













## Planning Science Learning Across the Strands





### - Exploring Connections




#### Some Links Related to Tonight's Webinar

Name	Description	QR Codes and Website Addresses
Junior Cycle for Teachers (Science page)	Junior Cycle for Teachers (JCT) is a dedicated continuing professional development (CPD) support service of the Department of Education and Skills. Its aim is to support schools in their implementation of the new Framework for Junior Cycle (2015) through the provision of appropriate high quality CPD for school leaders and teachers, and the provision of effective teaching and learning resources.	<a href="https://www.jct.ie/science/science">https://www.jct.ie/science/science</a> 
Junior Cycle for Teachers (Science Resources for the Classroom)	Here you will find the classroom resources mentioned in tonight's webinar, i.e. The Big Bang and The Kepler Data Activity as well as many other resources.	<a href="https://www.jct.ie/science/resources">https://www.jct.ie/science/resources</a> 
ALMA Observatory	The ALMA Observatory in Chile is part of the Atacama Large Millimeter/submillimeter Array (ALMA) between Europe, North America and Japan. Scientists worldwide have used ALMA to make countless scientific discoveries in the Universe.	<a href="https://www.almaobservatory.org/en/home/">https://www.almaobservatory.org/en/home/</a> 

<p>Armagh Observatory and Planetarium</p>	<p>The Armagh Observatory has an informative blog relating to all things space travel, as well as some planetary data sheets free to download.</p>	<p><a href="http://www.armaghplanetarium.com/blog/">http://www.armaghplanetarium.com/blog/</a></p> 
<p>Astronomy Education at the University of Nebraska-Lincoln</p>	<p>This website has numerous resources for the classroom, e.g. videos, interactive simulator-based online laboratories for introductory astronomy and dynamic think-pair-share questions to engage students.</p>	<p><a href="https://astro.unl.edu">https://astro.unl.edu</a></p> 
<p>Astronomy Picture of the day</p>	<p>NASA's Astronomy Picture of the Day has been running for over 25 years. Every day a new picture of the Universe is shared along with a brief explanation written by a professional astronomer.</p>	<p><a href="https://apod.nasa.gov/apod/astropix.html">https://apod.nasa.gov/apod/astropix.html</a></p> 
<p>Big Bang (AR) app for Apple</p>	<p>This app from CERN takes you on an epic interactive journey through the birth and evolution of the universe - in mixed reality. Go back in time 13.8 billion years and discover how space, time and the visible universe came to be.</p>	 

<p>Blackrock Castle Observatory</p>	<p>Through innovative workshops and partnership, BCO bring science education alive for students of all ages and are a crucial provider of ongoing science education for teachers.</p>	<p><a href="https://www.bco.ie/education/">https://www.bco.ie/education/</a></p> 
<p>European Space Education Resource Office (ESERO) Ireland</p>	<p>ESERO Ireland promotes space as a context to inspire and engage young people in STEM subjects (science, technology, engineering and mathematics). They provide a comprehensive range of resources and supports to help integrate space as a theme in classrooms.</p>	<p><a href="https://esero.ie/">https://esero.ie/</a></p> 
<p>Google expeditions (for Android/Google devices)</p>	<p>You can access a range of apps that use Virtual and Augmented Reality (VR/AR) to allow students to see models of celestial bodies and processes. Useful expeditions related to space exploration include:</p> <ul style="list-style-type: none"> <li>Exploring the Solar System (AR)</li> <li>International Space Station (VR)</li> <li>Human Space Flight (VR)</li> <li>Space Science (AR)</li> <li>Trip to the Moon 1966 (VR)</li> <li>Planets and their Moons (AR)</li> <li>Comets (AR)</li> </ul>	<p><a href="https://edu.google.com/products/vr-ar/expeditions/?modal_active=none">https://edu.google.com/products/vr-ar/expeditions/?modal_active=none</a></p> 
<p>Hubble Space Telescope</p>	<p>Access a range of detailed images and educational materials from one of humankind's most famous telescopes.</p>	<p><a href="https://spacetelescope.org/">https://spacetelescope.org/</a></p> 

<p>I-LOFAR</p>	<p>Located in Birr Castle, Co. Offaly, I-LOFAR is the Irish addition to an international network of state of the art radio telescopes known as the <b>low-frequency array</b> (LOFAR). These are used to observe the Universe in unprecedented detail at low radio frequencies.</p>	<p><a href="http://lofar.ie/i-lofar/">http://lofar.ie/i-lofar/</a> <a href="http://lofar.ie/forteachers/">http://lofar.ie/forteachers/</a></p> 
<p>NASA for Students</p>	<p>A full range of NASA resources for students.</p>	<p><a href="https://www.nasa.gov/audience/forstudents/index.html">https://www.nasa.gov/audience/forstudents/index.html</a></p> 
<p>NASA Space Place</p>	<p>A student-friendly site for exploring space.</p>	<p><a href="https://spaceplace.nasa.gov/menu/space/">https://spaceplace.nasa.gov/menu/space/</a></p> 
<p>Science News for Students (space)</p>	<p>Science News for Students is an award-winning online publication dedicated to providing age-appropriate, topical science news to learners, parents and educators. This link will provide many space-related publications.</p>	<p><a href="https://www.sciencenewsforstudents.org/topic/space-0">https://www.sciencenewsforstudents.org/topic/space-0</a></p> 

Space Scoop	Space Scoop is a website for kids which brings the latest astronomy news from across the Universe each week. The articles cover all the most exciting cosmic events in a language that's easy to understand. All news and pictures come directly from 13 of the world's space agencies.	<a href="http://www.spacescoop.org/en/">http://www.spacescoop.org/en/</a> 
Space Week	Space Week is Ireland's newest national STEM week, in parallel with World Space Week, which takes place each year during the first week in October.	<a href="http://www.spaceweek.ie/">http://www.spaceweek.ie/</a> 
Space.com	Space.com has been covering discoveries and missions in space for over 20 years.	<a href="https://www.space.com/">https://www.space.com/</a> 
World Space Week	World Space Week is the largest international space event, with over 5,000 events taking place across 80 countries.	<a href="http://www.worldspaceweek.org/">http://www.worldspaceweek.org/</a> 