

First Quarter Learning Targets

	Learning Targets	Review Problems	1 st	2 nd	3 rd	Notes
4A	Sample Surveys: General Concepts ⇒ sample vs. population (census) ⇒ inference ⇒ sampling variability ⇒ Why is randomness important?	R4.1, T4.1				
4B	Sample Surveys: How to Sample Well ⇒ valid sampling methods – completely describe implementation (random digit table or calculator) and advantages of each <ul style="list-style-type: none"> • Simple Random Sample • Stratified Random Sample • Clustered Random Sample • Systematic Random Sample 	R4.3, R4.4 T4.2, T4.4, T4.7, T4.13a				
4C	Sample Surveys: How to Sample Badly ⇒ bias - identify sources of bias; completely describe how a survey might be biased <ul style="list-style-type: none"> • convenience sample • voluntary response sample • undercoverage • nonresponse bias • response bias 	R4.2, R4.5 T4.8, T4.11, T4.13c				
4D	Experiments: Studies vs. Experiments ⇒ observational study vs. experiment ⇒ scope and nature of the conclusions that can be made from a study description	R4.6a, R4.8 T4.3, T4.6				

4E	Experiments: Terminology ⇒ experimental units ⇒ explanatory and response variables ⇒ treatments and levels ⇒ confounding - properly describe a confounding variable in the context of a problem ⇒ blinding – single and double blind ⇒ placebos ⇒ statistically significant	R4.6b, R4.7a, R4.9 T4.12a, T4.14c				
4F	Experiments: Well-Designed Experiments ⇒ Comparison, random assignment, control, replication ⇒ Describe random assignment of treatments using a random digit table or technology ⇒ Describe a completely randomized experiment (diagram optional)	R4.7b, R4.10a T4.5, T4.12b, T4.14b				
4G	Experiments: Blocking ⇒ Explain the purpose of blocking ⇒ Describe a randomized block experiment ⇒ Describe a matched pair experiment	R4.7c, R4.10bc T4.9, T4.10, T4.14a				
1A	Categorical Variables: ⇒ Calculate and display (bar graph) the marginal distributions and conditional distributions from a two-way table ⇒ Describe the association between two categorical variables by comparing appropriate conditional distributions or by creating a segmented bar graph	R1.2, R1.4, R1.5 T1.3, T1.9, T1.10, T1.13				
1B	Quantitative Variables: Graphs ⇒ Create and interpret frequency tables, histograms, dotplots and stemplots ⇒ Apply the Area Principle to making graphs ⇒ Describe a distribution from a histogram, dotplot, stemplot ⇒ Compare two distributions using comparison words	R1.3, R1.6, R1.7a, R1.8, R1.9c, R1.10 T1.5, T1.6, T1.12a, T1.14, T1.15				

1C	Quantitative Variables: Statistics ⇒ Calculate measures of center (median and mean); explain how they are similar and different ⇒ Calculate measures of spread (range, IQR, standard deviation); explain the advantages and disadvantages of each ⇒ Draw and interpret boxplots, including finding outliers	R1.7bc, R1.9ab, R1.10 T1.4, T1.7, T1.8, T1.11, T1.12bc				
2A	Describing Locations in Distributions ⇒ Find and interpret percentiles; estimate percentiles from an ogive ⇒ Understand the effects of applying (+ - x /) a constant to all measurements in a data set ⇒ Understand z-scores and use them to compare performances	R2.1, R2.2, R2.3 T2.1, T2.3, T2.4, T2.9, T2.10, T2.11b				
2B	The Normal Distribution Part One ⇒ Approximate the mean and median of a density curve ⇒ Know the characteristics of the Normal model ⇒ Apply the 68-95-99.7 Rule	R2.4, R2.5 T2.2, T2.6, T2.7				
2C	The Normal Distribution Part Two ⇒ Use z-scores and the Normal Model to solve problems involving percentiles ⇒ Determine if a distribution of data is nearly Normal from graphical and numerical evidence	R2.6, R2.7, R2.8, R2.9, R2.10, R2.11 T2.5, T2.8, T2.11a, T2.12, T2.13				

- Each learning target will be assessed the week it is taught. It will be assessed again at least one more time a week or two later.
 - If the last grade for a learning target is the highest grade for that learning target, then that will be the grade for the learning target (replacing any lower grades in the grade book).
 - If the last grade is not the highest grade for that learning target, then the most recent grade will be averaged with the existing grade.
 - Parents may be notified when a score of 0 or 1 is earned on any learning target.

Score Conversions:

Target Score	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Percent	40	45	50	55	60	65	70	75	80	85	90	95	100