge Sharing

www.facebook.com/childrensdiscovery/

Children's Discovery @chldrns_dscvry

PLEASE LIKE US!

We'd love to share your stories of science in the library!

Our facebook page is a **centralised space for librarians to share their experiences delivering STEM education**. It provides a platform to share successes and failures and to share ideas and resources with participating libraries across the country.

Some of our resources are also available for sale from here. We now take credit card to make it easier to quickly buy the resources you need.

What's New?

Spark Junior Discovery Boxes

To compliment our current range of Spark! Discovery Boxes, we now have a suite of Spark Junior Discovery Boxes specifically designed for children aged 3-5 years ready for purchase.

Each science-themed Discovery Box contains specific equipment and books with corresponding @ Home notes for children to explore with the adults in their home.

Would you like your own set of ***Spark!*** or ***Spark Junior Discovery*** Boxes? Contact us for details at **info@childrensdiscovery.org.au**

Spark! Discovery Box: Virtual Reality

Our new Spark! Discovery Box explores the weird and wonderful world of virtual reality. Virtual reality is a completely simulated environment, transporting you to a different reality to the one in front of you. With the special virtual reality viewer included in the box, you can move around, look in every direction and actually experience the virtual world as if you were physically there. Combined with other cool equipment such as a T-shirt which allows you to see inside the wearer's body and @ Home notes to guide you, this new Spark! Discovery Box is virtually out of this world!

Spark! Discovery Box: Dog or Frog

We now have two options for the Amazing Animals Spark! Discovery Box. Both these Discovery Boxes contain animal x-rays, tooth specimens and an interactive book to guide you through the anatomy, physiology and behaviour of animals. **The only question is, are you team dog or frog?**

Learning through Play

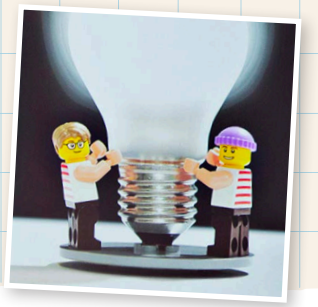
The LEGO Foundation was established with the aim of re-defining play and to re-imagine learning.

"We want to build a future where learning through play empowers children to become creative, engaged, lifelong learners."

The Foundation has released two recent reports; one that sets out a **definition** of '***learning through play***', and the second summarises current **evidence** on the importance of children's learning through play.

Play is considered as a range of activities, from simple freedom to explore and discover, to more guided or structured actions or games with a particular learning goal. The critical requirement is that children must experience agency and be supported rather than directed. The evidence of the importance of play on learning is mounting; more than simply an enjoyable experience, it is engaging with the world in playful ways that is essential for laying a foundation for learning early in life.

http://www.legofoundation.com/en-au/



STEM Activity Clearinghouse

The STEM Activity Clearinghouse is an online resources with high quality vetted STEM activities that are appropriate for library use.

This website was developed by The **Space Science Institute's National Centre for Interactive Learning** who provide STEM training to public libraries in the USA. It contains useful search filters such as content level and audience, demonstration videos, and tips and tricks for implementing activities in your library.

http://clearinghouse.starnetlibraries.org/index.php

FREE Giveaway be quick!

Guinness World Records

Science & Stuff Giveaway

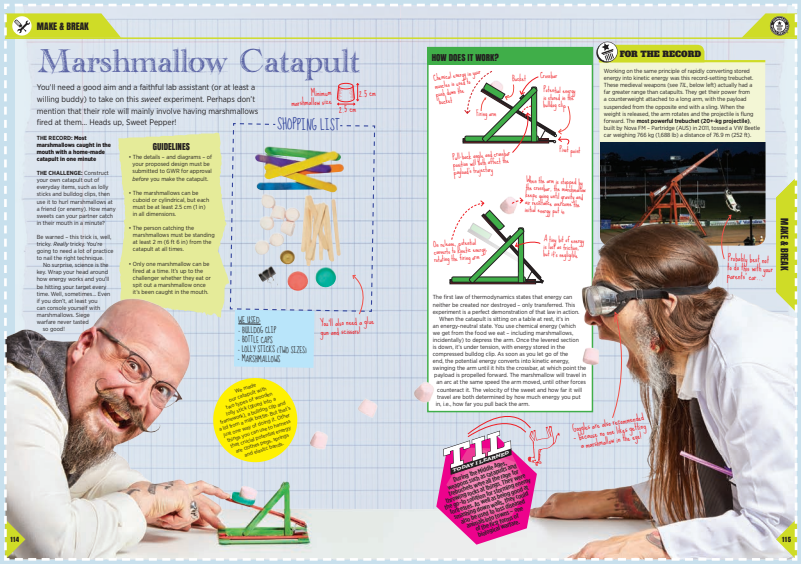
To celebrate the release of Guinness World Records: Science & Stuff, Pan Macmillan Australia are providing five books to giveaway to contribute to your Library STEM collection!

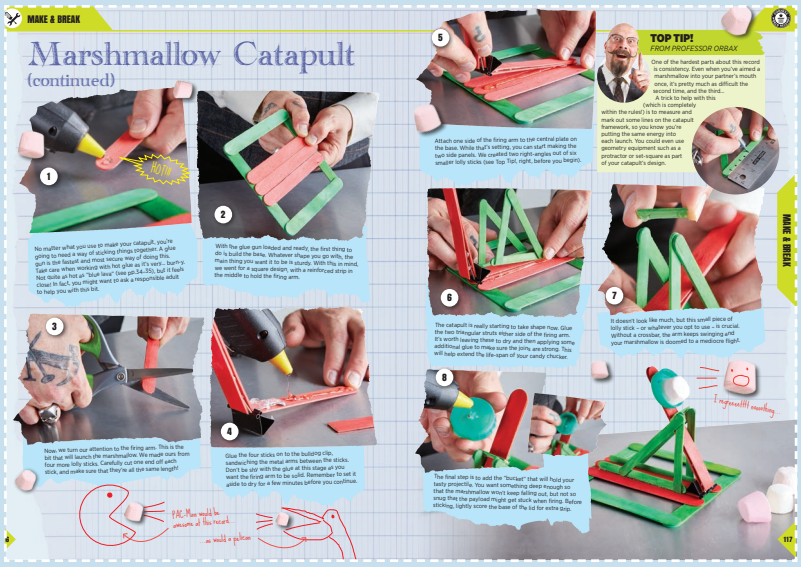
This book is a whirlwind tour through our astounding, record-breaking world, celebrating the simple joys of finding things out. **As a taster, here is an fun experiment to break a World Record by creating a Marshmallow Catapult**.

https://www.youtube.com/watch?v=rCIWi4vphbY

For a chance to win one these books for your library collection, please email info@childrensdiscovery.org.au with the subject line "Guinness World Records Giveaway" by 30 April 2018.

Good luck!





Children's Discovery Museum (Ltd)
ABN: 16 103 244 408
www.childrensdiscovery.org.au
info@childrensdiscovery.org.au

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