MEA 2014-2015
Teacher: Claudia Valle
Start Date:

Course: Math Models A
Student:
Projected End Date:

**Objective: Students will develop a hypothesis, collect data using appropriate methods to minimize bias and error, analyze the data, and display the data using various representations.**

| Assignment # | Activity | Essential Question | Date Completed | Grade | TEKS | ELPS |
|---|---|---|---|---|---|---|
| 1 | Organizing and Describing Data | What are some real life situations that you would need to use probability or statistics? | | | M.1.A, M1.B, M.1.C, M.2.A | 1A, 1C, 1E, 1F, 2D, 2E, 2H, 2I, 3C, 3D, 3F, 3G, 4F, 4J, 4K, 5B, 5F, 5G |
| 2 | Frequency and Histograms | | | | M.1.A, M1.B, M.1.C, M.2.A | 1A, 1C, 1E, 1F, 2D, 2E, 2I, 3C, 3D, 3F, 3G, 4F, 4J, 4K, 5B, 5F, 5G |
| 3 | Data Distributions | | | | M.1.A, M1.B, M.1.C, M.2.B | 1A, 1C, 1E, 1F, 2D, 2E, 2I, 3C, 3D, 3F, 3G, 4F, 4J, 4K, 5B, 5F, 5G |
| 4 | Misleading Graphs and Statistics | | | | M.1.A, M1.B, M.1.C, M.2.C | 1A, 1C, 1E, 1F, 2D, 2E, 2I, 3C, 3D, 3F, 3G, 4F, 4J, 4K, 5B, 5F, 5G |
| 5 | Looking at Probability | | | | M.1.A, M1.B, M.1.C, M.4.A, M.4.B | 1A, 1C, 1E, 1F, 2D, 2E, 2I, 3C, 3D, 3F, 3G, 4F, 4J, 4K, 5B, 5F, 5G |
| 6 | Statistics Project | | | | M.1.A, M1.B, M.1.C, M.2.A, M2.B, M.2.C, M.2.D, M.3.A, M.3.B, M.3.C | 1C, 5B, 5F, 5G |
| 7 | Unit 1 Test | | | | M.1.A, M1.B, M.1.C, M.2.A, M2.B, M.2.C, M.2.D, M.3.A, M.3.B, M.3.C, M.4.A, M.4.B | 1E, 4G, 4K |

| Objective: Students will explore the characteristics of exponential, inverse, and trigonometric functions and investigate how they are used to model real-world situations. | | | | | | |
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| 8 | Scatter Plots and Trend Lines | How can you find a function to model real-world data and predict future situations? | | | M.1.A, M1.B, M.1.C, M.2.D | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 9 | Variables in Variation | | | | M.1.A, M1.B, M.1.C, M.8.C | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 10 | Applications of Variation | | | | M.1.A, M1.B, M.1.C, M.8.C | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 11 | Population Explosion | | | | M.1.A, M1.B, M.1.C, M.8.A | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 12 | Rebounding Ball | | | | M.1.A, M1.B, M.1.C, M.8.C | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 13 | Exponential Models | | | | M.1.A, M1.B, M.1.C, M.2.D | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 14 | Modeling the Spread of Diseases | | | | M.1.A, M1.B, M.1.C, M.8.A | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 15 | Modeling Radioactive Decay | | | | M.1.A, M1.B, M.1.C, M.8.A | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 16 | Modeling Periodic Motion | | | | M.1.A, M1.B, M.1.C, M.8.B | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 17 | Applications of Trig Functions | | | | M.1.A, M1.B, M.1.C, M.8.B | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 18 | Regression: Modeling Real-World Data | | | | M.1.A, M1.B, M.1.C, M.2.D | 1E, 1F, 2D, 2E, 2H, 2I, 3D, 4G, 4J, 4K, 5F, 5G |
| 19 | Unit 2 Test | | | | M.1.A, M1.B, M.1.C, M.2.D, M.8.A, M.8.B, M.8.C | 1E, 4G, 4K |

| Objective: Students explore mathematical models in music, art, and architecture. | | | | | | |
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| 20 | Sound Waves | How does knowing how to apply mathematical models help to better understand real-world situations? | | | M.1.A, M1.B, M.1.C, M.9.B | 1.C, 2D, 2E, 2H, 3D, 3H, 4G, 4J, 5F, 5G |
| 21 | Music of Mathematical Patterns | | | | M.1.A, M1.B, M.1.C, M.9.B | 1.C, 2D, 2E, 2H, 3D, 3H, 4G, 4J, 5F, 5G |
| 22 | Rounding Out the Sound | | | | M.1.A, M1.B, M.1.C, M.9.B | 1.C, 2D, 2E, 2H, 3D, 3H, 4G, 4J, 5F, 5G |
| 23 | Tessellations and Transformations | | | | M.1.A, M1.B, M.1.C, M.9.A | 1.C, 2D, 2E, 2H, 3D, 3H, 4G, 4J, 5F, 5G |
| 24 | Dilation and Similarity | | | | M.1.A, M1.B, M.1.C, M.9.A | 1.C, 2D, 2E, 2H, 3D, 3H, 4G, 4J, 5F, 5G |
| 25 | Perspective in Art and Architecture | | | | M.1.A, M1.B, M.1.C, M.9.A | 1.C, 2D, 2E, 2H, 3D, 3H, 4G, 4J, 5F, 5G |
| 26 | Creative Castles | | | | M.1.A, M1.B, M.1.C, M.9.A | 1.C, 2D, 2E, 2H, 3D, 3H, 4G, 4J, 5F, 5G |
| 27 | Analyzing Models in Art and Architecture | | | | M.1.A, M1.B, M.1.C, M.9.A | 1.C, 2D, 2E, 2H, 3D, 3H, 4G, 4J, 5F, 5G |
| 28 | Unit 3 Test | | | | M.1.A, M1.B, M.1.C, M.9.A, M.9.B | 1E, 4G, 4K |