

The Science of Reading and the International Baccalaureate Primary Years Programme in the US

IB Research department, April 2024

The Primary Years Programme (PYP) is a flexible curriculum framework that is compatible with the Science of Reading. There are learning benefits to meeting reading instruction needs alongside and through the PYP. The PYP is designed to blend with national, state, and district curriculum requirements, seeking to enhance student learning in all contexts.

The Science of Reading

The science of learning to read is based on a substantial, well-established research base which consistently shows that explicit and systematic instruction across five key, interrelated areas is effective in learning to read. These areas are phonemic awareness, phonics, fluency, vocabulary, and comprehension ([National Reading Panel, 2000](#), [What Works Clearinghouse, 2019](#)).

- **Phonemic awareness:** Phonemes are the smallest units of spoken language and combine to form syllables and words. English consists of about 41 phonemes. Phonemic awareness and letter knowledge are the two best predictors of how well children will learn to read during their first two years in school. The effects of explicit phonemic awareness instruction on student outcomes are substantial, both immediately and months after instruction.
- **Phonics:** Refers to the relationship between letters and sounds. The effects of systematic phonics instruction on student reading outcomes are robust.
- **Fluency:** Refers to the automaticity of reading or the ability to read a text quickly, accurately, and with proper expression. The effects of systematic fluency instruction on student reading outcomes are substantial.



- **Vocabulary:** The effects of systematic vocabulary instruction on student reading outcomes are minimal but promising.
- **Comprehension:** The effects of a variety of explicit cognitive strategies on reading comprehension are strong and consistent.

The PYP

The PYP is a curriculum framework that is intended to work in conjunction with local, state, and national curricular standards that schools adhere to in more than the 125 countries. The PYP has always promoted a balance of instructional strategies to meet the needs of learners, primarily through supporting student curiosity, research, and engagement in the learning process. Balancing inquiry, skills-based teaching and explicit instruction allows schools to prioritize proficiency in reading while maintaining commitment to what makes learning meaningful and engaging for students. Through transdisciplinary learning, inquiry-based teaching and learning, and authentic assessment, the PYP ensures that learning is relevant, challenging and significant.