

# SUMMER LIVE VIDEO CAMPS 2020



- Book daily morning and afternoon sessions online
- All online video classes are age-adjusted for 4-7 and 8-12 year old children
- Our live online video classes are project-based, interactive and fun
- All our teachers are Scientists & Science Communicators and are highly experienced working with young children

#### 6-10 July - Big Bang to Al

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Mon, 6 July	10.00-11.00	4-7 years	Lost in space: Explore the universe, galaxies&black holes. What was the Big Bang?
Mon, 6 July	11.30-12.30	8-12 years	Lost in space: Explore the universe, galaxies&black holes. What was the Big Bang?
Mon, 6 July	2.00-3.00	4-7 years	Scientist Fritz Zwicky and the life cycles of stars
Mon, 6 July	3.30-4.30	8-12 years	Scientist Fritz Zwicky and the life cycles of stars
Tue, 7 July	10.00-11.00	4-7 years	How the Earth was formed and rocks and how they change
Tue, 7 July	11.30-12.30	8-12 years	How the Earth was formed and rocks and how they change
Tue, 7 July	2.00-3.00	4-7 years	Microorganisms or how it all started on Earth. Wonderful cells
Tue, 7 July	3.30-4.30	8-12 years	Microorganisms or how it all started on Earth. Wonderful cells
Wed, 8 July	10.00-11.00	4-7 years	Looking for fossils and Dinosaur Hunters. Mary Anning's excavations
Wed, 8 July	11.30-12.30	8-12 years	Looking for fossils and Dinosaur Hunters. Mary Anning's excavations
Wed, 8 July	2.00-3.00	4-7 years	Homo sapiens: Our evolutionary path. How we came up with simple machines
Wed, 8 July	3.30-4.30	8-12 years	Homo sapiens: Our evolutionary path. How we came up with simple machines
Thu, 9 July	10.00-11.00	4-7 years	The scientific discoveries of ancient Egyptians and the first great Navigators
Thu, 9 July	11.30-12.30	8-12 years	The scientific discoveries of ancient Egyptians and the first great Navigators
Thu, 9 July	2.00-3.00	4-7 years	Leonardo da Vinci and his inventions. How electricity changed the word
Thu, 9 July	3.30-4.30	8-12 years	Leonardo da Vinci and his inventions. How electricity changed the word
Fri, 10 Jul	10.00-11.00	4-7 years	Reaching the stars: rockets and space missions. Space probes: Rosetta&Voyagers
Fri, 10 Jul	11.30-12.30	8-12 years	Reaching the stars: rockets and space missions. Space probes: Rosetta&Voyagers
Fri, 10 Jul	2.00-3.00	4-7 years	What is Artificial Intelligence?
Fri, 10 Jul	3.30-4.30	8-12 years	What is Artificial Intelligence?

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# 13-17 July - Faster, Higher, Deeper, Further

Mon, 13 Jul	10.00-11.00	4-7 years	Simple Machines: Wheel and Axle. Steam engines and motors
Mon, 13 Jul	11.30-12.30	8-12 years	Simple Machines: Wheel and Axle. Steam engines and motors
Mon, 13 Jul	2.00-3.00	4-7 years	The evolution of cars and driving faster that the speed of sound (supersonic cars)
Mon, 13 Jul	3.30-4.30	8-12 years	The evolution of cars and driving faster that the speed of sound (supersonic cars)
Tue, 14 Jul	10.00-11.00	4-7 years	Brothers Montgolfier and first hot air balloons. Flying animals: insects, birds, bats
Tue, 14 Jul	11.30-12.30	8-12 years	Brothers Montgolfier and first hot air balloons. Flying animals: insects, birds, bats
Tue, 14 Jul	2.00-3.00	4-7 years	From Leonardo Da Vinci to the Wright Brothers. Roaring into the Jet Age
Tue, 14 Jul	3.30-4.30	8-12 years	From Leonardo Da Vinci to the Wright Brothers. Roaring into the Jet Age
Wed, 15 Jul	10.00-11.00	4-7 years	Konstantin Tsiolkovsky and the first rockets. Defeating gravity: Blast off
Wed, 15 Jul	11.30-12.30	8-12 years	Konstantin Tsiolkovsky and the first rockets. Defeating gravity: Blast off
Wed, 15 Jul	2.00-3.00	4-7 years	Engineering Design Challenges in building Rockets. How to become an astronaut
Wed, 15 Jul	3.30-4.30	8-12 years	Engineering Design Challenges in building Rockets. How to become an astronaut
Thu, 16 Jul	10.00-11.00	4-7 years	The science behind sink versus float (buoyancy). History of navigation
Thu, 16 Jul	11.30-12.30	8-12 years	The science behind sink versus float (buoyancy). History of navigation
Thu, 16 Jul	2.00-3.00	4-7 years	Deep sea diving in submarine. Echolocation or how submarines 'see' underwater
Thu, 16 Jul	3.30-4.30	8-12 years	Deep sea diving in submarine. Echolocation or how submarines 'see' underwater
Fri, 17 Jul	10.00-11.00	4-7 years	Faster, further into the future! Who wants to be an engineer?
Fri, 17 Jul	11.30-12.30	8-12 years	Faster, further into the future! Who wants to be an engineer?
Fri, 17 Jul	2.00-3.00	4-7 years	Space missions, time travel and wormholes
Fri, 17 Jul	3.30-4.30	8-12 years	Space missions, time travel and wormholes

# 20-24 July - Newtonian Physics

Mon, 20 Jul	10.00-11.00	4-7 years	What are Forces? Isaac Newton and the Newtonian Laws. What is Energy?
Mon, 20 Jul	11.30-12.30	8-12 years	What are Forces? Isaac Newton and the Newtonian Laws. What is Energy?
Mon, 20 Jul	2.00-3.00	4-7 years	States of Matter. Newtonian vs. non-Newtonian liquids
Mon, 20 Jul	3.30-4.30	8-12 years	States of Matter. Newtonian vs. non-Newtonian liquids
Tue, 21 Jul	10.00-11.00	4-7 years	What is gravity? Galileo Galilei's experiments
Tue, 21 Jul	11.30-12.30	8-12 years	What is gravity? Galileo Galilei's experiments
Tue, 21 Jul	2.00-3.00	4-7 years	Leonardo da Vinci and the science of Flight. Rocket Science&how far can we go
Tue, 21 Jul	3.30-4.30	8-12 years	Leonardo da Vinci and the science of Flight. Rocket Science&how far can we go
Wed, 22 Jul	10.00-11.00	4-7 years	Electromagnetism and Light. Electricity and Circuits
Wed, 22 Jul	11.30-12.30	8-12 years	Electromagnetism and Light. Electricity and Circuits
Wed, 22 Jul	2.00-3.00	4-7 years	The weak and strong forces and what is radioactivity?

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Wed, 22 Jul	3.30-4.30	8-12 years	The weak and strong forces and what is radioactivity?
Thu, 23 Jul	10.00-11.00	4-7 years	The physics of sound. What are waves?
Thu, 23 Jul	11.30-12.30	8-12 years	The physics of sound. What are waves?
Thu, 23 Jul	2.00-3.00	4-7 years	Beyond Newton: Introduction in Particle Physics
Thu, 23 Jul	3.30-4.30	8-12 years	Beyond Newton: Introduction in Particle Physics
Fri, 24 Jul	10.00-11.00	4-7 years	Classical physics vs. quantum mechanics
Fri, 24 Jul	11.30-12.30	8-12 years	Classical physics vs. quantum mechanics
Fri, 24 Jul	2.00-3.00	4-7 years	Einstein, Stephen Hawking and the mystery of Black Holes
Fri, 24 Jul	3.30-4.30	8-12 years	Einstein, Stephen Hawking and the mystery of Black Holes

# 27-31 July - Medical Science - 'Who wants to be a Doctor?'

Mon, 27 Jul	10.00-11.00	4-7 years	What's inside us? Anatomy and the Systems in the human body
Mon, 27 Jul	11.30-12.30	8-12 years	What's inside us? Anatomy and the Systems in the human body
Mon, 27 Jul	2.00-3.00	4-7 years	Skeletons and muscles
Mon, 27 Jul	3.30-4.30	8-12 years	Skeletons and muscles
Tue, 28 Jul	10.00-11.00	4-7 years	How doctors can see inside us; from optical fibres to MRI and X-Ray machines
Tue, 28 Jul	11.30-12.30	8-12 years	How doctors can see inside us; from optical fibres to MRI and X-Ray machines
Tue, 28 Jul	2.00-3.00	4-7 years	Neurosurgeons! The brain and the central nervous system
Tue, 28 Jul	3.30-4.30	8-12 years	Neurosurgeons! The brain and the central nervous system
Wed, 29 Jul	10.00-11.00	4-7 years	The importance of our digestive system and how it works
Wed, 29 Jul	11.30-12.30	8-12 years	The importance of our digestive system and how it works
Wed, 29 Jul	2.00-3.00	4-7 years	What is nutrition and how does it affect our health?
Wed, 29 Jul	3.30-4.30	8-12 years	What is nutrition and how does it affect our health?
Thu, 30 Jul	10.00-11.00	4-7 years	What are pathogens and what is our immune system?
Thu, 30 Jul	11.30-12.30	8-12 years	What are pathogens and what is our immune system?
Thu, 30 Jul	2.00-3.00	4-7 years	John Snow and the discovery of 'Germ Theory'.
Thu, 30 Jul	3.30-4.30	8-12 years	John Snow and the discovery of 'Germ Theory'.
Fri, 31 Jul	10.00-11.00	4-7 years	How modern medicine keeps us safe – from vaccines to antibiotics
Fri, 31 Jul	11.30-12.30	8-12 years	How modern medicine keeps us safe – from vaccines to antibiotics
Fri, 31 Jul	2.00-3.00	4-7 years	Can doctors eliminate human disease?
Fri, 31 Jul	3.30-4.30	8-12 years	Can doctors eliminate human disease?



# 3-7 Aug - Astrogeology

Mon, 3 Aug	10.00-11.00	4-7 years	What is beneath our feet? James Hutton and the science of geology
Mon, 3 Aug	11.30-12.30	8-12 years	What is beneath our feet? James Hutton and the science of geology
Mon, 3 Aug	2.00-3.00	4-7 years	How do scientists know what is inside the Earth? Inge Lehman: geologist
Mon, 3 Aug	3.30-4.30	8-12 years	How do scientists know what is inside the Earth? Inge Lehman: geologist
Tue, 4 Aug	10.00-11.00	4-7 years	The rock cycle and an exploration of crystals
Tue, 4 Aug	11.30-12.30	8-12 years	The rock cycle and an exploration of crystals
Tue, 4 Aug	2.00-3.00	4-7 years	The science behind earthquakes: plate tectonics and the Richter scale
Tue, 4 Aug	3.30-4.30	8-12 years	The science behind earthquakes: plate tectonics and the Richter scale
Wed, 5 Aug	10.00-11.00	4-7 years	What is astrogeology? Our closest celestial neighbour, the Moon
Wed, 5 Aug	11.30-12.30	8-12 years	What is astrogeology? Our closest celestial neighbour, the Moon
Wed, 5 Aug	2.00-3.00	4-7 years	Our Solar family of rocky planets: Mercury, Venus, and Mars
Wed, 5 Aug	3.30-4.30	8-12 years	Our Solar family of rocky planets: Mercury, Venus, and Mars
Thu, 6 Aug	10.00-11.00	4-7 years	Moons, Comets, Meteorites and how to build a solar system
Thu, 6 Aug	11.30-12.30	8-12 years	Moons, Comets, Meteorites and how to build a solar system
Thu, 6 Aug	2.00-3.00	4-7 years	The hidden world beneath the Antarctic Ice Sheet. Exoplanets
Thu, 6 Aug	3.30-4.30	8-12 years	The hidden world beneath the Antarctic Ice Sheet. Exoplanets
Fri, 7 Aug	10.00-11.00	4-7 years	How planets and moons change: extreme weather on other planets
Fri, 7 Aug	11.30-12.30	8-12 years	How planets and moons change: extreme weather on other planets
Fri, 7 Aug	2.00-3.00	4-7 years	What is the shape of the ocean floor? Rachel Carson&what she did for our planet
Fri, 7 Aug	3.30-4.30	8-12 years	What is the shape of the ocean floor? Rachel Carson&what she did for our planet

# **10-14 Aug - Scientific Discoveries through history**

Mon, 10 Aug	10.00-11.00	4-7 years	Franklin, Crick and Watson and the secret of DNA
Mon, 10 Aug	11.30-12.30	8-12 years	Franklin, Crick and Watson and the secret of DNA
Mon, 10 Aug	2.00-3.00	4-7 years	Amazing physicists: from Isaac Newton to Stephen Hawking/black holes
Mon, 10 Aug	3.30-4.30	8-12 years	Amazing physicists: from Isaac Newton to Stephen Hawking/black holes
Tue, 11 Aug	10.00-11.00	4-7 years	Nicola Tesla and the giant thunder collector. Katherine Johnson&rocket science
Tue, 11 Aug	11.30-12.30	8-12 years	Nicola Tesla and the giant thunder collector. Katherine Johnson&rocket science
Tue, 11 Aug	2.00-3.00	4-7 years	Mary Anning's amazing fossils
Tue, 11 Aug	3.30-4.30	8-12 years	Mary Anning's amazing fossils
Wed, 12 Aug	10.00-11.00	4-7 years	Robert Hooke and miraculous microorganisms
Wed, 12 Aug	11.30-12.30	8-12 years	Robert Hooke and miraculous microorganisms
Wed, 12 Aug	2.00-3.00	4-7 years	How Edward Jenner, Alexander Fleming and Louis Pasteur saved the world

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8-12 years

4-7 years

8-12 years

4-7 years

8-12 years

4-7 years

8-12 years

4-7 years

8-12 years

How Edward Jenner, Alexander Fleming and Louis Pasteur saved the world
Charles Darwin and the survival of the fittest
Charles Darwin and the survival of the fittest
Rachel Carson and how to take care of our planet
Rachel Carson and how to take care of our planet
Kingdom Brunel and his big engineering dreams
Kingdom Brunel and his big engineering dreams
Galileo Galilei, Nicolaus Copernicus, and the search for truth
Galileo Galilei, Nicolaus Copernicus, and the search for truth

# 17-21 Aug - Atoms, Molecules, Bacteria/microorganisms

3.30-4.30

10.00-11.00

11.30-12.30

2.00-3.00

3.30-4.30

10.00-11.00

11.30-12.30

2.00-3.00

3.30-4.30

Wed, 12 Aug

Thu, 13 Aug

Thu, 13 Aug

Thu, 13 Aug

Thu, 13 Aug

Fri, 14 Aug

Fri, 14 Aug

Fri, 14 Aug

Fri, 14 Aug

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Mon, 17 Aug	10.00-11.00	4-7 years	The origins of matter. What are atoms made from?
Mon, 17 Aug	11.30-12.30	8-12 years	The origins of matter. What are atoms made from?
Mon, 17 Aug	2.00-3.00	4-7 years	The elements and the periodic table with Dmitri Mendeleev
Mon, 17 Aug	3.30-4.30	8-12 years	The elements and the periodic table with Dmitri Mendeleev
Tue, 18 Aug	10.00-11.00	4-7 years	How stars form and how they change matter. What are supernovae?
Tue, 18 Aug	11.30-12.30	8-12 years	How stars form and how they change matter. What are supernovae?
Tue, 18 Aug	2.00-3.00	4-7 years	What is a molecule? Polymers and chemical reactions
Tue, 18 Aug	3.30-4.30	8-12 years	What is a molecule? Polymers and chemical reactions
Wed, 19 Aug	10.00-11.00	4-7 years	Acids and bases – the power of hydrogen
Wed, 19 Aug	11.30-12.30	8-12 years	Acids and bases – the power of hydrogen
Wed, 19 Aug	2.00-3.00	4-7 years	Adventures with carbon
Wed, 19 Aug	3.30-4.30	8-12 years	Adventures with carbon
Thu, 20 Aug	10.00-11.00	4-7 years	The magic of water
Thu, 20 Aug	11.30-12.30	8-12 years	The magic of water
Thu, 20 Aug	2.00-3.00	4-7 years	Abiogenesis – or how life began
Thu, 20 Aug	3.30-4.30	8-12 years	Abiogenesis – or how life began
Fri, 21 Aug	10.00-11.00	4-7 years	Cell biology and single-celled organisms
Fri, 21 Aug	11.30-12.30	8-12 years	Cell biology and single-celled organisms
Fri, 21 Aug	2.00-3.00	4-7 years	Bacteria, archaea, fungi, and extremophiles
Fri, 21 Aug	3.30-4.30	8-12 years	Bacteria, archaea, fungi, and extremophiles



# 24-28 Aug - Marine Biology

Mon, 24 Aug	10.00-11.00	4-7 years	Who wants to be a marine biologist? Intro to the oceans and the oceanic zones
Mon, 24 Aug	11.30-12.30	8-12 years	Who wants to be a marine biologist? Intro to the oceans and the oceanic zones
Mon, 24 Aug	2.00-3.00	4-7 years	Why is the sea salty and the origins of life in the oceans
Mon, 24 Aug	3.30-4.30	8-12 years	Why is the sea salty and the origins of life in the oceans
Tue, 25 Aug	10.00-11.00	4-7 years	The deep sea and bioluminescence
Tue, 25 Aug	11.30-12.30	8-12 years	The deep sea and bioluminescence
Tue, 25 Aug	2.00-3.00	4-7 years	Mysterious octopuses
Tue, 25 Aug	3.30-4.30	8-12 years	Mysterious octopuses
Wed, 26 Aug	10.00-11.00	4-7 years	Frozen oceans and life over and under the ice
Wed, 26 Aug	11.30-12.30	8-12 years	Frozen oceans and life over and under the ice
Wed, 26 Aug	2.00-3.00	4-7 years	The cetaceans: whales and dolphins
Wed, 26 Aug	3.30-4.30	8-12 years	The cetaceans: whales and dolphins
Thu, 27 Aug	10.00-11.00	4-7 years	The amazing coasts: The Ocean's end
Thu, 27 Aug	11.30-12.30	8-12 years	The amazing coasts: The Ocean's end
Thu, 27 Aug	2.00-3.00	4-7 years	Coastal ecosystems – marine iguanas, sea turtles and the importance of algae
Thu, 27 Aug	3.30-4.30	8-12 years	Coastal ecosystems – marine iguanas, sea turtles and the importance of algae
Fri, 28 Aug	10.00-11.00	4-7 years	Staying afloat! Buoyancy in nature
Fri, 28 Aug	11.30-12.30	8-12 years	Staying afloat! Buoyancy in nature
Fri, 28 Aug	2.00-3.00	4-7 years	Ocean conservation
Fri, 28 Aug	3.30-4.30	8-12 years	Ocean conservation
1-3 Sep – Chemistry		·	
Tue, 1 Sep	10.00-11.00	4-7 years	The science of chemistry and amazing chemicals
Tue, 1 Sep	11.30-12.30	8-12 years	The science of chemistry and amazing chemicals
Tue, 1 Sep	2.00-3.00	4-7 years	The discovery of elements and the periodic table
Tue, 1 Sep	3.30-4.30	8-12 years	The discovery of elements and the periodic table
Wed, 2 Sep	10.00-11.00	4-7 years	The states of matter from the coldest condensates to the hottest plasmas
Wed, 2 Sep	11.30-12.30	8-12 years	The states of matter from the coldest condensates to the hottest plasmas
Wed, 2 Sep	2.00-3.00	4-7 years	The properties of matter and the strangest chemicals
Wed, 2 Sep	3.30-4.30	8-12 years	The properties of matter and the strangest chemicals
Thu, 3 Sep	10.00-11.00	4-7 years	Amazing Carbon and wonderful Water
Thu, 3 Sep	11.30-12.30	8-12 years	Amazing Carbon and wonderful Water
Thu, 3 Sep	2.00-3.00	4-7 years	The life of Marie Curie and her incredible discoveries
Thu, 3 Sep	3.30-4.30	8-12 years	The life of Marie Curie and her incredible discoveries

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