

BALANCED INSTRUCTION in MATHEMATICS

An effective mathematics classroom incorporates a variety of instructional approaches that focus on the development of conceptual understanding and procedural skills through problem-solving. A balance of these approaches allows students to engage in authentic learning, utilize the mathematical practices, and make connections.

Embedded Practices

- Students engage in meaningful and challenging learning activities that address their unique characteristics and needs.
- Students engage in learning experiences that foster communication, collaboration, creativity, and critical thinking.
- Students leverage a variety of digital and print resources to learn content and demonstrate what they know.

Standards for Mathematical Practice

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Apply & Problem-Solve

- **Students communicate** ideas to develop skills and understanding.
- **Students focus** on efficiency of strategy rather than rote procedures.
- **Students solve** problems to understand math in the world around them.

Authentic Connections

- **Students mathematize** their world.
- **Students make** mathematical connections.
- **Students apply** their thinking to new contexts and situations.
- **Students engage** in inquiry.

Core Knowledge & Skills

- **Students utilize** various tools to make sense of mathematical skills and concepts.
- **Students understand** concepts through models and relevant examples.
- **Students visually** represent mathematics.
- **Students engage** in explanatory/reflective writing.
- **Students develop** skills through purposeful practice.
- **Students compute** with numbers accurately, efficiently, and flexibly.