Galway Math Curriculum Guide
Kindergarten

Problem Solving Strand

Students will build new mathematical knowledge through problem solving.

- K.PS.1 Explore, examine, and make observations about a social problem or mathematical situation
- K.PS.2 Interpret information correctly, identify the problem, and generate possible solutions

Students will solve problems that arise in mathematics and in other contexts.

- K.PS.3 Act out or model with manipulatives activities involving mathematical content from literature and/or story telling
- K.PS.4 Formulate problems and solutions from everyday situations (e.g., counting the number of children in the class, using the calendar to teach counting).

Students will apply and adapt a variety of appropriate strategies to solve problems.

- K.PS.5 Use informal counting strategies to find solutions
- K.PS.6 Experience teacher-directed questioning process to understand problems
- K.PS.7 Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking
- K.PS.8 Use manipulatives (e.g., tiles, blocks) to model the action in problems
- K.PS.9 Use drawings/pictures to model the action in problems

Students will monitor and reflect on the process of mathematical problem solving.

K.PS.10 Explain to others how a problem was solved, giving strategies

Reasoning and Proof Strand

Students will recognize reasoning and proof as fundamental aspects of mathematics.

- K.RP.1 Understand that mathematical statements can be true or false

Students will make and investigate mathematical conjectures.

- K.RP.2 Investigate the use of knowledgeable guessing as a mathematical tool
- K.RP.3 Explore guesses, using a variety of objects and manipulatives

Students will develop and evaluate mathematical arguments and proofs.

- K.RP.4 Listen to claims other students make

Communication Strand

Students will organize and consolidate their mathematical thinking through communication.

- K.CM.1 Understand how to organize their thought processes with teacher guidance

Students will communicate their mathematical thinking coherently and clearly to peers, teachers, and others.

- K.CM.2 Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations

Students will analyze and evaluate the mathematical thinking and strategies of others.

- K.CM.3 Listen to solutions shared by other students
- K.CM.4 Formulate mathematically relevant questions with teacher guidance

Students will use the language of mathematics to express mathematical ideas precisely.

- K.CM.5 Use appropriate mathematical terms, vocabulary, and language

Connections Strand

Students will recognize and apply mathematics in contexts outside of mathematics.

- K.CN.1 Recognize the presence of mathematics in their daily lives
- K.CN.2 Use counting strategies to solve problems in their daily lives
- K.CN.3 Recognize and apply mathematics to objects and pictures

Representation Strand

Students will create and use representations to organize, record, and communicate mathematical ideas.

- K.R.1 Use multiple representations, including verbal language, acting out or modeling a situation, and drawing pictures as representations
- K.R.2 Use standard and nonstandard representations

Students will use representations to model and interpret physical, social, and mathematical phenomena.

- K.R.3 Use objects to show and understand physical phenomena (e.g., guess the number of cookies in a package)

Based on Revised March 2005 NYS Mathematics Core Curriculum PK – Grade 12 Process and Content Strands. Prepared spring 2008.