

Mathematics	Statistics and Probability
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This LAUSD Curriculum Map was written, developed and edited by math teachers from schools across the district that joined together as the Math Leaders Collaborative. The Math Leaders Collaborative were guided by mastery learning and grading as the theory and structure for the assessments within this map. To use the resources in this map, it is highly recommended that teachers take the **Curriculum Map Schoology Course** to better understand the elements within this map. This Schoology course will go in depth about the Curriculum Map, the Learning Targets and the Assessments and Resources. To enroll for this course, use the following Schoology Course Access Code: **C64SJDF2ZG27C**.

LAUSD Teaching and Learning Framework Focus Elements

3b2: Teacher uses intentional, differentiated strategies to engage all students in discussion, attempting gradual release from teacher-directed to student-initiated conversation. Students participate in intellectually challenging discussions.

3c1: Instructional projects, activities, and assignments are aligned to the instructional standards, require higher levels of thinking, are culturally relevant, and may include real-world application. Most students are cognitively engaged constructing their own understanding and exploring content. The learning activities are differentiated, as necessary, to meet the learning needs of student subgroups.

3d3: Teacher’s feedback to students is timely, frequent, relevant, accurate, and aligned to the instructional outcome. Specific feedback guides students to revise and improve their work.

TIME	CONTENT, LANGUAGE, AND ISTE STANDARDS	LEARNING TARGETS	ASSESSMENTS	CURRICULUM UNIT AND RESOURCE CONNECTIONS
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Mathematics

Statistics and Probability

4 weeks

Unit 1

HSS.ID.A.1*
HSS.ID.A.2*
HSS.ID.A.3*

Mathematical Practices:
1, 4, 5

Dot plots, Histograms, Stem Plots,
Frequency Distributions, Ogive, Box
Plots, Shape, Center, Spread



I can summarize, represent, and interpret data on a single count or measurement variable.

Understanding Basic Statistics

- Chapters 1 – 3 Cumulative Review pages 137 – 139

Statistics and Probability with Applications Stats Medic

- Quiz 1.1 - 1.5
- Quiz 1.6 - 1.9
- Chapter 1 Test

Elementary Statistics: Picturing the World

- Chapter 2 Quiz
- Chapter 2 Test
- Chapter 1 & 2 Cumulative Review

Illustrative Math

- [Hair Cut Costs](#)
- [SAT Scores](#)
- [Identifying Outliers](#)

Inside Mathematics

- [Through the Grapevine](#)

Mastery Learning Assessments

- [Learning Targets](#)

Textbook Resources:

Understanding Basic Statistics

- Chapter 3 pages 86 – 136

Statistics and Probability with Applications

- Chapter 1 pages 4 – 90

Stats in Your World

- Chapter 2 – 4 pages 16 – 112

Elementary Statistics: Picturing the World

- Chapter 2 39-119, 122
- Using Technology in Statistics: Summarizing Data

Extra Notes

- [Exploring Data](#)

Khan Academy

- [Creating Boxplots, Dot Plots and Histograms](#)

Stats Medic

- [Stats Medic](#)
- [Stats Medic Activities](#)

MT Science Education

- [Analyzing and Interpreting Data 1: Pendulum](#)
- [Analyzing and Interpreting Data 2: Old Faithful](#)
- [Analyzing and Interpreting Data 3: Most Average Person](#)

Map Mathshell

- [Representing Data with Box Plots](#)

Mathematics

Statistics and Probability

Against All Odds: Videos and Activities

- [Stemplots](#)
- [Histograms](#)
- [4 Measures of Center](#)
- [Box Plots](#)

Stat Trek

- [Stemplots](#)

C Palms

- [Archery: Box Plot](#)

Census.gov




- [Creating and Interpreting Histograms](#)

Websites for additional resources:

- [Gapminder](#)
- [Ted talks](#)
- [Open Middle](#)
- [Teacher.Desmos](#)
- [Short lecture on Histogram](#)
- [Graphic organizers for ELL](#)
- [Robert Kaplinsky \(interesting subjects to make graphs about](#)
- [Types of statistics - tree graph](#)

Mathematics

Statistics and Probability

<p>5 weeks</p> <p>Unit 2</p>	<p>HSS.ID.B.5 HSS.ID.B.6 HSS.ID.B.6.A HSS.ID.B.6.B HSS.ID.B.6.C HSS.ID.C.7 HSS.ID.C.8 HSS.ID.C.9</p> <p>Mathematical Practices: 1, 3, 4, 5</p> <p>Scatter Plots, Least Squares Regression Line, Correlation Coefficient, Causation, Coefficient of Determination, Standard error</p>   	<p>I can summarize, represent, and interpret data on two categorical and quantitative variables and interpret linear models.</p>	<p>Understanding Basic Statistics</p> <ul style="list-style-type: none"> • Chapters 1 – 3 Cumulative Review pages 137 – 139 • Chapters 4 – 6 Cumulative Review pages 288 – 289 <p>Statistics and Probability with Applications Stats Medic</p> <ul style="list-style-type: none"> • Quiz 2.1 - 2.4 • Quiz 2.5 - 2.8 • Chapter 2 Test <p>Elementary Statistics: Picturing the World</p> <ul style="list-style-type: none"> • Chapter 9 Quiz • Chapter 9 Test • Chapter 9-10 Cumulative Review <p>Illustrative Math</p> <ul style="list-style-type: none"> • Musical Preferences • Used Subaru Foresters • Coffee and Crime • Texting and Grades <p>Mastery Learning Assessments</p> <ul style="list-style-type: none"> • Learning Targets 	<p>Textbook Resources:</p> <p><i>Understanding Basic Statistics</i></p> <ul style="list-style-type: none"> • Chapter 2 pages 40 – 85 • Chapter 4 pages 140-184 <p><i>Statistics and Probability with Applications</i></p> <ul style="list-style-type: none"> • Chapter 2 pages 95 – 169 <p><i>Stats in Your World</i></p> <ul style="list-style-type: none"> • Chapter 6 – 8 pages 137 – 217 <p><i>Elementary Statistics: Picturing the World</i></p> <ul style="list-style-type: none"> • Chapter 9 pages 469 – 501, 514-517, 519, 522 • Extra Chapter 9 pages 509-513 • Using Technology in Statistics: Linear Regression <p>Extra Notes</p> <ul style="list-style-type: none"> • Describing Relationships.pdf <p>Stats Medic</p> <ul style="list-style-type: none"> • Stats Medic • Stats Medic Activities <p>Interactivate</p> <ul style="list-style-type: none"> • Scatterplot Exploration • Rossman Chance Guess the Correlation Applet <p>Inside Mathematics</p> <ul style="list-style-type: none"> • Scatterplot – Population • Scatterplot – Snakes <p>Teach Engineering</p> <ul style="list-style-type: none"> • Linear Regression Activity: Twizzler
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Mathematics

Statistics and Probability

Against All Odds: Videos and Activities

- [Scatterplots](#)
- [Fitting Lines to Data](#)
- [Correlation](#)
- [The Question of Causation](#)

Stats Monkey

- [The Case of Missing m&m's enrichment activity](#)

Mathematics

Statistics and Probability

5 weeks

Unit 3

HSS.IC.B.6
HSS.IC.A.1
HSS.IC.B.3

Mathematical Practices:
1, 3, 4, 5

Population, Sample, Parameter,
Statistic, Types of Data, Surveys,
Experiments, Observational Studies,
Randomization, Random Number
Generator
Simulation, Sampling Techniques



I can classify data and make inferences and justify conclusions from sample surveys, experiments, and observational studies and evaluate random processes underlying statistical experiments.

Understanding Basic Statistics

- Chapters 1 – 3 Cumulative Review pages 137 – 139

Elementary Statistics: Picturing the World

- Chapter 1 Quiz
- Chapter 1 Test
- Chapter 1 & 2 Cumulative Review

Statistics and Probability with Applications Stats Medic

- Quiz 3.1 - 3.4
- Quiz 3.5 - 3.9
- Chapter 3 Test
- [Sample released questions](#)

LAUSD Curriculum Map

- [Performance Task page 14](#)

Illustrative Math

- [Strict Parents](#)
- [School Advisory Panel](#)
- [Types of Statistical Studies](#)

Mastery Learning Assessments

- [Learning Targets](#)

Textbook Resources:

Understanding Basic Statistics

- Chapter 1 pages 1 –39

Statistics and Probability with Applications

- Chapter 3 pages 181 – 256

Stats in Your World

- Chapter 1 pages 1 – 15
- Chapter 9 – 11 pages 218 – 287

Elementary Statistics: Picturing the World

- Chapter 1 pages 2 – 31, 34, 36-37
- Using Technology in Statistics: Random Sampling

Extra Notes

- [Designing Studies](#)
- [TABLE B Random digits](#)

Statistics Teacher

- [Statistics Teacher - Level of Conceptual Understanding in Statistics \(LOCUS\)](#)

Stats Medic

- [Stats Medic](#)
- [Stats Medic Activities](#)

Random.org

- [Randomness](#)

Census at School

- [Census at School](#)

Against All Odds: Videos and Activities

- [Designing Experiments](#)

Mathematics

Statistics and Probability

- [Census and Sampling](#)
- [Sample and Surveys](#)

Mathematics

Statistics and Probability

6 weeks
*End of 1st
Semester
*Begin 2nd
Semester

Unit 4

HSS.CP.A.1
HSS.CP.A.2
HSS.CP.A.3
HSS.CP.A.4
HSS.CP.A.5
HSS.CP.B.6
HSS.CP.B.7
HSS.CP.B.8
HSS.CP.B.9

Mathematical Practices:
1, 2, 4, 5

Counting Principles, Union,
Intersection, Complements, General
Addition / Multiplication Rule;
Permutation and Combination



I can use the rules of probability to compute probabilities of compound events in a uniform probability model and identify and describe independence and conditional probability and use them to interpret data.

Understanding Basic Statistics

- Chapters 4 – 6 Cumulative Review pages 288 – 289

Statistics and Probability with Applications Stats Medic

- Quiz 4.1 - 4.4
- Quiz 4.5 - 4.8
- Chapter 4 Test

Elementary Statistics: Picturing the World

- Chapter 3 Quiz
- Chapter 3 Test
- Chapter 3-5 Cumulative Review

Inside Mathematics

- [Fair Games](#)
- [Fair Games 2](#)
- [Game Show](#)
- [Friends You Can Count On](#)
- [Party Time](#)
- [Got Your Number](#)
- [Rod Trains](#)

Illustrative Math

- [Cards and Independence](#)
- [Lucky Envelopes](#)
- [Rain and Lightning](#)
- [How Do You Get to School?](#)

LAUSD Performance Task

- [CAASPP Online Practice](#)

Mastery Learning Assessments

- [Learning Targets](#)

Textbook Resources:

Understanding Basic Statistics

- Chapter 5 pages 188 – 238

Statistics and Probability with Applications

- Chapter 4 pages 261 – 329

Stats in Your World

- Chapters 12 – 14 pages 288 – 347

Elementary Statistics: Picturing the World

- Chapter 3 pages 129-183, 186
- Using Technology in Statistics: Probability

Extra Notes

- [Basic Probability](#)

Stats Medic

- [Stats Medic](#)
- [Stats Medic Activities](#)

NCTM

- [Adjustable Spinner](#)

Inside Mathematics Performance

Assessment Tasks

- [Marble Game](#)
- [Winning Spinners](#)

Engage NY

- [The General Multiplication Rule](#)
- [Counting Rules—The Fundamental Counting Principle and Permutations](#)
- [Counting Rules- Combinations](#)

Mathematics

Statistics and Probability

- [Using Permutations and Combinations to Compute Probabilities](#)

Against All Odds: Videos and Activities

- [Introduction to Probability](#)
- [Probability Models](#)

Cut the Knot

- [Cut-the-Knot: Conditional Probability](#)

Ck-12

- [Conditional Probability Principles](#)

Map Mathshell

- [Representing Conditional Probabilities 1](#)
- [Representing Conditional Probabilities 2](#)

Khan Academy

- [Conditional Probability and Independence](#)

Mathematics

Statistics and Probability

3 weeks

Unit 5

HSS.MD.A.1
HSS.MD.A.2
HSS.MD.A.3
HSS.MD.A.4

Mathematical Practices:
1, 2, 4, 5, 7

Random Variable, Discrete Probability, Continuous Probability, Binomial Distribution, Assigning Probabilities, Expected Value, Probability Distribution



I can calculate expected values and use them to solve problems.

Understanding Basic Statistics

- Chapters 4 – 6 Cumulative Review pages 288 – 289

Statistics and Probability with Applications Stats Medic

- Quiz 5.1 - 5.4
- Chapter 5 Test

Elementary Statistics: Picturing the World

- Chapter 4 Quiz
- Chapter 4 Test
- Chapter 3-5 Cumulative Review

Illustrative Math

- [Bob's Bagel Shop](#)
- [Sound Really Good \(Sort Of...\)](#)

Mastery Learning Assessments

- [Learning Targets](#)

Textbook Resources:

Understanding Basic Statistics

- Chapter 6 pages 240 – 287

Statistics and Probability with Applications

- Chapter 5.1 – 5.5 pages 331 – 374; 393 – 397

Stats in Your World

- Chapter 15 pages 348 – 374

Elementary Statistics: Picturing the World

- Chapter 4 pages 189 – 226
- Extra: Chapter 4, Sec 4.3 216-222, 227
- Using Technology in Statistics: Binomial and Discrete Distribution

Extra Notes

- [Random Variables](#)

Stats Medic

- [Stats Medic 5.1](#)
- [Stats Medic 5.2](#)
- [Stats Medic 5.3](#)
- [Stats Medic 5.4](#)
- [Stats Medic 5.5](#)

Engage NY

- [Discrete Random Variables](#)
- [Probability Distribution of Discrete Random Variables](#)
- [Expected Value of a Discrete Random Variable](#)
- [Interpreting Expected Values](#)

Mathematics

Statistics and Probability




- [Determining Discrete Probability Distributions 1](#)
- [Determining Discrete Probability Distributions 2](#)
- [Estimating Probability Distributions Empirically 1](#)
- [Estimating Probability Distributions Empirically 2](#)

Against All Odds: Videos and Activities

- [Random Variables](#)
- [Binomial Distributions](#)

Mathematics

Statistics and Probability

<p>3 weeks</p> <p>Unit 6</p>	<p>HSS.ID.A.4 HSS.MD.B.5 HSS.MD.B.5.A HSS.MD.B.5.B HSS.MD.B.6 HSS.MD.B.7</p> <p>Mathematical Practices: 1, 2, 4, 5, 7, 8</p> <p>Empirical Rule, Normal Distributions, Area Under the Curve, Normal Approximation, Sampling Distributions for Sample Proportion and Sample Means, Central Limit Theorem</p>   	<p>I can use probability to evaluate outcomes of decisions.</p>	<p>Understanding Basic Statistics</p> <ul style="list-style-type: none"> Chapters 7 – 9 Cumulative Review pages 471 – 473 <p>Statistics and Probability with Applications Stats Medic</p> <ul style="list-style-type: none"> Quiz 5.5 - 5.7 Chapter 5 Test Midterm Exam Quiz 6.1 - 6.3 Quiz 6.4 - 6.6 Chapter 6 Test <p>Elementary Statistics: Picturing the World</p> <ul style="list-style-type: none"> Chapter 5 Quiz Chapter 5 Test Chapter 3-5 Cumulative Review <p>Illustrative Math</p> <ul style="list-style-type: none"> Fred's Fun Factory But Mango is My Favorite... <p>Mastery Learning Assessments</p> <ul style="list-style-type: none"> Learning Targets 	<p>Textbook Resources:</p> <p><i>Understanding Basic Statistics</i></p> <ul style="list-style-type: none"> Chapter 7 pages 290 – 364 <p><i>Statistics and Probability with Applications</i></p> <ul style="list-style-type: none"> Chapter 5.6; 5.7 pages 375 – 392 Chapter 6 pages 399 – 449 <p><i>Stats in Your World</i></p> <ul style="list-style-type: none"> Chapter 5 pages 113 – 136 <p><i>Elementary Statistics: Picturing the World</i></p> <ul style="list-style-type: none"> Chapter 4 pages 201 – 213 Chapter 5 pages 233-289 Using Technology in Statistics: Normal Distribution <p>Extra Notes and Tables</p> <ul style="list-style-type: none"> Modeling Distributions Sampling Distributions Empirical Graph Empirical Rule ppt Table A TABLE D t distribution critical values TABLE F χ^2 distribution critical values <p>Stats Medic</p> <ul style="list-style-type: none"> Stats Medic 5.5 Stats Medic 5.6 Stats Medic 5.7 Stats Medic Chapter 6 Stats Medic Activities
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Mathematics

Statistics and Probability

Engage NY

- [Games of Chance and Expected Values 1](#)
- [Games of Chance and Expected Values 2](#)
- [Using Expected Values to Compare Strategies](#)
- [Making Fair Decisions](#)

Against All Odds: Videos and Activities

- [Normal Curves](#)
- [Normal Calculations](#)
- [Checking Assumption of Normality](#)
- [Sampling Distributions](#)

Mathematics

Statistics and Probability

7 weeks

Unit 7

HSS.IC.B.4
HSS.IC.B.5

Mathematical Practices:
1, 3, 4, 5, 6, 7, 8

Confidence Intervals, Hypothesis Tests, Type 1 and Type 2 Error



I can do hypothesis tests, find confidence intervals, make inferences and justify conclusions from statistical studies.

Understanding Basic Statistics

- Chapters 7 – 9 Cumulative Review pages 471 – 473
- Chapters 10 – 11 Cumulative Review pages 588 – 590

Statistics and Probability with Applications Stats Medic

- Quiz 7.1 - 7.3
- Quiz 7.4 - 7.6
- Chapter 7 Test
- Quiz 8.1 - 8.3
- Quiz 8.4 - 8.6
- Chapter 8 Test
- Quiz 9.1 - 9.2
- Quiz 9.3 - 9.4
- Quiz 9.5 - 9.6
- Chapter 9 Test
- Quiz 10.1 - 10.2
- Quiz 10.3 - 10.4
- Quiz 10.5 - 10.6
- Chapter 10 Test

Elementary Statistics: Picturing the World

- Ch. 6, 7, 8, 10 Quiz
- Chapter 6, 7, 8, 10 Test
- Chapter 6-8 Cumulative Review
- Chapter 9-10 Cumulative Review

Illustrative Math

- [Scratch 'n Win Blues](#)
- [The Marble Jar](#)

Mastery Learning Assessments

Textbook Resources:

Understanding Basic Statistics

- Chapters 8 – 11 pages 366 – 590

Statistics and Probability with Applications

- Chapters 7 – 10 pages 451 – 683

Stats in Your World

- Chapters 16 – 20 pages 375 – 527

Elementary Statistics: Picturing the World

- Chapter 6 - 8 pages 347-467
- Chapter 9 Sec 9.1 pages 478 – 479; 9.3 pages 498-508, 518
- Chapter 10, Sec 10.1-10.2 pages 525-548, 571- 574, 578
- Extra: Chapter 10 Sec. 10.3-10.4 pages 549- 575
- Chapter 6 Using Technology in Statistics: Confidence Interval
- Chapter 7 Using Technology in Statistics: Hypothesis Testing
- Chapter 8 Using Technology in Statistics: Hypothesis Testing 2 groups
- Chapter 10 Using Technology in Statistics: ANOVA

Stats Medic

- [Stats Medic Chapter 7](#)
- [Stats Medic Chapter 8](#)
- [Stats Medic Chapter 9](#)
- [Stats Medic Chapter 10](#)
- [Stats Medic Activities Chapter 7](#)
- [Stats Medic Activities Chapter 8](#)
- [Stats Medic Activities Chapter 9](#)
- [Stats Medic Activities Chapter 10](#)

Mathematics

Statistics and Probability

- [Learning Targets 7A](#)
- [Learning Targets 7B](#)

LAUSD Curriculum Map

- [Performance Task page 28](#)

Stats Medic Activities:

- [What is the average for chapter 6 test?](#)
- [Which way will the Hershey Kiss land?](#)

Extra Notes

- [Confidence Interval](#)
- [Testing a Claim](#)
- [Collection of formulas and conditions](#)
- [Hypothesis testing cheat sheet](#)

Against All Odds

- [Confidence Intervals](#)
- [Tests of Significance](#)
- [Small Sample Inference for One Mean](#)
- [Comparing Two Means](#)
- [Inference for Proportions](#)
- [Inference for Two-Way Tables](#)

Khan Academy

- [Hypothesis Testing and p-values](#)
- [Hypothesis Testing - One sample z test for proportions](#)
- [Hypothesis Testing - One sample test for Means \(z-test vs. t-test\)](#)

Minitab

- [Two-Sample Hypothesis Tests](#)

Flinn Scientific Bio Fax

- [Chi-Square Using m&m's](#)

Mathematics

Statistics and Probability

Amstat

- [Chi-Square Test: The Case of the Careless Zookeeper](#)

Graphic Organizers

- [Inference](#)

Mathematics	Statistics and Probability
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