

APPENDIX B: PIRLS AND PISA BENCHMARKS

The four international benchmarks used by PIRLS to assess reading achievement are:

(1) Low International Benchmark (between 400 and 474 points).

When reading literary texts, students can

- Recognize explicitly stated detail and locate a specific part of the story and make an inference clearly suggested by the text.
- When reading information texts, students can locate and reproduce explicitly stated information that is readily accessible, for example, at the beginning of the text or in a clearly defined section and
- Begin to make a straightforward inference clearly suggested by the text.

(2) Intermediate International Benchmark (between 475 and 549 points)

When reading literary texts, students can

- Identify central events, plot sequence and relevant story details;
- Make straightforward inferences about the attributes, feelings and motivations of main characters and
- Begin to make connections across parts of the text.

When reading information texts, students can

- Locate and reproduce one or two pieces of information in the text;
- Make straightforward inferences to provide information from a single part of the text and
- Use subheadings, textboxes and illustrations to locate parts of the text.



(3) High International Benchmark (between 550 and 624 points),

When reading literary texts, students can

- Locate relevant episodes and distinguish significant details embedded across the text;
- Make inferences to explain relationships between intentions, actions, events and feelings, and give text-based support;
- Recognize the use of some textual features (e.g., figurative language, abstract message) and
- Begin to interpret and integrate story events and character actions across the text.

When reading information texts, students can

- Recognize and use a variety of organizational features to locate and distinguish relevant information;
- Make inferences based on abstract or embedded information;
- Integrate information across the text to recognize main ideas and provide explanations;
- Compare and evaluate parts of a text to give a preference and a reason for it and
- Begin to understand textual elements, such as simple metaphors and author's point of view.

(4) Advanced International Benchmark (625 points or above),

When reading literary texts, students can

- Integrate ideas across a text to provide interpretations of a character's traits, intentions and feelings, and provide full-text support;
- Interpret figurative language and
- Begin to examine and evaluate story structure.

When reading information texts, students can

- Distinguish and interpret complex information from different parts of text, and provide full text-based support;
- Understand the function of organizational features and
- Integrate information across a text to sequence activities and fully justify preferences.



PISA PROFICIENCY LEVELS

Summary descriptions of the six proficiency levels in mathematics

Level	Lower score limit	What students can typically do
6	669	<p>Students can conceptualise, generalise and utilise information based on their investigations and modelling of complex problem situations, and can use their knowledge in relatively non-standard contexts. They can link different information sources and representations and flexibly translate among them. Students at this level are capable of advanced mathematical thinking and reasoning. These students can apply this insight and understanding, along with a mastery of symbolic and formal mathematical operations and relationships, to develop new approaches and strategies for attacking novel situations. Students at this level can reflect on their actions, and can formulate and precisely communicate their actions and reflections regarding their findings, interpretations, arguments, and the appropriateness of these to the original situation.</p>
5	607	<p>Students can develop and work with models for complex situations, identifying constraints and specifying assumptions. They can select, compare, and evaluate appropriate problem-solving strategies for dealing with complex problems related to these models. Students at this level can work strategically using broad, well-developed thinking and reasoning skills, appropriate linked representations, symbolic and formal characterisations, and insight pertaining to these situations. They begin to reflect on their work and can formulate and communicate their interpretations and reasoning.</p>
4	545	<p>Students can work effectively with explicit models for complex concrete situations that may involve constraints or call for making assumptions. They can select and integrate different representations, including symbolic, linking them directly to aspects of real-world situations. Students at this level can utilise their limited range of skills and can reason with some insight, in straightforward contexts. They can construct and communicate explanations and arguments based on their interpretations, arguments, and actions.</p>

Level	Lower score limit	What students can typically do
3	482	Students can execute clearly described procedures, including those that require sequential decisions. Their interpretations are sufficiently sound to be a base for building a simple model or for selecting and applying simple problem-solving strategies. Students at this level can interpret and use representations based on different information sources and reason directly from them. They typically show some ability to handle percentages, fractions and decimal numbers, and to work with proportional relationships. Their solutions reflect that they have engaged in basic interpretation and reasoning.
2	420	Students can interpret and recognise situations in contexts that require no more than direct inference. They can extract relevant information from a single source and make use of a single representational mode. Students at this level can employ basic algorithms, formulae, procedures, or conventions to solve problems involving whole numbers. They are capable of making literal interpretations of the results.
1	358	Students can answer questions involving familiar contexts where all relevant information is present and the questions are clearly defined. They are able to identify information and to carry out routine procedures according to direct instructions in explicit situations. They can perform actions that are almost always obvious and follow immediately from the given stimuli.