

# CRASH, BANG, SQUELCH!

Saturday 16<sup>th</sup> March 2019



## WHAT IS CRASH, BANG, SQUELCH?

Crash, Bang, Squelch! (CBS) is a day of hands-on science experiments held in the department of Zoology as part of the Cambridge Science Festival. The event is run by Cambridge Hands-On Science (CHaOS), which is a student society whose purpose is to show children and their families that science is interactive, interesting and fun! We take over the Zoology teaching labs for the day and fill them with around 70 different experiments, covering **Biology**, **Chemistry**, **Physics**, **Maths**, **Engineering**, **Medicine** and **Geology**. Many of them are home-made and all of them demonstrated by friendly and enthusiastic volunteers.

## GROWTH OF CBS

The first CBS was run in 1998. It has grown and been improved upon every year. This year saw over **1500** members of the public in our main event, and over **800** went to various talks that we ran throughout the day in the neighbouring lecture theatre.



## NEW THINGS FOR 2019

We're always looking for new ways to engage the public. One notable addition to our collection of experiments included **"Fire Tornado" (Physics)**. We had a wider selection of skulls for **"Animal Skulls" (Biology)** and creepy crawlies for **"A Bug's Life" (Biology)**.

We ran more **Robotics Workshops** this year, with very high demand. Tickets were sold-out, but we were able to squeeze in a few additional eager families at the door on the day.

Some of the ideas from the talks below are now being developed into new experiments!



### TALKS



We ran 7 talks this year, all of which were very popular and the audience were given plenty of opportunities to participate. The speakers and their subjects were...

#### **Yaron Bernstein**

Undergraduate materials scientist discussing radioactivity, with fiery demonstrations!

#### **Simon Thomas & Sophie Miocevich,**

Undergraduate physicist and geologist duo talking Yellowstone, volcanos and ravioli.

#### **Tom Webster**

Graduate mathematician asking "are you smarter than a computer?"

#### **Andrew Selleck**

Undergraduate astrophysicist having some fun with "Berserk Fireworks".

#### **Ben Akrill & Matthew Le Maitre,**

Undergraduate physicist and computer scientist teaching us the fundamentals of making and breaking secret codes.

#### **Finlay Knops-McKim**

Graduate engineer encouraging others by showcasing the world of engineering and a 3D printer made of K'Nex!

#### **Jennifer Simpson**

Undergraduate vet talking about X-rays of animals, accompanied by a very special canine guest speaker.

# STATISTICS

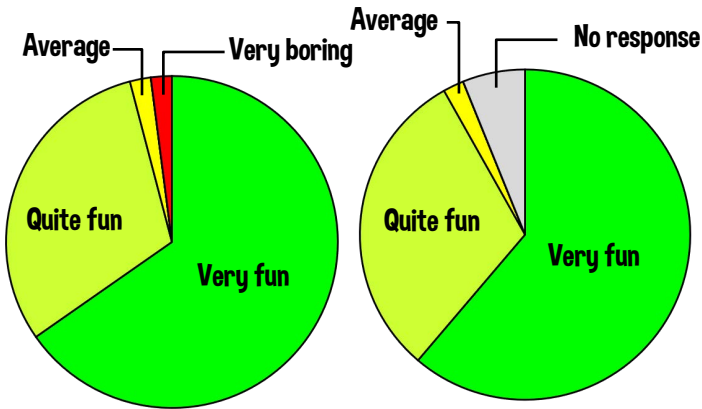
Let's let some pie charts tell us how Crash, Bang, Squelch! went this year...

## GENERAL FORM (49 responses)

How fun was the event...

... for you?

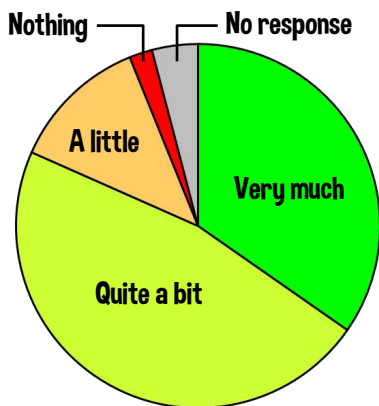
... for your group?



(0 selected "Quite boring")

(0 selected "Quite boring" or "Very boring")

How much did you learn?



Would you come again?



(0 selected "Maybe" or "Probably not")

## KIDS' FORM (65 responses)

How fun was the event?

Average No response



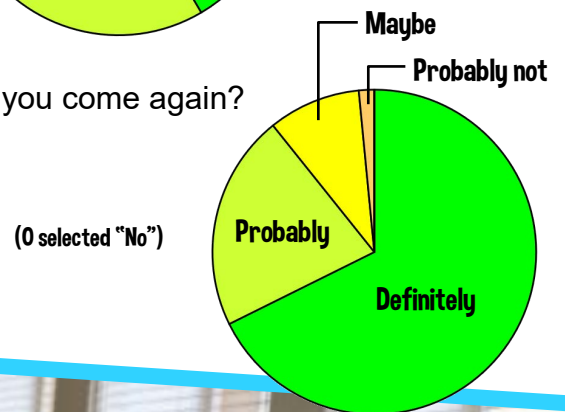
(0 selected "Quite boring" or "Very boring")

How much did you learn?



(0 selected "Nothing")

Would you come again?

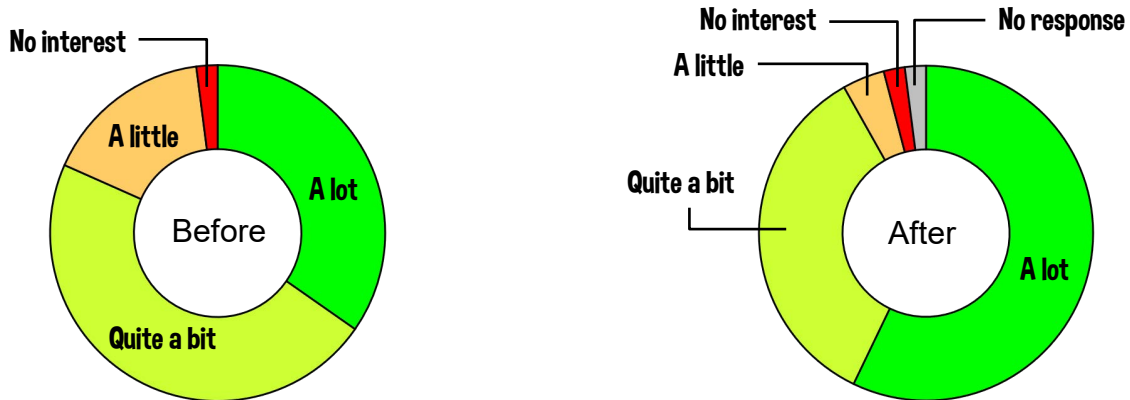


(0 selected "No")

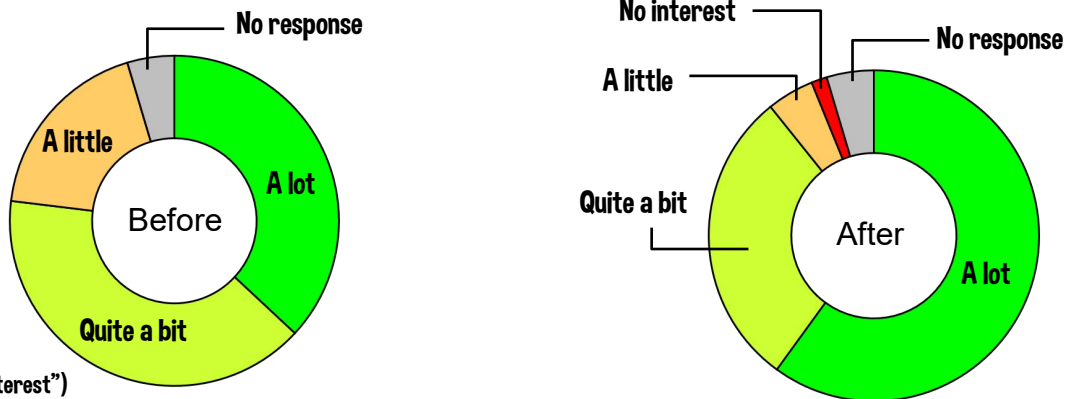


# STATISTICS

We asked in the general form how interested the kids were in learning science before and after Crash, Bang, Squelch! This was the result:



We asked the same question on the kids' form:

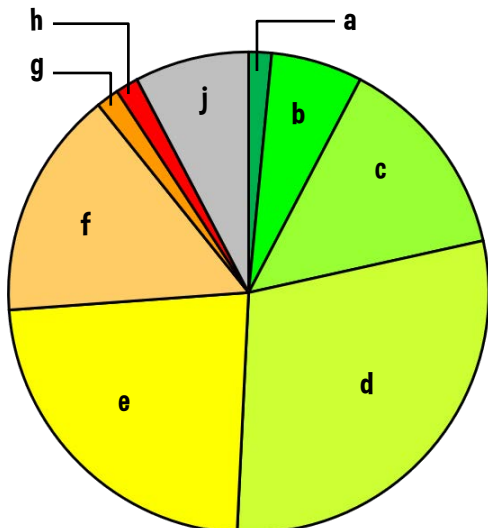
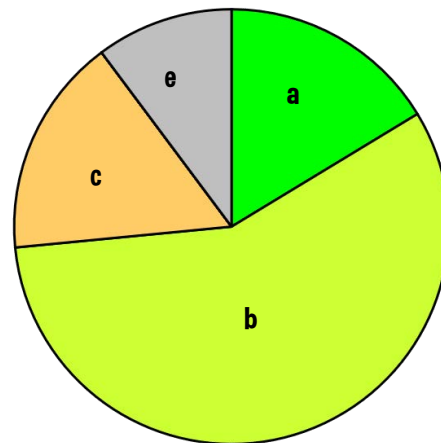


(0 selected "No interest")

We also asked on the general form whether the child/children would aspire to be scientists before and after Crash, Bang, Squelch!

The chart on the right shows proportions of

- (a) change from "no" to "yes"
- (b) no change from "yes"
- (c) no change from "no"
- (d) change from "yes" to "no"
- (e) no response



Finally, we asked a similar question on the kids' form, asking whether they'd want to be a scientist or doctor when they're older (again before and after CBS)...

The chart on the left shows proportions of

- (a) change from "no" to "yes"
- (b) change from "maybe" to "yes"
- (c) change from "no" to "maybe"
- (d) no change from "yes"
- (e) no change from "maybe"
- (f) no change from "no"
- (g) change from "yes" to "maybe"
- (h) change from "maybe" to "no"
- (i) change from "yes" to "no"
- (j) no response



“Great exhibit - keep it going.”

“Perfect for inquisitive 7 yr old”

“Fantastic event - needs to be longer”

“It was Amazing! Must do again!”

“It is really interesting and I want to do more activities”

“It is a very good event and you should add something new each year”

“Vacuum Bazooka favourite”

“I really like the experiment of the vinegar + carbonate”

“I enjoyed the gloopy slime thing”

“Sheep eyeballs :)”

“My favourite bit was when we learnt about viruses, bacteria and parasites!”



## HOW ABOUT THE TALKS?

Here are some numbers to let you know how the talks were received...  
(note that these stats are averaged across all seven talks)

**69%** enjoyed the talks very much

**90%** would come back

**82%** thought the speakers were very enthusiastic

**64%** thought the talks were very appropriate

**66%** thought the speakers went at a very good speed

**72%** thought the talks were very interactive

**80%** thought the speakers were very clear

### Some positive comments...

"The rock, paper, scissors robot was very impressive"

"Loved the volunteer bit with the seismometer"

"Loved the Seaweed! Did not know that!"

"Very informative and fab explosions!"

"The best part of the talk was seeing the rabbit skeleton"

"[The best part was] when he made something out of his 3D printer"

"Demonstrations were great"

"Audience interaction very good. Presenter very engaging. Balloon exercise fun."



## SOME CONSTRUCTIVE IMPROVEMENT FEEDBACK

There are a few areas we could improve on next time, which some of the visitors suggested...

“More interactive work that kids can get involved in”

“Easier explanations for young children”

“Organisation for entering event could be improved”

“Didn't like system of leaving talks to back of queue [for CBS main]”

“Speakers need some training/practice”

“Lecture could have been louder”



**THANKS TO ALL OUR SUPPORTERS!**

Firstly thanks to the University of Cambridge, the Cambridge Science Festival and specifically the Department of Zoology, for letting us use their labs and lecture theatre for the day. We are also very grateful for the staff at Zoology for helping us set up and set down around the event.

Huge thanks to the many student volunteers present for the day, and the many members of the public who showed up to receive our science enthusiasm!

Lastly, we thank our sponsors for the support and funding they give us. These are the university's admissions office and the organisations listed below:



CHaOS simply cannot run without any of the above help - we truly appreciate it!



**SEE YOU NEXT  
YEAR!**

