Subject	**Chapter 111. Mathematics**
Course Title	**§111.47. Statistics, Beginning with School Year 2015-2016**

(a) General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra I

(b) Introduction.

(1) The desire to achieve educational excellence is the driving force behind the Texas essential knowledge and skills for mathematics, guided by the college and career readiness standards. By embedding statistics, probability, and finance, while focusing on fluency and solid understanding, Texas will lead the way in mathematics education and prepare all Texas students for the challenges they will face in the 21st century.

(2) The process standards describe ways in which students are expected to engage in the content. The placement of the process standards at the beginning of the knowledge and skills listed for each grade and course is intentional. The process standards weave the other knowledge and skills together so that students may be successful problem solvers and use mathematics efficiently and effectively in daily life. The process standards are integrated at every grade level and course. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students will select appropriate tools such as real objects, manipulatives, paper and pencil, and technology and techniques such as mental math, estimation, and number sense to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

(3) In Statistics, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra I. Students will broaden their knowledge of variability and statistical processes. Students will study sampling and experimentation, categorical and quantitative data, probability and random variables, inference, and bivariate data. Students will connect data and statistical processes to real-world situations. In addition, students will extend their knowledge of data analysis.

(4) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and Skills.

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(A) apply mathematics to problems arising in everyday life, society, and the workplace	(i) apply mathematics to problems arising in everyday life
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(A) apply mathematics to problems arising in everyday life, society, and the workplace	(ii) apply mathematics to problems arising in society
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(A) apply mathematics to problems arising in everyday life, society, and the workplace	(iii) apply mathematics to problems arising in the workplace
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution	(i) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution	(ii) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the reasonableness of the solution

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems	(i) select tools, including real objects as appropriate, to solve problems
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems	(ii) select tools, including manipulatives as appropriate, to solve problems
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems	(iii) select tools, including paper and pencil as appropriate, to solve problems
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems	(iv) select tools, including technology as appropriate, to solve problems
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems	(v) select techniques, including mental math as appropriate, to solve problems

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems	(vi) select techniques including estimation as appropriate, to solve problems
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems	(vii) select techniques, including number sense as appropriate, to solve problems
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(i) communicate mathematical ideas using multiple representations, including symbols as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(ii) communicate mathematical ideas using multiple representations, including diagrams as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(iii) communicate mathematical ideas using multiple representations, including graphs as appropriate

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(iv) communicate mathematical ideas using multiple representations, including language as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(v) communicate mathematical reasoning using multiple representations, including symbols as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(vi) communicate mathematical reasoning using multiple representations, including diagrams as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(vii) communicate mathematical reasoning using multiple representations, including graphs as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(viii) communicate mathematical reasoning using multiple representations, including language as appropriate

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(ix) communicate [mathematical ideas'] implications using multiple representations, including symbols as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(x) communicate [mathematical ideas'] implications using multiple representations, including diagrams as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(xi) communicate [mathematical ideas'] implications using multiple representations, including graphs as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(xii) communicate [mathematical ideas'] implications using multiple representations, including language as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(xiii) communicate [mathematical reasoning's] implications using multiple representations, including symbols as appropriate

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(xiv) communicate [mathematical reasoning's] implications using multiple representations, including diagrams as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(xv) communicate [mathematical reasoning's] implications using multiple representations, including graphs as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate	(xvi) communicate [mathematical reasoning's] implications using multiple representations, including language as appropriate
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(E) create and use representations to organize, record, and communicate mathematical ideas	(i) create representations to organize mathematical ideas
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(E) create and use representations to organize, record, and communicate mathematical ideas	(ii) create representations to record mathematical ideas

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(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(E) create and use representations to organize, record, and communicate mathematical ideas	(iii) create representations to communicate mathematical ideas
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(E) create and use representations to organize, record, and communicate mathematical ideas	(iv) use representations to organize mathematical ideas
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(E) create and use representations to organize, record, and communicate mathematical ideas	(v) use representations to record mathematical ideas
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(E) create and use representations to organize, record, and communicate mathematical ideas	(vi) use representations to communicate mathematical ideas
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(F) analyze mathematical relationships to connect and communicate mathematical ideas	(i) analyze mathematical relationships to connect mathematical ideas

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(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(F) analyze mathematical relationships to connect and communicate mathematical ideas	(ii) analyze mathematical relationships to communicate mathematical ideas
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(G) display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication	(i) display mathematical ideas using precise mathematical language in written or oral communication
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(G) display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication	(ii) display mathematical arguments using precise mathematical language in written or oral communication
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(G) display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication	(iii) explain mathematical ideas using precise mathematical language in written or oral communication
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(G) display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication	(iv) explain mathematical arguments using precise mathematical language in written or oral communication

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(G) display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication	(v) justify mathematical ideas using precise mathematical language in written or oral communication
(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(G) display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication	(vi) justify mathematical arguments using precise mathematical language in written or oral communication
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(A) compare and contrast the benefits of different sampling techniques including random sampling and convenience sampling methods	(i) compare and contrast the benefits of different sampling techniques including random sampling method
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(A) compare and contrast the benefits of different sampling techniques including random sampling and convenience sampling methods	(ii) compare and contrast the benefits of different sampling techniques including convenience sampling method

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(B) distinguish among observational studies, surveys, and experiments	(i) distinguish among observational studies, surveys and experiments
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(C) analyze generalizations made from observational studies, surveys and experiments	(i) analyze generalizations made from observational studies
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(C) analyze generalizations made from observational studies, surveys and experiments	(ii) analyze generalizations made from surveys

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(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(C) analyze generalizations made from observational studies, surveys and experiments	(iii) analyze generalizations made from experiments
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(D) distinguish between sample statistics and population parameters	(i) distinguish between sample statistics and population parameters
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(E) formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions	(i) formulate a meaningful question

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(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(E) formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions	(ii) determine the data needed to answer the question
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(E) formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions	(iii) gather the appropriate data
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(E) formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions	(iv) analyze the data

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(E) formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions	(v) draw reasonable conclusions
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(F) communicate methods used, analyses conducted, and conclusions drawn for a data-analysis project through the use of one or more of the following: a written report, a visual display, an oral report, or a multi-media presentation	(i) communicate methods used for a data-analysis project through the use of one or more of the following: a written report , a visual display, an oral report, or a multi-media presentation
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(F) communicate methods used, analyses conducted, and conclusions drawn for a data-analysis project through the use of one or more of the following: a written report, a visual display, an oral report, or a multi-media presentation	(ii) communicate analyses conducted for a data-analysis project through the use of one or more of the following: a written report, a visual display, an oral report, or a multi-media presentation

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(F) communicate methods used, analyses conducted, and conclusions drawn for a data-analysis project through the use of one or more of the following: a written report, a visual display, an oral report, or a multi-media presentation	(iii) communicate conclusions drawn for a data-analysis project through the use of one or more of the following: a written report, a visual display, an oral report, or a multi-media presentation
(2) Statistical process sampling and experimentation. The student applies mathematical processes to apply understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study. The student is expected to:	(G) critically analyze published findings for appropriateness of study design implemented, sampling methods used, or the statistics applied	(i) critically analyze published findings for appropriateness of study design implemented, sampling methods used, or the statistics applied
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(A) distinguish between mathematical models and statistical models	(i) distinguish between mathematical models and statistical models
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(B) construct a statistical model to describe variability around the structure of a mathematical model for a given situation	(i) construct a statistical model to describe variability around the structure of a mathematical model for a given situation
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(C) distinguish among different sources of variability including measurement, natural, induced, and sampling variability	(i) distinguish among different sources of variability including measurement variability

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(C) distinguish among different sources of variability including measurement, natural, induced, and sampling variability	(ii) distinguish among different sources of variability including natural variability
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(C) distinguish among different sources of variability including measurement, natural, induced, and sampling variability	(iii) distinguish among different sources of variability including induced variability
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(C) distinguish among different sources of variability including measurement, natural, induced, and sampling variability	(iv) distinguish among different sources of variability including sampling variability
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(D) describe and model variability using population and sampling distributions	(i) describe variability using population distributions
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(D) describe and model variability using population and sampling distributions	(ii) describe variability using sampling distributions
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(D) describe and model variability using population and sampling distributions	(iii) model variability using population distributions

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(3) Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:	(D) describe and model variability using population and sampling distributions	(iv) model variability using sampling distributions
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(A) distinguish between categorical and quantitative data	(i) distinguish between categorical and quantitative data
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(B) represent and summarize data and justify the representation	(i) represent data
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(B) represent and summarize data and justify the representation	(ii) summarize data
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(B) represent and summarize data and justify the representation	(iii) justify the representation
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(C) analyze the distribution characteristics of quantitative data including determining the possible existence and impact of outliers	(i) analyze the distribution characteristics of quantitative data including determining the possible existence of outliers

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(C) analyze the distribution characteristics of quantitative data including determining the possible existence and impact of outliers	(ii) analyze the distribution characteristics of quantitative data including determining the possible impact of outliers
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(D) compare and contrast different graphical or visual representations given the same data set	(i) compare and contrast different graphical or visual representations given the same data set
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(E) compare and contrast meaningful information derived from summary statistics given a data set	(i) compare and contrast meaningful information derived from summary statistics given a data set
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(F) analyze categorical data, including determining marginal and conditional distributions, using two-way tables	(i) analyze categorical data, including determining marginal distributions, using two-way tables
(4) Categorical and quantitative data. The student applies the mathematical process standards to represent and analyze both categorical and quantitative data. The student is expected to:	(F) analyze categorical data, including determining marginal and conditional distributions, using two-way tables	(ii) analyze categorical data, including determining conditional distributions, using two-way tables
(5) Probability and random variables. The student applies the mathematical process standards to connect probability and statistics. The student is expected to:	(A) determine probabilities including the use of a two-way table	(i) determine probabilities including the use of a two-way table

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(5) Probability and random variables. The student applies the mathematical process standards to connect probability and statistics. The student is expected to:	(B) describe the relationship between theoretical and empirical probabilities using the Law of Large Numbers	(i)describe the relationship between theoretical and empirical probabilities using the Law of Large Numbers
(5) Probability and random variables. The student applies the mathematical process standards to connect probability and statistics. The student is expected to:	(C) construct a distribution based on a technology-generated simulation or collected samples for a discrete random variable	(i) construct a distribution based on a technology generated simulation or collected samples for a discrete random variable
(5) Probability and random variables. The student applies the mathematical process standards to connect probability and statistics. The student is expected to:	(D) compare statistical measures, such as sample mean and standard deviation, from a technology-simulated sampling distribution to the theoretical sampling distribution	(i) compare statistical measures from a technology simulated sampling distribution to the theoretical sampling distribution
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(A) explain how a sample statistic and a confidence level are used in the construction of a confidence interval	(i) explain how a sample statistic [is] used in the construction of a confidence interval
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(A) explain how a sample statistic and a confidence level are used in the construction of a confidence interval	(ii) explain how a a confidence level [is] used in the construction of a confidence interval
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(B) explain how changes in the sample size, confidence level, and standard deviation affect the margin of error of a confidence interval	(i) explain how changes in the sample size affect the margin of error of a confidence interval

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(B) explain how changes in the sample size, confidence level, and standard deviation affect the margin of error of a confidence interval	(ii) explain how changes in the confidence level affect the margin of error of a confidence interval
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(B) explain how changes in the sample size, confidence level, and standard deviation affect the margin of error of a confidence interval	(iii) explain how changes in the standard deviation affect the margin of error of a confidence interval
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(C) calculate a confidence interval for the mean of a normally distributed population with a known standard deviation	(i) calculate a confidence interval for the mean of a normally distributed population with a known standard deviation
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(D) calculate a confidence interval for a population proportion	(i) calculate a confidence interval for a population proportion
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(E) interpret confidence intervals for a population parameter, including confidence intervals from media or statistical reports	(i) interpret confidence intervals for a population parameter, including confidence intervals from media or statistical reports

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(F) explain how a sample statistic provides evidence against a claim about a population parameter when using a hypothesis test	(i) explain how a sample statistic provides evidence against a claim about a population parameter when using a hypothesis test
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(G) construct null and alternative hypothesis statements about a population parameter	(i) construct null hypothesis statements about a population parameter
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(G) construct null and alternative hypothesis statements about a population parameter	(ii) construct alternative hypothesis statements about a population parameter
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(H) explain the meaning of the p-value in relation to the significance level in providing evidence to reject or fail to reject the null hypothesis in the context of the situation	(i) explain the meaning of the *p* -value in relation to the significance level in providing evidence to reject or fail to reject the null hypothesis in the context of the situation
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(I) interpret the results of a hypothesis test using technology-generated results such as large sample tests for proportion, mean, difference between two proportions, and difference between two independent means	(i) interpret the results of a hypothesis test using technology generated results

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(J) describe the potential impact of Type I and Type II Errors	(i) describe the potential impact of Type I Errors
(6) Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:	(J) describe the potential impact of Type I and Type II Errors	(ii) describe the potential impact of Type II Errors
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(A) analyze scatterplots for patterns, linearity, outliers, and influential points	(i) analyze scatterplots for patterns
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(A) analyze scatterplots for patterns, linearity, outliers, and influential points	(ii) analyze scatterplots for linearity
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(A) analyze scatterplots for patterns, linearity, outliers, and influential points	(iii) analyze scatterplots for outliers

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(A) analyze scatterplots for patterns, linearity, outliers, and influential points	(iv) analyze scatterplots for influential points
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(B) transform a linear parent function to determine a line of best fit	(i) transform a linear parent function to determine a line of best fit
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(C) compare different linear models for the same set of data to determine best fit, including discussions about error	(i) compare different linear models for the same set of data to determine best fit, including discussions about error
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(D) compare different methods for determining best fit, including median-median and absolute value	(i) compare different methods for determining best fit, including median-median
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(D) compare different methods for determining best fit, including median-median and absolute value	(ii) compare different methods for determining best fit, including absolute value

TEKS (Knowledge and Skills)	Student Expectation	Breakout
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(E) describe the relationship between influential points and lines of best fit using dynamic graphing technology	(i) describe the relationship between influential points and lines of best fit using dynamic graphing technology
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(F) identify and interpret the reasonableness of attributes of lines of best fit within the context, including slope and *y* -intercept	(i) identify the reasonableness of attributes of lines of best fit within the context, including slope
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(F) identify and interpret the reasonableness of attributes of lines of best fit within the context, including slope and *y* -intercept	(ii) identify the reasonableness of attributes of lines of best fit within the context, including *y* -intercept
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(F) identify and interpret the reasonableness of attributes of lines of best fit within the context, including slope and *y* -intercept	(iii) interpret the reasonableness of attributes of lines of best fit within the context, including slope
(7) Bivariate data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to:	(F) identify and interpret the reasonableness of attributes of lines of best fit within the context, including slope and *y* -intercept	(iv) interpret the reasonableness of attributes of lines of best fit within the context, including *y* -intercept

The English language proficiency standards (ELPS) outline English language proficiency level descriptors and student expectations for English language learners (ELLs). School districts are required to implement the ELPS as an integral part of each subject in the required curriculum. This document outlines the ELPS that have been designated as appropriate for inclusion in instructional materials. Additionally, many of the designated ELPS are most appropriate for inclusion in teacher materials and are only required to be included in student materials where specifically indicated.		
(c) Cross-curricular second language acquisition essential knowledge and skills		
1) Cross-curricular second language acquisition/learning strategies. The ELL uses language learning strategies to develop an awareness of his or her own learning processes in all content areas. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to:		
(A) use prior knowledge and experiences to understand meanings in English	(1) use prior knowledge to understand meanings in English	T: 9-12 S: 9-12
(A) use prior knowledge and experiences to understand meanings in English	(2) use prior experiences to understand meanings in English	T: 9-12 S: 9-12
(B) monitor oral and written language production and employ self-corrective techniques or other resources	(1) monitor oral language production and employ self-corrective techniques or other resources	T: 9-12
(B) monitor oral and written language production and employ self-corrective techniques or other resources	(2) monitor written language production and employ self-corrective techniques or other resources	NA
(C) use strategic learning techniques such as concept mapping, drawing, memorizing, comparing, contrasting, and reviewing to acquire basic and grade-level vocabulary	>>>>>	NA

(D) speak using learning strategies such as requesting assistance, employing non-verbal cues, and using synonyms and circumlocution (conveying ideas by defining or describing when exact English words are not known)	>>>>>	T: 9-12 S: 9-12
(E) internalize new basic and academic language by using and reusing it in meaningful ways in speaking and writing activities that build concept and language attainment	(1) internalize new basic language by using and reusing it in meaningful ways in speaking activities that build concept and language attainment	NA
(E) internalize new basic and academic language by using and reusing it in meaningful ways in speaking and writing activities that build concept and language attainment	(2) internalize new basic language by using and reusing it in meaningful ways in writing activities that build concept and language attainment	NA
(E) internalize new basic and academic language by using and reusing it in meaningful ways in speaking and writing activities that build concept and language attainment	(3) internalize new academic language by using and reusing it in meaningful ways in speaking activities that build concept and language attainment	NA
(E) internalize new basic and academic language by using and reusing it in meaningful ways in speaking and writing activities that build concept and language attainment	(4) internalize new academic language by using and reusing it in meaningful ways in writing activities that build concept and language attainment	NA
(F) use accessible language and learn new and essential language in the process	>>>>>	T: 9-12
(G) demonstrate an increasing ability to distinguish between formal and informal English and an increasing knowledge of when to use each one commensurate with grade-level learning expectations	(1) demonstrate an increasing ability to distinguish between formal and informal English	NA

(G) demonstrate an increasing ability to distinguish between formal and informal English and an increasing knowledge of when to use each one commensurate with grade-level learning expectations	(2) demonstrate an increasing knowledge of when to use [formal and informal English] commensurate with grade-level learning expectations	NA
(H) develop and expand repertoire of learning strategies such as reasoning inductively or deductively, looking for patterns in language, and analyzing sayings and expressions commensurate with grade-level learning expectations	>>>>>	NA
(2) Cross-curricular second language acquisition/listening. The ELL listens to a variety of speakers including teachers, peers, and electronic media to gain an increasing level of comprehension of newly acquired language in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in listening. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to:		
(A) distinguish sounds and intonation patterns of English with increasing ease	(1) distinguish sounds of English with increasing ease	NA
(A) distinguish sounds and intonation patterns of English with increasing ease	(2) distinguish intonation patterns of English with increasing ease	NA
(B) recognize elements of the English sound system in newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters	>>>>>	NA
(C) learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions	(1) learn new language structures heard during classroom instruction and interactions	T: 9-12

(C) learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions	(2) learn new expressions heard during classroom instruction and interactions	T: 9-12
(C) learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions	(3) learn basic vocabulary heard during classroom instruction and interactions	T: 9-12 S: 9-12
(C) learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions	(4) learn academic vocabulary heard during classroom instruction and interactions	T: 9-12 S: 9-12
(D) monitor understanding of spoken language during classroom instruction and interactions and seek clarification as needed	(1) monitor understanding of spoken language during classroom instruction and interactions	T: 9-12
(D) monitor understanding of spoken language during classroom instruction and interactions and seek clarification as needed	(2) seek clarification [of spoken language] as needed	T: 9-12 S: 9-12
(E) use visual, contextual, and linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language	(1) use visual support to enhance and confirm understanding of increasingly complex and elaborated spoken language	NA
(E) use visual, contextual, and linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language	(2) use contextual support to enhance and confirm understanding of increasingly complex and elaborated spoken language	NA
(E) use visual, contextual, and linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language	(3) use linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language	T: 9-12 S: 9-12

(F) listen to and derive meaning from a variety of media such as audio tape, video, DVD, and CD ROM to build and reinforce concept and language attainment	(1) listen to and derive meaning from a variety of media to build and reinforce concept attainment	NA
(F) listen to and derive meaning from a variety of media such as audio tape, video, DVD, and CD ROM to build and reinforce concept and language attainment	(2) listen to and derive meaning from a variety of media to build and reinforce language attainment	NA
(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	(1) understand the general meaning of spoken language ranging from situations in which topics are familiar to unfamiliar	NA
(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	(2) understand the general meaning of spoken language ranging from situations in which language [is] are familiar to unfamiliar	NA
(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	(3) understand the general meaning of spoken language ranging from situations in which contexts are familiar to unfamiliar	NA
(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	(4) understand the main points of spoken language ranging from situations in which topics are familiar to unfamiliar	NA
(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	(5) understand the main points of spoken language ranging from situations in which language [is] are familiar to unfamiliar	NA

(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	(6) understand the main points of spoken language ranging from situations in which contexts are familiar to unfamiliar	NA
(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	(7) understand the important details of spoken language ranging from situations in which topics are familiar to unfamiliar	NA
(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	(8) understand the important details of spoken language ranging from situations in which language [is] are familiar to unfamiliar	NA
(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	(9) understand the important details of spoken language ranging from situations in which contexts are familiar to unfamiliar	NA
(H) understand implicit ideas and information in increasingly complex spoken language commensurate with grade-level learning expectations	(1) understand implicit ideas in increasingly complex spoken language commensurate with grade-level learning expectations	NA
(H) understand implicit ideas and information in increasingly complex spoken language commensurate with grade-level learning expectations	(2) understand information in increasingly complex spoken language commensurate with grade-level learning expectations	NA
(I) demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs	(1) demonstrate listening comprehension of increasingly complex spoken English by following directions commensurate with content and grade-level needs	NA

(I) demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs	(2) demonstrate listening comprehension of increasingly complex spoken English by retelling or summarizing spoken messages commensurate with content and grade-level needs	NA
(I) demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs	(3) demonstrate listening comprehension of increasingly complex spoken English by responding to questions and requests commensurate with content and grade-level needs	T: 9-12 S: 9-12
(I) demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs	(4) demonstrate listening comprehension of increasingly complex spoken English by collaborating with peers commensurate with content and grade-level needs	T: 9-12
(I) demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs	(5) demonstrate listening comprehension of increasingly complex spoken English by taking notes commensurate with content and grade-level needs	T: 9-12 S: 9-12
(3) Cross-curricular second language acquisition/speaking. The ELL speaks in a variety of modes for a variety of purposes with an awareness of different language registers (formal/informal) using vocabulary with increasing fluency and accuracy in language arts and all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in speaking. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to:		
(A) practice producing sounds of newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters to pronounce English words in a manner that is increasingly comprehensible	>>>>>	NA

(B) expand and internalize initial English vocabulary by learning and using high-frequency English words necessary for identifying and describing people, places, and objects, by retelling simple stories and basic information represented or supported by pictures, and by learning and using routine language needed for classroom communication	(1) expand and internalize initial English vocabulary by learning and using high-frequency English words necessary for identifying and describing people, places, and objects	NA
(B) expand and internalize initial English vocabulary by learning and using high-frequency English words necessary for identifying and describing people, places, and objects, by retelling simple stories and basic information represented or supported by pictures, and by learning and using routine language needed for classroom communication	(2) expand and internalize initial English vocabulary by retelling simple stories and basic information represented or supported by pictures	NA
(B) expand and internalize initial English vocabulary by learning and using high-frequency English words necessary for identifying and describing people, places, and objects, by retelling simple stories and basic information represented or supported by pictures, and by learning and using routine language needed for classroom communication	(3) expand and internalize initial English vocabulary by learning and using routine language needed for classroom communication	T: 9-12 S: 9-12
(C) speak using a variety of grammatical structures, sentence lengths, sentence types, and connecting words with increasing accuracy and ease as more English is acquired	(1) speak using a variety of grammatical structures with increasing accuracy and ease as more English is acquired	NA
(C) speak using a variety of grammatical structures, sentence lengths, sentence types, and connecting words with increasing accuracy and ease as more English is acquired	(2) speak using a variety of sentence lengths with increasing accuracy and ease as more English is acquired	NA
(C) speak using a variety of grammatical structures, sentence lengths, sentence types, and connecting words with increasing accuracy and ease as more English is acquired	(3) speak using a variety of sentence types with increasing accuracy and ease as more English is acquired	NA

(C) speak using a variety of grammatical structures, sentence lengths, sentence types, and connecting words with increasing accuracy and ease as more English is acquired	(4) speak using a variety of connecting words with increasing accuracy and ease as more English is acquired	T: 9-12 S: 9-12
(D) speak using grade-level content area vocabulary in context to internalize new English words and build academic language proficiency	(1) speak using grade-level content area vocabulary in context to internalize new English words	T: 9-12 S: 9-12
(D) speak using grade-level content area vocabulary in context to internalize new English words and build academic language proficiency	(2) speak using grade-level content area vocabulary in context to build academic language proficiency	T: 9-12 S: 9-12
(E) share information in cooperative learning interactions	>>>>>	T: 9-12 S: 9-12
(F) ask and give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts, to using abstract and content-based vocabulary during extended speaking assignments	(1) ask [for] information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts, to using abstract and content-based vocabulary during extended speaking assignments	T: 9-12 S: 9-12
(F) ask and give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts, to using abstract and content-based vocabulary during extended speaking assignments	(2) give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts, to using abstract and content-based vocabulary during extended speaking assignments	T: 9-12 S: 9-12
(G) express opinions, ideas, and feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics	(1) express opinions ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics	T: 9-12

(G) express opinions, ideas, and feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics	(2) express ideas ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics	T: 9-12
(G) express opinions, ideas, and feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics	(3) express feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics	NA
(H) narrate, describe, and explain with increasing specificity and detail as more English is acquired	(1) narrate with increasing specificity and detail as more English is acquired	NA
(H) narrate, describe, and explain with increasing specificity and detail as more English is acquired	(2) describe with increasing specificity and detail as more English is acquired	NA
(H) narrate, describe, and explain with increasing specificity and detail as more English is acquired	(3) explain with increasing specificity and detail as more English is acquired	T: 9-12 S: 9-12
(I) adapt spoken language appropriately for formal and informal purposes	(1) adapt spoken language appropriately for formal purposes	NA
(I) adapt spoken language appropriately for formal and informal purposes	(2) adapt spoken language appropriately for informal purposes	NA
(J) respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce concept and language attainment	(1) respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce concept attainment	NA

(J) respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce concept and language attainment	(2) respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce language attainment	N/A
(4) Cross-curricular second language acquisition/reading. The ELL reads a variety of texts for a variety of purposes with an increasing level of comprehension in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in reading. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. For kindergarten and first grade, certain of these student expectations apply to text read aloud for students not yet at the stage of decoding written text. The student is expected to:		
(A) learn relationships between sounds and letters of the English language and decode (sound out) words using a combination of skills such as recognizing sound-letter relationships and identifying cognates, affixes, roots and base words	(1) learn relationships between sounds and letters of the English language	NA
(A) learn relationships between sounds and letters of the English language and decode (sound out) words using a combination of skills such as recognizing sound-letter relationships and identifying cognates, affixes, roots and base words	(2) decode (sound out) words using a combination of skills	NA
(B) recognize directionality of English reading such as left to right and top to bottom	>>>>>	NA
(C) develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials	(1) develop basic sight vocabulary used routinely in written classroom materials	T: 9-12 S: 9-12

(C) develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials	(2) derive meaning of environmental print	T: 9-12 S: 9-12
(C) develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials	(3) comprehend English vocabulary used routinely in written classroom materials	T: 9-12 S: 9-12
(C) develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials	(4) comprehend English language structures used routinely in written classroom materials	T: 9-12 S: 9-12
(D) use prereading supports such as graphic organizers, illustrations, and pretaught topic-related vocabulary and other prereading activities to enhance comprehension of written text	>>>>>	T: 9-12 S: 9-12
(E) read linguistically accommodated content area material with a decreasing need for linguistic accommodations as more English is learned	>>>>>	T: 9-12
(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(1) use visual and contextual support to read grade-appropriate content area text	T: 9-12 S: 9-12

(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(2) use visual and contextual support to enhance and confirm understanding	T: 9-12 S: 9-12
(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(3) use visual and contextual support to develop vocabulary needed to comprehend increasingly challenging language	T: 9-12 S: 9-12
(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(4) use visual and contextual support to develop grasp of language structures needed to comprehend increasingly challenging language	NA
(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(5) use visual and contextual support to develop background knowledge needed to comprehend increasingly challenging language	T: 9-12 S: 9-12
(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(6) use support from peers and teachers to read grade-appropriate content area text	T: 9-12 S: 9-12

(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(7) use support from peers and teachers to enhance and confirm understanding	T: 9-12 S: 9-12
(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(8) use support from peers and teachers to develop vocabulary needed to comprehend increasingly challenging language	T: 9-12 S: 9-12
(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(9) use support from peers and teachers to develop grasp of language structures needed to comprehend increasingly challenging language	T: 9-12 S: 9-12
(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	(10) use support from peers and teachers to develop background knowledge needed to comprehend increasingly challenging language	T: 9-12 S: 9-12
(G) demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs	(1) demonstrate comprehension of increasingly complex English by participating in shared reading commensurate with content area and grade level needs	NA

(G) demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs	(2) demonstrate comprehension of increasingly complex English by retelling or summarizing material commensurate with content area and grade level needs	T: 9-12 S: 9-12
(G) demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs	(3) demonstrate comprehension of increasingly complex English by responding to questions commensurate with content area and grade level needs	T: 9-12 S: 9-12
(G) demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs	(4) demonstrate comprehension of increasingly complex English by taking notes commensurate with content area and grade level needs	T: 9-12 S: 9-12
(H) read silently with increasing ease and comprehension for longer periods	(1) read silently with increasing ease for longer periods	NA
(H) read silently with increasing ease and comprehension for longer periods	(2) read silently with increasing comprehension for longer periods	NA
(I) demonstrate English comprehension and expand reading skills by employing basic reading skills such as demonstrating understanding of supporting ideas and details in text and graphic sources, summarizing text and distinguishing main ideas from details commensurate with content area needs	(1) demonstrate English comprehension by employing basic reading skills commensurate with content area needs	NA

(I) demonstrate English comprehension and expand reading skills by employing basic reading skills such as demonstrating understanding of supporting ideas and details in text and graphic sources, summarizing text and distinguishing main ideas from details commensurate with content area needs	(2) expand reading skills commensurate with content area needs	NA
(J) demonstrate English comprehension and expand reading skills by employing inferential skills such as predicting, making connections between ideas, drawing inferences and conclusions from text and graphic sources, and finding supporting text evidence commensurate with content area needs	>>>>>	NA
(K) demonstrate English comprehension and expand reading skills by employing analytical skills such as evaluating written information and performing critical analyses commensurate with content area and grade level needs	>>>>>	NA
(5) Cross-curricular second language acquisition/writing. The ELL writes in a variety of forms with increasing accuracy to effectively address a specific purpose and audience in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in writing. In order for the ELL to meet grade-level learning expectations across foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. For kindergarten and first grade, certain of these student expectations do not apply until the student has reached the stage of generating original written text using a standard writing system. The student is expected to:		
(A) learn relationships between sounds and letters of the English language to represent sounds when writing in English	>>>>>	NA
(B) write using newly acquired basic vocabulary and content-based grade-level vocabulary	(1) write using newly acquired basic vocabulary	NA

(B) write using newly acquired basic vocabulary and content-based grade-level vocabulary	(2) write using content-based grade-level vocabulary	NA
(C) spell familiar English words with increasing accuracy, and employ English spelling patterns and rules with increasing accuracy as more English is acquired	(1) spell familiar English words with increasing accuracy	NA
(C) spell familiar English words with increasing accuracy, and employ English spelling patterns and rules with increasing accuracy as more English is acquired	(2) employ English spelling pattern with increasing accuracy as more English is acquired	NA
(C) spell familiar English words with increasing accuracy, and employ English spelling patterns and rules with increasing accuracy as more English is acquired	(3) employ English spelling rules with increasing accuracy as more English is acquired	NA
(D) edit writing for standard grammar and usage, including subject-verb agreement, pronoun agreement, and appropriate verb tenses commensurate with grade-level expectations as more English is acquired	(1) edit writing for standard grammar and usage, including subject-verb agreement commensurate with grade-level expectations as more English is acquired	NA
(D) edit writing for standard grammar and usage, including subject-verb agreement, pronoun agreement, and appropriate verb tenses commensurate with grade-level expectations as more English is acquired	(2) edit writing for standard grammar and usage, including pronoun agreement, commensurate with grade-level expectations as more English is acquired	NA
(D) edit writing for standard grammar and usage, including subject-verb agreement, pronoun agreement, and appropriate verb tenses commensurate with grade-level expectations as more English is acquired	(3) edit writing for standard grammar and usage, including appropriate verb tenses, commensurate with grade-level expectations as more English is acquired	NA

(E) employ increasingly complex grammatical structures in content area writing commensurate with grade level expectations such as (i) using correct verbs, tenses, and pronouns/antecedents; (ii) using possessive case (apostrophe -s) correctly; and, (iii) using negatives and contractions correctly	>>>>>	NA
(F) write using a variety of grade-appropriate sentence lengths, patterns, and connecting words to combine phrases, clauses, and sentences in increasingly accurate ways as more English is acquired	(1) write using a variety of grade-appropriate sentence lengths in increasingly accurate ways as more English is acquired	NA
(F) write using a variety of grade-appropriate sentence lengths, patterns, and connecting words to combine phrases, clauses, and sentences in increasingly accurate ways as more English is acquired	(2) write using a variety of grade-appropriate sentence patterns in increasingly accurate ways as more English is acquired	NA
(F) write using a variety of grade-appropriate sentence lengths, patterns, and connecting words to combine phrases, clauses, and sentences in increasingly accurate ways as more English is acquired	(3) write using a variety of grade-appropriate connecting words to combine phrases, clauses, and sentences in increasingly accurate ways as more English is acquired	NA
(G) narrate, describe, and explain with increasing specificity and detail to fulfill content area writing needs as more English is acquired	(1) narrate with increasing specificity and detail to fulfill content area writing needs as more English is acquired	NA
(G) narrate, describe, and explain with increasing specificity and detail to fulfill content area writing needs as more English is acquired	(2) describe with increasing specificity and detail to fulfill content area writing needs as more English is acquired	NA
(G) narrate, describe, and explain with increasing specificity and detail to fulfill content area writing needs as more English is acquired	(3) explain with increasing specificity and detail to fulfill content area writing needs as more English is acquired	NA