

| Cycle 1 | 27 Days | The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents. |
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| | Aug. 23 - Oct. 1, 2021 | |
| Unit | # Class Periods | <p align="center">Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| | | <p><i>The Mathematical Process Standards are integrated throughout the course in all activities and lessons. Teachers should refer to these standards for instructional strategies and depth of rigor. Specific process standards have been highlighted for each unit, but these process standards should not be the only process standards associated with the daily lessons.</i></p> <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ STAT.1A Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟ STAT.1B 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. Ⓟ STAT.1C 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. Ⓟ STAT.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. Ⓟ STAT.1E Create and use representations to organize, record, and communicate mathematical ideas. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. Ⓟ STAT.1G Display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication. |

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| | | <p><i>The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.</i></p> <p>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| <p>Unit 1: Categorical and Quantitative Data Students identify and distinguish between categorical and quantitative data.</p> | <p>4 class periods (90-min. each) or 8 class periods (45-min. each)</p> <p><i>Enrichment Opportunities</i> Aug. 2-13</p> <p><i>Teachers Report to Work</i> Aug. 16</p> <p><i>Teacher Service Days</i> Aug. 16-17, Aug. 19-20</p> <p><i>Teacher Prep Day (no students)</i> Aug. 18</p> <p><i>Labor Day</i> Sept. 6</p> <p><i>Fall Holiday</i> Sept. 16</p> <p><i>Teacher Service Day (no students)</i> Sept. 17</p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> PS STAT.1E Create and use representations to organize, record, and communicate mathematical ideas. PS STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. <p>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:</p> <ul style="list-style-type: none"> STAT.4A Distinguish between categorical and quantitative data. STAT.4B Represent and summarize data and justify the representation. STAT.4C Analyze the distribution characteristics of quantitative data, including determining the possible existence and impact of outliers. |

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| <p>Unit 2: Data Analysis Representation Students analyze relationships among data and the associated representations.</p> | <p>7 class periods (90-min. each) or 14 class periods (45-min. each)</p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ STAT.1E Create and use representations to organize, record, and communicate mathematical ideas. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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 • STAT.2G Critically analyze published findings for appropriateness of study design implemented, sampling methods used, or the statistics applied. <p>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:</p> <ul style="list-style-type: none"> • STAT.4A Distinguish between categorical and quantitative data. • STAT.4B Represent and summarize data and justify the representation. • STAT.4C Analyze the distribution characteristics of quantitative data, including determining the possible existence and impact of outliers. • STAT.4D Compare and contrast different graphical or visual representations given the same data set. • STAT.4E Compare and contrast meaningful information derived from summary statistics given a data set. • STAT.4F Analyze categorical data, including determining marginal and conditional distributions, using two-way tables. |

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| Unit | # Class Periods | <p align="center">Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| | | <p>Probability and Random Variables. The student applies the mathematical process standards to connect probability and statistics. The students is expected to:</p> <ul style="list-style-type: none"> • STAT.5D Compare statistical measures such as sample mean and standard deviation from a technology-simulated sampling distribution to the theoretical sampling distribution. |

| Cycle 2 | 29 Days | |
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| | Oct. 5 - Nov. 12, 2021 | |
| <p><i>The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.</i></p> | | |
| Unit | # Class Periods | <p>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| <p>Unit 3: Line of Best Fit Students identify, compare, and interpret the reasonableness of attributes of lines of best fit within the context.</p> | <p>9.5 class periods (90-min. each) or 19 class periods (45-min. each)</p> <p><i>Teacher Service Day (no students) Oct. 4</i></p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ STAT.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. Ⓟ STAT.1G Display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication. <p>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:</p> <ul style="list-style-type: none"> • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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. <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3A Distinguish between mathematical models and statistical models. • STAT.3B Construct a statistical model to describe variability around the structure of a mathematical model for a given situation. • STAT.3C Distinguish among different sources of variability, including measurement, natural, induced, and sampling variability. <p>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:</p> <ul style="list-style-type: none"> • STAT.4B Represent and summarize data and justify the representation. • STAT.4C Analyze the distribution characteristics of quantitative data, including determining the possible existence and impact of outliers. |

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| | Oct. 5 - Nov. 12, 2021 | | |
| Unit | # Class Periods | Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course. The student will: | |
| | | Bivariate Data. The student applies the mathematical process standards to analyze relationships among bivariate quantitative data. The student is expected to: <ul style="list-style-type: none"> • STAT.7A Analyze scatterplots for patterns, linearity, outliers, and influential points. • STAT.7B Transform a linear parent function to determine a line of best fit. • STAT.7C Compare different linear models for the same set of data to determine best fit, including discussions about error. • STAT.7D Compare different methods for determining best fit, including median-median and absolute value. • STAT.7E Describe the relationship between influential points and lines of best fit using dynamic graphing technology. • STAT.7F Identify and interpret the reasonableness of attributes of lines of best fit within the context, including slope and y-intercept. | |
| Unit 4: Probability (from Tables) Students calculate probabilities based on data from tables. (continues in cycle 3) | 5 class periods (90-min. each) or 10 class periods (45-min. each) | Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: <ul style="list-style-type: none"> Ⓟ STAT.1E Create and use representations to organize, record, and communicate mathematical ideas. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. 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: <ul style="list-style-type: none"> • STAT.2F 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. Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to: <ul style="list-style-type: none"> • STAT.3A Distinguish between mathematical models and statistical models. | |

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| | Oct. 5 - Nov. 12, 2021 | |
| Unit | # Class Periods | Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course. The student will: |
| | | <p>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:</p> <ul style="list-style-type: none"> • STAT.4D Compare and contrast different graphical or visual representations given the same data set. • STAT.4F Analyze categorical data, including determining marginal and conditional distributions, using two-way tables. <p>Probability and Random Variables. The student applies the mathematical process standards to connect probability and statistics. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.5A Determine probabilities, including the use of a two-way table. • STAT.5B Describe the relationship between theoretical and empirical probabilities using the Law of Large Numbers. • STAT.5C Construct a distribution based on a technology-generated simulation or collected samples for a discrete random variable. |

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| | Nov. 15, 2021 - Jan. 14, 2022 | |
| Unit | # Class Periods | <p>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| <p>Unit 4: Probability (from Tables) Students calculate probabilities based on data from tables.</p> <p>(continued from cycle 2)</p> | <p>5 class periods (90-min. each) or 10 class periods (45-min. each)</p> <p><i>Thanksgiving Break</i> Nov. 22-26</p> <p><i>Enrichment Opportunities</i> Dec. 20-21</p> <p><i>Winter Break</i> Dec. 20-31</p> <p><i>MLK Jr. Day</i> Jan. 17</p> <p><i>Teacher Prep Day (no students)</i> Jan. 18</p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> PS STAT.1E Create and use representations to organize, record, and communicate mathematical ideas. PS STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2F 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. <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3A Distinguish between mathematical models and statistical models. <p>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:</p> <ul style="list-style-type: none"> • STAT.4D Compare and contrast different graphical or visual representations given the same data set. • STAT.4F Analyze categorical data, including determining marginal and conditional distributions, using two-way tables. <p>Probability and Random Variables. The student applies the mathematical process standards to connect probability and statistics. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.5A Determine probabilities, including the use of a two-way table. • STAT.5B Describe the relationship between theoretical and empirical probabilities using the Law of Large Numbers. • STAT.5C Construct a distribution based on a technology-generated simulation or collected samples for a discrete random variable. |

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| | Nov. 15, 2021 - Jan. 14, 2022 | |
| Unit | # Class Periods | <p>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| <p>Unit 5: Probability (from Normal Model) Students calculate probabilities based on data within a normal model.</p> | <p>7 class periods (90-min. each) or 14 class periods (45-min. each)</p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ STAT.1C 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. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2F 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. <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3A Distinguish between mathematical models and statistical models. • STAT.3D Describe and model variability using population and sampling distributions. <p>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:</p> <ul style="list-style-type: none"> • STAT.4D Compare and contrast different graphical or visual representations given the same data set. • STAT.4F Analyze categorical data, including determining marginal and conditional distributions, using two-way tables. |

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| | Nov. 15, 2021 - Jan. 14, 2022 | |
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| | | <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> <p>Probability and Random Variables. The student applies the mathematical process standards to connect probability and statistics. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.5A Determine probabilities, including the use of a two-way table. • STAT.5B Describe the relationship between theoretical and empirical probabilities using the Law of Large Numbers. • STAT.5D Compare statistical measures such as sample mean and standard deviation from a technology-simulated sampling distribution to the theoretical sampling distribution. |

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| | Jan. 19 - Feb. 25, 2022 | |
| Unit | # Class Periods | <p>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| <p>Unit 6: Experimental Design Students explore experimental design based on the use of statistical modeling.</p> | <p>3.5 class periods (90-min. each) or 7 class periods (45-min. each)</p> <p><i>Teacher Service Day/Presidents' Day (no students) Feb. 21</i></p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ STAT.1C 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. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2A Compare and contrast the benefits of different sampling techniques, including random sampling and convenience sampling methods. • STAT.2B Distinguish among observational studies, surveys, and experiments. • STAT.2C Analyze generalizations made from observational studies, surveys, and experiments. • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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. • STAT.2G Critically analyze published findings for appropriateness of study design implemented, sampling methods used, or the statistics applied. <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3A Distinguish between mathematical models and statistical models. • STAT.3B Construct a statistical model to describe variability around the structure of a mathematical model for a given situation. • STAT.3C Distinguish among different sources of variability, including measurement, natural, induced, and sampling variability. |

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| | | <p>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:</p> <ul style="list-style-type: none"> • STAT.4A Distinguish between categorical and quantitative data. |
| <p>Unit 7: Confidence Intervals (1- Proportion) Students interpret and determine confidence intervals for one proportion data.</p> | <p>4 class periods (90-min. each) or 8 class periods (45-min. each)</p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> • PS STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2C Analyze generalizations made from observational studies, surveys, and experiments. • STAT.2D Distinguish between sample statistics and population parameters. • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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. <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3D Describe and model variability using population and sampling distributions. <p>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:</p> <ul style="list-style-type: none"> • STAT.4A Distinguish between categorical and quantitative data. |

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| | | <p>Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.6A Explain how a sample statistic and a confidence level are used in the construction of a confidence interval. • STAT.6B Explain how changes in the sample size, confidence level, and standard deviation affect the margin of error of a confidence interval. • STAT.6C Calculate a confidence interval for the mean of a normally distributed population with a known standard deviation. • STAT.6D Calculate a confidence interval for a population proportion. • STAT.6E Interpret confidence intervals for a population parameter, including confidence intervals from media or statistical reports. |
| <p>Unit 8: Confidence Intervals (2-Proportion) Students interpret and determine confidence intervals for two proportions data.</p> | <p>4 class periods (90-min. each) or 8 class periods (45-min. each)</p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas.</p> <p>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:</p> <ul style="list-style-type: none"> • STAT.2C Analyze generalizations made from observational studies, surveys, and experiments. • STAT.2D Distinguish between sample statistics and population parameters. • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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. |

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| | | <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3D Describe and model variability using population and sampling distributions. <p>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:</p> <ul style="list-style-type: none"> • STAT.4A Distinguish between categorical and quantitative data. <p>Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.6A Explain how a sample statistic and a confidence level are used in the construction of a confidence interval. • STAT.6B Explain how changes in the sample size, confidence level, and standard deviation affect the margin of error of a confidence interval. • STAT.6C Calculate a confidence interval for the mean of a normally distributed population with a known standard deviation. • STAT.6D Calculate a confidence interval for a population proportion. • STAT.6E Interpret confidence intervals for a population parameter, including confidence intervals from media or statistical reports. • STAT.6I 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. |

| Cycle 5 | | 33 Days Feb. 28 - Apr. 22, 2022 | <i>The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.</i> |
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| Unit | # Class Periods | Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course. The student will: | |
| Unit 9: Confidence Intervals (Sample Mean and Difference between Means) Students explore confidence intervals with a sample mean and using the difference between means. | 8 class periods (90-min. each) or 16 class periods (45-min. each) <i>Enrichment Opportunities</i> <i>Mar. 14-16</i> <i>Spring Break</i> <i>Mar. 14-18</i> <i>Chávez-Huerta Day</i> <i>Mar. 28</i> <i>Spring Holiday</i> <i>Apr. 15</i> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ STAT.1C 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. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2C Analyze generalizations made from observational studies, surveys, and experiments. • STAT.2D Distinguish between sample statistics and population parameters. • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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. <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3D Describe and model variability using population and sampling distributions. <p>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:</p> <ul style="list-style-type: none"> • STAT.4A Distinguish between categorical and quantitative data. | |

| Cycle 5 | 33 Days Feb. 28 - Apr. 22, 2022 | <i>The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.</i> |
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| Unit | # Class Periods | <p align="center">Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| | | <p>Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.6A Explain how a sample statistic and a confidence level are used in the construction of a confidence interval. • STAT.6B Explain how changes in the sample size, confidence level, and standard deviation affect the margin of error of a confidence interval. • STAT.6C Calculate a confidence interval for the mean of a normally distributed population with a known standard deviation. • STAT.6D Calculate a confidence interval for a population proportion. • STAT.6E Interpret confidence intervals for a population parameter, including confidence intervals from media or statistical reports. • STAT.6I 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. |
| <p>Unit 10: Hypothesis Test (Proportion) Students interpret and conduct hypothesis testing using p-values.</p> | <p>4 class periods (90-min. each) or 8 class periods (45-min. each)</p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ STAT.1C 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. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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. |

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| Unit | # Class Periods | <p align="center">Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| | | <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3D Describe and model variability using population and sampling distributions. <p>Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.6F Explain how a sample statistic provides evidence against a claim about a population parameter when using a hypothesis test. • STAT.6G Construct null and alternative hypothesis statements about a population parameter. • STAT.6H 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. • STAT.6J Describe the potential impact of Type I and Type II Errors. |
| <p>Unit 11: Hypothesis Test (1-Proportion continued, 2-Proportion) Students conduct hypothesis testing for one and two proportions.</p> <p>(continues in cycle 6)</p> | <p>4 class periods (90-min. each) or 8 class periods (45-min. each)</p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ STAT.1C 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. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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. |

| Cycle 5 | 33 Days | The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents. |
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| | Feb. 28 - Apr. 22, 2022 | |
| Unit | # Class Periods | <p align="center">Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| | | <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3D Describe and model variability using population and sampling distributions. <p>Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.6F Explain how a sample statistic provides evidence against a claim about a population parameter when using a hypothesis test. • STAT.6G Construct null and alternative hypothesis statements about a population parameter. • STAT.6H 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. • STAT.6I 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. • STAT.6J Describe the potential impact of Type I and Type II Errors. |

| Cycle 6 | 31 Days | The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents. |
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| | Apr. 25 - June 7, 2022 | |
| Unit | # Class Periods | <p>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| <p>Unit 11: Hypothesis Test (1-Proportion continued, 2-Proportion) Students conduct hypothesis testing for one and two proportions.</p> <p>(continued from cycle 5)</p> | <p>4 class periods (90-min. each) or 8 class periods (45-min. each)</p> <p><i>Memorial Day May 30</i></p> <p><i>Teacher Prep Day (no students) June 8</i></p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> PS STAT.1C 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. PS STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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. <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3D Describe and model variability using population and sampling distributions. <p>Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.6F Explain how a sample statistic provides evidence against a claim about a population parameter when using a hypothesis test. • STAT.6G Construct null and alternative hypothesis statements about a population parameter. • STAT.6H 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. |

| Cycle 6 | 31 Days Apr. 25 - June 7, 2022 | <i>The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.</i> |
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| Unit | # Class Periods | <p align="center">Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</p> <p>The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course.</p> <p>The student will:</p> |
| | | <ul style="list-style-type: none"> • STAT.6I 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. • STAT.6J Describe the potential impact of Type I and Type II Errors. |
| <p>Unit 12: Hypothesis Test (Mean and Difference between Means) Students conduct hypothesis testing using mean and the difference between means.</p> | <p>8 class periods (90-min. each) or 16 class periods (45-min. each)</p> | <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ STAT.1C 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. Ⓟ STAT.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> • STAT.2E Formulate a meaningful question, determine the data needed to answer the question, gather the appropriate data, analyze the data, and draw reasonable conclusions. • STAT.2F 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. <p>Variability. The student applies the mathematical process standards when describing and modeling variability. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.3D Describe and model variability using population and sampling distributions. <p>Inference. The student applies the mathematical process standards to make inferences and justify conclusions from statistical studies. The student is expected to:</p> <ul style="list-style-type: none"> • STAT.6F Explain how a sample statistic provides evidence against a claim about a population parameter when using a hypothesis test. |

| Cycle 6 | 31 Days | | The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents. |
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| | Apr. 25 - June 7, 2022 | | |
| Unit | # Class Periods | Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The bold face words in the TEKS SEs indicate concepts addressed specially in this unit, the unbolded concepts are addressed in other units of this course. The student will: | |
| | | <ul style="list-style-type: none"> • STAT.6G Construct null and alternative hypothesis statements about a population parameter. • STAT.6H 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. • STAT.6I 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. • STAT.6J Describe the potential impact of Type I and Type II Errors. | |