

A Correlation of

SCOTT FORESMAN
Investigations
IN NUMBER, DATA, AND SPACE®

to the

INDIANA
Academic Standards
Mathematics

Kindergarten

PEARSON

G/M-266_K

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**

Kindergarten

Indiana Mathematics Standards	Investigations in Number, Data, and Space
KINDERGARTEN	
Standard 1	
Number Sense and Computation	
K.1.1 Count objects in a set and use objects, pictures and numerals to represent whole numbers to 20.	These are some of the many examples. Unit 1: 48–49, 59–60, 65–66, 83–86, 98–99 Unit 2: 40–41, 48, 52, 56–59, 62, 72, 89, 92–93, 119, 124 Unit 5: 74–75, 78, 82, 100, 109, 114, 120 Unit 7: 32–35, 45–47, 51, 54, 120
K.1.2 Find the number that is one more than or one less than any whole number up to 20.	Unit 2: 139–140 Unit 6: 46-49, 68-73
K.1.3 Use correctly the words one/many, none/some/all, more/less, most/least, and equal to/more than/less than.	These are some of the many examples. Unit 2: 11–12, 95–98, 107–109, 115, 119, 129, 136, 140, 161–162 Unit 4: 13–14 Unit 6: 120, 139, 145
K.1.4 Show equivalent forms of whole numbers from 10 to 20 as groups of tens and ones using objects, diagrams and numerals.	Online Activity: Unit 6 Activity 34 Unit 2: 26-32, 48-50 Unit 6: 74-78, 124-127
K.1.5 Model addition by joining sets of objects (for any two sets with fewer than 10 objects when joined) and model subtraction by removing objects from sets for numbers less than 10.	Unit 4: 14, 18–19, 66–69, 74, 98, 101–102, 107, 110, 115, 118, 144–145, 151, 154–156, 161, 176–177 Unit 6: 14, 18–19, 31–34, 36–40, 42–43, 44, 48, 57, 60, 84, 101–104, 107–108, 113, 116–117, 121, 124–125, 126–127, 130, 139–142, 144–145, 147–150, 152–154, 156, 160–161, 180–183
K.1.6 Record and organize information and answer questions about data using objects and pictures in context.	Unit 1: 12, 95–99, 113–114, 117–119 Unit 7: 10–12, 25–26, 26–30, 44–47, 49–50, 51, 54–55, 63–65, 74, 89–91, 93, 103, 107, 116–117, 120–121, 123–125, 135–137, 139–140

Indiana Mathematics Standards	Investigations in Number, Data, and Space
Standard 2	
Algebra and Functions	
K.2.1 Verbally describe mathematical relationships involving addition and subtraction situations for numbers less than 10.	Unit 4: 13–14, 96–98, 103, 111–112, 137, 152, 172–175, 182–183 Unit 6: 13, 103–104, 111–112, 118, 120–122, 124–125, 129–130, 172–179
K.2.2 Create, extend, and give the rule for simple patterns with numbers and shapes.	Unit 3: 36–37, 41–44, 46–49, 59–61, 60–62, 66–69, 71–73, 76, 77–79, 81–82, 83–84, 88, 91–93, 96–97, 100–102, 104–105, 115–118, 120–123, 125–127, 129–131, 135–137, 139, 144–145, 147, 149–150, 152–154, 157–158, 161–164
Standard 3	
Geometry and Measurement	
K.3.1 Identify, describe, sort, compare and classify objects by shape, size, number of vertices and other attributes.	Unit 5: 23–27, 32, 38, 59–63, 79, 93–97, 99–103, 108–110, 112–115, 126–127, 130–131, 135
K.3.2 Identify the positions of objects in space and use the terms inside, outside, between, above, below, near, far, under, over, up, down, behind, in front of, next to, to the left of and to the right of.	Online Activity: Unit 5 Activity 4
K.3.3 Make direct comparisons of the length and weight of objects and recognize which object is shorter, longer, taller, lighter or heavier	Unit 2: 83–86, 89, 92, 98–99, 106–107, 115, 119, 125–127 Unit 6: 80–81, 85, 89, 92–93
K.3.4 Identify concepts of time (before/after, shorter/longer, morning, afternoon, evening, today, yesterday, tomorrow, week, month and year).	Online Activity: Unit 7 Activities 19, 28 and 29 Unit 1: 36-39 Calendar Classroom Routine Units 1-7
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 4: 66–69, 72–74, 84, 96–98, 103, 111–112, 137, 152 Unit 6: 103–104, 111–112, 118, 120–121, 126–127, 129–130, 131, 139–142, 152–154 Unit 7: 44–47, 51, 54–55, 116–117, 120–121, 135–137

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. 	<p>These are some of the many examples.</p> <p>Unit 4: 66–69, 72–74, 84, 96–98, 103, 111–112, 137, 152</p> <p>Unit 6: 103–104, 111–112, 118, 120–121, 126–127, 129–130, 131, 139–142, 152–154</p> <p>Unit 7: 44–47, 51, 54–55, 116–117, 120–121, 135–137</p>
<ul style="list-style-type: none"> • Apply and adapt a variety of appropriate strategies to solve problems. 	<p>These are some of the many examples.</p> <p>Unit 4: 66–69, 72–74, 84, 96–98, 103, 111–112, 137, 152</p> <p>Unit 6: 103–104, 111–112, 118, 120–121, 126–127, 129–130, 131, 139–142, 152–154</p> <p>Unit 7: 44–47, 51, 54–55, 116–117, 120–121, 135–137</p>
<ul style="list-style-type: none"> • Monitor and reflect on the process of mathematical problem solving. 	<p>These are some of the many examples.</p> <p>Unit 4: 66–69, 72–74, 84, 96–98, 103, 111–112, 137, 152</p> <p>Unit 6: 103–104, 111–112, 118, 120–121, 126–127, 129–130, 131, 139–142, 152–154</p> <p>Unit 7: 44–47, 51, 54–55, 116–117, 120–121, 135–137</p>
Reasoning and Proof	
<ul style="list-style-type: none"> • Recognize reasoning and proof as fundamental aspects of mathematics. 	<p>These are some of the many examples.</p> <p>Unit 1: 107, 111–112, 116–117, 121–122, 125, 136</p> <p>Unit 3: 31, 33–34, 38, 48</p> <p>Unit 4: 174–175, 183</p> <p>Unit 7: 63–65, 67–68, 72, 76–78, 82, 87, 92–95, 108, 112, 129–130, 141–142</p>
<ul style="list-style-type: none"> • Make and investigate mathematical conjectures. 	<p>These are some of the many examples.</p> <p>Unit 1: 107, 111–112, 116–117, 121–122, 125, 136</p> <p>Unit 3: 31, 33–34, 38, 48</p> <p>Unit 4: 174–175, 183</p> <p>Unit 7: 63–65, 67–68, 72, 76–78, 82, 87, 92–95, 108, 112, 129–130, 141–142</p>

Indiana Mathematics Standards	Investigations in Number, Data, and Space
<ul style="list-style-type: none"> • Develop and evaluate mathematical arguments and proofs. 	<p>These are some of the many examples.</p> <p>Unit 1: 107, 111–112, 116–117, 121–122, 125, 136</p> <p>Unit 3: 31, 33–34, 38, 48</p> <p>Unit 4: 174–175, 183</p> <p>Unit 7: 63–65, 67–68, 72, 76–78, 82, 87, 92–95, 108, 112, 129–130, 141–142</p>
<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: 107, 111–112, 116–117, 121–122, 125, 136</p> <p>Unit 3: 31, 33–34, 38, 48</p> <p>Unit 4: 174–175, 183</p> <p>Unit 7: 63–65, 67–68, 72, 76–78, 82, 87, 92–95, 108, 112, 129–130, 141–142</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 1: 31, 34–35, 46, 87–88, 97–99, 117–119, 122–123, 126</p> <p>Unit 3: 28, 36–37, 39, 41–42, 43–44, 48–49, 63–64, 71, 76, 102, 106–107, 117–118, 132–133, 139, 141–142</p> <p>Unit 5: 30–32, 37–39, 42–43, 79, 83–84, 100–103, 108–110, 114–115, 130–131</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 1: 31, 34–35, 46, 87–88, 97–99, 117–119, 122–123, 126</p> <p>Unit 3: 28, 36–37, 39, 41–42, 43–44, 48–49, 63–64, 71, 76, 102, 106–107, 117–118, 132–133, 139, 141–142</p> <p>Unit 5: 30–32, 37–39, 42–43, 79, 83–84, 100–103, 108–110, 114–115, 130–131</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 1: 31, 34–35, 46, 87–88, 97–99, 117–119, 122–123, 126</p> <p>Unit 3: 28, 36–37, 39, 41–42, 43–44, 48–49, 63–64, 71, 76, 102, 106–107, 117–118, 132–133, 139, 141–142</p> <p>Unit 5: 30–32, 37–39, 42–43, 79, 83–84, 100–103, 108–110, 114–115, 130–131</p>

Indiana Mathematics Standards	Investigations in Number, Data, and Space
<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 1: 31, 34–35, 46, 87–88, 97–99, 117–119, 122–123, 126</p> <p>Unit 3: 28, 36–37, 39, 41–42, 43–44, 48–49, 63–64, 71, 76, 102, 106–107, 117–118, 132–133, 139, 141–142</p> <p>Unit 5: 30–32, 37–39, 42–43, 79, 83–84, 100–103, 108–110, 114–115, 130–131</p>
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: 83–86, 101, 108, 113, 117, 122–123, 135, 142</p> <p>Unit 4: 97, 103</p> <p>Unit 6: 75–77, 81, 85, 89, 93, 150</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 5: 70–72, 75, 78, 82–84, 122–123, 126, 130, 134</p> <p>Unit 6: 75–77, 81, 85, 89, 93, 150</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 5: 23–25, 30, 37, 48, 51, 59–62, 78, 93–96, 109–110, 133, 144–145</p> <p>Unit 7: 76–80, 82, 87, 108, 109–110, 112</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 1: 101–104, 108, 113, 122–123, 142–143</p> <p>Unit 2: 66–70, 72, 86, 89, 92, 98, 119</p> <p>Unit 3: 37–38, 48, 62–64, 77–79, 83–84, 91–93, 135–137</p> <p>Unit 4: 61–63, 70</p> <p>Unit 6: 14, 30, 36–40, 44, 47–48, 75–77, 81, 85, 89, 93, 122, 126, 139–142, 144–145, 150, 152–154, 180–183</p> <p>Unit 7: 26–30, 51–52, 116–117</p>

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<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 1: 101–104, 117, 122–123, 142–143</p> <p>Unit 2: 66–70, 72, 86, 89, 92, 98, 119</p> <p>Unit 3: 37–38, 48, 71–73, 77–79, 91–93, 135–137</p> <p>Unit 4: 61–63, 74</p> <p>Unit 6: 14, 30, 36–40, 44, 47–48, 75–77, 81, 85, 89, 93, 122, 126, 139–142, 144–145, 150, 152–154, 160–161</p> <p>Unit 7: 26–30, 39–42, 51–52</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 1: 101–104, 108, 113, 117, 142–143</p> <p>Unit 2: 66–70, 89, 92, 98, 119</p> <p>Unit 3: 48, 62–64, 71–73, 83–84, 91–93</p> <p>Unit 4: 61–63, 70, 74</p> <p>Unit 6: 14, 30, 36–40, 44, 47–48, 75–77, 81, 85, 89, 93, 122, 126, 139–142, 144–145, 160–161, 180–183</p> <p>Unit 7: 26–30, 39–42, 116–117</p>
Estimation and Mental Computation	
<ul style="list-style-type: none"> • Know and apply appropriate methods for estimating the results of computations. 	<p>These activities prepare children to meet this standard.</p> <p>Unit 4: 59–63, 70, 74</p>
<ul style="list-style-type: none"> • Round numbers to a specified place value. 	<p>Rounding is not taught in the Kindergarten program.</p>
<ul style="list-style-type: none"> • Use estimation to decide whether answers are reasonable. 	<p>Unit 2: 34–36, 41, 72, 95–98, 107–109, 115</p> <p>Unit 4: 59–63, 70, 74</p> <p>Online Activity: Unit 6 Activity 9</p>
<ul style="list-style-type: none"> • Decide when estimation is an appropriate strategy for solving a problem. 	<p>Online Activity: Unit 6 Activity 9</p>
<ul style="list-style-type: none"> • Determine appropriate accuracy and precision of measurement in problem situations. 	<p>Unit 2: 83–86, 89, 90, 92, 98–99, 106–107, 115, 119, 125–127, 160, 168–171</p> <p>Unit 4: 12, 29–32, 34–36, 39–43, 46–47, 49–51, 63–64, 70, 74, 169, 181</p> <p>Unit 6:</p>
<ul style="list-style-type: none"> • Use properties of numbers and operations to perform mental computation. 	<p>Unit 4: 77, 79, 97, 155, 174–175, 178, 179, 182</p> <p>Unit 6: 18–19, 69, 84, 103, 108–109, 114, 174</p>

Indiana Mathematics Standards	Investigations in Number, Data, and Space
<ul style="list-style-type: none"> Recognize when the numbers involved in a computation allow for a mental computation strategy. 	<p>Unit 4: 101–102, 107, 110, 115, 118, 176–177 Unit 6: 174</p>
Technology	
<ul style="list-style-type: none"> Technology should be used as a tool in mathematics education to support and extend the mathematics curriculum. 	<p>Implementation Guide: 32–33 Unit 5: 11, 34–37, 48, 52, 62, 66–67, 75, 78, 81–83, 100, 108, 114, 119, 123, 126, 130, 138–141</p>
<ul style="list-style-type: none"> Technology can contribute to concept development, simulation, representation, communication, and problem solving. 	<p>Implementation Guide: 32–33 Unit 5: 11, 34–37, 48, 52, 62, 66–67, 75, 78, 81–83, 100, 108, 114, 119, 123, 126, 130, 138–141</p>
<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 problem solving skills. 	<p>Implementation Guide: 32–33 Unit 5: 11, 34–37, 48, 52, 62, 66–67, 75, 78, 81–83, 100, 108, 114, 119, 123, 126, 130, 138–141</p>
<ul style="list-style-type: none"> Elementary students should learn how to perform thoroughly the basic arithmetic operations independent of the use of a calculator. 	<p>These are some of the many examples. Implementation Guide: 32–33 Unit 4: 69, 73, 77, 97, 155, 172–174, 178–179, 182 Unit 6: 69, 75, 84, 88–89, 103–104, 108–109, 111–112, 114, 116, 144, 174–175</p>
<ul style="list-style-type: none"> The focus must be on learning mathematics, using technology as a tool rather than as an end in itself. 	<p>Implementation Guide: 32–33 Unit 5: 11, 34–37, 48, 52, 62, 66–67, 75, 78, 81–83, 100, 108, 114, 119, 123, 126, 130, 138–141</p>