|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Common Core Strand** | **Cluster** | **Standard** | **Learning Targets**  7th Grade Math Curriculum Map – 3rd Quarter | **Resources** | **Vocabulary** |
| **Geometry** | **Draw, construct, and describe geometrical figures and describe the relationships between them.** | 7.G.1 1. Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale. | I can use a scale drawing to determine the actual dimensions and area of a geometric figure.  I can use a different scale to reproduce a similar scale drawing. | Chapter 5: Proportions and Similarity | scale drawing |
| 7.G.2 2. Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle. | I can draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle. | Lesson 11: p. 793-794 Draw Triangles | triangle, angle side, protractor, |
| 7.G.3 3. Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids. | I can describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids. | Lesson 12:  p. 795- : Cross sections | parallel,  coplanar, cross section, face, edge, vertex, polyhedron, solids |
| **Geometry** | **Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.** | 7.G.4 4. Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle. | I know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle. | Chapter 10: Volume Surface Area Additional Lesson 13: p. 801-806: Circumference & area of circles | radius diameter area pi |
| 7.G.5 5. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure. | I can use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure. | Chapter 12: Polygons | supplementary,  complementary, vertical, adjacent |
| 7.G.6  **6**. Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. | I can solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. | Chapter 10: Volume/Surface Area Chapter 11: Proportional Reasonings | length, width,  base, height, altitude, area, surface area, volume |
| **Statistics & Probability** | **Use random sampling to draw inferences about a population.** | 7.SP.1 1. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. | I can explain why the validity of a sample depends on whether the sample is representative of the population. | Chapter 8: Probability | sample population, random sample, representative sample |
| **Statistics and Probability** | **Use random sampling to draw inferences about a population.** | 7.SP.2 2. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be. | I can draw inferences about a population based on data generated by a random sample. | Chapter 8: Probability Additional Lesson 14: p. 807-808: Predictions/ Inferences on Data | population sample, random sample |
| **Draw informal comparative inferences about two populations.** | 7.SP.3 3. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable. | I can draw inferences about the data sets by making a comparison of these differences relative to the mean absolute deviation or interquartile range of either set of data. | Additional Lesson 15: p. 809-810  Compare Data Sets | centers,  variablilities, mean, median, mean absolute, deviation, interquartile, range |
| **Statistics and Probability** | **Draw informal comparative inferences about two populations.** | 7.SP.4 4. Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book. | I can use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. | Additional Lesson 16:  p. 811-816: Box-Whisker plots (compare population) | centers,  variablilities, mean, median, mean absolute, deviation, interquartile, range |
| **Investigate chance processes and develop, use, and evaluate probability models.** | 7.SP.5 5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. | I can understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. | Chapter 8: Probability | likely,  unlikely |
| 7.SP.6 6. Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times. | I can use variablity to explain why the experimental probability will not always exactly equal the theoretical probability. | Chapter 8: Probability | theoretical probability, experimental probability, relative frequency |
| **Statistics and Probability** | **Investigate chance processes and develop, use, and evaluate probability models.** | 7.SP.7a 7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected. | I can develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. | Chapter 8: Probability | probability model, uniform probability model, frequency, relative frequency, theoretical probability, experimental probability |
| 7.SP.7b 7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies? | I can develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. | Chapter 8: Probability | probability model, uniform probability model, frequency, relative frequency, theoretical probability, experimental probability |
| **Statistics and Probability** | **Investigate chance processes and develop, use, and evaluate probability models.** | 7.SP.8a 8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. | I can understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. | Chapter 8: Probability | compound events, sample space, tree diagram, outcomes, favorable outcomes, simulation |
| 7.SP.8b 8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event. | I can represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event. | Chapter 8: Probability | compound events, sample space, tree diagram, outcomes, favorable outcomes, simulation |
| 7.SP.8c 8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. c. Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood? | I can design and use a simulation to generate frequencies for compound events. | Additional Lesson 17:  p. 817-818: Compound Events | compound events, sample space, tree diagram, outcomes, favorable outcomes, simulation |