Cobb County School District

Mathematics of Industry and Government (MIG) Teaching & Learning Framework					
Semester 1		**Semester 2**			
Unit 1 14 weeks	**Unit 2** 4 weeks	**Unit 3** 9 weeks	**Unit 4** 4 weeks	**Unit 5** 3 weeks	**Unit 6** 2 weeks
Exploring Linear Programming **MIG.ARDDM.2**	**Making Relevant Connections with Optimal Locations and Paths** **MIG.ARDDM.3** **MIG.ARDDM.4**	**Analyzing Statistical Distributions** **MIG.ARPDM.5** **MIG.ARPDM.6**	**Investigating Probabilistic Models and Simulations** **MIG.PR.7** **MIG.ARPDM.8**	**Modeling Fair Methods** **MIG.ARPDM.9**	**Culminating Project-Based Learning Unit**
MIG.ARDDM.2.1 (Advanced Linear Programming) **MIG.ARDDM.2.2** (Continuous, Integer, Binary Contexts) **MIG.ARDDM.2.3** (Model & Interpret Results) **MIG.ARDDM.2.4** (Solve Problems with 3 or More Variables) **MIG.ARDDM.2.5** (Cause & Effect of Contextual Changes)	**MIG.ARDDM.3.1** (Optimal Median Location, One-Dimensional) **MIG.ARDDM.3.2** (Optimal Median Location, Rectilinear) **MIG.ARDDM.3.3** (Optimal Location, 3 Noncollinear points) **MIG.ARDDM.3.4** (Optimal Location, In a Set) **MIG.ARDDM.4.1** (Relate to a Network Representation) **MIG.ARDDM.4.2** (Apply Recursive Algorithms) **MIG.ARDDM.4.3** (Alternate Decisions to Contextual Changes)	**MIG.ARPDM.5.1** (Properties of Normal Distributions) **MIG.ARPDM.5.2** (Theoretical & Empirical Probabilities) **MIG.ARPDM.5.3** (Contextual Factors & Issues, Decision-Making Process) **MIG.ARPDM.5.4** (Quality Control Techniques) **MIG.ARPDM.6.1** (Calculate Theoretical & Empirical Probabilities) **MIG.ARPDM.6.2** (Analyze & Interpret Probabilities **MIG.ARPDM.6.3** (Contextual Factors & Issues, Decision-Making Process)	**MIG.PR.7.1** (PERT, Completion Times of Projects) **MIG.PR.7.2** (Transition Matrices, Markov Chains) **MIG.PR.7.3** (Apply Queuing Theory) **MIG.PR.7.4** (Contextual Factors & Issues, Decision-Making Process) **MIG.ARPDM.8.1** (Technology to Simulate Real-World Situations) **MIG.ARPDM.8.2** (Results of Simulations) **MIG.ARPDM.8.3** (Alternate Decisions to Contextual Changes)	**MIG.ARPDM.9.1** (Fair Voting Methods) **MIG.ARPDM.9.2** (Apportioning Representative) **MIG.ARPDM.9.3** (Setting Voting District Boundaries)	**All Standards**
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 many 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: PR:Probabilistic Reasoning, ARDDM: Abstract Reasoning & Deterministic Decision-Making, ARPDM: Abstract Reasoning & Probabilistic Decision-Making					

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Mathematics of Industry and Government (MIG) Teaching & Learning Framework					
BLOCK					
Unit 1 7 weeks	**Unit 2** 2 weeks	**Unit 3** 4.5 weeks	**Unit 4** 2 weeks	**Unit 5** 1.5 weeks	**Unit 6** 1 week
Exploring Linear Programming **MIG.ARDDM.2**	**Making Relevant Connections with Optimal Locations and Paths** **MIG.ARDDM.3** **MIG.ARDDM.4**	**Analyzing Statistical Distributions** **MIG.ARPDM.5** **MIG.ARPDM.6**	**Investigating Probabilistic Models and Simulations** **MIG.PR.7** **MIG.ARPDM.8**	**Modeling Fair Methods** **MIG.ARPDM.9**	**Culminating Project-Based Learning Unit**
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