

A Correlation of

SCOTT FORESMAN
Investigations
IN NUMBER, DATA, AND SPACE®

to the

INDIANA
Academic Standards
Mathematics

Grade One

PEARSON

G/M-266_G1

INTRODUCTION

This correlation demonstrates the alignment of content between ***Investigations in Number, Data, and Space*** and *Indiana's Academic Standards-Mathematics, Final Draft dated March 12, 2009*. Correlation page references are to the Teacher Edition Curriculum Units, Student Math Handbook and Student Activity Book. The Indiana Online Activities for Investigations are available on Pearson SuccessNet in English and Spanish. These activities are cited in the correlation by unit number and activity number. On SuccessNet, you can download each activity which consists of a teacher page and a student page. The teacher page contains related vocabulary, directions for teaching the content, suggested questions to promote discussion, examples of student responses, and differentiation support. These Indiana Activities are provided to give teachers additional support while teaching the Indiana Academic Standards for Mathematics.

Investigations in Number, Data, and Space is a Kindergarten through Grade 5 mathematics curriculum designed to engage students in making sense of mathematical ideas. Six major goals guided the development of Investigations in Number, Data, and Space® curriculum. The curriculum is designed to:

- Support students to make sense of mathematics and learn that they can be mathematical thinkers
- Focus on computational fluency with whole number as a major goal of the elementary grades
- Provide substantive work in important areas of mathematics—rational numbers, geometry, measurement, data, and early algebra—and connections among them
- Emphasize reasoning about mathematical ideas
- Communicate mathematics content and pedagogy to teachers
- Engage the range of learners in understanding mathematics.

Underlying these goals are three guiding principles that are touchstones for the *Investigations* ©2008 team as they approach both students and teachers as agents of their own learning:

1. Students have mathematical ideas.
2. Teachers are engaged in ongoing learning about mathematics content, pedagogy and student learning.
3. Teachers collaborate with the students and curriculum materials to create the curriculum as enacted in the classroom.

Investigations is based on experience from research and practice. Based on that extensive classroom testing, the curriculum takes seriously the time students need to develop a strong conceptual foundation and skills based on that foundation. Each curriculum unit focuses on an area of content in depth, providing time for students to develop and practice ideas across a variety of activities and contexts that build on each other. An additional set of online lessons has been developed to address specific state standards. Daily guidelines for time spent on class sessions, Classroom Routines (K-3), and Ten-Minute Math (3-5) reflect the commitment to devoting adequate time to mathematics in each school day.

**Investigations in Number, Data, and Space
to the
Indiana Academic Standards – Mathematics**

Grade 1

Indiana Mathematics Standards	Investigations in Number, Data, and Space
GRADE 1	
Standard 1	
Number Sense and Computation	
1.1.1 Count, read, write, order, rename and compare whole numbers to at least 100.	These are some of the many examples. Unit 1: 72–74, 78–79, 87, 89–93, 103–106, 112, 122–124, 134–135 Unit 3: 152–153 Unit 8: 38–39, 41–42, 44–45, 159–160
1.1.2 Name the number that is one more than or one less than any number to at least 100.	Unit 1: 17–18 Unit 3: 31, 140, 162, 166, 171 Unit 6: 148
1.1.3 Match the ordinal numbers first, second, third, etc. with an ordered set to at least 10 items.	Online Activity: Unit 7 Activity 15
1.1.4 Show equivalent forms of whole numbers to at least 100 as groups of tens and ones.	Unit 3: 27–32 Student Math Handbook: 6-16 Online Activity: Unit 8 Activity 26
1.1.5 Solve problems involving addition and subtraction by modeling addition of numbers to at least 100 (putting together, increasing) and by modeling the inverse operation of subtraction (taking away, comparing, finding the difference) using objects.	These are some of the many examples. Unit 3: 182–183, 186–187, 233 Unit 6: 59, 125, 137, 153, 160–162 Unit 8: 110–115, 117, 121–125, 168–169
1.1.6 Demonstrate fluency with addition facts and the corresponding subtraction facts for totals to at least 20.	These are some of the many examples. Unit 1: 118–120, 203–203, 234–236 Unit 3: 71–72, 109–110, 189–190, 220–222 Unit 6: 16–17, 43, 46–47, 125, 167 Unit 8: 55–58, 61–64, 66–69, 72–74, 76, 78–79, 81–83, 86, 162–163

Indiana Mathematics Standards	Investigations in Number, Data, and Space
1.1.7 Pose a question and collect and represent data using pictures or picture graphs to answer the question posed.	Unit 4: 23–24, 32–33, 53–54, 57–59, 61–62, 63–66, 68–69, 79, 91–92, 105–106, 111, 139–140
Standard 2	
Algebra and Functions	
1.2.1 Write and solve equations involving addition.	Unit 6: 27–28, 31, 47, 165, 176–177, 182, 193–194 Unit 8: 16, 76, 110, 117, 121–125
1.2.2 Create, extend, and give a rule for number patterns using addition.	Unit 7: 75–79, 81, 87–91, 98–108, 101–102, 105, 148–149
1.2.3 Solve problems using the identity principle for addition and subtraction.	Unit 6: 74, 179, 182–183
Standard 3	
Geometry and Measurement	
1.3.1 Identify, describe, compare, sort and draw triangles, rectangles, squares and circles in terms of their attributes (position, shape, size and number of vertices). Use simple plane shapes to compose a given shape.	Unit 2: 25–29, 31–35, 37–43, 45–47, 49–51, 55–60, 71–76, 78–84, 86–89, 91–92, 96–100, 121–122, 132
1.3.2 Estimate and measure the length of an object to the nearest inch and centimeter.	Unit 5: 11, 74–77
1.3.3 Give the value of a collection of pennies, nickels and dimes up to \$1.00.	Unit 1: 162–164 Online Activity: Unit 8 Activities 40–41
Process Standards	
Problem Solving	
<ul style="list-style-type: none"> • Build new mathematical knowledge through problem solving. 	These are some of the many examples. Unit 1: 106–108, 115–118, 208–209 Unit 3: 62–63, 69–72, 83–84, 89–92 Unit 5: 42–46, 50, 80–81 Unit 6: 37–38, 43–44, 48–49, 115, 118–119, 121–123, 129, 133, 136–137

Indiana Mathematics Standards	Investigations in Number, Data, and Space
<ul style="list-style-type: none"> Solve problems that arise in mathematics and in other contexts. 	These are some of the many examples. Unit 2: 26, 109–112, 114–116, 142 Unit 4: 53–57, 63–66 Unit 5: 35–40, 42–47, 49–51, 79–81
<ul style="list-style-type: none"> Apply and adapt a variety of appropriate strategies to solve problems. 	These are some of the many examples. Unit 1: 110–111, 166, 236–238 Unit 3: 60–61, 67–70, 220–221 Unit 6: 37–38, 43–44, 48–49, 114–115, 181–182 Unit 7: 105–108, 129–130
<ul style="list-style-type: none"> Monitor and reflect on the process of mathematical problem solving. 	These are some of the many examples. Unit 1: 106–108, 115–118, 208–209 Unit 3: 62–63, 83–84, 89–92, 96 Unit 5: 42–46, 50, 84 Unit 6: 37–38, 43–44, 109, 112, 115, 118–119, 121–123, 129, 133
Reasoning and Proof	
<ul style="list-style-type: none"> Recognize reasoning and proof as fundamental aspects of mathematics. 	These are some of the many examples. Unit 1: 129–130, 168–171, 173–174, 204–205 Unit 3: 63, 72, 111, 162, 190–191 Unit 6: 89–91, 118–119, 149, 161–162
<ul style="list-style-type: none"> Make and investigate mathematical conjectures. <p><i>Continued</i></p>	These are some of the many examples. Unit 1: 129–130, 168–171, 173–174, 204–205 Unit 3: 63, 72, 111, 162, 190–191 Unit 6: 89–91, 118–119, 149, 161–162
<ul style="list-style-type: none"> Develop and evaluate mathematical arguments and proofs. 	These are some of the many examples. Unit 1: 129–130, 168–171, 173–174, 204–205 Unit 3: 63, 72, 111, 162, 190–191 Unit 6: 89–91, 118–119, 149, 161–162

Indiana Mathematics Standards	Investigations in Number, Data, and Space
<ul style="list-style-type: none"> Select and use various types of reasoning and methods of proof. 	<p>These are some of the many examples.</p> <p>Unit 1: 129–130, 168–171, 173–174, 204–205</p> <p>Unit 3: 63, 72, 111, 162, 190–191</p> <p>Unit 6: 89–91, 118–119, 149, 161–162</p>
Communication	
<ul style="list-style-type: none"> Organize and consolidate their mathematical thinking through communication. 	<p>These are some of the many examples.</p> <p>Unit 2: 45–47, 51–53, 91–92, 114–116</p> <p>Unit 4: 29–31, 54–55, 81–82</p> <p>Unit 7: 43–44, 58–59, 62–63, 66–67, 89–91</p> <p>Unit 8: 44, 57–58, 61–62, 68–69, 73</p>
<ul style="list-style-type: none"> Communicate their mathematical thinking coherently and clearly to peers, teachers, and others. 	<p>These are some of the many examples.</p> <p>Unit 2: 42–43, 91–92, 96–98, 114–116</p> <p>Unit 4: 29–31, 54–55, 76, 81–82</p> <p>Unit 7: 50–51, 58–59, 66–67, 78–79, 89–91</p> <p>Unit 8: 44, 57–58, 61–62, 68–69, 82–83</p>
<ul style="list-style-type: none"> Analyze and evaluate the mathematical thinking and strategies of others. 	<p>These are some of the many examples.</p> <p>Unit 2: 42–43, 45–47, 51–53, 91–92, 96–98</p> <p>Unit 4: 29–31, 54–55, 76, 81–82</p> <p>Unit 7: 43–44, 50–51, 66–67, 78–79</p> <p>Unit 8: 57–58, 61–62, 73, 82–83</p>
<ul style="list-style-type: none"> Use the language of mathematics to express mathematical ideas precisely. 	<p>These are some of the many examples.</p> <p>Unit 2: 51–53, 91–92, 96–98, 114–116</p> <p>Unit 4: 29–31, 54–55, 76</p> <p>Unit 7: 43–44, 50–51, 58–59, 62–63, 66–67</p> <p>Unit 8: 44, 57–58, 61–62, 68–69, 73, 82–83</p>

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Connections	
<ul style="list-style-type: none"> Recognize and use connections among mathematical ideas. 	<p>These are some of the many examples.</p> <p>Unit 1: 214</p> <p>Unit 3: 90, 200</p> <p>Unit 6: 16–17, 43, 46–47, 125, 129–130, 133, 161–162, 167</p> <p>Unit 9: 24–27, 34–37, 45–46, 109–110</p>
<ul style="list-style-type: none"> Understand how mathematical ideas interconnect and build on one another to produce a coherent whole. 	<p>These are some of the many examples.</p> <p>Unit 1: 122–124</p> <p>Unit 7: 37, 40–44, 55, 58–60, 64, 93–96, 104, 117–118, 138</p> <p>Unit 9: 52–55, 75–78, 82, 85–86, 90</p>
<ul style="list-style-type: none"> Recognize and apply mathematics in contexts outside of mathematics. 	<p>These are some of the many examples.</p> <p>Unit 2: 26, 109–112, 114–116, 142</p> <p>Unit 4: 53–57, 63–66</p> <p>Unit 5: 35–40, 42–47, 49–51, 79–81</p>
Representation	
<ul style="list-style-type: none"> Create and use representations to organize, record, and communicate mathematical ideas. 	<p>These are some of the many examples.</p> <p>Unit 6: 27–29, 31, 47, 165, 176–177, 182, 193–194</p> <p>Unit 7: 33–34</p> <p>Unit 9: 24–27, 34–37, 45, 46, 52–55, 75–78, 85–86, 109–110</p>
<ul style="list-style-type: none"> Select, apply, and translate among mathematical representations to solve problems. 	<p>These are some of the many examples.</p> <p>Unit 6: 27–29, 31, 47, 165, 176–177, 182, 193–194</p> <p>Unit 7: 33–34</p> <p>Unit 9: 24–27, 34–37, 45, 46, 52–55, 75–78, 85–86, 109–110</p>
<ul style="list-style-type: none"> Use representations to model and interpret physical, social, and mathematical phenomena. 	<p>These are some of the many examples.</p> <p>Unit 6: 27–29, 31, 47, 165, 176–177, 182, 193–194</p> <p>Unit 7: 33–34</p> <p>Unit 9: 24–27, 34–37, 45, 46, 52–55, 75–78, 85–86, 109–110</p>

Indiana Mathematics Standards	Investigations in Number, Data, and Space
Estimation and Mental Computation	
<ul style="list-style-type: none"> • Know and apply appropriate methods for estimating the results of computations. 	Online Activity: Unit 6 Activity 50
<ul style="list-style-type: none"> • Round numbers to a specified place value. 	Online Activity: Unit 8 Activity 27
<ul style="list-style-type: none"> • Use estimation to decide whether answers are reasonable. 	Online Activity: Unit 8 Activity 57
<ul style="list-style-type: none"> • Decide when estimation is an appropriate strategy for solving a problem. 	Online Activity: Unit 8 Activity 57
<ul style="list-style-type: none"> • Determine appropriate accuracy and precision of measurement in problem situations. 	Unit 5: 32–33, 35–40, 55–56, 92
<ul style="list-style-type: none"> • Use properties of numbers and operations to perform mental computation. 	Unit 3: 227, 229 Unit 6: 37–38 Unit 8: 57, 16–17, 62, 110, 122–125
<ul style="list-style-type: none"> • Recognize when the numbers involved in a computation allow for a mental computation strategy. 	Online Activity: Unit 8 Activity 30
Technology	
<ul style="list-style-type: none"> • Technology should be used as a tool in mathematics education to support and extend the mathematics curriculum. 	Implementation Guide: 42–43 Unit 2: 39–40, 47, 55–56, 59, 63, 84, 88, 93–94, 100, 106–107, 112, 114, 125–127, 128
<ul style="list-style-type: none"> • Technology can contribute to concept development, simulation, representation, communication, and problem solving. 	Implementation Guide: 42–43 Unit 2: 39–40, 47, 55–56, 59, 63, 84, 88, 93–94, 100, 106–107, 112, 114, 125–127, 128
<ul style="list-style-type: none"> • The challenge is to ensure that technology supports-but is not a substitute for- the development of skills with basic operations, quantitative reasoning, and solving skills. 	Implementation Guide: 42–43 Unit 2: 39–40, 47, 55–56, 59, 63, 84, 88, 93–94, 100, 106–107, 112, 114, 125–127, 128

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<p>o Elementary students should learn how to perform thoroughly the basic arithmetic operations independent of the use of a calculator.</p>	<p>These are some of the many examples. Implementation Guide: 42–43 Unit 1: 104–106, 110–111, 113–116, 124, 127, 166, 206–207, 230–231, 236–238 Unit 3: 62–63, 65, 69–72, 83–84, 87, 89–92, 96, 109–110, 121, 126, 132, 222–223, 227–228 Unit 6: 37–38, 43–44, 48–49, 109, 112, 115, 118–119, 121–123, 129, 133, 136–137, 185–186</p>
<p>o The focus must be on learning mathematics, using technology as a tool rather than as an end in itself.</p>	<p>Implementation Guide: 42–43 Unit 2: 39–40, 47, 55–56, 59, 63, 84, 88, 93–94, 100, 106–107, 112, 114, 125–127, 128</p>