

Introduction

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Overview of TIMSS Advanced 2015

The study of mathematics and science in primary school and secondary school prepares students to become knowledgeable, productive individuals and contributing members of society. TIMSS is an international assessment of the mathematics and science achievement of students at the fourth and eighth grades in more than sixty countries. Now entering its twentieth year of data collection, TIMSS provides countries with a measure of how well they are preparing their students with

Each country that participates in TIMSS Advanced 2015 gains valuable information on the following:

- the numbers of students and the proportion of the overall student population who are participating in advanced mathematics and physics study at the end of secondary school;

The TIMSS Advanced 2015 Assessment Frameworks

Chapter 1 of this publication contains the framework for the advanced mathematics assessment and Chapter 2 contains the framework for the physics assessment. Each chapter describes the major content domains (e.g., algebra, calculus, etc. in mathematics; and mechanics, thermodynamics, etc. in physics), the topic areas within each content domain, and the topics to be assessed. Across the assessment, each topic receives approximately equal weight in terms of time allocated to assessing the topic.

to provide fresh ideas and information about how curricula and instruction in mathematics and physics have evolved since the development of the frameworks for TIMSS Advanced 2008. These updates keep the frameworks educationally