Based on the original work by Jane Goetz, Seattle Public Schools. Composed by Allison Ledesma, Judy Stocks, and Michal Brehm, University of Washington

A *New* Conceptual Story: Turtle Paths – Grade 3

Students explore problems involving paths, lengths of paths, turns and perimeter; they create commands that describe paths, including the measures of distances and turns in the paths; they solve missing measure problems (which includes work with perimeters)

Investigation 1 (Week 1: 4-5 Days): *Paths and Lengths of Paths* -- students begin to understand that paths are representations or records of movements; they describe paths using mathematical language and find several paths that meet certain geometric constraints; apply mathematical processes such as addition, subtraction, and estimation

Session 1: Walking Paths

Students walk paths and describe paths using mathematical language; develop understanding of what paths are; describe movements and give commands to create shapes

Goals:

Understand that a path is a record of movement; a straight path results from movement without a turn or curve; a turn is a rotation that creates a corner in a path; a path is the contour of anything – every path has a shape or figure. Understand and be able to use basic Geo-Logo commands

Materials:

Student Sheets 1, 2, 3 (HW), Family Letter, Dot Paper, Masking Tape, colored pencils, overhead and transparencies

Kid Issues:

- Vocab/Conceptual understanding (closed figure, line segment, turn vs. curve)
- Knowing right and left
- Representing directionality from a path on floor onto 2-dimensional paper
- Dots as representing steps
- Trying diagonal paths on dot paper

Session 2: Commanding the Turtle

Goals:

Materials:

Kid Issues:

Session 3,4: Mazes and Maps

Teacher Checkpoint: Thinking Mathematically About Paths