GTT-DM & AR Modules-Timeline
Sharyland North Junior High
2014-2015 (Fall Semester)

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Class Schedule: Monday-Friday

1st-Conf	5th- GTT-DM & AR
2nd- Science Academy	7th- IPC
3rd- Regular Sci.	8th- Regular Sci.
4th- IPC	9th- Regular Sci.

GTT-Design & Modeling-40 Days

Introduction Unit - Lesson 1.1 What is Engineering? 5 Days

- Lesson 1.1 What is Engineering - Overview
- Lesson 1.1 What Is Engineering - Key Terms
- Activity 1.1.1 Gateway To Technology Notebook Dividers
- Activity 1.1.1.a Engineering Notebook Templates
- Activity 1.1.2 Introduction to Engineering
- Project 1.1.3 STEM Investigation
- Activity 1.1.4 What is Technology?
- Activity 1.1.5.a Engineering Careers - Scavenger Hunt
- Activity 1.1.5.b Engineering Careers - Interview
- Activity 1.1.5.c Engineering Careers - Brochure
- Activity 1.1.5.d Engineering Careers - Book
- Activity 1.1.5.e Engineering Careers - Skit
- Activity 1.1.5.f Engineering Careers - Online Magazine
- Activity 1.1.5.g Engineering Careers – Glog
- Activity 1.1.5.h Engineering Careers – Flowchart

Introduction Unit - Lesson 1.2 Design Process-5 Days

- Lesson 1.2 Design Process - Overview
- Lesson 1.2 Design Process - Key Terms
- Activity 1.2.1 Design Process
- Activity 1.2.2 Design Elements
- Activity 1.2.3 Furniture Design
- Activity 1.2.3.a Hobby Organizer Design

Unit 1: Design and Modeling - Lesson 1.3 Measurement-5 Days

- Lesson 1.3 Measurement - Overview
- Lesson 1.3 Measurement - Key Terms
- Activity 1.3.1 Standard and Metric Measuring
- Activity 1.3.2 History of Measurement
- Activity 1.3.3 Precision Measuring
- Activity 1.3.3a Precision Measuring Worksheet
- Activity 1.3.4 Measurement Lab – Skimmer

Unit 1: Design and Modeling - Lesson 1.4 Sketching and Dimensioning-5 Days

- Lesson 1.4 Sketching and Dimensioning - Overview
- Lesson 1.4 Sketching and Dimensioning - Key Terms
- Activity 1.4.1 Sketching Techniques
- Activity 1.4.2 Sketching Practice
- Activity 1.4.3 Language of Sketching
- Activity 1.4.4 Orthographic Projection
- Activity 1.4.5 Dimensioning

Unit 1: Design and Modeling - Lesson 1.5 Designing for Production-20 Days

- Lesson 1.5 Designing for Production - Overview
- Lesson 1.5 Designing for Production - Key Terms
- Activity 1.5.1 Descriptive Geometry and Coordinate System
- Activity 1.5.2 Computer Modeling Fundamentals
- Activity 1.5.3 Parametric Modeling
- Activity 1.5.4 Sketch Plane Cube
- Activity 1.5.5 Pegboard Toy
- Activity 1.5.5a Pegboard Working Drawings
- Activity 1.5.5b Pegboard Presentation Drawings
- Activity 1.5.6 Bracket
- Project 1.5.7 Switch Plate Design
- Project 1.5.8 Hairbrush Design
- Problem 1.5.9 Playground Design Problem

GTT-Automation & Robotics-40 Days

Unit 2 Automation and Robotics: VEX - Lesson 2.1 What is Automation and Robotics?-5 Days

- Lesson 2.1 What is Automation and Robotics? - Overview
- Lesson 2.1 What is Automation and Robotics? - Key Terms
- Activity 2.1.1a Sandwich Algorithm
- Activity 2.1.1b VEX Build
- Activity 2.1.2a Understanding Robots
- Activity 2.1.2 What Do We Use Robots For

Unit 2 Automation and Robotics: VEX - Lesson 2.2 Mechanical Systems-12 Days

- Lesson 2.2 Mechanical Systems - Overview
- Lesson 2.2 Mechanical Systems - Key Terms
- Activity 2.2.1 Observing Mechanisms
- Activity 2.2.2 Mechanical Gears
- Activity 2.2.2a Mechanical Gears Review
- Project 2.2.3 Windmill Construction
- Project 2.2.4 Pull Toy Construction
- Project 2.2.5 Survival Challenge

Unit 2 Automation and Robotics: VEX - Lesson 2.3 Automated Systems-23 Days

- Lesson 2.3 Automated Systems - Overview
- Lesson 2.3 Automated Systems - Key Terms
- Activity 2.3.1 "Beef" up Your Technological Resources Understanding
- Activity 2.3.2 Robot Behaviors and Writing Pseudocode
- Activity 2.3.3 Using ROBOTC
- Project 2.3.4 Automation Through Programming
- Project 2.3.5 Simulated Factory Assembly Line