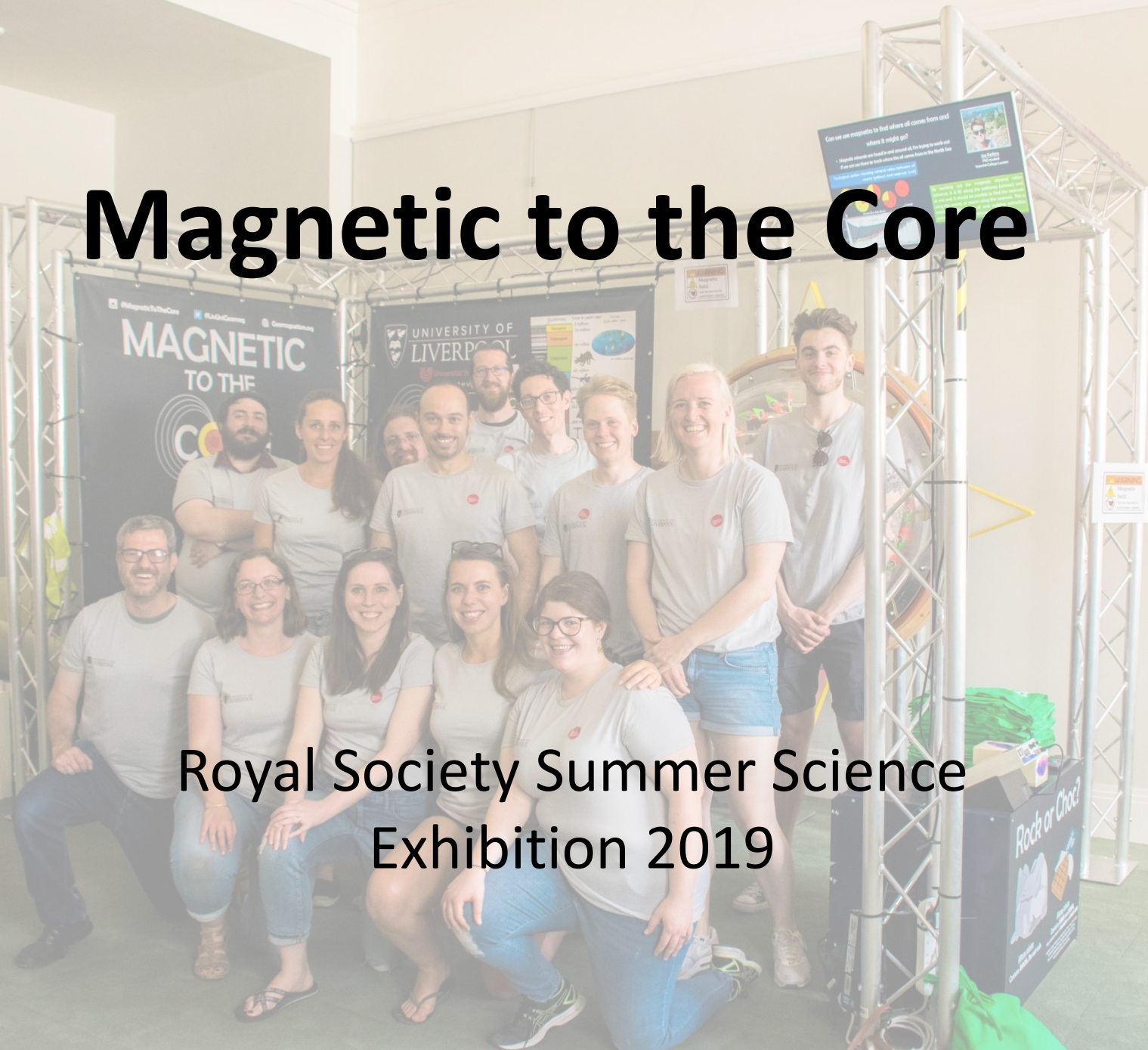


Magnetic to the Core

Royal Society Summer Science
Exhibition 2019



Top tips

- Find some money, then find some more
- Hire someone (yourself) to work full-time for 2-3 months
- Build core team
- Talk to people
- Trial runs



(👉 this might just be enough)

Money

Total budget: £ 26,650

£ 10,000 from School of Environmental Sciences (Uni of Liverpool)

£ 10,000 from Department of Earth, Ocean and Ecological Sciences
(University of Liverpool)

£ 6,000 out of research budgets (Leverhulme, NERC)

£ 400 from the Royal Society

£ 250 from the British Geophysical
Association

University Money

- Tie exhibition into REF impact case study
(deadline is 2021, or perhaps the next one?)
- Gather lots of evidence for impact
- Involve impact development and business managers, communication managers, etc.
- Talk to press office from early on

Money

- Team of 21 people
- Transport to, in and from London
- Airbnbs (one with parking)
- Van to bring equipment to London
- Me for two months full-time
- Food



How to save money

- Do everything yourself
- Involve people who are in London
- Have people share
- Make the most of Royal Society lunch money
(use it for everything you don't want to get via official suppliers)

Hire yourself

- Extended my contract by 2 months
- Worked full-time on the exhibition
- Ideally, add another month



Build core team

- Professor (head of lab), NERC fellow and me
- Made the big decisions
- Helps to have the most senior person for getting money and delegating tasks to other postdocs and PhDs

Talk to people

- Find people at your institution who have done the exhibition
- Talk early on to impact people and press office
- Involve people
- Good for connections

Trial runs

- Essential for trying out your activities
- How much time does building stand cost
- What are the strengths of your team
- How long do activities take
- Get feedback



Did you know?

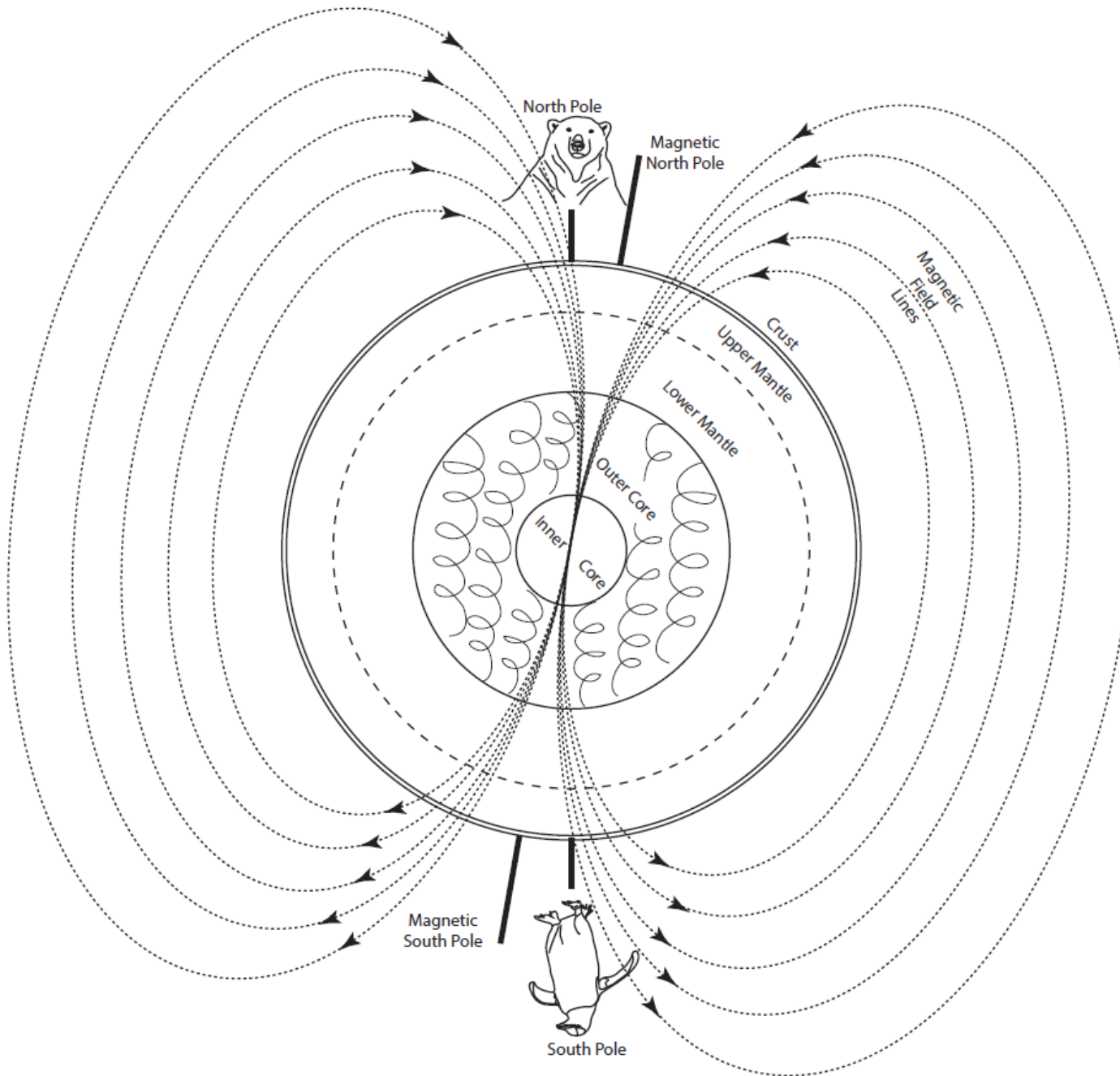
The Earth has a liquid outer core made up of iron and nickel

The fluids in the outer core are like water and flow with the same speed as ocean currents

The geographic North pole is the axis around which the Earth spins

The magnetic North pole is where your compass points to

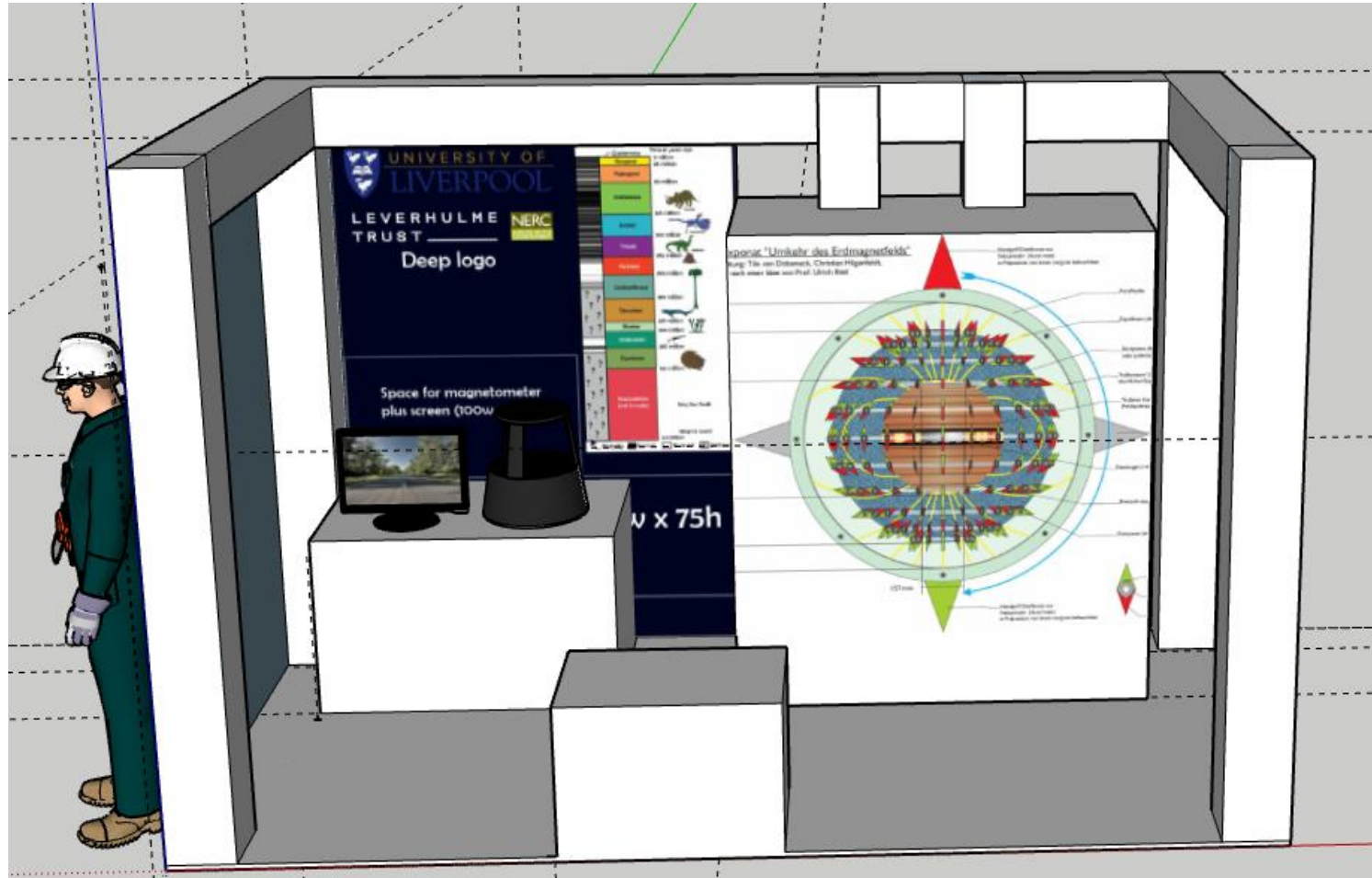
Rocks can 'remember' the magnetic field of the time at which the rocks were formed



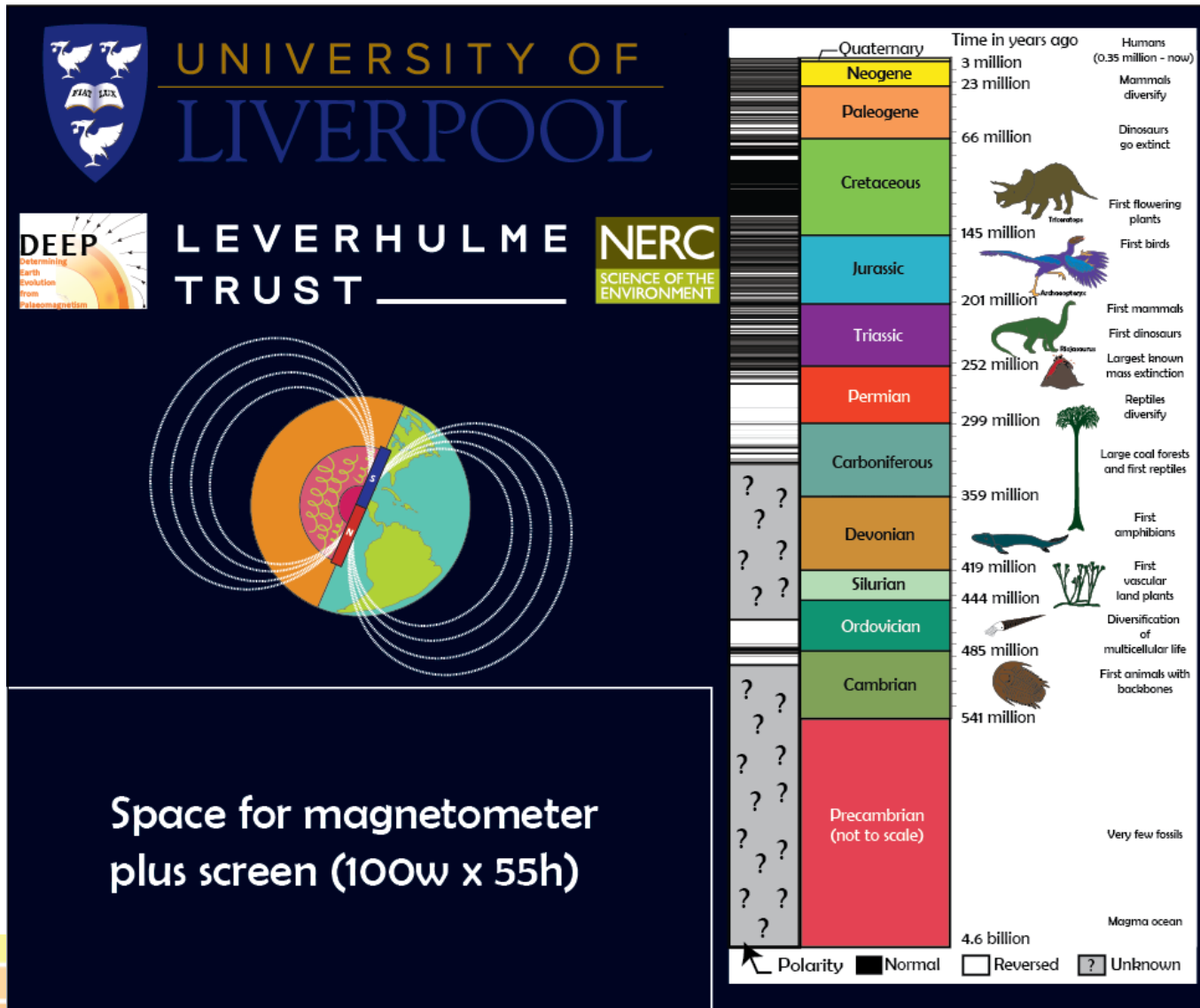
Stand design



Stand design (sketchup > free)



Stand design – backdrop





UNIVERSITY OF
LIVERPOOL

University of Liverpool
LEVERHULME
TRUST

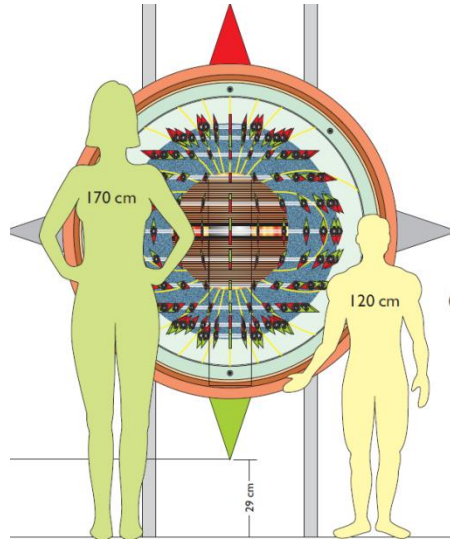
DEEP
NERC



Hands-on activities



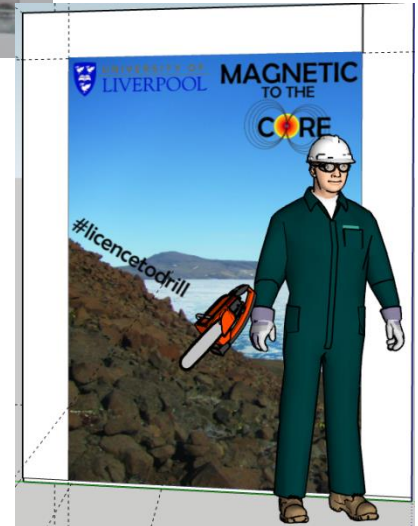
Kickstool magnetometer



Magnetic globe



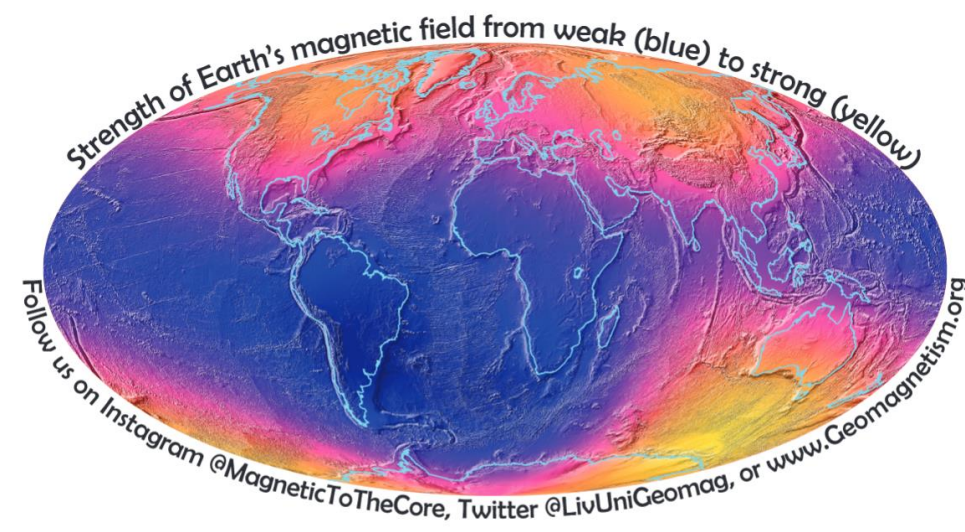
Rock or choc?



License to drill

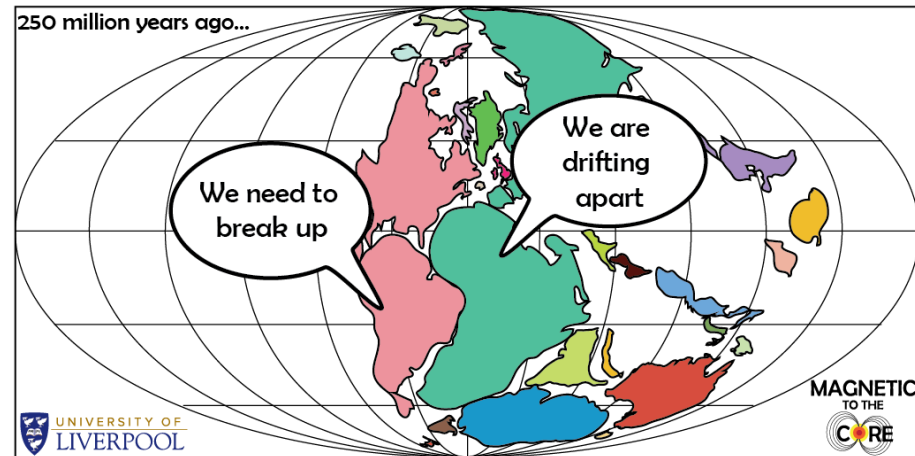
Giveaways

1000 stickers



Not enough (finished after 3 days)

2000 magnets



Only for doing quiz (impact) > too many

Information booklet



Information booklet

Ten things you might not know about the Earth's magnetic field

@MagneticToTheCore

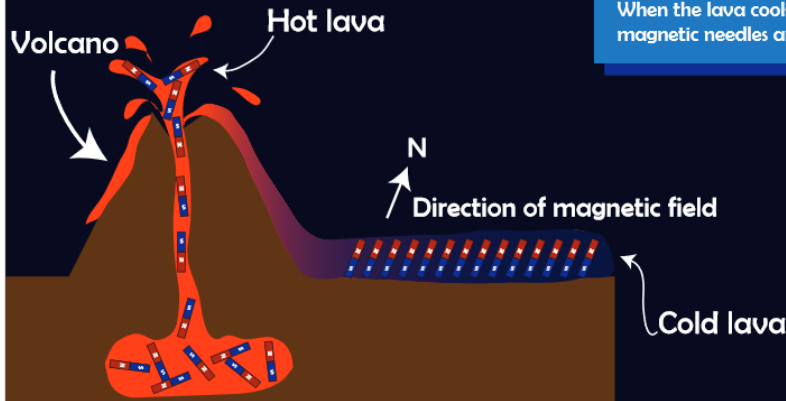
@LivUniGeomag

Geomagnetism.org



1. Rocks can capture the Earth's magnetic field when they are formed

Magnetic needles inside a hot lava align themselves to the magnetic field
When the lava cools down, the magnetic needles are locked in



Ten things you might not know about the Earth's magnetic field

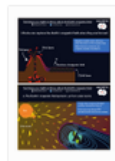
Preprint

File available

September 2019

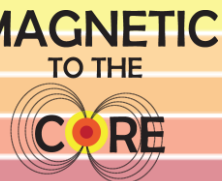
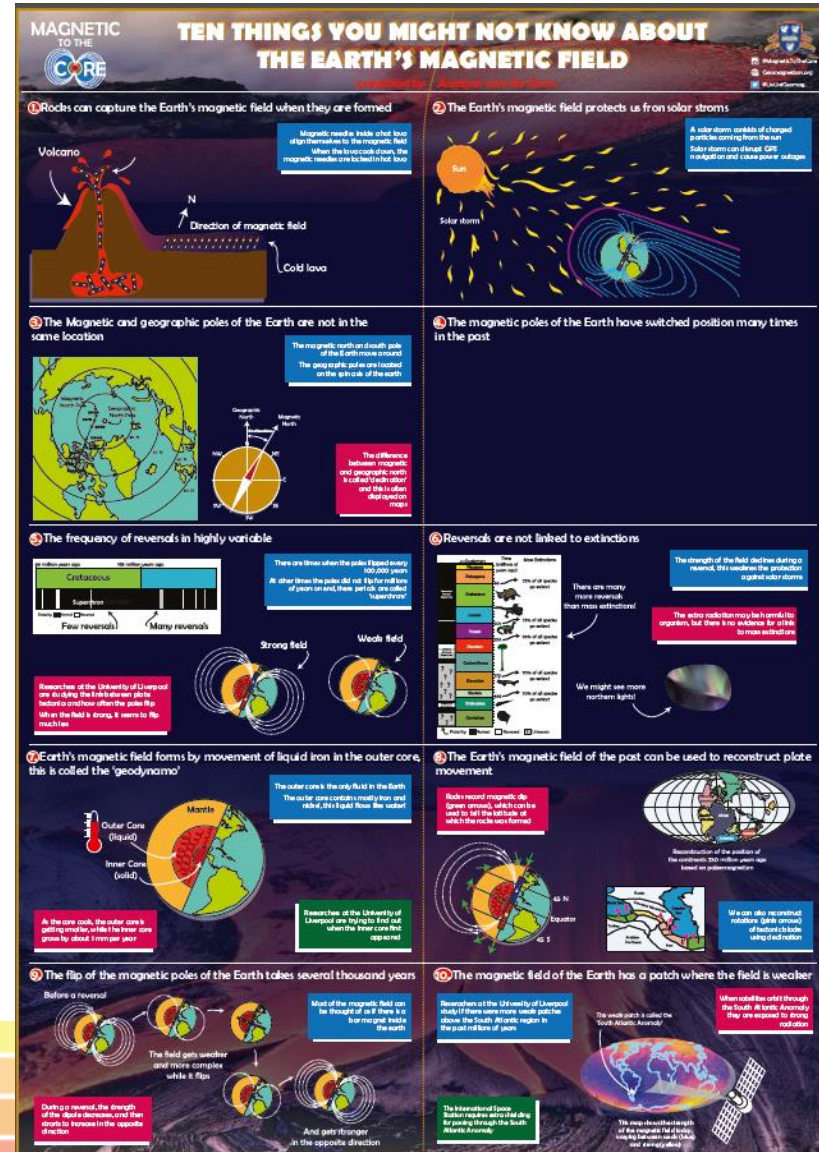
Anniq van der Boon

Share



Source

341 Reads · 10 Recommendations



Team planning

What's on this day								How busy will it be?	Number of shifts pp		Time per shift in hours		Total time	
10am- 4.30pm	Exhibition open to the public and registered schools groups													
7pm - 10pm	Soiree - lead researchers							<i>Busy (soiree)</i>						
Annique	<i>no morning</i>		11.00-12.00			13.45-15.45			18.30-22.30	3	2	4	1	7
Greig	9.30-11.30								18.30-22.30	2	2	4		6
Andy		9.45-11.45							18.30-22.30	2	2	4		6
Courtney	<i>no morning</i>					13.45-15.45				1	2			2
Richard	<i>no morning</i>		11.30-13.30		13.30-14.30		15.30-17.00			3	2	1.5	1	4.5
Louise	<i>no morning</i>					13.45-15.45				1	2			2
Domenico				11.45-13.45			15.45-17.00			2	2	1.25		3.25
Yael	<i>no morning</i>		11.00-12.00	12.00-13.45						2	2		1	3
Dan	<i>no morning</i>			11.45-13.45					18.30-22.30	2	2	4		6
Ben	9.30-11.30						15.30-17.00			2	2	1.5		3.5
Simon		9.45-11.45			13.30-14.30		15.30-17.00			3	2	1.5	1	4.5
Elliot	9.30-11.30				13.30-15.30					2	2	2		4
Anouk	<i>no morning</i>				13.30-15.30				18.30-22.30	2	2	4		6
Georgia	<i>no morning</i>				13.30-15.30					1	2			2
Jenny			11.30-13.30				15.45-17.00			2	2	1.25		3.25
Janine	<i>no morning</i>		11.30-13.30						18.30-22.30	2	2	4		6
Joe	<i>no morning</i>						15.30-17.00			1	2			2
first day														
Questionnaire person														
Opening hours	10.00-11.00	11.00-12.00	12.00-13.00	13.00-14.00	14.00-15.00	15.00-16.00	16.00-16.30		19.00-20.00	20.00-21.00	21.00-22.00			
Total number	5	5-6 p	6	6	6	6	6		6	6	6			
** = Meet the researchers		11.00-12.00		13.30-14.30										
		Annique		Richard										
		Yael		Simon										

Team planning

FRIDAY	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	MONDAY	TUESDAY	Accommodation	Travelcard zone	Travelcard days
28-Jun	29-Jun	30-Jun	01-Jul	02-Jul	03-Jul	04-Jul	05-Jul	06-Jul	07-Jul	08-Jul	09-Jul			
			press morning	lates evening	soiree	soiree								
To London in afternoon												yes	1 to 1	11
To London in afternoon												yes	?	11
To London in afternoon												no	?	7
To London in afternoon												yes	1 to 1	11
To London in afternoon												yes	1 to 3	11
												no	?	2
To London in afternoon												no, plus can host	?	11
To London in afternoon												yes	1 to 3	11
To London in afternoon										back Monday morn		yes	1 to 3	11
passenger with Elliot												yes	1 to 3	11
? until mid afternoon												yes	1 to 3	7
												yes	1 to 3	5
								Arrives 8.15 Euston only morning				yes	?	2
drives to London												yes	1 to 3	8
					arrives in evening				to Canada			yes	1 to 1	3
	Arrives 19.15 Euston									train in morning		yes	1 to 1	7
?										Train Lon-LPL in evening		family	?	7
				arrives in evening					to Canada			yes	1 to 1	4
												no	1 to 6	6
												no	no	0
12	11	12	15	15	17	18	17	17	14	8	8			

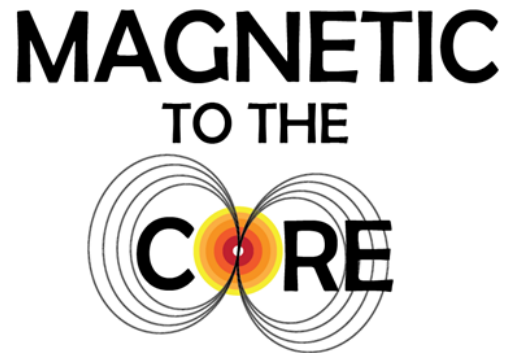
Team

- Give people responsibilities
(Twitter, Instagram, different hands-on activities)
- Train your team (do training day)
- **Trust your team!**
- Make everyone feel valued, different strengths

Team training

Audience engagement & communication training

20th of May 2019



Enjoy it!

