



Issue No 4

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NEWSLETTER

This week saw three of the brightest planets (Our Lady's College, Croí na Gaillimhe and the School of Physics) align in the National University of Ireland, Galway.

With fantastic facilities, a tradition of excellence and the very best students and academic talent we were thrilled to have the opportunity to visit the School of Physics.

Professor Andy Shearer and PhD student Adriana Cardinot and their team presented us with the most exciting visually stunning thorough, and timely coverage of the

heavens above in an easy-to-understand style that was perfect for our Young Hearts Astronomers!

Their expert science reporting, was filled with vivid colour photography, that we all found extremely informative.

We experienced a 3D visualization of our known universe. It wasn't until we really left Earth, and got above the atmosphere and had seen the horizon bend back on itself, that we could understand our planet as a limited condition!



YOUNG HEARTS PROJECT



NUI Galway
OÉ Gaillimh



"Remember to look up at the stars and not down at your feet" - Stephen Hawking



We were shown a visual of how the Universe began in a Big Bang about 14 billion years ago. At that time, the entire Universe was inside a bubble that was thousands of times smaller than a pinhead. It was hotter and denser than anything we could imagine!

Adriana then explained how the images on a television screen are composed of tiny dots called pixels (short for picture element). We were amazed to learn that the computer controls each pixel individually. Most monitors have hundreds of thousands, or often millions, of pixels that are lit or dimmed to create an image. We then were given the opportunity to create our own pixels.



(Helena, Natalie, Leny and Kate working hard on their pixels)



(Christina and Breda creating their colourful pixels).



(Aisling and Josephine discussing their pixels)

Professor Andy Shearer then explained that from the dawn of humankind to a mere 400 years ago, all that we knew about our universe came through observations with the naked eye until Galileo turned his telescope toward the heavens in 1610.

The world was in for an awakening. Edwin Hubble, for whom the Hubble Telescope is named, used the largest telescope of

his day in the 1920s at the Mt. Wilson Observatory near Pasadena, Calif., to discover galaxies beyond our own!



We learned that Hubble, the observatory, is the first major optical telescope to be placed in space!



Scientists have used Hubble to observe the most distant stars and galaxies as well as the planets in our solar system. With the decommissioning of the space shuttle, however, the telescope that changed the world is now looking ahead to its inevitable end-of-life.

The hubble will be replaced by the James Webb Space Telescope. Webb will be the premier observatory of the next decade, serving thousands of astronomers worldwide. The telescope

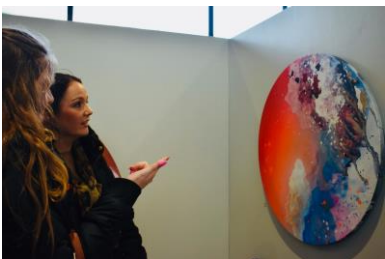
will be launched on an Ariane 5 rocket from French Guiana in 2021.



We ended our tour by visiting The O'Donoghue Centre, NUI Galway to meet our Young Hearts Artist Finbar McHugh. Finbar has created a series of abstract paintings exploring his inner world of thoughts, emotions and feelings, brought to life in stunning splashes of energetic colour



'These paintings are moments, snapshots from his travels. Each one a different adventure through space and time.' Finbar McHugh



(Claire discussing her thoughts with Jackie)



Special thanks to the School of Physics for our warm welcome and taking such great care of us!



We are visiting the Astronomy of Birr Castle to visit one of the greatest attractions the Great Telescope!