



CRASH BANG SQUELCH!

CHaOS (Cambridge Hands-On Science) has been running Crash, Bang, Squelch! (CBS) for 20 years! CHaOS fills the Zoology department with experiments and let the public get a free day filled with Hands-on fun. We share our love and enthusiasm for

Science, Mathematics, Engineering, Medicine, and Computing.

CHaOS aims to inspire and enthuse children and the general public about STEMM. Students volunteers from many university departments came to demonstrate experiments, and it is all organized by CHaOS committee alongside the zoology department.



On Saturday the 19th of March, we held the first Crash, Bang, Squelch! Since 2019. The zoology department was kind enough to open itself up for another CBS, working with us to figure out the safest way to make the hands on science experience we wanted to give.

This limited the number of visitors we could have to only 75 at the main event at a time. But we are proud of how many people attended, with around 500 visitors.

We loved putting on and running CBS, and want to tell you all about what this amazing event was like, and what we achieved.

EXPERIMENTS!

CHaOS is all about experiments! CHaOS aims to make STEMM fun, engaging and most importantly hands-on, and so we'd like to tell you about some of the fantastic things visitors got to do at CBS.

We filled the zoology department with over 40 different experiments. Each experiment had a passionate volunteer to demonstrate, and over 90% of the volunteers were new to CHaOS!



There were some fantastic Biology demonstrations, including pond life, where children can see plant and insect life that live in ponds. Children got to see a range of skulls, ranging from cats and dogs, to snakes and deer. Demos specific to medicine were popular, including a giant model hand with a set of ropes visitors could play with to simulate tendons, as well as an organ vest, and some cuddly microbes.

By turning off the lights and covering the windows, a dark room housed experiments exploring ultra-violet light, sunsets, and polarisation. A lot of our visitors enjoyed the physics of hot air balloons, demonstrated by a toaster and a bin bag!

Chemistry is always popular, including experiments such as electrolysis, which uses water and a voltage to send a ping pong ball flying!

Finally, Engineering included Trebuchet, where visitors being fling objects across the department, as well as the chance to build a cantilever bridge, which excels at engaging our youngest visitors!



TALKS!

Talks at Crash, Bang, Squelch! are aimed at children, so they can discover a whole different topic, with both audience participation and live demonstrations to keep it engaging for a younger audience!

Emperors, spies and seaweed: writing messages only you can read

Ben and Matt showed us how to write messages only you can read using seaweed.

You can be an Engineer too: designing the world around you

Finlay presented his homemade 3D printer and how engineering is all around us.

Women who rocked STEM!

Grace and Conor told the stories of Mary Anning, Marie Curie, and Florence Bell, Women to look up to in STEM!

Colourful creations: the science of colour

The Science of colour was vibrantly described by Elizabeth.

Inventing an impenetrable suit of armour

Matt and Ben made an amazing phone case.

Cells and Important tiny blobs

Andrew Dowdell-Stent explored the tiny worlds of cells.

Vast distance in Space: How far away is that place?

Andrew Sellek blew minds with the scale of the universe.



ROBOTS!

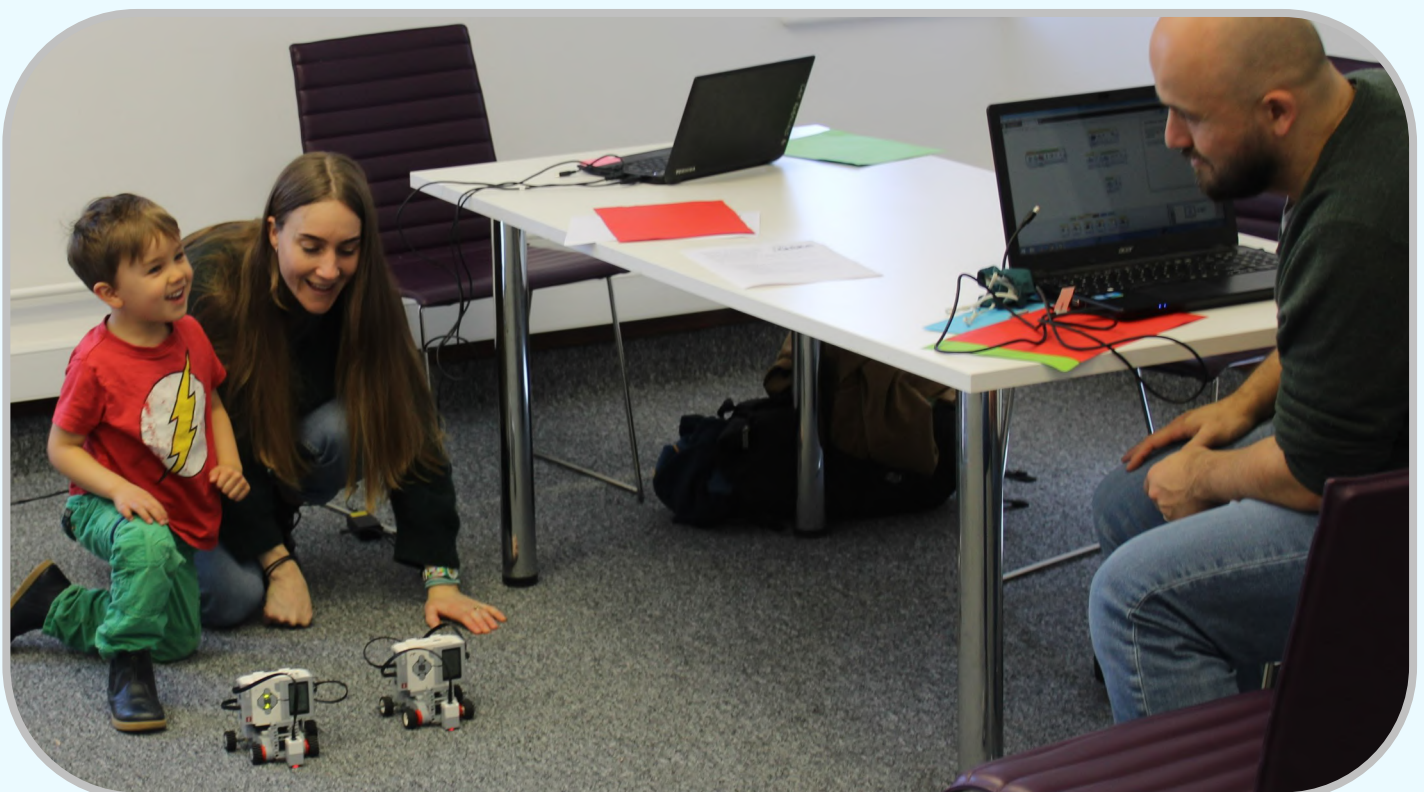
CHaOS ran 6 robotics workshops during the course of Crash, Bang Squelch! In these 45 minute sessions, each child experimented with a Lego mindstorm with CHaOS volunteers helping them.

The children programmed the robot to respond to different colours by moving in particular ways. The robot could turn, move forward, backward or stop! This culminated in a robot following the edge of a path made of coloured paper, stopping at red.

This event was very popular, with high attendance, and was aimed at giving children a hands-on experience with programming. The robots sessions make STEMM come alive and feel reachable and exciting.

75% of those asked said they enjoyed the session, with our favourite comment was a request for “bigger robots please”.

Thank you to the Engineering department, who let us borrow equipment for the robotics workshop.



WHAT WE PULLED OFF!

Being so soon after the end of lockdown, CHaOS was concerned about the attendance of CBS. However, CBS had around 500 visitors! With 87% of those asked saying they would definitely return.

Most children attending were between the years of 5 to 11, with 89% of the children asked saying they found it “quite fun” or “very fun”.

“You can be an Engineer”, was one of the most popular talks, with 100% enjoying it very much, and finding it very interactive.

77% of children asked said they learned very much/quite a lot. With 16% convinced to go into science by Crash, Bang, Squelch!

We would like to share part of a quote with you, from a parent who attended the event:

“I just wanted to say how completely fantastic Crash Bang Squelch was. The students who talked to us were brilliant ambassadors for science and the university; friendly, brilliant, child friendly, informative and welcoming. The range of demonstrations, experiments, models and activities were fascinating and great fun. My daughter and I have come up with lots of great questions since Saturday and have been talking about aspects of it everyday ...”



THANK YOU!

The CHaOS committee would like to thank everyone who volunteered, for giving their time to provide such a singular and inspiring event. We hope many who took part would consider joining the CHaOS committee.

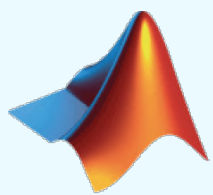
We would also like to thank the Zoology department for allowing us to use the building, for help setting up the days prior, and packing up on the Sunday afterward, as well as working with CHaOS to make sure Crash, Bang, Squelch! was safe, particularly in the context of the COVID-19 pandemic.

We would like to thank everyone who came as a visitor to our event, and hope you found it both fun and educational. Please do come next year for CBS 2023!

A special thank you to the following who gave talks as CBS:

Matthew Le Maitre, Ben Akrill, Finlay Knops-McKim, Andrew Sellek, Elizabeth Brown, Andrew Dowdell-Stent, Conor Carfolla, and Grace Exley

An extra special thank you to our sponsors who made this event possible, MathWorks and the James Dyson Award.



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