



<i>Topic</i>	<i>Key question to ask our MCA students</i>	<i>Reading material</i>
<b>Year 7</b>		
Working scientifically	What is a control variable in an experiment and why is it important to have them?	<a href="https://theday.co.uk/stories/the-scientist-just-keep-working-on-it">https://theday.co.uk/stories/the-scientist-just-keep-working-on-it</a>
Matter	How are particles arranged in solids, liquids and gases?	<a href="https://theday.co.uk/stories/protein-made-from-thin-air-to-feed-the-world">https://theday.co.uk/stories/protein-made-from-thin-air-to-feed-the-world</a>
Atoms	What are the parts of an atom?	<a href="https://theday.co.uk/video-articles/2015-01-21">https://theday.co.uk/video-articles/2015-01-21</a>
Mixtures	How can we separate a mixture of salt, sand and water?	<a href="https://theday.co.uk/stories/parched-california-seeks-salvation-in-science">https://theday.co.uk/stories/parched-california-seeks-salvation-in-science</a>
Atoms, Elements and Compounds	Everything is made up of atoms so how do we get different chemicals and substances?	<a href="https://theday.co.uk/stories/the-great-hydrogen-revolution-gathers-pace">https://theday.co.uk/stories/the-great-hydrogen-revolution-gathers-pace</a>
Periodic table	How many different types of atoms are there in the world?	<a href="https://theday.co.uk/stories/the-great-hydrogen-revolution-gathers-pace">https://theday.co.uk/stories/the-great-hydrogen-revolution-gathers-pace</a>
Organ systems	Why do we need to eat and breathe?	<a href="https://theday.co.uk/stories/human-organs-grown-inside-sheep-and-pigs">https://theday.co.uk/stories/human-organs-grown-inside-sheep-and-pigs</a>
Cells and organisation	Why are cells so important?	<a href="https://theday.co.uk/stories/paralysed-man-walks-again-after-cell-transplant">https://theday.co.uk/stories/paralysed-man-walks-again-after-cell-transplant</a>
Biological reactions	Why do plants need to photosynthesise and respire?	<a href="https://theday.co.uk/stories/net-zero-britain-must-plant-billions-of-trees">https://theday.co.uk/stories/net-zero-britain-must-plant-billions-of-trees</a>
Reproduction	Why do we look different from our parents?	<a href="https://www.softschools.com/language_arts/reading_comprehension/science/490/human_reproduction/">https://www.softschools.com/language_arts/reading_comprehension/science/490/human_reproduction/</a>
Forces and motion	How could you find the average speed of a car driving down Rochdale road?	<a href="https://theday.co.uk/stories/the-greatest-sprinter-of-all-time-bows-out">https://theday.co.uk/stories/the-greatest-sprinter-of-all-time-bows-out</a>
Density and pressure	Why do climbers experience physical problems when climbing at high altitude?	<a href="https://theday.co.uk/stories/death-fame-and-the-lure-of-the-mountains">https://theday.co.uk/stories/death-fame-and-the-lure-of-the-mountains</a>
Energy	How does burning fossil fuels effect our planet?	<a href="https://theday.co.uk/briefings/air-pollution">https://theday.co.uk/briefings/air-pollution</a>
<b>Year 8</b>		
Solids, liquids and gases	What happens when an ice cube melts?	<a href="https://theday.co.uk/stories/giant-ice-cube-to-fight-climate-change-in-mongolia">https://theday.co.uk/stories/giant-ice-cube-to-fight-climate-change-in-mongolia</a>
Periodic table	What is the periodic table and why is it important?	<a href="https://theday.co.uk/stories/trade-secrets-golden-age">https://theday.co.uk/stories/trade-secrets-golden-age</a>
Metals and uses	What metal is best to make jewellery and why?	<a href="https://theday.co.uk/stories/billionaires-unveil-plan-to-mine-platinum-in-space">https://theday.co.uk/stories/billionaires-unveil-plan-to-mine-platinum-in-space</a>
Types of chemical reactions	What might you see when a chemical reaction is happening?	<a href="https://theday.co.uk/stories/terror-as-deadly-wildfire-burns-greek-resort">https://theday.co.uk/stories/terror-as-deadly-wildfire-burns-greek-resort</a>
Earth and atmosphere	What gases are in the Earth's atmosphere and how are they changing over time?	<a href="https://theday.co.uk/stories/what-we-wear-saving-the-planet-each-time-we-dress">https://theday.co.uk/stories/what-we-wear-saving-the-planet-each-time-we-dress</a>
Acids and Alkalis	Why do we brush out teeth and what does this have to do with acids and alkalis?	<a href="https://theday.co.uk/stories/an-ecosystem-wiped-out-in-a-single-generation">https://theday.co.uk/stories/an-ecosystem-wiped-out-in-a-single-generation</a>
Movement	Why do we have a skeleton?	<a href="https://theday.co.uk/stories/brains-bionics-and-the-future-of-bodies">https://theday.co.uk/stories/brains-bionics-and-the-future-of-bodies</a>
Variation	Why is DNA essential for life?	<a href="https://theday.co.uk/stories/the-genetic-accident-behind-all-life-on-earth">https://theday.co.uk/stories/the-genetic-accident-behind-all-life-on-earth</a>
Health and disease	How can we live a healthy life?	<a href="https://theday.co.uk/stories/sugar-named-the-world-s-most-popular-drug">https://theday.co.uk/stories/sugar-named-the-world-s-most-popular-drug</a>
Ecosystems	Is Manchester a good example of an ecosystems with lots of biodiversity?	<a href="https://theday.co.uk/stories/mass-bleaching-of-barrier-reef-could-go-global">https://theday.co.uk/stories/mass-bleaching-of-barrier-reef-could-go-global</a>
Electricity	What is needed for a current to flow around a circuit?	<a href="https://theday.co.uk/stories/tesla-unveils-electric-car-for-the-people">https://theday.co.uk/stories/tesla-unveils-electric-car-for-the-people</a>
Waves and sound	How do we hear sounds?	<a href="https://theday.co.uk/stories/scientists-unlock-music-room-inside-brain">https://theday.co.uk/stories/scientists-unlock-music-room-inside-brain</a>
Light	Can you describe how light travels?	<a href="https://theday.co.uk/stories/the-camera-that-captures-your-entire-life">https://theday.co.uk/stories/the-camera-that-captures-your-entire-life</a>
Magnetism	What is the shape of the magnetic field around a bar magnet?	<a href="https://theday.co.uk/stories/earth-s-magnetic-poles-could-be-about-to-flip">https://theday.co.uk/stories/earth-s-magnetic-poles-could-be-about-to-flip</a>
Earth in space	Name the planets in our solar system in order from closest to the sun to furthest away from the Sun.	<a href="https://theday.co.uk/stories/eureka-liquid-water-on-mars-confirms-nasa">https://theday.co.uk/stories/eureka-liquid-water-on-mars-confirms-nasa</a>
<b>Year 9</b>		
The Martian	How can literacy help to explain scientific concepts?	<a href="https://www.tyrone.k12.pa.us/site/handlers/filedownload.ashx?moduleinstanceid=2789&amp;dataid=3206&amp;FileName=The%20Martian.pdf">https://www.tyrone.k12.pa.us/site/handlers/filedownload.ashx?moduleinstanceid=2789&amp;dataid=3206&amp;FileName=The%20Martian.pdf</a>
Key concepts in biology	Why do we need enzymes in our bodies?	<a href="https://theday.co.uk/briefings/british-inventions">https://theday.co.uk/briefings/british-inventions</a>
Cells and control	How does water move in and out of all the cells in our body?	<a href="https://theday.co.uk/stories/paralysed-man-walks-again-after-cell-transplant">https://theday.co.uk/stories/paralysed-man-walks-again-after-cell-transplant</a>
States of matter	How does the arrangement and the energy of particles change when water turns into water vapour?	<a href="https://theday.co.uk/stories/sudden-ice-melt-in-greenland-shocks-scientists">https://theday.co.uk/stories/sudden-ice-melt-in-greenland-shocks-scientists</a>
Separation techniques	Can you describe a technique that you could use to produce potable water from river water?	<a href="https://theday.co.uk/stories/giant-water-reserve-found-beneath-african-desert">https://theday.co.uk/stories/giant-water-reserve-found-beneath-african-desert</a>
Atomic structure and the periodic table	Can you draw and label the structure of an atom including the 3 subatomic particles?	<a href="https://theday.co.uk/stories/arctic-mega-mine-in-rush-for-white-gold">https://theday.co.uk/stories/arctic-mega-mine-in-rush-for-white-gold</a>
Forces and motion	How could you measure the change in speed of a toy car moving along a track?	<a href="https://theday.co.uk/stories/daredevil-freefall-breaks-the-sound-barrier">https://theday.co.uk/stories/daredevil-freefall-breaks-the-sound-barrier</a>
Energy	Why is no machine 100% efficient?	<a href="https://theday.co.uk/stories/solar-powered-plane-soars-across-the-atlantic">https://theday.co.uk/stories/solar-powered-plane-soars-across-the-atlantic</a>

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