Station 1

A dual approach to assessment, involving classroom-based assessment across the three years and a final externally-assessed, state-certified examination can enable the appropriate balance between preparing students for examinations and also facilitating creative thinking, engaged learning and better outcomes for students. This approach will recognise and value the different types of learning that take place in schools and will allow for a more rounded assessment of the educational achievements of each young person.

The assessment practices will build on existing good practice in teaching, learning and assessment. Successful implementation will depend to a very significant degree on the professional skills and abilities of teachers and their collaborative engagement with their subject department colleagues. It will also require effective school leadership to create a supportive professional context for teachers.

Formative assessment, complemented by summative assessment, will be a key feature of the new Junior Cycle.

An overall picture of students' achievement is not possible without the opportunity for ongoing assessment. Schools will therefore need to use a variety of assessment approaches that will allow students to demonstrate their understanding of concepts and skills and their ability to apply them in ways that would not be possible in a written examination. Taken together, the assessment elements undertaken will provide a broad picture of the student's learning journey throughout the three years of junior cycle.

Most of the assessment activities over the three years of junior cycle will be formative in nature. Teachers will use the learning outcomes provided by subject or short course specifications as a starting point for planning a unit of learning and to develop learning intentions and success criteria to be shared and discussed with their students. These learning outcomes will clearly set out what the students should know, understand and be able to do as a result of the learning and teaching activities which they have undertaken during the course of the junior cycle.

As part of their daily practice, teachers will continue to assess students' learning by observing and listening as students carry out tasks and by considering how they respond to questions. Teachers will use the learning intentions and success criteria as the basis for providing feedback to help students plan their next steps in learning. Students will also be encouraged to reflect on how they are progressing in their own learning and provide feedback to their teachers. In developing the capacity for self-management and self-awareness, students will approach their learning more confidently and will be better prepared to meet the challenges of life beyond school.

Adapted from the Framework for Junior Cycle (2015)

Station 2

Over the three years of junior cycle, students will have many opportunities to enjoy and learn science. They will work like a scientist as they formulate scientific questions and hypotheses, initiate research, plan and conduct investigations, process and analyse data and information, evaluate evidence to draw valid conclusions, and report and reflect on the process. Students will collaborate as they prepare scientific communications for a variety of purposes and audiences. They will learn about, and make informed decisions about, their own health and wellbeing, and about science-related issues of social and global importance. Through these activities they will develop their science knowledge, understanding, skills, and values, thereby achieving the learning outcomes across the strands.

The Classroom-Based Assessments, outlined in Table 5 below, link to important aspects of that development and relate to priorities for learning and teaching such as investigating, and communicating in science, which are vital to working like a scientist. Students need to develop a sense of what is appropriate for scientific investigation and research, plan and conduct investigations and research topics, process and analyse data and information, draw evidence-based conclusions, evaluate the process, and prepare scientific communications. The Classroom-Based Assessments offers students the chance to demonstrate their achievements as creators of scientific research reports by selecting a topic or problem to investigate.

Table 5: Classroom-Based Assessments in Science

CBA	Format	Student preparation	Completion of the assessment	SLAR[1] Meeting
Extended experimental investigation (EEI)	Reports which may be presented in a wide range of formats.	Students will, over a three-week period; formulate a scientific hypotheses, plan and conduct an experimental investigation to test their hypotheses, generate and analyse primary data, and reflect on the process, with support/guidance by teacher.	End of second year	One review meeting
Science in society investigation (SSI)	Reports which may be presented in a wide range of formats.	Students will, over a three-week period; research a socio-scientific issue, analyse the information/secondary data collected, and evaluate the claims and opinions studied and draw evidence-based conclusions about the issues involved, with support/guidance by teacher.	End of first term or early term 2 in third year.	One review meeting

The presentation formats for each of the above Classroom-Based Assessments can include the following (this is not an exhaustive list):

- a hand-written/ typed report
- model building
- multimodal presentation
- podcasts
- webpage

Students should receive a copy of the features of quality as early as possible, so that they are aware of what they need to do to generate work of the highest possible standard. It is also acceptable, and in some respects encouraged, that the evidence of learning presented for the Classroom-Based Assessment could be used as part of a student's entry to a local or national science fair.

Adapted from the Junior Cycle Science Specification (2015)

Station 3

All teachers of each subject involved in teaching and assessing the Classroom-Based Assessments in the school will engage in Subject Learning and Assessment Review meetings where they will share and discuss samples of their assessments of student work and build common understanding about the quality of student learning.

Each Subject Learning and Assessment Review meeting will be subject-specific and will focus on the Classroom-Based Assessment undertaken by the particular year group. Each meeting will take approximately two hours. This means that when fully implemented, teachers will be facilitated to participate in a review meeting for each subject they teach in respect of the second-year Classroom-Based Assessment and also for the third year Classroom-Based Assessment. A teacher of two subjects to second year and third year will attend four review meetings amounting to eight hours of professional time.

One teacher of each subject in the school will be allocated two additional hours by school management to facilitate the preparation for and coordination of each Subject Learning and Assessment Review meeting. To foster capacity building in each subject department, this activity will normally be rotated among the relevant teachers.

In Subject Learning and Assessment Review meetings, teachers will share and discuss samples of their assessments of student work and build a common understanding about the quality of student learning.

Where there is a single teacher of a subject in a school, the teacher can be facilitated to participate in a Subject Learning and Assessment Review meeting with another school. In the case of an Irish-medium school, the teacher can be facilitated to participate in a Subject Learning and Assessment Review meeting with another Irish-medium school. The potential of ICT to support such meetings will be explored.

The Subject Learning and Assessment Review meetings will play a key role in developing a collegial professional culture and build confidence about the judgements that teachers make about student performance. The structured support in Subject Learning and Assessment Review meetings for Classroom-Based Assessments will also help to ensure consistency and fairness within and across schools in the assessment of student learning.

Adapted from the Framework for Junior Cycle (2015)

Station 4

Assessing the Classroom-Based Assessments

More detailed material on assessment for reporting in Junior Cycle Science, setting out details of the practical arrangements related to assessment of the Classroom-Bases Assessments, will be available in a separate assessment specification and guidelines. This will include, for example, the suggested length and formats for student pieces of work, support in using 'on-balance' judgement in relation to the features of quality. The NCCA's Assessment Toolkit will also include substantial resource material for use and reference in ongoing classroom assessment of Junior Cycle Science, as well as providing a detailed account of the Subject Learning and Assessment Review process.

The Assessment Task

The Assessment Task is a written task completed by students during class time, which is not marked by the class teacher, but is sent to the State Examinations Commission for marking. It will be allocated 10% of the marks used to determine the grade awarded by the SEC. The Assessment Task is specified by the NCCA and is related to the learning outcomes on which the second Classroom-Based Assessment is based. The content and format of the Assessment Task may vary from year to year.

Inclusive assessment practices

Where a school judges that a student has a specific physical or learning difficulty, reasonable accommodations may be put in place to remove as far as possible the impact of the disability on the student's performance in classroom-based assessments. The accommodations (e.g. the support provided by a Special Needs Assistant or the support of assistive technologies) should be line with the arrangements the school has put in place to support the student's learning throughout the year.

The Final Assessment

There will be one examination paper at a common level, set by the State Examinations Commission (SEC). The examination will be two hours in duration and will take place at the end of third year. During this assessment students will be required to engage with, demonstrate comprehension of, and provide written responses to stimulus material. The content and format of the final examination may vary from year to year. In any year, the learning outcomes to be assessed will constitute a sample of the outcomes from the tables of learning outcomes

Adapted from the Junior Cycle Science Specification (2015)