

Binding Blocks

Building the Universe one nucleus at the time

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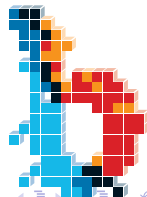
Warwick 5-6th January



UNIVERSITY
of York

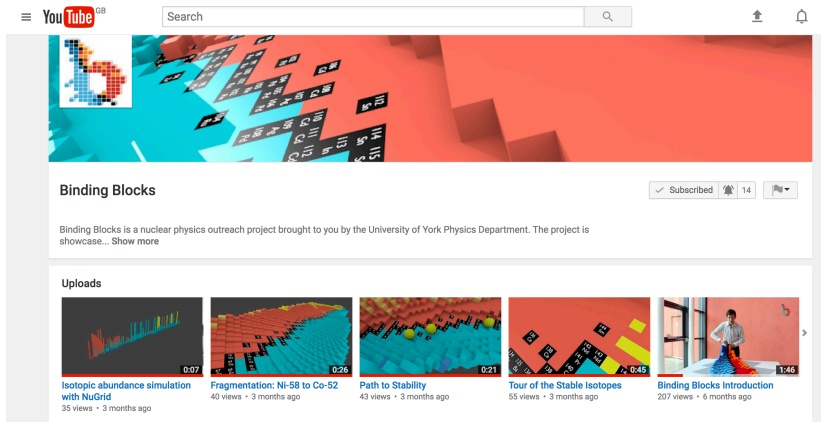


Science & Technology
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What is Binding Block???

Have a look on our YouTube page to check out videos!



The image shows the YouTube channel page for 'Binding Blocks'. At the top, there is a navigation bar with the YouTube logo, a search bar, and icons for upload, notifications, and a profile picture. The channel banner features a 3D visualization of a nucleus with red and blue blocks and black labels with numbers. Below the banner, the channel name 'Binding Blocks' is displayed, followed by a 'Subscribed' button, a notification bell icon with '14' notifications, and a share icon. A short description follows: 'Binding Blocks is a nuclear physics outreach project brought to you by the University of York Physics Department. The project is showcase... Show more'. The 'Uploads' section lists five videos:

- Isotopic abundance simulation with NuGrid**: 35 views • 3 months ago. Video thumbnail shows a 3D bar chart with red and blue bars.
- Fragmentation: Ni-58 to Co-52**: 40 views • 3 months ago. Video thumbnail shows a 3D visualization of a nucleus with red and blue blocks.
- Path to Stability**: 43 views • 3 months ago. Video thumbnail shows a 3D visualization of a nucleus with red and blue blocks.
- Tour of the Stable Isotopes**: 55 views • 3 months ago. Video thumbnail shows a 3D visualization of a nucleus with red and blue blocks.
- Binding Blocks Introduction**: 207 views • 6 months ago. Video thumbnail shows a person standing next to a large model of a nucleus.

Binding Block in numbers....

- 25000 Lego bricks → 4 full packed hockey bags
- Low-cost outreach activity (3k GBP for material)
- Total spending 12 kGBP
- 2(+1) lecturers+1 outreach-officer +4PhD students+ 20 M.Phys. students
- 1 paper: Physics Education (<https://arxiv.org/pdf/1610.02296.pdf>)
- 3 international conferences (IOP Liverpool; NUSTAR @York; INPC2016)
- More than 30 events
- Exhibition @ STFC Daresbury Laboratory
- Countries involved: South-Africa Canada, UK, Australia

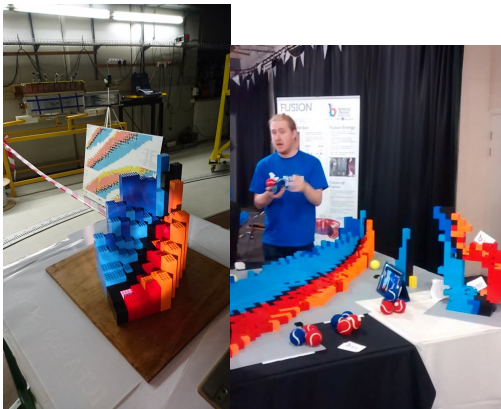
A non-complete list of events

When?	Who?	Where?	How many?
22/10/2016	Nuclear Science Day	Guelph	30
25/09/2015	YorNight King's Manor	York	500
01/08/2015	Star Gazing St Peter's School	York	200
30/01/2016	Physics 50th Anniversary Physics	York	100
03/02/2016	Visit by York College Physics	York	30
03/10/2016	"Widening Participation" Physics	York	20
16/03/2016	Huntington Outreach Huntington School		20
(30/03-01/04)/2016	IoP Nuclear Physics Conf	Liverpool	120
06/07/2016	Three Minutes to Midnight St Peter's School	York	200
06/11/2016	Family Fringe Ron Cooke Hub	York	1000
17/06/2016	CERN Teachers Day NSLC	York	48 teachers
20/06/2016	New and Aspiring Primary science specialists	York	24 teachers
24/06/2016	Open Day Exhibition Centre,	York	100
25/06/2016	Open Day Exhibition Centre,	York	150
27/06/2016	Schools Physicists of the Year Awards Exhibition Centre,	York	200
28/06/2016	Big Bang Fair Doncaster Racecourse	Doncaster	2000
07/09/2016	Open Day STFC Daresbury Laboratory	Daresbury	7500
07/12/2016	Widening Participation Physics,	York	48
08/01/2016	Girls in Physics Physics,	York	12
17/09/2016	iTL Open Day iThemba LABS	Cape Town	150
Autumn	NUSTAR Conference Kings Manor	York	100
19/10/2016	Physics Review 25th Anniversary James Hall	York	300
06/11/2016	Public (Tim Peake) Exhibition Centre,	York	
09/11/2016	Hull Training Hull University Library	Hull	8

BB is expanding! Join our team!

Binding Block collaborations

- BB @iThemba Lab
- BB @ Guelph (Dr. L. Caballero)
- BB @ Calgary (Dr. J. Doven) [ongoing]
- BB @Denmark (C.D.)
- BB @ Hull (J. Keegan) [ongoing]
- BB @ Kent (????)



What's next?

- Create side-activities for large events (ongoing)
- Create material for teachers:
 - ① Lesson plans (to be added to Phys. Ed. special issue)
 - ② Educational videos (... if STFC gives us money....)
 - ③ Interactive 3D chart for iPad (ongoing)
 - ④ 3D printable version of the chart (prototype)
- Include other UK groups
- Create a permanent exhibition
- Create a booklet to train new members