

Assessment and College and Career Ready Resources (6-10) Math

Assessment Resources

Resources for grades 3-8 are provided here as these grades will provide the foundation for the skills needed on ISTEP+ Grade 10

[ISTEP+ Grades 3-8](#) link includes 6-8 resources:

- Blueprints
- Item Samplers
- Instructional and Assessment Guidance
- Released Part 1 Applied Skills Items and Scoring Notes
- Calculator Policy
- Math Graph Paper Guidance
- Math Rubric for ISTEP+ Part 1
- Use of Highlighters

[ISTEP+ Grade 10](#) includes:

- Blueprints
- Item Samplers
- Instructional and Assessment Guidance
- Released Part 1 Applied Skills Items and Scoring Notes
- Calculator Policy
- Math Graph Paper Guidance
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[2016-17 Indiana Assessment Windows](#)
[Assessment Vocabulary](#)
[ISTEP+ Performance Level Descriptors](#)
[ISTEP+ Experience Online](#)

Assessment Analysis of ISTEP+ 2014-2016

Evidence strongly demonstrates that Indiana students in grades 6-10 are struggling with the following ISTEP+ components:

Geometry and Measurement
Algebra and Functions

Linear Equations, Inequalities, and Functions
Systems of Equations and Inequalities

College and Career Ready Standard Resources Aligned to Assessment Analysis

Focus on Middle School and High School Best Practices for Teaching and Learning Math

When discussing the “[Best Practices for Teaching and Learning Mathematics](#)” current research shows that there are three main areas teachers need to focus on to get the best outcomes for student learning, especially with regard to the components listed in the Assessment Analysis. The first area is teachers must move from just asking questions to asking [purposeful questions](#) about the above math concepts. This can be done using higher-order thinking questions that look at the thinking of the students and the structure of the mathematics. The second area of focus is the move to [facilitating good mathematical discourse](#) in the math classroom so that students are the driving force in explaining their process of doing the math and validating their solutions for the problem. Teachers alone should not be validating solutions and explaining the mathematical procedures being done in a problem. Teachers should be asking students why they approached a problem the way they did and why did they use the process they used to solve the problem. The final area of focus is that teachers must engage students in [rich meaningful mathematical tasks](#). Teachers should be using rich mathematical tasks to infuse the necessary rigor that requires procedural skills, conceptual skills and application and modeling. Resources to support these three areas can be found below:

Rich Mathematical Task Examples:

- [Shell Centre, Math Assessment Project](#)
- [NRich Maths](#)
- [Dan Meyer's Tasks](#)
- [Teacher Desmos](#)
- [NCTM Illuminations](#)
- [Word Problems for Kids](#)
- [Robert Kaplinsky](#)
- [Bowland Maths](#)
- [Balanced Assessment in Mathematics](#)
- [Mathalicious, Real World Problems](#)
- [National Library of Virtual Manipulatives](#)

Posing Purposeful Questions and DOK Resources:

- [Karin Hess's Cognitive Rigor Matrix for Math and Science](#)
- [DOK Question Stems](#)
- [Webb's DOK Wheel](#)
- [100 Purposeful Questions that Promote Discourse](#)
- [Questions to Facilitate Math Discourse](#)

General Resources:

- [Engaging in the Mathematical Processes \(Look-fors\)](#)
- [Mathematical Processes Posters](#)