

**Course Expectations**

**ACT Math & Science Prep 11**

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**I. Course Description**

This one-semester course is designed to prepare young adults for the math and science portions of the ACT exam. This 18 week course will provide test taking strategies, practice exams, and content focus to ensure that students reach their highest score potentials. Emphasis is on developing visualization abilities, analytical skills and deductive reasoning to master content. The prerequisite for this course is successful completion of Algebra I and Geometry. This course will fulfill one half of elective credits required for graduation.

**II. Performance Outcomes**

1. To establish an ideal score for entrance into a higher academic institution.

2. To track this score goal through bi-weekly practice ACT math exams.

3. To learn and utilize specific test-taking skills to increase practice test scores.

4. To master mathematic content in Intermediate Algebra and Spatial Geometry

5. To increase the ability to reason scientifically through sample questions across Biology, Physics, Geoscience and Earth Science.

**III. Course Activities and Criteria for Evaluating Students**

Grades will be uploaded and posted to Infinite Campus every Thursday by the end of the day.

**A. Testing:**

1. **Summative Assessments - Practice ACT Exams**:

Every two weeks students will take a Practice ACT Exam from previous years.

Students will receive a Raw, Percentile and Ranked score.

Students will personally chart their ranked score and compare it to their diagnostic exam.

2. **Formative Assessments** - **Daily Exit Tickets and Weekly Vocabulary/formula Quizzes:**

Each day of content, students will receive a five question exit ticket.

The ticket will contain five multiple choice questions, that mirror the ACT exam.

Every week students will receive a set of key terms and vocabulary to be mastered.

On Fridays students will be assessed on their ability to match vocabulary and recite formulas.

**B. Assignments:**

Daily assignments, worksheets and packets will be given and kept in students’ binder. Students would benefit from a three ringed binder, folder, and pencils for this course. If students are absent for a day, the assignments will be available in the classroom or online via the school’s website.

**C. Homework Policy:**

Homework assignments will involve finishing classwork. Each day there will be more assignments given that can be completed in the time allotted. These assignments will not be graded, but will be a great resource in preparing for the upcoming ACT exam. Students will be informed that they can watch any lecture before class on <http://geometry.flippedmath.com/> <http://algebra.flippedmath.com/>to prepare for the next day’s lesson as all of the topics are covered.

**D. Project:**

Depending on time restraints there may be creative projects that occur throughout the year. If not, these projects will be provided on an extra credit basis. These projects involve utilizing art, music, sports, cooking and other real world applications. In addition, there may be math labs, in which students will go outside and measure or model using mathematics to solve complex problems.

**E. Grading Scale:**

90-100% = A

80-89% = B

70-79% = C

60-69% = D

50-59% = F

“Minimum F” Policy

**F. Semester Exams:**

Semester exams will consist of a previous years ACT math and science exam and will be given at the end of the 2nd or 4th quarters. These exams will make up no more than 10% of the student’s semester grade.

**G. Extra Credit:**

During each exam there will be an extra credit assignment to help boost grades. These consist of projects, logic, modeling and other brain teasers.

**H. Writing Across the Curriculum:**

Mathematical literacy will be a big push in my classroom. Vocabulary is an important part of learning geometry. Students will be charged with learning new terms, symbols, and definitions. Students will create a Word Wall, utilize math graffiti, and be introduced to mathematical essays.

**I. Reading Across the Curriculum:**

There is a two shelf bookcase at the entrance of my classroom, where students have the ability to check out any item they wish. This can be done at any point throughout the year. The books are of various levels and contain mathematics, science, engineering, technology, as well as some fun reads. If a student has completed all of his or her work for the day and there is still time in class, he or she will be instructed to take out any book and begin reading.

**J. Student Discourse:**

Students will have the opportunity to engage in activities, model with mathematics, and apply concepts to real world situations. Students will have the ability to pose inquiries and work with peers to solve problems. Students coming up to the board to solve problems, utilize white boards, or generate solutions on large graph paper increases engagement and ownership of the work.

**IV. Textbook:**

There is no textbook for the course as we will follow Common Core Standards for Algebra and Geometry that are tested on the ACT exam. Guided notes, lectures and assignments will be given out in class.

**V. Behavioral Expectations:**

There are only two classroom rules to be adhered to: 1. No Phones in Class 2. No Food in Class. Chaparrals progressive discipline model will be enforced in the classroom. Any offense will follow the consequences below:

-First offense is a warning

-Second offense is a one on one conversation

-Third offense is a phone call home

-Fourth offense is a detention

-Any other offense will be brought to the Deans of administration

*I have reviewed the above expectations and understand its content.*

Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Student Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_

Parent Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Parent Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_

Weekly Course Outline

Week 1

Intro to Syllabus, Goal Setting, Team Building

Week 2 **Diagnostic ACT Exam**

(Intermediate-Algebra) Distributing with Exponents and Factoring \*Science Friday

Week 3

(Intermediate-Algebra) Graphing and Solving Quadratic Equations \*Science Friday

Week 4 **Practice Exam 1**

(Intermediate-Algebra) Ratios, Radicals (Imperfect Square Roots), Imaginary and Complex numbers \*Science Friday

Week 5

(Spatial Geometry) Polygons: interior, exterior and total \*Science Friday

Week 6 **Practice Exam 2**

(Spatial Geometry) Transformations, Dilations, Parallel lines cut by a transversal \*Science Friday

Week 7

(Spatial Geometry) Trigonometry, SOHCAHTOA, Special Right Triangles, Word Problems \*Science Friday

Week 8 **Practice Exam 3**

(Intermediate-Algebra) Sequences, Series, Arithmetic, Geometric, Word problems \*Science Friday

Week 9

(Intermediate-Algebra), Logs and Matrix \*Science Friday

Week 10 **Practice Exam 4**

(Intermediate-Algebra) Data Analysis, Mean Median, Mode Quartiles, Range, Box and Whisker, Data Tables \*Science Friday

Week 11

(Intermediate-Algebra) Analyzing Graphs and Data Tables, \*Science Friday

Week 12 **Practice Exam 5**

(Intermediate-Algebra) Algebraic Word Problems, Functions and Ratios \*Science Friday

Week 13

(Intermediate-Algebra) Probability \*Science Friday

Week 14 **Practice Exam 6**

(Coordinate Geometry) Circles, Geometric Word Problems \*Science Friday

Week 15

(Coordinate Geometry) Area, Perimeter, Surface Area and Volume \*Science Friday

Week 16 **Practice Exam 7**

Go through each question on a mathematics exam that was just taken to prepare students for the final