## **Cobb County School District**



Semester 1			Semester 2		
Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
5 weeks	5 weeks	8 weeks	9 weeks	7 weeks	2 weeks
Statistical Modeling	Statistics as a	Collecting/Considering Data and Types of	Analyzing Data and the Role of	Interpreting Results to	Exploring
Statistical Modeling	Problem-Solving	Studies (including non-traditional data)	Distributions	Answer the Statistical	Culminating
SR.MM.1	Process and the	SR.DSR.3	SR.DSR.4	Investigative Question	Capstone
	Role of Questioning			SR.DSR.5	Unit
	SR.DSR.2				
SR.MM.1.1	SR.DSR.2.1	SR.DSR.3.1	SR.DSR.4.1	SR.DSR.5.1	All Standard
(Explain contextual,	(Formulate statistical	(Apply and appropriate data-collection plan	(Summarize quantitative or categorical data	(Use statistical evidence from	
mathematical	investigative	when collecting primary or secondary data for	using tables, graphical displays, and	analyses to answer the	
problems using a	questions about a	the statistical investigative question of	numerical summary statistics)	formulated statistical	
mathematical model)	population using	interest)	SR.DSR.4.2	investigative questions)	
SR.MM.1.2	samples taken from	SR.DSR.3.2	(Summarize and describe relationships	SR.DSR.5.2	
(Create mathematical	the population)	(Distinguish between surveys, observational	among multiple variables)	(Interpret the impact of	
models to explain	SR.DSR.2.2	studies and experiments)	SR.DSR.4.3	outliers, missing values or	
phenomena that exist	(Formulate	SR.DSR.3.3	(Use sampling distributions developed	erroneous values of the results)	
in the natural sciences,	comparative and	(Design sample surveys, experiments, and	through simulation to describe the sample-	SR.DSR.5.3	
social sciences, liberal	associative statistical	observational studies using accepted	to sample variability of sample statistics)	(Use and interpret the p-value	
arts, fine and	investigative	practices)	SR.DSR.4.4	to determine whether the	
performing arts,	questions for surveys, observational studies,	SR.DSR.3.4	(Use sampling distributions to compute	estimate for a population	
and/or the humanities)	and experiments to	(Distinguish between random selection and	simulated p-values)	characteristic is plausible)	
SR.MM.1.3	compare two or more	random assignment and identify their impact	SR.DSR.4.5	SR.DSR.5.4	
(Using abstract and	groups or to	on conclusions)	(Describe the relationship between two	(Interpret a given margin of	
quantitative reasoning,	investigate the	SR.DSR.3.5	quantitative variables by interpreting	error associated with an	
make decisions about	association of two or	(Describe potential sources and effects of bias	correlation and LSRL)	estimate of a population	
information and data from a real-life	more variables)	and confounding variables)	SR.DSR.4.6	characteristic)	
situation)	SR.DSR.2.3	SR.DSR.3.6	(Use simulations to investigate associations	SR.DSR.5.5	
SR.MM.1.4	(Formulate	(Describe and adhere to the ethical use of	between two categorical variables and to	(Explain the impact of multiple	
-	multivariable	data)	compare groups)	variables on one another)	
(Use various mathematical	statistical	SR.DSR.3.7			
representations and	investigative	(Identify when data can be generalized to a			
structures with this	questions)	target population)			
information to	SR.DSR.2.4				
represent and solve	(Formulate inferential				
real-life problems)	statistical				
,	investigative				
	questions regarding association and				
	prediction)				1

Units contain tasks that depend upon the concepts addressed in earlier units. Mathematical standards are interwoven and should be addressed throughout the year in as man different units and tasks as possible in order to stress the natural connections that exist among mathematical topics.

The Framework for Statistical Reasoning, Mathematical Modeling Framework, and the K-12 Mathematical Practices should be taught throughout the units.

Key for Course Standards: MM: Mathematical Modeling DSR: Data & Statistical Reasoning

## **Cobb County School District**

Statistical Reasoning Teaching & Learning Framework  BLOCK									
Unit 1 2.5 weeks Statistical Modeling SR.MM.1	Unit 2 2.5 weeks Statistics as a Problem-Solving Process and the	Unit 3 4 weeks  Collecting/Considering Data and Types of Studies (including non-traditional data) SR.DSR.3	Unit 4 4.5 weeks Analyzing Data and the Role of Distributions SR.DSR.4	Unit 5 3.5 weeks Interpreting Results to Answer the Statistical Investigative Question	Unit 6 1 week Exploring Culminating Capstone				
SR.MM.1.1 (Explain contextual, mathematical problems using a mathematical model) SR.MM.1.2 (Create mathematical models to explain phenomena that exist in the natural sciences, social sciences, liberal arts, fine and performing arts, and/or the humanities) SR.MM.1.3 (Using abstract and quantitative reasoning, make decisions about information and data from a real-life situation) SR.MM.1.4 (Use various mathematical representations and structures with this information to represent and solve real-life problems)	Role of Questioning SR.DSR.2  SR.DSR.2.1 (Formulate statistical investigative questions about a population using samples taken from the population)  SR.DSR.2.2 (Formulate comparative and associative statistical investigative questions for surveys, observational studies, and experiments to compare two or more groups or to investigate the association of two or more variables)  SR.DSR.2.3 (Formulate multivariable statistical investigative questions)  SR.DSR.2.4 (Formulate inferential statistical investigative questions regarding association and prediction)	SR.DSR.3.1  (Apply and appropriate data-collection plan when collecting primary or secondary data for the statistical investigative question of interest)  SR.DSR.3.2  (Distinguish between surveys, observational studies and experiments)  SR.DSR.3.3  (Design sample surveys, experiments, and observational studies using accepted practices)  SR.DSR.3.4  (Distinguish between random selection and random assignment and identify their impact on conclusions)  SR.DSR.3.5  (Describe potential sources and effects of bias and confounding variables)  SR.DSR.3.6  (Describe and adhere to the ethical use of data)  SR.DSR.3.7  (Identify when data can be generalized to a target population)	SR.DSR.4.1  (Summarize quantitative or categorical data using tables, graphical displays, and numerical summary statistics)  SR.DSR.4.2  (Summarize and describe relationships among multiple variables)  SR.DSR.4.3  (Use sampling distributions developed through simulation to describe the sampleto sample variability of sample statistics)  SR.DSR.4.4  (Use sampling distributions to compute simulated p-values)  SR.DSR.4.5  (Describe the relationship between two quantitative variables by interpreting correlation and LSRL)  SR.DSR.4.6  (Use simulations to investigate associations between two categorical variables and to compare groups)	SR.DSR.5.1  (Use statistical evidence from analyses to answer the formulated statistical investigative questions)  SR.DSR.5.2  (Interpret the impact of outliers, missing values or erroneous values of the results)  SR.DSR.5.3  (Use and interpret the p-value to determine whether the estimate for a population characteristic is plausible)  SR.DSR.5.4  (Interpret a given margin of error associated with an estimate of a population characteristic)  SR.DSR.5.5  (Explain the impact of multiple variables on one another)	Unit All Standard				

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