NCCA
An Chomhairle Náisiúnta Curaclaim agus Measúnachta
National Council for Curriculum and Assessment

Junior Cycle Coding short course

Guidelines for the Classroom-Based Assessment

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Contents

Introduction

This document, Junior Cycle Coding short course: Guidelines for the Classroom-Based Assessment, provides:

- General information on Classroom-Based Assessments
- Detail of the nature and scope of the Classroom-Based Assessment described in the specification for the Junior Cycle Coding short course.
- The Features of Quality used to describe the level of achievement in the Classroom-Based Assessment
- Guidelines for schools, teachers and students on completing the Classroom-Based Assessment.

These guidelines should be used in conjunction with the specification for the Junior Cycle Coding short course and the Focus on Learning toolkit for Junior Cycle. A detailed outline of assessment in Junior Cycle can be found in the Framework for Junior Cycle 2015, which can be accessed at https://assets.gov.ie/static/documents/framework-for-junior-cycle-2015.pdf

In Junior Cycle short courses there will be a range of assessment approaches to complement learning. These will include ongoing assessments, including routine teacher-designed tasks and tests; ongoing assessment for students undertaking priority learning units at Level 1 and 2; and one classroom-based assessment as set out in these guidelines.

Classroom-Based Assessments: General Information

Classroom-Based Assessments are best described as the occasions when the teacher assesses the students using the specific task(s) set out in the NCCA short course specification or in the school developed short course specification. The tasks are described and the Features of Quality, which support teacher judgement, are set out in these guidelines.

Although the assessment is similar to the ongoing assessment that occurs every day in class, in the case of the Classroom-Based Assessment the teacher's judgement is used in the school's reporting to parents and students and may also be recorded for Subject Learning and Assessment Review meetings. Students prepare for the Classroom-Based Assessment over a suggested period of time in second or third year. The results of other projects, homework or tests undertaken by the students in the course of their normal classwork do not add up to the award of a descriptor for the Classroom-Based Assessment.

Deciding on the level of achievement in Classroom-Based Assessments

There are four level descriptors of achievement in each Classroom-Based Assessment: *Exceptional*, *Above expectations*, *in line with expectations*, and *Yet to meet expectations*.

Teachers use the Features of Quality, set out in these guidelines (pages 7 and 11), to decide the level of achievement in each Classroom-Based Assessment. The Features of Quality are the criteria that will be used to assess the student work as best fitting one of the Descriptors:

When using the Features of Quality to assess the level of student achievement in a Classroom-Based Assessment, teachers use 'on-balance' judgement. The teacher should read the Features of Quality (starting with Yet to meet expectation) until they reach a descriptor that best describes the work being assessed. While it should be noted that none of the descriptors imply faultless achievement, evidence of work for the award of Exceptional should closely match the criteria for that level within the Features of Quality. Where it is not clearly evident which quality descriptor should apply, teachers must come to judgment, based on the evidence from the student's work, to select the descriptor that best matches the student's work overall. This 'best fit' approach allows teachers to select the descriptor that 'on balance' describes the work being assessed.

Teachers should not assume that the results of a group of students being assessed will follow any particular distribution pattern, as the students work is being judged only against the Features of Quality rather than other students' performances.

Time for Classroom-Based Assessments

Classroom-Based Assessment is included within the time allocated for short courses, which is approximately 100 hours. This Classroom-Based Assessment is the culmination of the work undertaken in the three strands of the coding short course. The Classroom-Based Assessment should begin after work in the three strands has been completed. The Classroom-Based Assessment is called Putting the Pieces Together and allows students to choose to complete one of two options: either a Software Project or a Coding Portfolio:

It is envisaged that completion of either the Software Project or the Coding Portfolio options would take place over approximately 6 - 8 hours. Whilst the timing of Classroom-Based Assessment in short courses may vary from school to school, Classroom-Based assessments for reporting purposes in the JCPA cannot be conducted in first year.

School autonomy in preparing for the Classroom-Based Assessment

These guidelines set out a range of options for the Classroom-Based Assessment so that it can suit the particular needs and circumstances of students and the school. A variety of possibilities are presented as to how the final software project can be conducted, the nature of the project itself and the role the teacher plays in facilitating the students' group project. Within the parameters set by the guidelines, the range of themes and topics for the assessment can be determined independently by the school, teachers and students.

Schools have the flexibility to adapt any NCCA short course to suit their particular needs and school context. If adapting the course, schools may also need to adapt the Classroom-Based Assessment, so that it reflects the learning their students undertook. Schools may also develop their own short course(s) and related Classroom-Based Assessment. Guidelines for schools who wish to develop their own short course(s) are available at https://ncca.ie/en/junior-cycle/subjects-and-short-courses/develop-your-own-short-course/

How the school supports the completion of the assessments

The school supports the completion of the assessments by:

- Ensuring that the NCCA Specification and Guidelines for the Classroom-Based Assessment are provided to teachers
- Supporting teachers in recording the level Descriptors awarded to each student
- Retaining records and pieces of work, with parental/guardian consent and student assent as appropriate, for the purposes of Subject Learning and Assessment Review
- Applying the guidelines for Subject Learning and Assessment Review
- Applying inclusive assessment practices and ensuring accessibility of assessment for all students
- Reporting the outcomes of Classroom-Based Assessments to students and their parents/guardians as part of the school's reporting procedures and through the Junior Cycle Profile of Achievement (JCPA).

In gathering evidence for assessment purposes within the Junior Cycle Short Courses, it is important that teachers use approaches which are sustainable and proportionate. As assessment is about empowering teachers to improve outcomes for students, it is important to ensure that too much paperwork and overly complex processes do not get in the way of learning and teaching. Any paperwork needs to support learning rather than becoming an end in itself.

While assessment judgements should be based on evidence drawn mainly from day-to-day learning and teaching there is no need to collect large folios of evidence to support this. In sharing learning intentions and success criteria or the features of quality for the Classroom-Based Assessment, teachers should highlight the role students can play in identifying quality evidence from their own work to be used for assessment purposes.

An efficient planning process which identifies when and how key aspects of learning will be captured as evidence for assessment is one way to ensure that assessment in short courses remains manageable and sustainable. This approach avoids excessive and inappropriate evidence being collected about student performance and allows for review meeting discussions to be taken forward in a structured way. It also avoids the pressure at the end of the course to search for and identify evidence to support judgements about overall performance.

To facilitate providing feedback to students during their engagement with assessment, the process of completing the Classroom-Based Assessment should be viewed as part of teaching and learning, and not solely for assessment purposes. It is envisaged that teachers will guide, support and supervise throughout the process.

Support may include:

- Clarifying the requirements of the chosen Classroom-Based Assessment

- Providing instructions at strategic intervals to facilitate the timely completion of the Classroom- Based Assessment
- Providing supports for students with special educational needs (SEN).

Note that only work which is the student's own can be accepted for assessment in the JCPA.

Classroom-Based Assessment in Coding (short course)

Assessment in coding will be classroom-based and students will have a choice of two approaches:

1. **Putting the Pieces Together – Software Project:** Students develop a final software project of their choice in teams of two or three.
2. **Putting the Pieces Together - Coding Portfolio:** Students create a portfolio collection of examples of their work across the three strands.

The Classroom-Based Assessment the student chooses is the culmination of their work in the three strands of the Coding short course. As such, the Classroom- Based Assessment should begin after the work in the three strands has been completed. It is important to note that work completed in year one of Junior Cycle cannot be included for reporting in the JCPA.

Classroom-Based Assessment: Putting the Pieces Together – Software Project

For this option, students will develop a final software project of their choice. They will research and establish requirements; design, implement and test the software. They will document their work and their code and present the project to their peers for review. They will reflect on feedback and also provide feedback on other students' projects.

Students will work on this project in teams of 2 or 3. Whilst they undertake the Classroom-Based Assessment as part of a team, the student's individual role and contribution to the work will be the focus of the assessment. While expected to work on their own on agreed separate areas of the Classroom-Based Assessment, they will need to maintain the cohesion required as a team in order to complete the work. Work which cannot be authenticated by the teacher cannot be accepted for assessment in the JCPA.

The main learning outcomes to be assessed in this final project are:

Classroom-Based Assessment: Software Project
1.6, 1.7, 1.8, 1.9, 2.9, 2.10, 2.11, 2.12, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10

While some of the learning outcomes are identified above, student choice may call for additional or a different set of learning outcomes to be identified.

Guidelines for completion of the Classroom-Based Assessment - Software Project option:

As a group, the students will decide which piece of software they wish to develop within the timeframe available to them. This may be based on earlier research undertaken as part of their work in the Coding short course, or from an issue with which the student has a personal connection. Using their learning experiences from the other strands of the Coding short course, students will establish the requirements and the design, as well as implement and test their software. During these processes, each student will maintain documentation around their own contribution to the group's work and pieces of code. Upon presenting the final piece of software to their class, students will be required to assess the feedback their work has generated.
The five aspects to this option are:

- Initial research and planning
- Design, implementation and testing
- Documentation of work and code
- Presentation of final project
- Assessment of feedback

Preparation:
Schools may decide an appropriate amount of time to allocate to the Classroom-Based Assessment from the 100 hours allocated to the Coding short course, in order to enable students to complete the work on their software, with a suggested timeframe of 6 - 8 hours. Students have a wide range of research options they can use in order to decide on their software project and its design. Where sources or AI are used, they should be referenced. In their use of internet-based sources, students should be encouraged to search effectively, evaluate and synthesise material prior to the creation of their own work, or prior to forming their own opinions. Although this phase of the Classroom-Based Assessment is monitored by the teacher, the preparation is the students' own work, carried out both individually and in active, meaningful collaboration as part of a group.

Creating presenting and reflecting on the software design:
Following agreement by the students on the topic chosen for their group, each group will create a piece of software within the timeframe allowed. Part of this time must also be devoted to work on design, the user experience, implementation and testing. The final phase of the Classroom-Based Assessment involves students presenting their piece of software to their class and then reflecting on the feedback this generates. This is an important part of the process when testing the final piece of software.

Classroom-Based Assessment for the Software Project option: Advice for students

You will identify, research and implement a piece of software as part of a group. This piece of software may be based on, or reflect an aspect of, work that was previously researched or is of interest to you or your group. Your teacher will inform you as to the amount of time that has been

allocated to the Classroom-Based Assessment, which also includes presenting your final design to your class and evaluating their feedback.

The preparation part of this *Classroom-Based Assessment – software project* will be monitored by your teacher. Work which cannot be authenticated by your teacher will not be accepted for assessment purposes.

You will have the freedom to choose the software your group will design and implement bearing in mind the following suggestions:

- The software should be of interest to your whole group.
- You need to complete your piece of software within the timeframe allowed.
- You should ask key questions about the software your group will design to help organise your work and later presentation.
- You will need to maintain documentation around your own contribution to the group's work and
- pieces of code during the process.
- In presenting a proposal to their fellow students, your group should think about how they will communicate it to this audience.
- After your group have presented their piece of software you will all need to individually record and reflect on any feedback received.

You must work on the Classroom-Based Assessment in groups of two or three at most, however, please note that it will be your individual role and contribution to the work that is the focus of assessment for the JCPA.

Deciding on the level of achievement: Classroom-Based Assessment - Software Project

Features of Quality

Key Features of Quality in support of student and teacher judgement for the Classroom-Based Assessment: Putting the Pieces Together are described here. The Features of Quality are the criteria used to assess the student work as best fitting the Descriptors:

Features of Quality: Classroom-Based Assessment - Software Project	
Exceptional describes a piece of work that reflects the Features of Quality for the Classroom-Based Assessment to a very high standard. While not necessarily perfect, the strengths of the work far outstrip its flaws, which are minor. Suggestions for improvement are easily addressable by the student.	• The student demonstrates how they were fully involved in the project as a highly committed member of the team. • The documentation of both the student's learning and their code is comprehensive. • The student demonstrates an excellent awareness of the ethical and/or legal issues they have encountered • The benefits of the project are presented in a very convincing way. • The student has accurately recorded feedback and comprehensively responded to it.
Above expectations describes a piece of work that reflects the Features of Quality for the Classroom- Based Assessment very well. The student shows a clear understanding of how to complete each area of the task. Feedback from the teacher might point to the necessity to address some aspect of the work in need of further attention or polishing, but, on the whole the work is of a high standard.	• The student demonstrates how they were involved in the project as a committed member of the team. • The documentation of both the student's learning and their code is very good. • The student demonstrates a very good awareness of the ethical and/or legal issues they have encountered • The benefits of the project are presented in a convincing way. • The student has correctly recorded feedback and competently responded to it.
In line with expectations describes a piece of work that reflects most of the Features of Quality for the Classroom-Based Assessment well. It shows a good understanding of the task in hand and is free from significant error. Feedback might point to areas needing further attention or correction, but the work is generally competent and accurate.	• The student demonstrates how were involved in the project as a member of the team. • The documentation of both the student's learning and their code is good. • The student demonstrates a good awareness of the ethical and/or legal issues they have encountered • The benefits of the project are presented in an adequate way. • The student has recorded feedback and adequately responded to it.
Yet to meet expectations describes a piece of work that falls	• The student demonstrates limited involvement in the project as a member of the team.

someway short of the demands of the Classroom-Based Assessment and its associated Features of Quality. Perhaps the student has made a good attempt, but the task has not been grasped clearly or is marred by significant lapses. Feedback will draw attention to fundamental errors that need to be addressed.	• The documentation of both the student's learning and their code is limited. • The student demonstrates a limited awareness of the ethical and/or legal issues they have encountered • The benefits of the project are presented in a less than adequate way. • The student has recorded some feedback but their response to it is limited.

Classroom-Based Assessment: Putting the Pieces Together - Coding Portfolio

Students will need to retain the work and examples of coding they have created ahead of beginning this Classroom-Based Assessment. They will then evaluate the work they have completed and choose between 3 – 5 examples that demonstrate how their learning has developed over time. They will reflect on each example; on the learning they took from it and how it helped them improve their ability to problem solve and use computational thinking. Students will work on their portfolio individually during their engagement with the short course in Coding. The portfolio can be digital or physical or a combination of both. Work which cannot be authenticated by the teacher cannot be accepted for assessment in the JCPA.

Classroom-Based Assessment: Coding Portfolio
1.1, 1.4, 1.5, 1.7, 1.9, 2.3, 2.4, 2.8, 2.10, 2.11, 3.1, 3.2, 3.3, 3.4, 3.5, 3.10

Guidelines for completion of the Coding Portfolio Classroom Based Assessment:

Individually, students will curate a collection of their work (which may be a mixture of individual or group-based work) undertaken as part of the Coding short course. The students will evaluate and justify the work they have chosen to include in their portfolio. This work must capture their learning experiences across all three strands of the short course as well as demonstrate how their learning has developed over time.

Drawing on examples of their learning experiences across the three strands, students will focus on:

- thinking carefully about the examples of their work which they choose to include, as well as any supporting documentation they created at the time
- choose the examples that best show the range of learning and skills they have developed through the three strands
- choose work that shows how their learning has developed through the three strands
- the presentation (digital or physical) of the selected work and accompanying reflection

- the inclusion of a short reflection on each selected piece

The four aspects to the project are:

- Deciding on the choice of 3 - 5 pieces of work
- Curating the selected work within a portfolio (digital or physical) for presentation
- Explaining the reason why the work was selected and a brief reflection on what it meant to them
- An overall reflection on the how all of the selected work demonstrates the development of their learning through the three strands

Preparation:
Schools may decide an appropriate amount of time to allocate to the Classroom-Based Assessment from the 100 hours allocated to the Coding short course, in order to enable students to complete the work on their software, with a suggested timeframe of approximately 6 - 8 hours. Students may choose either to present their elected work, the reasons for each choice and the overall reflection piece as a digital or physical portfolio. Where sources or AI are used in the preparation of the portfolio, they should be referenced.

This phase of the Classroom-Based Assessment is monitored by the teacher, however, the preparation is the students' own work. Students may discuss their selection of work with the teacher and other students should they wish.

Presenting and reflecting on the Coding Portfolio:
Whether digital or physical in nature the portfolio must contain between 3 and 5 pieces of selected work that is taken from the three strands and also demonstrates the development of the student's learning and skills over their time on the course. Each piece of selected work must be accompanied by a brief note stating the reason why it was chosen as well as a short reflection on what it meant to the student. A final overall reflection piece commenting on what the selected work shows as regards the student's development must be included.

Classroom-Based Assessment for the Coding Portfolio option: Advice for students

You will choose, in discussion with your teacher and other students, between 3 and 5 pieces of work you have done which best demonstrate the development of your learning and skills over your time on this course.

You will need to present them together in a portfolio where each piece of work will also be accompanied by a short note explaining the reason why they were included; a reflection on what it meant to you at the time and now. You will include an overall reflection piece at the very end of your portfolio that sums up how this works best demonstrates how your learning and skills have developed through the three strands of the course.

The preparation part of this *Classroom-Based Assessment – Coding Portfolio* will be monitored by your teacher. Work which cannot be authenticated by your teacher will not be accepted for assessment purposes.

You will have the freedom to choose which 3 – 5 pieces of work you will include as well as how you will best display them (digitally or physically) bearing in mind the following suggestions:

- The pieces of work should be of interest to you.
- You need to complete your portfolio within the timeframe allowed.
- When thinking about which work you should include, you should ask reflect on how you felt when you were working on it, if it was successful or not and why and if it demonstrates your learning and skills.
- You will need to decide how your work will be presented and whether it will be in, for example, a physical folder, or if your portfolio will be a digital collection of work and reflection pieces.

When you decide which 3 – 5 pieces of work best represent the development of your learning and skills in the Coding short course, you need to include a brief note with each one stating why you chose it for your Coding Portfolio. The following questions may help you:

- What is this piece of work about and how does it demonstrate my engagement with coding?
- Why is the piece of work a good example of my learning and skills?
- Where and how does it demonstrate that I was successful?
- If there is a mistake in the work can I explain how I learned from it for a later piece of work and how I would use this learning going forward?
- How did I feel about this piece of work at the start of working on it, while I was working on it and also when it was completed?

Once you have your 3 – 5 pieces of work selected and have included a brief note with each one, you should sum up all of your learning in a reflection on the complete Coding Portfolio. The questions below can be used to assist you in this endeavour:

- How does my selection of work show that my learning has progressed through the short course?
- What do I think my selection of work shows that I have learned?
- How does my selection of work show how my skills have developed over the entire course?
- If I included any groupwork, how did I feel being part of a group, and what can I tell about my role in the group?

- Reflecting on my selected pieces of work, what aspect of Coding do I think I could learn more about?
- What were the ethical and/or legal issues that I encountered when working on some or all of these pieces?

You must work on the *Classroom-Based Assessment – Coding Portfolio* individually as it is your work that is the focus of assessment for the JCPA. However, you may include work done as a part of a group once you clearly indicate your role in the work and the sections of the work for which you were responsible.

Deciding on the level of achievement: Classroom-Based Assessment - Coding Portfolio

Features of Quality

Key Features of Quality in support of student and teacher judgement for the Classroom-Based Assessment: Putting the Pieces Together are described here. The Features of Quality are the criteria used to assess the student work as best fitting the Descriptors:

Features of Quality: Classroom-Based Assessment – Coding Portfolio	
Exceptional describes a piece of work that reflects the Features of Quality for the Classroom-Based Assessment to a very high standard. While not necessarily perfect, the strengths of the work far outstrip its flaws, which are minor. Suggestions for improvement are easily addressable by the student.	• The student demonstrates sustained ongoing engagement with developing a broad range of coding skills • The student selects a broad range of examples which clearly demonstrate how their learning has evolved over time across the strands • The student demonstrates an excellent awareness of the ethical and/or legal issues they have encountered • The student reflections demonstrate a highly effective awareness of their ability to problem-solve and use computational-thinking through their chosen examples
Above expectations describes a piece of work that reflects the Features of Quality for the Classroom- Based Assessment very well. The student shows a clear understanding of how to complete each area of the task. Feedback from the teacher might point to the necessity to address some aspect of the work in need of further attention or polishing, but, on the whole the work is of a high standard.	• The student demonstrates ongoing engagement with developing a broad range of coding skills • The student selects a broad range of examples across the strands which demonstrate how their learning has evolved over time across the strands • The student demonstrates a very good awareness of the ethical and/or legal issues they have encountered • The student reflections demonstrate an effective awareness of their ability to problem-solve and use computational-thinking through their chosen examples

In line with expectations describes a piece of work that reflects most of the Features of Quality for the Classroom-Based Assessment well. It shows a good understanding of the task in hand and is free from significant error. Feedback might point to areas needing further attention or correction, but the work is generally competent and accurate.	• The student demonstrates engagement with developing a range of coding skills • The student selects a range of examples which demonstrate how their learning has evolved over time across the strands • The student demonstrates a good awareness of the ethical and/or legal issues they have encountered • The student reflections demonstrate an awareness of their ability to problem-solve and use computational-thinking through their chosen examples
Yet to meet expectations describes a piece of work that falls someway short of the demands of the Classroom-Based Assessment and its associated Features of Quality. Perhaps the student has made a good attempt, but the task has not been grasped clearly or is marred by significant lapses. Feedback will draw attention to fundamental errors that need to be addressed.	• The student demonstrates limited engagement with developing coding skills • The student selects a limited range of examples which somewhat demonstrates how their learning has evolved over time across the strands • The student demonstrates a limited awareness of the ethical and/or legal issues they have encountered • The student reflections demonstrate a limited awareness of their ability to problem-solve and use computational-thinking through their chosen examples

Subject Learning and Assessment Review meetings

Shared understanding of standards within junior cycle short courses will arise through professional discussion in Subject Learning and Assessment Review meetings. Teachers gather examples of student work and compare their judgements with other colleagues. Over time, this process will help develop a greater understanding of standards and ensure consistency of judgement about student performance.

Where there is a single teacher of a short course in a school, where feasible, the teacher will participate in a Subject Learning and Assessment Review meeting with another school. The potential of ICT to support such meetings will be explored.

Following the Subject Learning and Assessment Review each individual teacher re-considers the judgement they had made of their student's work, based on the outcomes of the meeting, and where necessary makes the appropriate adjustments to the level of achievement awarded to the work. The Descriptors awarded are used in reporting progress and achievement to parents and students as part of the school's reporting procedures and through the Junior Cycle Profile of Achievement (JCPA).

Further details on managing and participating in Subject Learning and Assessment Review meetings can be accessed at https://www.curriculumonline.ie/Junior-cycle and https://www.ncca.ie/en/junior-cycle/assessment-and-reporting/slar-meetings

Using feedback

Providing effective feedback is a crucial step to support learning. Students will be informed of the Descriptor they have been awarded once the review meeting has taken place and its outcomes have been processed. However, effective feedback goes beyond the naming of the Descriptor awarded. Feedback on the strengths of the student's work, and on areas for improvement can be used to support their future learning. Further information on the use of feedback can be found at https://www.ncca.ie/en/junior-cycle/assessment-and-reporting/focus-on-learning.

Querying a result

Queries in relation to the Descriptors awarded for the Classroom-Based Assessment, where they arise, will be dealt with by the school.

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