

5.8 Assessment

Introduction

As teachers, assessment helps us to provide feedback to students on their learning, to guide and reward students, to motivate students to improve their learning, to evaluate student attainment and also to evaluate the effectiveness of our teaching. We are very familiar with summative assessment which attempts to measure student attainment and contribute to students' grades. However, we should also regularly use formative assessment to provide feedback to students on their learning. We can also use continuous assessment to keep students regularly informed of their progress and to motivate their learning. Such continuous assessment could be used in addition to formative and summative assessment.

Homework plays an important role in formative assessment and in learning. It encourages students to revise material and considerably aids memory. However, it must be planned wisely and always corrected or marked so that students receive appropriate feedback.

What else can I assess?

It is useful to think about the different skills that you would like your students to achieve based on the syllabus learning outcomes. Some of the learning outcomes in the science syllabus involve students carrying out an experiment or investigation. For these learning outcomes, assessment could help students develop a wide range of extremely valuable skills, such as manipulative skills that are transferable. This could also help to make assessment more useful and interesting for your students. Scoring grids that identify assessment criteria can be used to provide feedback to students on a variety of learning outcomes. For an example of a scoring grid that highlights assessment criteria, see http://www.juniorscience.ie/jsss/Files/SE_Rubric.doc.

It is clear that both the psychomotor and cognitive domains of learning are necessary to complete an experiment or investigation in a meaningful way. Therefore, you may want to assess students' psychomotor skills during practical work. In the beginning, when students first begin to conduct experiments, you may just want to assess the students' manipulative skills and safety procedures. As

students develop appropriate practical skills, you will also want to assess students' ability to plan, design, make observations, interpret data and explain results. By doing this, you can provide a continuum of assessment criteria for your students and emphasise the importance of experiments and investigations to your students. You can differentiate within the continuum for individual students so that all students can experience success.

For more information on assessment, see www.ncca.ie and, for more comprehensive information on homework, read http://www.juniorscience.ie/jsss/Files/se_homework.pdf