

PLATO[®] Math Expeditions

Grade Level: K–8
Target Audience: Elementary/Middle
Audio Support: Yes

Product Features

- Over 400 learning objectives
- Variety of rich online tools and manipulatives
- Tutorial, practice, and quiz formats
- Supplemented by student Companion Worksheets (Levels D–G)
- Extensive graphic and interactive demonstrations
- Full audio for grades K–5

Product Benefits

- Meets NCTM standards
- Presents real-world simulations to connect to everyday life
- Reinforces core proficiency skills
- Aligns to national, state, and local standards
- Models problem-solving strategies
- Teaches mathematics concepts through an interdisciplinary approach
- Monitors and bookmarks student progress

Online Tools and Manipulatives

Money (work tent)	Place value
Number blocks (work tent)	Number line
Timer (work tent)	Protractor
Whole number operations (work tent)	Probability
Fraction, decimal, percentage (work tent)	Rotator to slide
Calculator (work tent)	Counting

Menu Icons

Question mark—provides mentor help for additional strategies to solve the problem
 Calculator—provides tool for basic operations and calculations
 Work tent—contains seven online math manipulatives
 Data bank—provides an overview of the courseware menu icons and features
 Exit—allows learner to stop and exit the skill activity

Reference Materials (Refer to PLATO Documentation CD)

PLATO Curriculum Guide—Math Expeditions (Levels A–I)
 PLATO Curriculum Guide—K–3 Skills Inventory
 PLATO Curriculum Guide—Companion Worksheets (Level D–G)
 PLATO Curriculum Guide—Math Expeditions Objective List (Appendix)



Getting Started

- Refer to the PLATO Curriculum Guide—Math Expeditions to learn about the product features and benefits.
- Use the objectives list to identify the curriculum structure.
- Begin previewing several courseware modules at your grade level.
- Become familiar with the reference materials on the PLATO Documentation CD.

Skill Activity Progression

- Tutorial—teaches math processes, and reinforces math terminology (not scored).
- Practice—contains 10 randomly generated questions and offers access to mentor help (scored).
- Quiz—contains 10 randomly generated questions and help is not available (scored).

Assessment

- Assign the PLATO Skills Inventory (Levels A–D) to determine courseware placement.
- Use the PLATO Math Expeditions Companion Worksheets as a pretest.
- Use a state or local assessment as an alternative to the PLATO Skills Inventory.

Implementation Strategies

- Align the courseware modules with state standards and classroom instruction.
- Use PLATO Math Expeditions to strengthen core proficiency math skills.
- Assign the PLATO Math Expeditions Companion Worksheets as a supplement to a courseware module.
- Promote problem-solving strategies using the help menus.
- Use the online math manipulatives for small or whole-group instruction.

Evaluation

- Generate selected teacher reports to track learner progress and measure gains.
- Discuss report data with learners to determine the next steps.
- Use the PLATO Math Expeditions Companion Worksheets as a post test.

Extension Exercises

- Use the Companion Worksheets in small groups for problem-solving strategies.
- Search for web sites that align with the thematic topics within the expedition.
- Create a web site library for each expedition.
- Align courseware modules with the units in PLATO Projects for the Real World.
- Use the math activity worksheets in PLATO Projects for the Real World (Level A–D) to supplement the modules within the PLATO Math Expeditions program.

Curriculum
Structure

Curriculum

Math
Expeditions

Course

Pacific Coast
Tide Pools

Module

Numeration

Skill Activity

Locate
Objects
Inside Out

For more information, please call 800.44.PLATO or visit www.plato.com

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Math Expeditions—Work Tent Tools

The Work Tent is equipped with an assortment of math tools, manipulatives, and resources for calculation and investigations. Tools include:

- Calculator
- Counter
- Number Blocks
- Fraction Pieces
- Money
- Timer
- Protractor
- Ruler
- Coordinate Chart

Math Expedition Sites and Course Descriptions Levels A–I

Course Levels	Course Locations	Course Skills	Course Description
Level A, Kindergarten	<i>Pacific Coast Tide Pool, CA</i>	Number recognition, compare, order, addition, subtraction, rounding, position, classify numbers, ordinals, money, time, length, mass, weight, capacity, geometry, fractions.	Learners become explorers as they classify and count plants, animals, and ocean life within the California coast tide pool.
Level B, First Grade	<i>Buffalo National River, AR</i>	Number recognition, ordinals, compare, order, place value, addition, subtraction, fractions, money, time, length, mass, weight, capacity, geometry, graphs.	Explorers investigate the river ecology of plants and animals while working on place value, addition, and subtraction skills.
Level C, Second Grade	<i>Rocky Mountains, MT</i>	Number recognition, ordinals, compare, order, place value, addition, subtraction, rounding, money, time, length, mass, weight, capacity, geometry, graphs, metric units.	As this expedition team explores how mountains are formed, they learn to multiply by twos, threes, fours, and fives.
Level D, Third Grade	<i>Puffin Island, ME</i>	Compare, order, place value, mental math, estimation, problem solving, addition, subtraction, rounding, fractions, multiplication, division, decimals, money, time, calendar, length, mass, weight, capacity, geometry, temperature, perimeter, area, graphs.	Expedition members learn how Dr. Kress brought puffins back to the islands of Maine. They also practice estimating sums, differences, and products.
Level E, Fourth Grade	<i>Red Rock Country, UT</i>	Compare, order, place value, mental math, estimation, problem solving, addition, subtraction, rounding, multiplication, division, fractions, decimals, length, capacity, mass, temperature, metric units, geometry, perimeter, area, graphs.	Team members practice perimeter and area skills as they plan to build backcountry trails within the Red Rock desert area.

Course Levels	Course Locations	Course Skills	Course Description
Level F, Fifth Grade	Cumberland Island, GA	Compare, order, place value, mental math, estimation, problem solving, addition, subtraction, rounding, fractions, mixed numbers, decimals, multiplication, division, ratios, length, capacity, mass, temperature, metric units, geometry, perimeter, area, angles, coordinate grid, volume, graphs, statistics, congruent/similar.	Studying the habitats of wild horses, sea turtles, and alligators gives learners the opportunity to measure angles with an online protractor, in addition to determining circumference and volume.
Level G, Sixth Grade	Everglades National Park, FL	Compare, order, place value, mental math, estimation, problem solving, addition, subtraction, rounding, fractions, mixed numbers, multiplication, division, decimals, ratios, rates, proportions, percents, geometry, perimeter, circumference, coordinate, grid, area, angles, volume, graphs, statistics, congruent/similar.	This journey takes the expedition team into the Florida Everglades as they learn about decimals, fractions, percents, ratios, and proportions.
Level H, Seventh Grade	Aransas National Wildlife Refuge, TX	Compare, order, place value, mental math, estimation, problem solving, addition, subtraction, rounding, multiplication, division, fractions, mixed numbers, decimals, ratios, rates, proportions, percents, geometry, perimeter, circumference, coordinate, grid, area, angles, volume, graphs, statistics, congruent/similar.	Team members explore the importance of wildlife refuges along with lessons on mean, median, mode, and range.
Level I, Eighth Grade	Archeology Dig, PA	Compare, order, place value, mental math, estimation, problem solving, addition, subtraction, rounding, multiplication, division, fractions, mixed numbers, decimals, ratios, rates, proportions, percents, geometry, perimeter, circumference, coordinate, grid, area, angles, volume, graphs, statistics, congruent/similar.	Before an underground parking garage is built, the team must learn the basics of archeology, as well as writing in scientific notation and determining probability and outcomes.

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