



Oide

Tacú leis an bhFoghlaim
Ghairmiúil i measc Ceannairí
Scoile agus Múinteoirí

Supporting the Professional
Learning of School Leaders
and Teachers

Phase 5: Engineering Statements 2023/2024



Introductory text for JCSP Statements Supporting The Junior Cycle Engineering

The statements below were developed with input from a number of practicing Engineering teachers in JCSP schools. They are offered **as one possible model** that teachers may use to approach the new Junior Cycle Engineering Specification. They will be adjusted over time based on feedback from teachers in JCSP schools.

The new Engineering Specification may be accessed in full at www.curriculumonline.ie.

In addition, support for teaching of the Junior Cycle Specification may be accessed through the Junior Cycle for Teachers (JCT) Technologies team at www.jct.ie.

It is important to note that the statements below offer a sample approach for the creation of Junior Cycle Engineering statements. They do not cover all of the learning outcomes which are expected to be taught in the new junior cycle course.

August 2023

I can understand the procedures, materials and processes in Engineering

Engineering

Statement Code: ENJC1

Student:

Class:

I can

I have begun ☐☐☐ | I am working on this ☐☐☐ | I can ☐☐☐

This has been demonstrated by my ability to:

1. State the classroom rules and daily routines e.g. tidying my workstation at the end of class ☐☐☐
2. Use hand tools and machines correctly and safely ☐☐☐
3. Look after my project and store it in the correct place ☐☐☐
4. Identify common engineering materials such as metals and plastics ☐☐☐
5. Explain where common engineering materials such as metals and plastics are used in everyday life ☐☐☐
6. Select a material to manufacture a product based on its properties ☐☐☐
7. Secure a workpiece properly and use the drill correctly ☐☐☐
8. Select a suitable tool for cutting a material and use it correctly ☐☐☐
9. Identify various engineering joining methods such as nuts and bolts, rivets, solder and adhesives ☐☐☐
10. Explain the reason why a joining method was chosen for an every day object e.g. joining wires, meccano sets ☐☐☐
11. Identify various electronic components and symbols ☐☐☐
12. Select appropriate finishes for materials such as filing, polishing or painting ☐☐☐

Reflecting on my learning...

One thing I did well...

One thing I did to improve...

I really enjoyed...

because...

I can research, design and manufacture in Engineering

Engineering

Statement Code: ENJC2

Student:

Class:

I can

I have begun ☐☐☐ | I am working on this ☐☐☐ | I can ☐☐☐

This has been demonstrated by my ability to:

- | | |
|---|--|
| 1. Carry out both primary and secondary research | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2. Compare old and new technologies, such as a scooter and an e-scooter, and explain the differences between them | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3. Investigate if the design and manufacture of a household item is environmentally friendly | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4. Read and use a working drawing | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5. Transfer measurements from a working drawing onto a piece of material | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6. Make a part using a working drawing | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7. Suggest an improvement to a given item e.g. game controller, mouse, headsets, gaming chair | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8. Identify various mechanisms and use in a project | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9. Bend a material accurately to a given angle | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10. Solder an electronic circuit using at least 3 electronic components | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 11. Use coding software to program a mechatronic system | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 12. Complete a part or project to a high quality finish by filing, polishing or painting | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Reflecting on my learning...

One thing I did well...

One thing I did to improve...

I really enjoyed...

because...

I can communicate my understanding of Engineering concepts

Engineering

Statement Code: ENJC3

Student:

Class:

I can

I have begun ☐☐☐ | I am working on this ☐☐☐ | I can ☐☐☐

This has been demonstrated by my ability to:

- | | |
|--|--|
| 1. Create a 2D sketch to show my first design ideas | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2. Create a 3D sketch to show the steps towards my final design | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3. Produce a working drawing of a part(s) of a project using drawing equipment or CAD software | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4. Analyse an object and list the materials and steps involved in making it | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5. Make a model using various materials such as card, paper or foam | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6. Use engineering terms when annotating/labelling drawings and sketches | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7. Present information to others using any appropriate media | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8. Develop my communication skills using digital technologies | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9. Work as part of a group or team to develop social and team-building skills | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10. Reflect on the quality of my work | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 11. Examine my completed project(s) and list possible improvements | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 12. Explain the choice of materials and the steps taken to make my project | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Reflecting on my learning...

One thing I did well...

One thing I did to improve...

I really enjoyed...

because...