

Credit Recovery

Algebra IA (Semester 1 & 2) Syllabus

COURSE INFORMATION:

- Credits to be earned: 0.5 per semester
 - *To earn the entire 1 credit, you must successfully complete Algebra IA semester 1 & 2.*
- Grade Level: 9th-12th grade

COURSE DESCRIPTION:

Our credit recovery (CRC) courses are built by taking 60% of the Traditional virtual content and pulling it into the CRC course. The amount of content varies based on each course and each course is broken down into units.

Algebra 1A is organized around the families of functions, with special emphasis on linear functions. Students will learn to represent them in multiple ways as verbal descriptions, equations, tables, and graphs. This course is intended for students who need extra time and supports while taking Algebra. (Required placement based on assessment scores)

COURSE SCOPE AND SEQUENCE:

Semester 1:

Unit 1: You will identify the difference between statistical and non-statistical questions and classify that data as numerical or categorical. You will represent and interpret data using data displays, and describe distributions using the appropriate terminology. You will create data displays and calculate summary statistics using technology, then interpret the values in context.

- A1.DS.A.1: Analyze and interpret graphical displays of data
- A1.DS.A.2: Use statistics appropriate to the shape of the data distribution to compare center and spread of two or more different data sets.

- A1.DS.A.3: Interpret differences in shape, center and spreads in the context of the data sets, accounting for possible effects of outliers.

Unit 2: You will learn that standard deviation is a measure of variability, and will interpret standard deviation in context. You will recognize outliers, investigate their source, make decisions about excluding them from the data set, and understand how the presence of outliers impacts measures of center and measures of variability. You will compare measures of center and the standard deviation and the interquartile range for different data sets. In the culminating activity, you will pose and answer a statistical question by designing an experiment, collecting data, and analyzing data.

- A1.DS.A.1: Analyze and interpret graphical displays of data.
- A1.DS.A.2: Use statistics appropriate to the shape of the data distribution to compare center and spread of two or more different data sets.
- A1.DS.A.3: Interpret differences in shape, center and spreads in the context of the data sets, accounting for possible effects of outliers.

Unit 3: You will expand and deepen your prior understanding of expressions and equations. You will reason about equations as ways to represent constraints, and will reason about the process of solving equations in terms of finding values that satisfy those constraints. The process of finding solutions may involve rewriting and manipulating equations. You will learn to explain and validate the steps to do so. Throughout the unit, you will practice reasoning about situations and mathematical representations, interpreting expressions and numbers in context, and using mathematical tools to model quantities and relationships.

- A1.NQ.B.4: Define and use appropriate quantities for representing a given context or problem.
- A1.SSE.A.1: Interpret the contextual meaning of individual terms or factors from a given problem that utilizes formulas or expressions.

- A1.CED.A.1: Create equations and inequalities in one variable and use them to model and/or solve problems.
- A1.CED.A.2: Create and graph linear, quadratic and exponential equations in two variables.
- A1.CED.A.3: Represent constraints by equations or inequalities and by systems of equations or inequalities, and interpret the data points as a solution or nonsolution in a modeling context.
- A1.CED.A.4: Solve literal equations and formulas for a specified variable that highlights a quantity of interest.
- A1.REI.A.1: Explain how each step taken when solving an equation or inequality in one variable creates an equivalent equation or inequality that has the same solution(s) as the original.
- A1.REI.C.6: Explain that the graph of an equation in two variables is the set of all its solutions plotted in the Cartesian coordinate plane

Unit 4: You will expand and deepen your prior understanding of equations. You will reason about systems of equations as ways to represent constraints and will reason about the process of solving equations in terms of finding values that satisfy those constraints. The process of finding solutions may involve rewriting and manipulating equations. You will learn to explain and validate the steps to do so. Throughout the unit, you will practice reasoning about situations and mathematical representations, interpreting expressions and numbers in context, and using mathematical tools to model quantities and relationships.

- A1.CED.A.3: Represent constraints by equations or inequalities and by systems of equations or inequalities, and interpret the data points as a solution or nonsolution in a modeling context.
- A1.CED.A.4: Solve literal equations and formulas for a specified variable that highlights a quantity of interest.
- A1.REI.A.1: Explain how each step taken when solving an equation or inequality in one variable creates an equivalent equation or inequality that has the same solution(s) as the original.

- A1.REI.B.3: Solve a system of linear equations algebraically and/or graphically
- A1.REI.B.5: Justify that the technique of linear combination produces an equivalent system of equations.
- A1.REI.C.6: Explain that the graph of an equation in two variables is the set of all its solutions plotted in the Cartesian coordinate plane

Semester 2:

Unit 5: You will expand and deepen your prior understanding of inequalities. You will reason about inequalities and systems of inequalities as ways to represent constraints, and will reason about the process of solving inequalities in terms of finding values that satisfy those constraints. The process of finding solutions may involve rewriting and manipulating inequalities. You will learn to explain and validate the steps to do so. Throughout the unit, you will practice reasoning about situations and mathematical representations, interpreting expressions and numbers in context, and using mathematical tools to model quantities and relationships.

- A1.CED.A.1: Create equations and inequalities in one variable and use them to model and/or solve problems.
- A1.CED.A.2: Create and graph linear, quadratic and exponential equations in two variables.
- A1.CED.A.3: Represent constraints by equations or inequalities and by systems of equations or inequalities, and interpret the data points as a solution or nonsolution in a modeling context.
- A1.REI.C.6: Explain that the graph of an equation in two variables is the set of all its solutions plotted in the Cartesian coordinate plane.
- A1.REI.C.7: Graph the solution to a linear inequality in two variables.
- A1.REI.C.8: Solve problems involving a system of linear inequalities.

- A1.SSE.A.1: Interpret the contextual meaning of individual terms or factors from a given problem that utilizes formulas or expressions.

Unit 6: You will informally construct scatter plots and lines of fit, notice linear patterns, and observe associations in categorical data using two-way tables. You will revisit two-way tables to find associations in categorical data using relative frequencies. You will also build on previous knowledge of scatter plots by assessing how well a linear model matches the data using residuals as well as the correlation coefficient for best-fit lines (found using technology). You will finish the unit with an exploration of the difference between correlation and causal relationships as well as an opportunity to apply this learning to anthropology and sports.

- A1.DS.A.4.b: Summarize data in two-way frequency tables. Recognize possible associations and trends in the data.
- A1.DS.A.5.a: Construct a scatter plot of bivariate quantitative data describing how the variables are related; determine and use a function that models the relationship. Construct a linear function to model bivariate data represented on a scatter plot that minimizes residuals.
- A1.DS.A.6: Interpret the slope (rate of change) and the y-intercept (constant term) of a linear model in the context of the data.
- A1.DS.A.7: Determine and interpret the correlation coefficient for a linear association.
- A1.DS.A.8: Distinguish between correlation and causation.
- A1.NQ.B.5: Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Unit 7: You will expand your understanding of functions, building on what you learned in your previous mathematics classes. You will develop your capacity to represent, interpret, and use functions to make sense of quantities in situations and to solve problems. You will be introduced to new tools for communicating about functions: function notation. Throughout the unit, you will use, interpret, and

connect the different representation of functions, both in and out of context.

- A1.IF.A.1.a: Understand that a function from one set (domain) to another set (range) assigns to each element of the domain exactly one element of the range. Represent a function using function notation.
- A1.IF.A.1.b: Understand that a function from one set (domain) to another set (range) assigns to each element of the domain exactly one element of the range. Understand that the graph of a function labeled f is the set of all ordered pairs (x, y) that satisfy the equation $y=f(x)$.
- A1.IF.A.2: Use function notation to evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
- A1.IF.B.3: Using tables, graphs and verbal descriptions, interpret key characteristics of a function that models the relationship between two quantities.
- A1.LQE.A.3: Construct linear, quadratic and exponential equations given graphs, verbal descriptions or tables.
- A1.LQE.A.1.a: Distinguish between situations that can be modeled with linear or exponential functions. Determine that linear functions change by equal differences over equal intervals.
- A1.IF.C.8: Translate between different but equivalent forms of a function to reveal and explain properties of the function and interpret these in terms of context.
- A1.REI.A.1: Explain how each step taken when solving an equation or inequality in one variable creates an equivalent equation or inequality that has the same solution(s) as the original.

Unit 8: You will expand your understanding of functions, building on what you learned in your previous mathematics classes. You will develop your capacity to represent, interpret, and use functions to make sense of quantities in situations and to solve problems. You will be introduced to new tools for communicating about functions: domain and range, average rates of change, and mathematical terms for

describing key features of graphs. You also will develop your ability to gather information about a function from its graph, by connecting features of the graph to features of the situation and other representations, and to sketch a graph that tells the story about the function. Throughout the unit, you will use, interpret, and connect the different representation of functions, both in and out of context.

- A1.IF.B.3: Using tables, graphs and verbal descriptions, interpret key characteristics of a function that models the relationship between two quantities.
- A1.IF.B.4: Relate the domain and range of a function to its graph and, where applicable, to the quantitative relationship it describes.
- A1.IF.B.5: Determine the average rate of change of a function over a specified interval and interpret the meaning.
- A1.REI.C.6: Explain that the graph of an equation in two variables is the set of all its solutions plotted in the Cartesian coordinate plane.

GRADING:

A student will start with a 0%, and after successful completion of each unit with an 80% or higher, the zero will gradually progress until the student gets to 100%.

Because a student must obtain the 80% or higher for all assignments, they will automatically pass the course if they finish all assignments. Instead of tracking grade percentages, CRC courses track student progress throughout the course. Once a student gets to 100%, they are done with that course.

Calculating and tracking student progress is not an automatic process. The teacher is responsible for marking all checkpoints for each student as incomplete before a student begins the course. This will set their progress percentage to 0%.

The majority of credit recovery assignments are self graded. There are some assignments that are not self graded and can stop the student from moving forward until the teacher grades that assignment. In the grades area, if an



assignment contains an icon instead of grade, this means the teacher needs to grade it before a score will appear. If a student has a 504 or IEP, contact the teacher of the course and let them know.

Once a student successfully completes a unit, either by passing the unit pre-test with an 80% or higher, or completing all of the practice assignments and post-test with an 80% or higher, the teacher will change the unit checkpoint from incomplete to complete. As each unit is marked as complete, the student's progress percentage will rise from a 0% and eventually end at 100%.

If a student gets stuck or can't move on to the next unit, the student must email their teacher with that information using Canvas Inbox.

At the end of this course, if the student reaches the 100% progression grade, they are done and will receive a passing grade on their transcript. If a student does not complete the course in the allotted time, they will receive an F. **Their grade will be transferred to their school district, and the school district will determine their final grade.**

ACADEMIC HONESTY:

Using someone else's work and claiming it as your own, even if it is unintentional, is considered being academically dishonest. Examples of academic dishonesty include, but are not limited to, using Artificial Intelligence programs or apps on assignments, online translators for world language courses, plagiarism, parents completing work for a child, and cheating. It is important that students cite sources and use quotation marks appropriately to avoid violating the Launch Academic Honesty policy.

Students who are suspected of violating the Launch Academic Honesty policy will receive reduced points on the assignment, and are expected to conference with the teacher and/or guardian before the grade can be modified.

If a student violates the guidelines, they will face the following consequences:

1st offense: Following teacher conference, student will be allowed to redo assignment for full credit and a formal warning will be issued.

2nd offense: Following teacher conference, student will be allowed to redo the assignment for a maximum grade of 50% and a second formal warning will be issued.

3rd offense: Following teacher, parent, student, and administrator conference, student will receive a zero for the assignment.

Students and parents should be aware that a teacher will reach out regarding a student's coursework if there is a question of academic integrity. These conversations are not meant to be an accusation, but rather an opportunity for students to discuss the process of completing the assignment and demonstrate mastery of the concept. If a teacher requests a meeting with a student and/or parent, a grade will not be finalized on the assignment until the conversation occurs.

ADDITIONAL IMPORTANT INFORMATION:

We encourage all students to speak to the instructor if they have problems or questions concerning the course. Do not wait to seek assistance – we are very willing to help each student in any way to perform to the very best of his or her abilities. Do not hesitate to ask questions throughout the class about projects, assignments, tests, etc.

COURSE RESOURCES:

The very first module is titled, Start Here: Course Resources and serves as a resource for students. This module has locks where students must view each resource before the next unit will unlock. Students can begin their work once the Start Here module locks are complete.

Each unit begins with a pre-test, which is the only assignment the student will initially see. The student only has one attempt to get an 80% or higher. Once the student submits the pre-test, they will be assigned to one of two paths, based on their score.

Path #1: If the pre-test score is 80% or higher, the student will go down path one. This means they have mastered the content within that unit and are exempted from the remainder of that unit. Then the next unit pre-test will unlock.

Path #2: If the pre-test score is lower than 80%, the student will go down path two. This means the unit will expand and automatically assign practice assignments. The amount of practice assignments vary based on standards for that unit. The student will have unlimited attempts on all of the practice assignments in order to get the required 80% or higher score. At the end of that unit the student will apply their knowledge to a post-test. The post-test will give the student three attempts to score 80% or higher. Once the student scores an 80% or higher on everything in that unit, the next unit pre-test will unlock.

DISTRICT TECHNOLOGY RESOURCES - ACCEPTABLE USE:

The purpose of the Springfield Public School's network, including access to the Canvas Learning Management System, is to support and enhance communication, learning and teaching. All students enrolled in an online course must follow the policies and procedures outlined in the District's Acceptable Use Policy. See pg. 75-76 of the [School Handbook](#) for more information.

CYBERBULLYING:

Cyberbullying is sending or posting harmful and cruel text or images using the Internet or other digital communication devices. Cyber threats are online materials that threaten or raise concerns about violence against others, suicide or self-harm. Discipline for such actions will follow the guidelines found in the [School Handbook](#).

Online courses will follow the same rules, policies and procedures established in the Springfield Public School Handbook, regardless of time of day or where students access Canvas.