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|  | Mathematics DepartmentScope and SequenceCourse title: Algebra 1  |
| **Description:** | Algebra I is a tool building class that helps students prepare for more advanced mathematics courses. Algebra I concepts, such as solving various types of equations and simplifying expressions, are basic to the high school math curriculum; therefore they are tested heavily as part of the Idaho State Achievement Test (ISAT) |
| **Book:** | Glencoe Algebra 1, Glencoe McGraw-Hill (ISBN 978-0-07-663923-6) Authors John A. Carter, Gilbert J. Cuevas, Roger Day, and Carol Malloy. Copyright 2014 by McGraw-Hill Education, 8787 Orion Place, Columbus, Ohio 43240-4027 |
| **Prerequisites:**  | Completion of Math 8 or Basic Algebra with a “C” grade or better. |
| **Course Objectives:** | * Apply and demonstrate the different way numbers are represented and used in the real world
* Select appropriate operations, and compute for problem solving
* Write and solve single and multi-step equations including real-world applications
* Use rates and ratios to model and solve real-life problems
* Articulate under what conditions a relation is a function
* Describe, analyze, and generalize a wide variety of patterns, relations, and functions
* Display representations of a functions (equations, graphs, and tables)
* Connect representations of a function in a real world context and communicate mathematical thinking
* Solve systems of equations using various methods
* Use inequalities in an applied application to solve/evaluate real world data
* Identify, graph and analyze an exponential growth and decay function
* Apply various types of factoring methods to solve real-world problems
* Graph, analyze and solve quadratic equations
* Find probabilities of simple and compound events
* Analyze, create, display and interpret data using statistical methods
 |
| **Course Length:** | This is a two trimester Course |

Mathematics Department

Scope and Sequence

Course Title: Algebra 1

 **Course Outline:**

* **Trimester 1**

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| --- | --- | --- | --- | --- | --- |
| **Chapter 1** | **Chapter 2** | **Chapter 3** | **Chapter 4** | **Chapter 5** | **Chapter 6** |
| Expressions, Equations and Functions | Linear Equations | Linear Functions | Equations of Linear Functions | Linear Inequalities | Systems of Linear Equations and Inequalities |
| Days | Days | Days | Days | Days | Days |
| 8 | 9 | 6 | 8 | 8 | 8 |
|  |  |  |  |  |  |
| A.SSE.1A.SSE.2N.Q. 3A.CED.1A.CED.2A.REI.3 | A.REI.10F.IF.1F.IF.2F.IF.4 | A.CED.1A.CED.4A.REI.1A.REI.3N.Q. 1N.Q. 2F-IF.1F-IF.2 | F.IF.4F.IF.6F.IF.7F.LE.1F.LE.2F.BF.2A.REI.10 | A.CED.2F.IF.2F.IF.7F.BF.1F.BF.3F.BF.4 | F.LE.2S-ID.6S-ID.7S-ID.8S-ID.9 | A.CED.1A.CED.3A.REI.3A.REI.12 | A.CED.2A.CED.3A.REI.5A.REI.6A.REI.11A.REI.12 |

* **Trimester 2**

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| **Chapter 7** | **Chapter 8**  | **Chapter 9** | **Chapter 10** | **Chapter 11** | **Chapter 12** |
| **Exponents and Exponential Functions** | **Quadratic Expressions and Equations** | **Quadratic Functions and Equations** | **Radical Functions and Geometry** | **Rational Functions and Equations** | **Statistics And Probability** |
|  |  |  |  |  |  |
| Days | Days | *Days* | Days | Days | Days |
| 8 | 9 | *9* | 7 | 9 | 10 |
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| A.SSE.2A.SSE.3F.IF.3F.IF.6F.IF7F.IF.8 | N.RN.1N.RN.2F.LE.1F.LE.2F.BF.2F.BF.3 | A.APR.1A.SSE.1A.SSE.2A.SSE.3A.REI.1A.REI.4 | *F.IF.4**F.IF.6**F.IF.7**F.IF.8**A.REI.4* | *A.REI.7**F.BF.3**S.ID.6**F.LE.1* | F.BF.4F.IF.4F.IF.7A.REI.4N.RN.2N.RN.3A.CED.2 | A.CED.2A.REI.11 | S.ID.2S.ID.3S.ID.5 |

**Grades:**

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| Grades are calculated based on the following weighting: Tests and Quizzes: 65% Assignments: 35% | Trimester Grades are based on the Madison High School grade scale shown below: A 94-100% C 73-76%  A- 90-93% C- 70-72% B+ 87-89% D+ 67-69% B 83-86% D 63-66% B- 80-82% D- 60-62% C+ 77-79% F Below 60% |