ILEARN SCIENCE
ITEM SPECIFICATIONS

WHAT IS AN ITEM SPECIFICATION?

Item specifications delineate the evidence students must demonstrate to show content mastery for each Indiana Academic Standard. They define exactly how a standard should be measured and provide a specific plan of how to meet the test blueprint.

Item writers and educators develop item specifications for statewide summative assessments. Item specifications prescribe alignment to standards, cognitive complexities, possible item types, and other established item-design criteria essential to developing blueprint-aligned test forms. Item specifications may also guide test construction at the classroom level with insight into evidences of standard mastery.

WHAT INFORMATION DO THEY SHARE?

- **Performance Expectation (Science) or Standard (Computer Science)**
- **Clarification Statements and Content Limits**

  Content limits, which refine the intent of the performance expectations and provide limits of what may be asked of examinees. For example, they may identify the specific formulae that students are expected to know or not know.
- **Essential Vocabulary**

  The essential vocabulary defines relevant technical terminology that students are expected to know.
- **Non-Essential Vocabulary**

  This delineates relevant technical vocabulary that students are not expected to know but may still appear on the assessment.

Sample Phenomena

This provides some examples of the sort of phenomena (scenarios) that would support effective items related to the standard in question.

Task Demands

Task demands identify the types of items and activities that item writers should use; each item should be clearly linked to one or more of these demands.

The verbs in the demands (e.g., select, identify, illustrate, describe) provide guidance on the types of interactions item writers might employ to elicit the student response.

Sample Items (Computer Science)

HOW CAN ITEM SPECIFICATIONS BE USED IN THE CLASSROOM?

1 Dig deep into Indiana Academic Standards.

Evidence statements target specific knowledge and skills that students must acquire to master each standard. The breakdown of Indiana Academic Standards provides additional insight into the depth of the standard and the specific skills related to it.

2 Effectively assess scientific literacy in the classroom.

Use item specifications to identify and create tasks that measure each of the three dimensions of the standards (Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts). Incorporate those tasks into classroom activities, student assignments, and classroom assessments to promote deeper understanding of science.

3 Create your own item specifications.

During professional development, continue to unpack the standards by adding evidence statements and measurement tasks which promote mastery of the standard