

ACADEMY
OF THE NEAR FUTURE

The CONNECTIVE Detective

Teacher Guide



Comhairle Cathrach
Bhaile Átha Cliath
Dublin City Council



The Connective Detective

What is 'The Connective Detective'?

The Connective Detective is a workshop series from Academy of the Near Future, a smart city education programme designed for young people, in partnership between CONNECT, Research Centre for Future Networks at Trinity College Dublin and Dublin City Council.

In four workshops, students will explore topics around telecommunications and connectivity as well as smart-city elements in a fun and creative way. Furthermore they learn presentation and prototyping skills. Each workshop is 90 mins long and has its own focus while building on the learning from the previous session. The workshops will be delivered between



September 2024 and May 2025. We will deliver Workshop 1 and Workshop 2 between September 2024 and January 2025. Workshop 3 and Workshop 4 will be delivered between January 2025 and May 2025.

Workshop materials will be provided, but access to tablets or laptops will be needed for Workshop 1, Workshop 3 and Workshop 4.

Highlights of workshop one:

- Different ways of communication
- How communication has changed with technology: The evolution of telecommunications

Highlights of workshop two:

- Telecommunications infrastructure
- Explore connectivity: How a home/mobile network and the internet works

Highlights of workshop three:

- Learn about smart cities and smart city technologies
- Building prototypes off your own smart city

- Learn about micro:bits

Highlights of workshop four:

- Integrate prototypes into a smart city
- Shape your presentation skills
- Preparation for exhibition in Trinity College Dublin

End of year exhibition:

After all workshops are delivered, we will invite classes/students to exhibit their creations at Trinity College Dublin. This will give them the opportunity to present their visions and creations to local authority staff and decision makers.



Who is it for?

The workshop series targets 5th and 6th class students in primary schools and will take place in the school's classroom. Only for the end of your exhibition the students will have to travel.

Who is your contact at Academy of the Near Future?

Your contact is Clara Butz, Engagement Programme Lead at Academy of the Near Future. For questions or queries, email clara@smartdocklands.ie.

About the Academy of the Near Future:

Academy of the Near Future is a smart city education programme designed for young people and local authority staff. Find out more under www.nearfuture.ie.

How does it align with the National Primary Curriculum?

'The Connective Detective' will touch on curriculum elements of Social Environmental and Scientific Education, and Arts. The elements covered are as following:

Social Environmental and Scientific Education

Social, Environmental and Scientific Education (SESE) consists of three subjects: Science, Geography, and History. SESE enables children to explore, investigate and develop an understanding of local and wider environments.

Science

- Interpret information and offer explanations
- Draw conclusions from suitable aspects of the evidence collected
- Explore a wide range of everyday objects and how they work tools and domestic equipment walls and their construction gates and hinges wheelbarrows
- Explore freely how a range of shapes, objects, and other constructions could be made using a variety of materials
- Explore how some objects might be improved or adapted
- Recognise that people like certain characteristics of objects but not others and investigate the reasons for these preferences in shape, color, texture, structure, material, practicality
- Use knowledge and the result of investigations to identify needs and/or opportunities to improve an object or environments in familiar contexts. Knowledge that plants need water could initiate design of watering device; the results of a litter survey could prompt design of new litter bins
- Understand that while the change may be desirable, it may result in problems too difficult to make, not pleasing to look at
- Develop the ability to draw designs showing different perspectives of proposed objects side, top, front elevations
- Communicate their design plan using sketches, models and other media including information and communication technologies
- Identify problems with, or undesirable effects of, a design during construction; propose and implement alterations as the object is made
- Develop craft-handling skills and techniques

History

- Use words, phrases and conventions associated with the recording of dates and time, such as BC, AD, age, period
- Develop an understanding of change and continuity by exploring similarities and differences between the past and the present and between different periods in the past
- Recognise some factors which may have caused, prevented or delayed changes in the past
- Appreciate that events usually have a number of causes and outcomes
- Examine and use critically a wide range of historical evidence photographs, pictures, objects, memories of older people, buildings, stories and songs, written sources, films, other media, information and communication technologies
- Make simple deductions from evidence

Arts

The Arts Education curriculum consists of three subjects: Music, Drama and Visual arts. The curriculum enables children to explore and express ideas, feelings and experiences through music, drama and the visual arts.

Visual Arts

- draw imaginative themes using inventive pattern and detail
- look at and talk about his/her work, the work of other children and the work of artists
- explore and experiment with the properties and characteristics of materials in making structures
- make imaginative structures

Drama

- discover how the use of space and objects helps in building the context and in signifying the drama theme
- become adept at implementing the 'playing rules' that maintain focus in dramatic action
- use the sharing of insights arising out of dramatic action to develop the ability to draw conclusions and to hypothesize about life and people

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- develop, out of role, the ability to co-operate and to communicate with others in helping to shape the drama
- develop, in role, the ability to co-operate and communicate with others in helping to shape the drama

