



Money skills you need for life.

**Hands on Banking®**



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## **How Hands on Banking® / El futuro en tus manos® Aligns with Alaska Education Standards**

The *Hands on Banking* program is helping students across the United States grasp important mathematics concepts while gaining valuable skills for life. The curriculum aligns with national and state principles and standards for mathematics, reading, and economics. All units and lessons are grade-level appropriate and are available in both English and Spanish.

The **No Child Left Behind Act** is a federal law designed to improve the academic achievement of all students, particularly those who are minorities, disabled, economically disadvantaged, or have limited English proficiency. The Act requires teachers of mathematics to provide all students with equal opportunities to excel and the mathematical skills and knowledge they need to actively participate in American society. Consistent with the objectives of the No Child Left Behind Act, the *Hands on Banking / El futuro en tus manos* curriculum includes supplemental materials for grade levels 4-12 that is also aligned with both state and national educational standards for mathematics, reading, and economics.

Specifically, *Hands on Banking* Teaching Guides coordinate with:

- *Alaska Content Standards, Mathematics*, (2006)
- *Alaska Mathematics Performance Standards* (2006)
- *Alaska Content Standards, Government and Citizenship*, (2006)
- *Alaska Content Standards, English/ Language Arts* (2006)
- *Alaska Reading Performance Standards* (2006)
- *Alaska Writing Performance Standards* (2006)
- *Principles and Standards for School Mathematics* compiled by the National Council for Teachers of Mathematics (2000)
- *National Standards in K-12 Education*, Jumpstart Coalition for Personal Financial Literacy (2007)
- *Voluntary National Content Standards in Economics*, National Council on Economic Education and National Association of Economics Educators and the Foundation for Teaching Economics (2010)
- *Standards for the English Language Arts*, sponsored by the National Council of Teachers of English and the International Reading Association (1996)
- *Economic and Personal Finance and Marketing Standards*, Business Education Standards from National Business Education Association from Securities Industry Foundation for Economic Education (2002)
- Department of Defense Education Activity (DODEA) *Curriculum Standards for Mathematics, Reading, and Social Studies. "Teaching the children of America's military families worldwide."* (2009)

We encourage teachers to use the connections below as starting points. Please refer to your own school, district, or local, standards to determine the appropriateness of individual units and lessons for your students.

**Connections between *Hands on Banking* and Content Standards for Alaska Students, Math K-12 (2006) and Alaska Mathematics Performance Standards (2006)**

**Standard A: Content Standard A:**

Mathematical facts, concepts, principles, and theories

**Numeration:**

Understand and use numeration.

**Understand and Use Numeration**

**Grade 3**

- M1.1.2 Use, model, and identify place value positions of 1's, 10's, and 100's.
- M1.1.5 Identify, model, and label simple fractions, describing and defining them as equal parts of a whole, a region, or a set.

**Grades 4-6**

- M1.2.2 Use, model, and identify place value positions from 0.001 to 1,000,000.
- M1.2.5 Model and explain the process of adding and subtracting fractions with common denominators and decimals that represent money.

**Grade 5**

- M1.2.3 Model and explain the processes of multiplication and division. Describe the relationships among the four basic operations.
- M1.2.5 Model and explain the process of adding and subtracting fractions with common denominators and decimals that represent money.
- Numeration (N): Understand and use numeration M1.2.5 Model and explain the process of adding and subtracting fractions with common denominators and decimals that represent money.

**Grade 8**

- M1.2.3 The student demonstrates conceptual understanding of mathematical operations by [using models, explanations, number lines, real-life situations L] describing or illustrating the effects of arithmetic operations on rational numbers (percents)

**Understanding Meaning of Operations**

**Grade 4**

- M3.2.5 Find equivalent fractions. Convert between fractions and mixed numbers.

**Measurement**

Select and use systems, tools, and unit of measurement

**Grade 3**

- M2.1.5 Identify coins, their value, and the value of given sets of coins.
- MEA-5 The student demonstrates understanding of measurable attributes by identifying coins, their value, or the value of a set of coins
- M2.2.6 Read, write, and use money notation, determining possible combinations of coins and bills to equal given amounts; count back change for any given situation.
- MEA-9 The student demonstrates ability to use measurement techniques using pictorial representations [or manipulatives L] in real-world contexts by counting back change from \$1.00

#### **Grade 4**

- M2.2.6 Read, write, and use money notation, determining possible combinations of coins and bills to equal given amounts; count back change for any given situation.
- MEA-9 The student demonstrates ability to use measurement techniques using pictorial representations [or manipulatives L] in real-world contexts by simulating multiple purchases and calculating the amount of change from a given bill(s) up to \$50.00

#### **Grade 5**

- M2.2.6 Read, write, and use money notation, determining possible combinations of coins and bills to equal given amounts; count back change for any given situation.
- MEA-6 The student demonstrates ability to use measurement techniques by determining possible combinations of coins and bills to given amounts
- M2.2.6 Read, write, and use money notation, determining possible combinations of coins and bills to equal given amounts; count back change for any given situation.
- MEA-7 The student demonstrates ability to use measurement techniques by simulating multiple purchases and calculating the amount of change from given bills up to \$100.00

#### **Estimation and Computation**

#### **Grade 3**

- M3.1.1 Make reasonable estimates of how many and how much; estimate the results of simple addition and subtraction problems.
- E&C-2 The student determines reasonable answers to real-life situations, paper/pencil computations, or calculator results by estimating the results of simple addition and subtraction problems up to 1,000
- M3.1.4 Model multiplication as repeated addition and grouping objects; model division as sharing equally and grouping objects.
- E&C-5 The student accurately solves problems (including real-world situations) by using repeated addition to model multiplication with whole numbers with products to 25
- E&C-6 The student accurately solves problems (including real-world situations) by using grouping or sharing equally to model division with whole numbers to 25

#### **Grade 4**

- M3.2.1 Describe and use a variety of estimation strategies including rounding to the appropriate place value, multiplying by powers of 10, and using front-end estimation to check the reasonableness of solutions.
- E&C-1 The student determines reasonable answers to real-life situations, paper/pencil computations, or calculator results by identifying or using [a variety of L] strategies (e.g., rounding to appropriate place value, multiplying by powers of ten, using front-end estimation) to estimate the results of whole number addition or subtraction computations to 10,000, or simple multiplication or division
- M3.2.2 Recall and use basic multiplication and division facts orally and with paper and pencil without a calculator.
- E&C-2 The student accurately solves problems (including real-world situations) by recalling basic multiplication facts, products to 100, and corresponding division facts efficiently
- M3.2.3 Add and subtract whole numbers, fractions with common denominators to 12, and decimals, including money amounts, using models and algorithms.
- E&C-3 The student accurately solves problems (including real-world situations) by adding or subtracting three-digit whole numbers

- M3.2.4 Multiply and divide multi-digit whole numbers by 2-digit numbers, limiting the 2-digit divisors to those that end in 0; multiply and divide decimals that represent money by whole numbers.
- E&C-4 The student accurately solves problems (including real-world situations) by multiplying two-digit numbers by single-digit numbers
- E&C-5 The student accurately solves problems (including real-world situations) by adding fractions with like denominators to 12

## **Grade 5**

- M3.2.1 Describe and use a variety of estimation strategies including rounding to the appropriate place value, multiplying by powers of 10, and using front-end estimation to check the reasonableness of solutions.
- E&C-1 The student determines reasonable answers to real-life situations, paper/pencil computations, or calculator results by identifying or using [a variety of L] strategies (e.g., rounding to appropriate place value, multiplying by powers of ten, using front-end estimation to estimate the results of addition or subtraction computations from tenths to 100,000, including money, or simple multiplication or division
- M3.2.2 Recall and use basic multiplication and division facts orally and with paper and pencil without a calculator.
- E&C-2 The student accurately solves problems (including real-world situations) by recalling basic multiplication facts, products to 144, and corresponding division facts efficiently
- M3.2.3 Add and subtract whole numbers, fractions with common denominators to 12, and decimals, including money amounts, using models and algorithms.
- E&C-3 The student accurately solves problems (including real-world situations) by adding or subtracting four digit whole numbers, fractions with like denominators to 12, or decimals involving money
- M3.2.4 Multiply and divide multi-digit whole numbers by 2-digit numbers, limiting the 2-digit divisors to those that end in 0; multiply and divide decimals that represent money by whole numbers.
- E&C-4 The student accurately solves problems (including real-world situations) by multiplying two-digit whole numbers by two-digit numbers or dividing three-digit whole numbers by single-digit numbers

## **Grade 6**

- M3.2.1 Describe and use a variety of estimation strategies including rounding to the appropriate place value, multiplying by powers of 10, and using front-end estimation to check the reasonableness of solutions.
- E&C-1 The student determines reasonable answers to real-life situations, paper/pencil computations, or calculator results by identifying or using [a variety of L] strategies (e.g., truncating, rounding to compatible numbers) to estimate the results of addition, subtraction or multiplication from thousandths to millions or simple division
- M3.2.2 Recall and use basic multiplication and division facts orally and with paper and pencil without a calculator.
- E&C-2 The student accurately solves problems (including real-world situations) by recalling basic addition, subtraction, multiplication, and division facts efficiently
- M3.2.3 Add and subtract whole numbers, fractions with common denominators to 12, and decimals, including money amounts, using models and algorithms.
- E&C-3 The student accurately solves problems (including real-world situations) by adding or subtracting whole numbers, fractions with unlike denominators to 12, or decimals to the hundredths place

- M3.2.4 Multiply and divide multi-digit whole numbers by 2-digit numbers, limiting the 2-digit divisors to those that end in 0; multiply and divide decimals that represent money by whole numbers.
- E&C-4 The student accurately solves problems (including real-world situations) by multiplying whole numbers by two- or three-digit numbers, dividing three-digit numbers by one- or two-digit numbers, or multiplying or dividing decimals that represent money by whole numbers, or multiplying or dividing proper fractions.

### **Grade 7**

- M3.3.1 Apply, explain, and assess the appropriateness of a variety of estimation strategies including truncating and rounding to compatible numbers.
- E&C-1 The student solves problems (including real-world situations) using estimation by identifying or using [a variety of L] strategies, including truncating, rounding, front-end estimation, compatible numbers, to check for reasonableness of solutions.
- E&C-2 The student solves problems (including real-world situations) using estimation by comparing results of different strategies.

### **Computation:**

#### **Grade 9**

The student accurately solves problems (including real-world situations) by

- E&C-2 adding or subtracting rational numbers including integers with whole number exponents (M3.4.2)
- E&C-3 multiplying or dividing rational numbers including integers with whole number exponents (M3.4.3)
- E&C-4 determining rate by using ratio and proportion (M3.4.5)

#### **Grade 10**

The student accurately solves problems (including real-world situations) by

- E&C-3 solving problems involving percent increase or decrease (M3.4.5)

### **Content Standards B, C, D, and E: Process skills and abilities**

Applying conceptual knowledge and skills as designated in all strands of Content Standard A by problem solving, communicating, reasoning, and making connections.

### **Problem Solving**

#### **Grade 3**

- M7.1.2 Develop and apply strategies including guess and check, modeling and acting out, drawings, and extending patterns to solve a variety of problems.
- PS-1 The student demonstrates an ability to problem solve by selecting and applying an appropriate strategy (e.g., guess and check, draw a picture, make a model, extend a pattern) to solve a variety of problems.
- M8.1.1 Translate problems from everyday language into math language and symbols.
- M8.1.2 Use manipulatives, models, pictures, and language to represent and communicate mathematical ideas.
- M8.1.3 Use everyday language to explain thinking about problem solving strategies and solutions to problems.
- PS-2 The student communicates his or her mathematical thinking by representing mathematical problems using manipulatives, models, pictures, and/or everyday language; or using everyday language to explain thinking about the problem-solving strategies and solutions to problems.

- M9.1.3 Explain why a prediction, estimation, or solution is reasonable.
- M10.1.2 Apply mathematical skills and processes to situations with self and family.
- PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as literature, self, and family.

#### **Grade 4**

- M7.2.2 Select and apply a variety of strategies including making a table, chart or list, drawing pictures, making a model, and comparing with previous experience to solve problems.
- PS-1 The student demonstrates an ability to problem solve by selecting and applying appropriate strategy (e.g., lists, guess and check, extended patterns) to solve a variety of problems.
- M7.2.3 Explain and verify results of the original problem and apply what was learned to new situations.
- PS-2 The student demonstrates an ability to problem solve by explaining and verifying results of an original problem and applying what was learned to new situations.
- M8.2.1 Use the mathematical vocabulary appropriate to the problem.
- M8.2.2 Represent mathematical and practical situations using concrete, pictorial, and symbolic representation.
- M8.2.3 Organize and communicate mathematical problem-solving strategies and solutions to problems.
- PS-3 The student communicates his or her mathematical thinking by representing problems using mathematical language including concrete, pictorial, and/or symbolic representation; or by organizing and communicating mathematical problem-solving strategies and solutions to problems.
- M10.2.1 Apply mathematical processes to social studies.
- M10.2.2 Apply mathematical skills and processes to situations with friends and school.
- PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as social studies, friends, and school.

#### **Grade 5**

- M7.2.2 Select and apply a variety of strategies including making a table, chart or list, drawing pictures, making a model, and comparing with previous experience to solve problems.
- PS-1 The student demonstrates an ability to problem solve by selecting and applying an appropriate strategy (e.g., tables, charts, lists, or graphs; guess and check; extended patterns; making a model) to solve a variety of problems and verify the results.
- M7.2.3 Explain and verify results of the original problem and apply what was learned to new situations.
- PS-2 The student demonstrates an ability to problem solve by explaining and verifying results of an original problem and applying what was learned to new situations.
- M8.2.1 Use the mathematical vocabulary appropriate to the problem.
- M8.2.2 Represent mathematical and practical situations using concrete, pictorial, and symbolic representation.
- M8.2.3 Organize and communicate mathematical problem-solving strategies and solutions to problems.
- PS-3 The student communicates his or her mathematical thinking by representing problems using mathematical language including concrete, pictorial, and/or symbolic representation; or organizing and communicating mathematical problem-solving strategies and solutions using mathematical language.

## **Grade 6**

- M7.2.2 Select and apply a variety of strategies including making a table, chart or list, drawing pictures, making a model, and comparing with previous experience to solve problems.
- M7.3.2 Select, modify, and apply a variety of problem-solving strategies including graphing, inductive and deductive reasoning, Venn diagrams, and spreadsheets.
- PS-1 The student demonstrates an ability to problem solve by selecting, modifying, and applying appropriate problem-solving strategies (e.g., graphing, Venn diagrams, tables, lists, working backwards, guess and check, or extending a pattern) and verifying results
- M7.3.3 Evaluate, interpret, and justify solutions to problems.
- PS-2 The student demonstrates an ability to problem solve by evaluating and interpreting solutions to problems.
- M8.2.1 Use the mathematical vocabulary appropriate to the problem.
- M8.2.2 Represent mathematical and practical situations using concrete, pictorial, and symbolic representation.
- M8.2.3 Organize and communicate mathematical problem-solving strategies and solutions to problems.
- PS-3 The student communicates his or her mathematical thinking by representing problems using mathematical language including concrete, pictorial, and/or symbolic representation; or using appropriate vocabulary, symbols, and technology to explain mathematical solutions.

## **Grade 8**

- M3.3.1 Apply, explain, and assess the appropriateness of a variety of estimation strategies including truncating and rounding to compatible numbers.
- E&C-1 The student solves problems (including real-world situations) using estimation by applying and assessing the appropriateness of a variety of estimation strategies.
- M3.3.3 Add and subtract fractions, decimals, and percents.
- M3.3.4 Multiply and divide rational numbers in various forms including fractions, decimals, and percents.
- E&C-3 The student accurately solves problems (including real-world situations) by using percents and percentages (e.g., tax, discount).
- M3.3.5 Convert between equivalent fractions, decimals, percents, and proportions. Convert from exact to decimal representations of irrational numbers.
- E&C-4 The student accurately solves problems (including real-world situations) by converting between equivalent fractions, decimals, or percents.

## **Connections between *Hands on Banking* and Alaska Content Standards, English/ Language Arts (2006)**

### **Standard B:**

**A student should be a competent and thoughtful reader, listener, and viewer of literature, technical materials, and a variety of other information.**

A student who meets the content standard should:

- 1) comprehend meaning from written text and oral and visual information by applying a variety of reading, listening, and viewing strategies; these strategies include phonic, context, and vocabulary cues in reading, critical viewing, and active listening;
- 2) reflect on, analyze, and evaluate a variety of oral, written, and visual information and experiences, including discussions, lectures, art, movies, television, technical materials, and literature;

3) relate what the student views, reads, and hears to practical purposes in the student's own life, to the world outside, and to other texts and experiences.

### **Performance Standards: Reading – Grades 3-6**

- R1: The student uses strategies to decode or comprehend meaning of words in text.
- R1.2: Comprehend literal meaning from text.
- R1.5: The student demonstrates an understanding of main idea.
- R1.6: The student follows written directions.

#### **Grade 3**

- R1.4 Retell or restate information
- R1.4 b. Restate information after reading a text.
- E.B.1.1.4.2 The student restates/summarizes information by restating information after reading a text or identifying accurate restatements
- R1.5 Identify main idea
- R1.5 Identify the main idea of a passage.
- E.B.1 1.5.1 The student demonstrates an understanding of main idea by identifying the main idea or central concept in various types of texts

#### **Grade 4**

- R2.4 Retell or restate information
- R2.4 b. Restate and summarize information or ideas from a text.
- E.B.3 2.4.2 The student restates/summarizes information by restating and summarizing information after reading a text or identifying accurate restatements and summaries
- E.D.3 2.5.2 The student demonstrates an understanding of main idea by Locating information in narrative and informational text to answer questions related to main ideas or key details
- R2.5 Support main idea
- R2.5 Locate evidence in the text and from related experiences to support understanding of a main idea.
- E.D.2.2.5.1 The student demonstrates an understanding of main idea by identifying the main idea or central concept in various types of texts
- E.D.4.2.5.3 The student demonstrates an understanding of main idea by identifying or describing related experiences to support understanding of a main idea

#### **Grade 5**

- R2.4 Retell or restate information
- R2.4 b. Restate and summarize information or ideas from a text.
- E.B.4 2.4.1 The student restates/summarizes information by restating and summarizing main ideas or events in correct sequence after reading a text (e.g., paraphrasing, constructing a topic outline, using graphic organizers) or identifying accurate restatements and summaries of main ideas or events or generalizations of a text
- R2.5 Support main idea
- R2.5 Locate evidence in the text and from related experiences to support understanding of a main idea.
- E.D.5 2.5.1 The student demonstrates an understanding of main idea by identifying the main idea or central concept in various types of texts
- E.D.6 2.5.2 The student demonstrates an understanding of main idea by locating information in narrative and informational text to answer questions related to main ideas or key details

## **Grade 6**

- R2.4 Retell or restate information
- R2.4b. Restate and summarize information or ideas from a text.
- E.B.5 2.4.1 The student restates/summarizes information by restating and summarizing main ideas or events in correct sequence after reading a text (e.g., paraphrasing, constructing a topic outline, using graphic organizers) or identifying accurate restatements and summaries of main ideas or events or generalizations of a text
- R2.5 Support main idea
- R2.5 Locate evidence in the text and from related experiences to support understanding of a main idea.
- E.D.82.5.1 The student demonstrates an understanding of main idea by identifying the main idea or central concept in various types of texts
- E.D.92.5.2 The student demonstrates an understanding of main idea by locating information in narrative and informational text to answer questions related to main ideas or key details

## **Grade 7**

- R3.3 Restate or summarize
- R3.3 Restate and summarize information or ideas from a text and connect new information or ideas to prior knowledge and experience.
- E.B.3 3.3.1 The student restates/summarizes and connects information by restating and summarizing main ideas or events, in correct sequence, after reading a text (e.g., paraphrasing, constructing a topic outline, charting or mapping main ideas or events) or identifying accurate restatements and summaries of main ideas or events or generalizations of a text
- E.B.4 3.3.2 The student restates/summarizes and connects information by connecting information within a text by making inferences and/or drawing conclusions across texts or other summarized information
- R3.4 Assess support of main idea
- R3.4 Clarify and connect main ideas and concepts, identify their relationship to other sources and related topics, and provide supporting details.
- E.B.2 3.4.1 The student demonstrates understanding of main ideas/arguments by identifying or explaining the main ideas in various types of texts (i.e., recognizing or developing appropriate titles, generalizations, assertions)
- E.B.3 3.4.2 The student demonstrates understanding of main ideas/arguments by locating information in narrative and informative text to answer questions related to main ideas or key details

## **Grade 8**

- R3.3 Restate or summarize
- R3.3 Restate and summarize information or ideas from a text and connect new information or ideas to prior knowledge and experience
- E.B.6 3.3.1 The student restates/summarizes and connects information by restating and summarizing main ideas or events, in correct sequence, after reading a text (e.g., paraphrasing, constructing a topic outline, charting or mapping main ideas or events) or identifying accurate restatements and summaries of main ideas or events or generalizations of a text.
- E.B.7 3.3.2 The student restates/summarizes and connects information by connecting information within a text by making inferences and/or drawing conclusions across texts or other summarized information\*
- R3.4 Assess support of main idea
- R3.4 Clarify and connect main ideas and concepts, identify their relationship to other sources and related topics, and provide supporting details

- E.B.6 3.4.1 The student demonstrates understanding of main ideas/arguments by identifying or explaining the main ideas in various types of texts (i.e., recognizing or developing appropriate titles, generalizations, assertions)
- E.B.7 3.4.2 The student demonstrates understanding of main ideas/arguments by locating information in narrative and informative text to answer questions related to main ideas or key details

**The student uses strategies to decode or comprehend the meaning of words in texts.**

- R3.1 Apply knowledge of word origins, root words, structure and context clues; and use dictionaries and glossaries to determine the meaning of new words and to comprehend text. E.B.1
- R4.1 Apply knowledge of syntax, roots, and word origins, and use context clues and reference materials to determine the meaning of new words and to comprehend text. E.B.1

**Grades 7--10**

R4.4 Follow multi-step directions

**Grade 9**

- 4.1.1 Determining meanings of unfamiliar words in context using knowledge of sounds, syllables, derivational roots and affixes, including cultural derivations (e.g., the root of photography and photosynthesis, kayak)
- 4.1.4 Determining the meaning of words in context including [connotation/denotation L], use of precise or technical vocabulary, content-specific vocabulary (symbiosis, suffrage, apartheid), or multiple meanings (e.g., Raven as a character in a myth and also representative of Native Alaskan notion of “trickster”)

**Grade 10**

- 4.1.1 Determining meanings of unfamiliar words in context using knowledge of sounds, syllables, derivational roots and affixes, including cultural derivations (e.g., the root of photography and photosynthesis, kayak)
- 4.1.4 Determining the meaning of words in context including [connotation/denotation L], use of precise or technical vocabulary, content-specific vocabulary (symbiosis, suffrage, apartheid), or multiple meanings (e.g., the James Joyce character Stephen Dedalus–Dedalus is a character and reference to Greek mythological figure)

**Connections between *Hands on Banking* and Alaska Content Standards, Technology (2006)**

**Standard A:**

**A student should be able to operate technology-based tools.**

A student who meets the content standard should:

- 1) use a computer to enter and retrieve information;
- 2) use technological tools for learning, communications, and productivity;

**Standard C:**

**A student should be able to use technology to explore ideas, solve problems, and derive meaning.**

A student who meets the content standard should:

- use technology to observe, analyze, interpret, and draw conclusions;
- solve problems both individually and with others; and
- create new knowledge by evaluating, combining, or extending information using multiple technologies.

**We congratulate you on your support of financial education in your schools, and thank you for your interest in our program. We welcome your questions and comments, or if you would like additional information, please contact us at [hobinfo@wellsfargo.com](mailto:hobinfo@wellsfargo.com)**