



# BRIGHT SPARKS OCTOBER HOLIDAY CLUB

## @ Winchester Science Centre

<b>Firework &amp; Fairground Science</b>	Investigate the science behind fireworks and fairground rides, by getting stuck into practical investigations! Take a look at the periodic table and examine the elements used in fireworks. Consider why we see a rocket explode before we hear it go bang. Discover centripetal forces and how it helps us stay on an upside down rollercoaster ride. Explore the forces and mechanics behind designing a fairground ride.				
	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
<b>Dates</b>	22nd October	23rd October	24th October	25th October	26th October
<b>Theme</b>	<b>The Elements</b>	<b>Spinning Science</b>	<b>Firework Science</b>	<b>Rocking Rollercoaster</b>	<b>Marvellous Mechanics</b>
8.00-9.00 am (optional)	BREAKFAST CLUB	BREAKFAST CLUB	BREAKFAST CLUB	BREAKFAST CLUB	BREAKFAST CLUB
9.00 - 9.15 am	WELCOME & WARM-UP	WELCOME & WARM-UP	WELCOME & WARM-UP	WELCOME & WARM-UP	WELCOME & WARM-UP
9.15 - 9.30 am	ACTIVITY INTRODUCTION	ACTIVITY INTRODUCTION	ACTIVITY INTRODUCTION	ACTIVITY INTRODUCTION	ACTIVITY INTRODUCTION
9.30 - 10.20 am	Session 1	Session 1	Session 1	Session 1	Session 1
10.20 - 10.40 am	BREAK TIME				
10.40 - 11.30 am	Session 2	Session 2	Session 2	Session 2	Session 2
11.30 - 12.20 pm	Session 3	Session 3	Session 3	Session 3	Session 3
12.20 - 1.20 pm	LUNCH TIME				
1.20 - 2.10 pm	Session 4	Session 4	Session 4	Session 4	Session 4
2.10 - 3.00 pm	Session 5	Session 5	Session 5	Session 5	Session 5
3.00 - 3.50 pm	Session 6	Session 6	Session 6	Session 6	Session
3.50-4.00 pm	DAILY CAMP RE-CAP & WRAP UP CAMP				
4.00 pm	HOME TIME	HOME TIME	HOME TIME	HOME TIME	HOME TIME
4.00-6.00 pm (optional)	AFTERNOON CLUB	AFTERNOON CLUB	AFTERNOON CLUB	AFTERNOON CLUB	AFTERNOON CLUB



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<b>Weekday</b>	<b>Monday 22nd October 2018</b>	
<b>Theme</b>	<b>The Elements</b>	
<b>Brief</b>	Calcium, Strontium, Sodium, Copper, Lithium, Barium and Iron are just some of the elements used to make fireworks so bright and colourful. But what do we use them for everyday? Investigate these elements and uncover their alchemistic properties!	
<b>9.00am</b>	<b>WELCOME &amp; INTRODUCTION</b>	
<b>Session 1</b>	<b>Investigating Calcium</b> - Why do acids react with our teeth?	<b>Investigating Strontium</b> - What glows in the dark?
<b>10.20 - 10.40 am</b>	<b>BREAK TIME</b>	
<b>Session 2</b>	<b>Explore the centre</b>	
<b>Session 3</b>	<b>Investigating Copper</b> - Who discovered electrolysis?	<b>Investigating Lithium</b> - How does Lithium power batteries?
<b>12.20 - 1.20 pm</b>	<b>LUNCH TIME</b>	
<b>Session 4</b>	<b>Investigating Barium</b> - How is barium useful for x-rays?	<b>Investigating Sodium</b> - Can we dissolve salt?
<b>Session 5</b>	<b>Explore the centre</b>	
<b>Session 6</b>	<b>Investigating Iron</b> - What makes something magnetic?	
<b>3.50-4.00 pm</b>	<b>DAILY RE-CAP, WRAP UP CAMP &amp; COLLECT BAGS</b>	
<b>4.00pm</b>	<b>HOME TIME</b>	



# OCTOBER HOLIDAY CLUB @ Winchester Science Centre

**Tuesday 23rd October 2018**

<b>Weekday</b>	<b>Tuesday 23rd October 2018</b>	
<b>Theme</b>	<b>Spinning Science</b>	
<b>Brief</b>	From Ferris Wheels to gyroscopes, centripetal forces keep us spinning around without toppling over. See how spinning is useful in a science laboratory and investigate how you make the best spinning top.	
<b>9.00am</b>	<b>WELCOME &amp; INTRODUCTION</b>	
<b>Session 1</b>	<b>Centripetal Force</b> - Explore how this force is used in the lab, at amusement parks, in gyroscopes and even washing machines!	<b>Make</b> - Whirling hex nut balloon.
<b>10.20 - 10.40 am</b>	<b>BREAK TIME</b>	
<b>Session 2</b>	<b>Explore the centre</b>	
<b>Session 3</b>	<b>Spirograph pictures</b> - Understand how Spirographs work to create intricate circle patterns.	<b>Firework Salad Spinning Art</b> - Creating firework art using centripetal force.
<b>12.20 - 1.20 pm</b>	<b>LUNCH TIME</b>	
<b>Session 4</b>	<b>Play</b> - Space spinner game	<b>Make</b> - Hama bead spinning tops
<b>Session 5</b>	<b>Explore the centre</b>	
<b>Session 6</b>	<b>Candyfloss</b> - looking at the best part of a fairground! Lets look at the science behind how candyfloss is made.	<b>Bazaar Balancing</b> - Hula hoops and plate spinning
<b>3.50-4.00 pm</b>	<b>DAILY RE-CAP, WRAP UP CAMP &amp; COLLECT BAGS</b>	
<b>4.00pm</b>	<b>HOME TIME</b>	



# OCTOBER HOLIDAY CLUB @ Winchester Science Centre

Weekday	<b>Wednesday 24th October 2018</b>	
Theme	<b>Firework Science</b>	
Brief	Explore the compounds used in fireworks and discover what colour flames they make. With safe practical investigations, fun craft activities and some great WOW moments!	
9.00am	<b>WELCOME &amp; INTRODUCTION</b>	
Session 1	<b>Underwater Fireworks</b> - Investigate densities and the interaction of oil and water to make a firework scene.	<b>Make</b> - use science to make some firework artwork
10.20 - 10.40 am	<b>BREAK TIME</b>	
Session 2	<b>Explore the centre</b>	
Session 3	<b>Design</b> - a firework straw rocket	<b>Build</b> - a confetti cannon
12.20 - 1.20 pm	<b>LUNCH TIME</b>	
Session 4	<b>Firework Sounds</b> - use snaps, crackles, scream and bangs, to explore the speed of sound.	<b>Make</b> - a loud noise with a paper banger
Session 5	<b>Explore the centre</b>	
Session 6	<b>Watch</b> - a live science fire show and witness some magical coloured flames	<b>Make popcorn</b> - the iconic fairground treat
3.50-4.00 pm	<b>DAILY RE-CAP, WRAP UP CAMP &amp; COLLECT BAGS</b>	
4.00pm	<b>HOME TIME</b>	



# OCTOBER HOLIDAY CLUB @ Winchester Science Centre

Weekday	Thursday 25th October 2018	
Theme	Rocking Rollercoasters	
Brief	Why don't you fall off a rollercoaster ride? How can water stay in an upside down bucket? Let's encounter the forces involved on bumper cars, Ferris wheels, drop towers and other amusement rides.	
9.00am	WELCOME & INTRODUCTION	
Session 1	<b>Going Upside Down</b> - Centrifugal cup spinners – will the water spill out of the bucket?	<b>Loop the Loop</b> - Understanding the basics behind our favourite rollercoasters, and how they work.
10.20 - 10.40 am	BREAK TIME	
Session 2	Explore the centre	
Session 3	<b>Helter Skelter</b> - How slow can you go? Build a spiral tower and see what forces can affect the marble run	<b>Zip line racers</b> - How can you power your invention down the zip line
12.20 - 1.20 pm	LUNCH TIME	
Session 4	<b>Pirate Ship</b> - explore swinging back and forth to create a Pendulum Painting	<b>Drop Tower</b> - How high can you build? What can affect the stability of the rollercoaster ride?
Session 5	Explore the centre	
Session 6	<b>Bumper Cars</b> - Test the cars on the tracks and see what materials might prevent them crashing.	<b>Design &amp; Make</b> - Fairground themed moving picture
3.50-4.00 pm	DAILY RE-CAP, WRAP UP CAMP & COLLECT BAGS	
4.00pm	HOME TIME	



# OCTOBER HOLIDAY CLUB @ Winchester Science Centre

Weekday	Friday 26th October 2018	
Theme	Marvellous Mechanics	
Brief	From the tallest free falling ride to the widest carousel - Engineers and mechanics solve practical problems by applying mathematical and scientific knowledge. Create crazy contraptions and engineer a moving fairground ride!	
9.00am	WELCOME & INTRODUCTION	
Session 1	<b>Line tracking robots</b> - explore a robot which follows a certain path controlled by a feed back mechanism.	<b>Make</b> - design and construct your own pom pom launcher
10.20 - 10.40 am	BREAK TIME	
Session 2	Explore the centre	
Session 3	<b>Gear Technology</b> - use gears, cogs and pulleys to build a carousel	<b>Make</b> - a friction climber
12.20 - 1.20 pm	LUNCH TIME	
Session 4	<b>Make</b> - build your Speed demon Spool racer	<b>Balancing</b> - investigate levers and pulleys but don't tip the scales
Session 5	Explore the centre	
Session 6	<b>Make</b> - design and construct your own Cardboard Automata fairground ride	
3.50-4.00 pm	DAILY RE-CAP, WRAP UP CAMP & COLLECT BAGS	
4.00pm	HOME TIME	