Instruction in Science Classes

Curriculum Coverage
There was variation in topic coverage within content domains. However, according to their teachers many students had been taught the TIMSS topics.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage of Students Taught</th>
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<tbody>
<tr>
<td>Biology Topics</td>
<td>73%</td>
</tr>
<tr>
<td>Chemistry Topics</td>
<td>76%</td>
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<tr>
<td>Physics Topics</td>
<td>72%</td>
</tr>
<tr>
<td>Earth Science Topics</td>
<td>68%</td>
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Instructional Time
Instructional time remains a crucial resource in considering students’ opportunity to learn, even though there are many factors that influence the effectiveness of an educational system. There was a considerable range in the yearly number of instructional hours in science.

Teaching Limited by Student Needs
Extent to which teachers reported instruction being limited by students’ needs

- Teaching NOT Limited: 28%
- Teaching SOMEWHAT Limited: 62%
- Teaching VERY Limited: 10%

Student Attendance
Frequency of student absences, as reported by students themselves

- Never or Almost Never: 61%
- Once a Month: 23%
- Once Every Two Weeks: 8%
- Once a Week or More: 8%

Computer Activities During Science Lessons
There is a continuing debate about the role of technology in education, including in science classes.

Teachers reported considerable variation in computer availability for use in science lessons.

- Sweden: 80%
- International Average: 42%
- Malta: 7%

Average science achievement for students with computer availability compared to those without availability:

- 493 vs 483

28-33% of the eighth grade students were asked to use computers at least monthly for various activities.

On average, the majority of eighth grade students reported using the Internet for their schoolwork.

- Access Textbook and Course Materials: 56%
- Access Assignments: 36%
- Collaborate with Classmates on Assignments: 53%
- Find Information to Aid Understanding in Classwork: 69%