

Indiana Academic Standard & Mathematics Pentathlon

GRADE 1 Alignment of Mathematics Pentathlon with the Indiana Academic Standards

Standard 1

Number Sense

- 1.1.1 Count, read, and write whole numbers up to 100.
Calla game
Adventures in Problem Solving Book I - pp. 97-103
- 1.1.2 Count and group objects in ones and tens.
Calla game
Adventures in Problem Solving Book I - pp. 97-103
- 1.1.3 Identify the number of tens and ones in numbers less than 100.
Calla game
Adventures in Problem Solving Book I - pp. 97-103
Note: Connect with hundred chart at C-S, P-S, and S modes.
- 1.1.4 Name the number that is one more than or one less than any number up to 100.
Calla game
Adventures in Problem Solving Book I - pp. 97-103
- 1.1.5 Compare whole numbers up to 10 and arrange them in numerical order.
Calla game
Adventures in Problem Solving Book I - pp. 60-62
Note: For this indicator stress numerical order.
- 1.1.7 Recognize when a shape is divided into congruent (matching) parts.
Hex-A-Gone game
Adventures in Problem Solving Book I - pp. 189-193
- 1.1.8 For a shape divided into 8 or fewer congruent (matching) parts, describe a shaded portion as “__ out of __ parts” and write the fraction.
Hex-A-Gone game
Adventures in Problem Solving Book I - pp. 194-199

Number Sense (continued)

1.1.9 For a set of 8 or fewer objects, describe a subset as “__ out of __ parts” and write the fraction.

Hex-A-Gone game

Adventures in Problem Solving Book I - pp. 194-199

Standard 2

Computation

1.2.1 Show the meaning of addition (putting together, increasing) using objects.

Shape-Up game;

Adventures in Problem Solving Book I - pp. 30-36;

Investigation Exercises Book I - pp. 5-15;

Star Track game;

Adventures in Problem Solving Book I - pp. 73;

Investigation Exercises Book I - pp. 3-17;

Calla game;

Adventures in Problem Solving Book I - pp. 103-115;

Investigation Exercises Book I - pp. 20-27

1.2.2 Show the meaning of subtraction (taking away, comparing, finding the difference) using objects.

Shape-Up game;

Adventures in Problem Solving Book I - pp. 30-36;

Investigation Exercises Book I - pp. 5-15;

Star Track game;

Adventures in Problem Solving Book I - pp. 64-69, 73;

Investigation Exercises Book I - pp. 3-17

1.2.3 Show equivalent forms of the same number (up to 20) using objects, diagrams, and numbers.

Shape-Up game;

Adventures in Problem Solving Book I - pp. 30-36

1.2.5 Understand the meaning of the symbols +, -, and =.

Shape-Up game;

Adventures in Problem Solving Book I - pp. 30-36;

Investigation Exercises Book I - pp. 5-15;

Star Track game;

Adventures in Problem Solving Book I - pp. 64-69, 73;

Investigation Exercises Book I - pp. 3-17

Computation (continued)

1.2.6 Understand the role of zero in addition and subtraction.

Shape-Up game;
Adventures in Problem Solving Book I - pp. 30-36;
Investigation Exercises Book I - pp. 5-15;
Star Track game;
Adventures in Problem Solving Book I - pp. 64-69, 73;
Investigation Exercises Book I - pp. 3-17

1.2.7 Understand and use the inverse relationship between addition and subtraction facts (such as $4 + 2 = 6$, $6 - 2 = 4$, etc.) to solve simple problems.

Shape-Up game;
Adventures in Problem Solving Book I - pp. 30-36;
Investigation Exercises Book I - pp. 5-15;
Star Track game;
Adventures in Problem Solving Book I - pp. 64-69, 73;
Investigation Exercises Book I - pp. 3-17

Standard 3

Algebra and Functions

1.3.4 Create and extend number patterns using addition.

Shape-Up game;
Adventures in Problem Solving Book I - pp. 30-36;
Investigation Exercises Book I - pp. 5-15;
Star Track game;
Adventures in Problem Solving Book I - pp. 64-69, 73;
Investigation Exercises Book I - pp. 3-17

Standard 4

Geometry

1.4.1 Identify, describe, compare, sort, and draw triangles, rectangles, squares, and circles.

Shape-Up game;
Adventures in Problem Solving Book I - pp. 11-29;
Investigation Exercises Book I - pp. 3-4;
Hex-A-Gone! game;
Adventures in Problem Solving Book I - pp. 163-164

Standard 5

Measurement

1.5.1 Measure the length of objects by repeating a non-standard unit or a standard unit.

Star Track game;

Adventures in Problem Solving Book I - p. 74

1.5.2 Use different units to measure the length of the same object and predict whether the measure will be greater or smaller when a different unit is used.

Investigation Exercises Book I - pp. 5-8

Standard 6

Problem Solving

1.6.1 Choose the approach, materials, and strategies to use in solving problems.

Shape-Up game;

Adventures in Problem Solving Book I - pp. 30-36;

Investigation Exercises Book I - pp. 5-15;

Star Track game; A

Adventures in Problem Solving Book I - pp. 73

1.6.2 Use tools such as objects or drawings to model problems.

The games of Hex-A-Gone, Calla, Kings & Quadruphages, Star Track, and Shape-Up all use objects as tools to model problems.

Shape-Up also uses pictures.

Adventures in Problem Solving Book I and Investigation Exercises Book I use a combination of objects, pictures, and symbols.

NOTE: All Mathematics Pentathlon games with the combined use of Adventures in Problem Solving and Investigation Exercises stress the use of a variety of strategies to solve problems as well as to explain their reasoning, justify procedures, and check the validity of results.