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# A National Children's Science Centre

**Article for *Ireland's Education Yearbook 2024* by Áine Hyland**



Ireland is the only country in the OECD and one of the few countries in the developed world without a National Children's Science Centre. Even countries with less developed economies such as Brazil (https://museudoamanha.org.br/en;), Kazakhstan (https://smithgill.com/work/kazakhstan_pavilion_science_museum/) and Mongolia (https://www.fddb.org/domes/inner-mongolia-science-museum/) have recognised the role such centres play in encouraging and supporting interest in and enthusiasm for science among young people. Happily, this gap in Ireland's infrastructure is about to be addressed with the development of a national interactive science centre for children in the North Wing of the National Concert Hall building on Earlsfort Terrace, Dublin.

For twenty-five years, discussions have been ongoing between the government and a charitable organisation, the National Children's Science Centre (NCSC), to set up such a centre. In 2013 an agreement was reached between the Office of Public Works (OPW) and the NCSC to locate the centre on Earlsfort Terrace. The unused north wing will be restored and renovated by OPW and the NCSC will equip, manage and run the centre. After many delays, planning permission was finally granted in March 2024 and it is planned to open the centre by 2028.

**Cutting-Edge Facilities in a Historical Location**

Totalling almost 10,000 sq. m., the development will include a state-of-the-art Planetarium at the west end of the site and the restoration and conversion of the Real Tennis Court on its northern boundary into 'Exhibit 15', an outreach program of exhibits, which will also travel throughout Ireland. Within the NCSC there will be exhibit rooms, a large lecture theatre, a specially designed science laboratory as well as activity rooms and spaces for CPD courses for teachers. It is particularly appropriate that the building on Earlsfort Terrace, that was constructed in the second half of the nineteenth century to house *The International Exhibition for the Arts and Manufactures,* is now being restored as a centre where STEAM (Science, Technology, Engineering, Mathematics and the Arts) will be celebrated.

**Key Role in Ireland's STEM Education**

The proposed new NCSC will play a crucial role in helping to achieve the Irish government's *Vision for STEM Education* i.e. that "*Ireland will be internationally recognised as providing the highest quality STEM education experience for learners that nurtures curiosity, inquiry, problem-solving, creativity, ethical behaviour, confidence, and persistence, along with the excitement of collaborative innovation."*

In its *Implementation Plan to 2026*, the Minister for Children, Roderic O'Gorman, stated that "*The STEM Education Policy statement acknowledges that there is a need to enhance STEM learning for learners of all backgrounds, abilities and gender, from early learning and care through to post-primary. The focus on STEM in early learning and care settings highlights how important that first engagement with education is for young children."*

The plan to set up the centre has been widely welcomed in the world of education and in 2023, the Joint Oireachtas Committee on Education recommended that "*The National Children's Science Centre, in gestation for many years, should be opened as a matter of urgent national priority"* stating *"that it will send out a message that Ireland is very serious about science education for primary and post primary students."*

**Exhibits and Educational Programmes**

The centre will include interactive science-based exhibits and activities for children and young people. It will provide issues-based immersive and interactive exhibitions and events for adults ("the curious of all ages"), and will also focus on visitor participation through debates, discussions, blogs etc., in-person and online. The Planetarium will provide opportunities for visitors to explore the solar system and the stars and to become virtual space travellers. Events and programmes will be provided for students, teachers and the general public – in person and online. Talks and programmes, including programmes for pre-school children, will be provided as well as programmes for primary and second-level classrooms – based on the school curriculum and on the Dept. of Education's STEM Implementation Plan.

Given the limited science education available in pre-service training for pre-school and

primary school teachers, the NCSC will be an invaluable source of teacher training and education, at both pre-service and in-service level, including summer courses. "Residencies" and "internships" will also be available for third-level students and special arrangements will be made to engage Transition Year students. To achieve its vision and mission, the NCSC will combine elements of Third and Fourth Generation Science Museums (Pedretti and Iannini, 2020). As well as presenting scientific ideas, topics and concepts through interactive, immersive and hands-on exhibits and activities (the aim of Third Generation museums), the NCSC will also include characteristics of Fourth Generation museums i.e. it will include issues-based exhibitions and events, focusing on visitor participation through talk, interaction and the potential for decision-making about significant science-related issues.

**Commitment to Equality and Inclusivity**

The NCSC will have a policy of equality, diversity and inclusion in terms of access and engagement. It will have a particular focus on ensuring access for people from disadvantaged backgrounds and people of different abilities and disabilities. This is in keeping with the Department of Education's *Recommendations on STEM and the Arts in Education*(March 2023) which states that *"the provision of equitable access for all learners to experiences of STEM and the Arts within formal and informal settings is necessary to promote the development of critical and creative thinking skills."* As well as ensuring that all parts of the Centre are wheelchair accessible, every effort will be made to ensure that there are no barriers to access or engagement by those with visual or hearing impairment or those with neurodiverse needs. The exhibits and events will be planned and delivered in accordance with the principles of Universal Design for Learning - a set of principles that give all individuals equal opportunities to learn, including students with disabilities.

As the NCSC will be the national science centre for Ireland, it will include exhibits and events based on scientific discoveries by Irish scientists. It is planned to highlight female scientists such as Ellen Hutchins (1785 – 1815); Mary Ward (1827-1869); Kathleen Lonsdale (1903 – 1971) and Jocelyn Bell-Burnell (1943- present), as well as male scientists and discoverers such as William Rowan Hamilton (1805-1865); George Boole (1815 - 1864); John Tyndall (1820-1893) and Ernest Walton (1903-1995).

The exhibits will be informed by the UN Sustainable Development Goals 2030 and will be aligned with the major transformations that science tells us are urgently needed to build a fairer and more sustainable world. These transformations will help to address challenges such as the digital revolution, human capacity and demography, consumption and production, decarbonization, food, biosphere and water and smart cities. A focus on these themes will not preclude the inclusion of exhibits and discussions on other themes and topics, now and in the future.

The success of the NCSC and its continuing ability to attract visitors will depend on its flexibility and creativity and its innovative approach to embracing and discussing new

and emerging issues. By constantly evolving to reflect advancements in science and technology, the Centre will remain a relevant and engaging resource for children, educators and the wider public.



**References:**

E. Pedretti and A.M.N. Iannini, *Controversy in Science Museums: Re-imagining Exhibition Spaces and Practice* (Routledge, 2020).

THE END