

Assessment of science knowledge



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Assessment of Science Knowledge No. Ways of Assessment

Pros and Cons

Examples

01.

Pre-Post Tests (Science Process Assessments for Elementary and Middle School Students)

Students' skills in terms of their attainment of knowledge are assessed by means of the tests, which are taken before the starting of an academic year or after ending of an academic year. These tests are very helpful to get an idea about how much a student has gained by the teaching and instructions provided by the teacher. Students may not be prepared for the Pre-tests but they appear well in post-tests, so the results from the Pre-tests cannot be considered as a final word for the students. The teacher designs his/her plans on the basis of the skills and knowledge level of the students.

Yearly Exams/Papers, Biyearly Exams/Papers and Preliminary Tests can be considered as an example of pre-post tests. The students can be asked to give answers

02.

Open-ended or Constructed Response Items. (Newsletter, 1996)

In this type of assessment, the students have to give answers to the asked questions in their own words. They construct their own answers with their understanding. Students are able to give answers within a very less time. Also this exercise helps students in forming their own opinions about a situation. This assessment allows the students to be creative. The responses given by students can be somewhat irrelevant in some cases.

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For example, the students are asked to write an essay on an Elephant emphasizing the features of an elephant in their own words.

03.

Performance-based items or events. (Newsletter, 1996)

In this assessment, the students are asked to present, demonstrate, practical, draw or explain whatever the teacher asks the students to do. This assessment is group-based as well as individual. The students get a chance to demonstrate their attained skills from this assessment. The students who are somewhat shy or not very confident can feel problems with this assessment.

For example, the students are asked to present on the topic of Matter and its forms by the help of PowerPoint.

04.

Projects and Experiments. (Newsletter, 1996)

The students are asked to do projects and perform experiments that are extended tasks. The students are assessed in terms of their skills to do a task that requires sufficient knowledge and skills' acquirement. The students get a chance to prove their talent to their teachers. Projects and experiments are also considered difficult tasks due to which, students may face problems with their completion. They require their teachers' support at each and every step of the task.

For example, the students are asked to come up with their own topics on the issue of cellular organs for scientific projects.

05.

Portfolios. (Newsletter, 1996)

Portfolios can also be used for assessing students' performance. In student

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portfolios, the tasks completed by students are attached, which help the teachers in evaluating the knowledge and skills attained by the student.

Portfolios are very helpful as they inform about each and every task completed by the student and his/her improvement with the tasks.

Sometimes, portfolios show an imbalance of performed tasks due to which, the teacher faces problems in evaluating the student wholly.

For example, portfolios can contain the daily and monthly home works of students, their monthly tests and so on.

06.

Short Response Paper. (Elementary Assessment Ideas)

The students can be asked to fill in a short response paper in which, they are asked to give short answers to the questions. This assessment strategy can be adopted at the end of the week to assess the students' acquirement of the instructions given by the teacher. This is helpful in scrutinizing the performance of students and their acquired skills. This assessment cannot be considered as fully authentic because some students take more time in comprehending the knowledge while other get the instructions and learn early.

For example, at the end of the week, the students are asked to give a weekly test in which, they are asked to write short answers to the asked questions, which they have learned during the week.

The lesson of “ Usage of Technology in the Classroom” can be improved by means of adding more assessment methodologies in the lesson as the lesson lacks some assessment methodologies and emphasizes more on instructional teaching. In the lesson, the teacher takes a pre-test for analyzing what students know already but it is only an oral test. At the end

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of the class, the teacher should conduct a short paper test that informs what students have gained in the class.

I have known the assessment methodologies by going to the websites that I have added in references list and these websites informed about improved strategies of assessment. After going through these websites, my knowledge about assessment methodologies was improved and I consider that in teaching students, these assessment methodologies should be adopted and added in the lesson plan.

I would like to make use of short response paper in the lesson. This methodology will be adopted because it is very fruitful in informing teacher about his/her instructional efficiency. It also informs whether the teacher is successful in enabling the students to learn what the teacher previously intended.

References

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