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GREEN ACRES SCHOOL
CELEBRATING 85 YEARS

8th Grade Curriculum Statements 2019-2020

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Language Arts

Teachers: Kara Combs and Peter Klam
Class Time: Five classes per six-day rotation
Class Size: 10-11 students

Skills & Concepts:
Language arts includes the study of literature, composition, grammar, vocabulary and speaking skills. Objectives for the students include the following:

- To read for enjoyment
- To read critically
- To express themselves clearly orally and in writing
- To listen actively
- To build vocabulary
- To edit work for spelling, punctuation, and grammar
- To learn research and study skills

Texts & Materials:
Literature: The literature includes *Stargirl*, *Long Way Down, Of Mice and Men*, *To Kill a Mockingbird*, stories and poetry by Edgar Allan Poe and other authors. With teacher guidance, sometimes students select their own reading material within a given genre, such as published memoir.

Composition: The **grammar** text is *Hands-On English* by Fran Santoro Hamilton. Grammar and mechanics are taught in mini-lessons and are reinforced when students write compositions. An assignment sheet that states objectives and method of evaluation accompanies major writing assignments.

Vocabulary: Using the workbook *Vocabulary for Achievement*, *Second Course,* students expand their vocabulary by studying the meanings of morphemes (the smallest unit of meaning of a word) and words relating to a common topic. Students also learn the meaning of words used in the literature that they read.

Units & Activities:
Literature: In-class discussions and written assignments focus upon critical analysis of setting, character development, plot development, conflict/resolution, theme, point of view, and style. Students often have opportunities to share their understanding and interpretation through dramatic and artistic activities. Students are asked to make connections from the literature to the world and then analyze how they can contribute positively to the world.

Composition: The aim of the composition program is to enable students to express themselves clearly, logically, and precisely. Expository writing assignments emphasize paragraph development and organization into introduction, body, and conclusion. Students learn to use literary techniques, such as vivid verbs, alliteration, and metaphor, in all of their expository and creative writing. Students often critique one another's papers (peer review), and revision is stressed. During the year, students write pieces such as analytical essays, persuasive speeches, personal narratives, short stories, memoirs, letters, poetry, and reviews.

Spelling: Standard spelling is expected in all compositions. Students will be expected to learn and use 100 specific words that follow a variety of spelling rules and patterns

World Studies

Teacher: Victor Stekoll
Class Time: Four classes per six-day rotation
Class Size: 15-16 students

Skills and Concepts:

- Employing research skills online and with hard copy materials
- Learning from films and videotapes
- Continuing to explore styles of studying that are effective
- Continued development of essay writing in homework, papers, and tests
- Organization and presentation of oral reports using visuals
- Working with others in simulations and games
- Critical thinking skills developed from the study of important issues and political and economic questions
- Developing an understanding of the US role in the world and the accompanying problems and benefits
- Recognizing how history repeats itself (sings a similar tune) and how we can learn from it
- Understanding the importance of the environment in a developing world

Some Texts and Supplementary materials used:

- *World Studies,* the textbook, by Victor Stekoll
- Slide/image program that accompanies the text
- Songbook that accompanies text
- Classroom as a resource room of books, films, and other materials
- Digital version of the text on iTunes U
- Ted Turner's *The Cold War* series
- CDs containing speeches and music
- The comprehensive film list and library for the course
- Trips to the Newseum and Spy Museum
- Youtube videos

Units and Activities:

- Survey of the 20th Century up to and through World War II
- Research and layout program for the Chronology Game or Time Line
- The Iron Curtain and the Cold War
- The Civil Rights Movement
- Role of the US in the modern world
- International Development and the Environment
- Biography Project
- Oral history project
- Research paper
- Model United Nations

Simulations: Monopolies and Roosevelt, Political Systems, Red/Blue Game, Coin Scramble, Model United Nations, Plant Experiment

8th Grade Math

Teacher: Paul Van Rijn
Class Time: Five classes per six-day rotation
Group Size: 11 students

Skills and Concepts:

- Order of operations, evaluating numerical expressions
- Mathematical properties
- Writing and simplifying algebraic expressions
- Negative numbers; operations with negative integers
- Solving single-step equations with integers
- Rational numbers
- Mathematical operations with fractions and decimals
- Equations with fractions
- Ratios, rates, proportions
- Applications of proportions with similarity and scale
- Using and plotting points on the coordinate plane
- Rate of change and linear relationships
- Percent, fraction, and decimal conversions
- Percent of change
- Application of percent
- Graphically representing and analyzing data

Focus throughout the year:

- Building numerical and procedural fluency.
- Application of math in the world around us.
- Developing and growing problem-solving practices.
- Emphasis on proper written techniques and format for math

Texts and Supplementary Materials Used:

- McDougal Littell Pre-Algebra
- Supplemental materials from textbook and online textbook resources, including lesson masters, enrichment, quizzes, tests, and graphics
- Math competition practice materials

Algebra

Teacher: Victor Stekoll
Class Time: Five classes per six-day rotation
Group Size: 9 students

Skills and Concepts:

- Review of computation, simplifying expressions, and solving equations (as needed)
- Inequalities, compound inequalities and absolute value inequalities
- Solving and graphing linear functions, slopes, rate of change, and rewriting functions in different forms
- Systems of equations and inequalities
- Problem-solving work with Mathcounts
- Ability to represent data using charts/graphs
- Simplifying and evaluating powers; graphing and modeling data with exponential growth and decay
- Operations with polynomials: adding/subtracting, multiplying, factoring
- Writing, graphing, and solving quadratic functions; modeling with parabolas; solving quadratic equations by graphing, square roots, completing the square, factoring, and the Quadratic Formula
- Simplifying radical expressions; solving radical equations
- Using a scientific calculator for all relevant concepts
- Use of graphing calculators and the iPad apps Desmos
- Selected topics which will include math lab activities such as bingo games, group problem-solving, and projects

Texts and Supplementary Materials Used:

- *Algebra I*, *Holt* HMH Fuse iPad version
- All accompanying materials: lesson masters, enrichment, quizzes, tests
- Topical material from magazines and newspapers
- Maryland Math Contest and Mathcounts materials
- Various online tools

Advanced Algebra

Teacher: Paul Van Rijn
Class Time: Five classes per six-day rotation
Group Size: 11 students

Skills and Concepts:

- Review of simplifying expressions, solving equations, linear functions (as needed)
- The Mathcounts Program – see handout later in the year
- Problem-solving work with Maryland Math Contest
- Solving systems of equations by graphing, substitution, and elimination
- Solving and graphing systems of linear inequalities
- Ability to represent data using charts/graphs
- Simplifying and evaluating powers; graphing and modeling data with exponential growth and decay
- Operations with polynomials: adding/subtracting, multiplying, factoring
- Writing, graphing, and solving quadratic functions; modeling with parabolas; solving quadratic equations by graphing, square roots, completing the square, factoring, and the Quadratic Formula
- Simplifying radical expressions; solving radical equations
- Simplifying rational expressions; solving rational equations
- Using a graphing calculator and graphing apps/software
- Use of TI-83/84 graphing calculators
- Several projects to illustrate algebraic modeling and practical application of concepts

Texts and Supplementary Materials Used:

- *Algebra I*, *Holt* HMH Fuse iPad version
- All accompanying material: lesson masters, enrichment, quizzes, tests, and graphics
- Topical material from magazines and newspapers
- Maryland Math Contest and Mathcounts materials

Science

Teacher: Merita Zajmi
Class Time: Four classes per six-day rotation
Group Size: 15-16 students

Overview: The goal of the eighth grade science curriculum is thinking critically and logically to explore the relationship between evidence and explanation. Student will learn that many scientific investigations result in new ideas and phenomena for further study. Students will use appropriate tools and techniques to gather, analyze, and interpret data. They will complete research projects throughout the year as well on topics of their interest.

Skills: Ask questions, conduct research, develop predictions, design controlled experiments with more than one variable, perform multiple trials, record observations, display the results in charts and graphs, draw conclusions, build theories, and communicate findings.

Topics for inquiry and investigation this year will be:

Chemistry: Overview of the parts of an atom, elements, and chemical properties of matter. Students will conduct several experiments to study the chemical reactions of different substances. They will study chemical bonding and the types of chemical reactions.

Radioactivity: Students will conduct tests to verify that even human bodies contain radioactive elements. They will understand the properties of radioactive elements and the effects of nuclear waste. A research topic on nuclear radioactivity will help in understanding nuclear power use.

Physics: Students will study the laws of physics using class experiments. During this unit, they will research, plan, design, and build models of motion using the steps of the engineering design process. They will be given a long-term challenge problem and they will be working in teams to find solutions.

Our Universe: Students will study the Big Bang Theory and how our universe is expanding. What is our place in the universe? What is our connection to the stars? What are the laws of physics that apply to the motion of objects in space?

Earth Science: Students will investigate the inner earth and its composition. They will study tectonic plates and the forces that lead to their motion over time. Based on this, students will investigate through simulations how these forces impact the land formations of our planet.

Genetics: After reviewing cells, cell processes, and reproduction, students will learn about the make-up of DNA using models. They will study genes and their inheritance. They will make predictions of offspring features using the Punnett Square. They will investigate mutations and the ways they affect different forms of life on Earth. At the end of the unit, students will look into genetic engineering and its impact on the future of living organisms.

Spanish

Teacher: Julie Pflieger/Pilar Puga
Class Time: Four classes per six-day rotation **Class Size:** 13-15 students

Skills and Concepts:
Awareness of and **appreciation** for the Spanish language and Hispanic culture, including development of the ability to compare and contrast both syntactic and cultural knowledge.
The four areas of language: listening, speaking, reading, writing; development of strategies for polishing these skills and becoming more effective language learners.

Vocabulary: Review of 7th grade vocabulary, and deeper study of 8th grade vocabulary (greetings, numbers, days and dates, weather, telling time, geographical terms, likes and dislikes, activities and places in the community, classroom objects and phrases, classes, food and health, physical and personality descriptions, emotions, family, celebrations, clothing and shopping, household and chores), plus vocabulary related to travel, technology, childhood experiences, natural disasters and medical emergencies terms, TV and movies, cooking, and the environment

Grammar: Review of 7th grade grammar (definite and indefinite articles, nouns, noun-adjective agreement, subject pronouns, subject-verb agreement, asking and answering questions, possessive adjectives, object pronouns, informal commands, comparisons and superlatives, demonstrative adjectives and pronouns, idiomatic expressions), plus reflexive verbs, reciprocal constructions, indirect and direct object pronouns, formal and informal commands, adverbs, uses of the impersonal *se*, uses of by (*por/para.)*

Verbs: Review of present tense (regular -ar, -er, and -ir verbs, stem-changing and irregular verbs), regular and irregular preterite (simple past) tense, imperfect (descriptive past) tense, present and imperfect present progressive tense, present perfect tense, simple future tense, introduction to the subjunctive tense. (time permitting)

Culture: Review of the geography of the Spanish-speaking world, Hispanic influence in the U.S.A., through the video story "En Busca de la Verdad" the students will learn about the culture of other Spanish speaking countries.

Texts and Supplementary Materials Used:
- E-textbook: *Realidades 2,* Pearson (8 chapters from the second half of the book.)
- Online practice workbooks to accompany *Realidades 2*, found on www.realidades.com
- Audio and video materials to accompany *Realidades 2*
- Maps, newspapers, magazines, music, videos, games in Spanish
- Teacher-made worksheets and presentations

Methods of Evaluation:
- Homework
- Quizzes and tests
- Conversational and listening practice
- Projects and writing assignments
- Use of Spanish in class

Physical Education

Teachers: Derek Edwards (lead) and Jennifer Simmons
Class Time: Four classes per six-day rotation (one held jointly with the 7th grade)
Group Size: 31 students

Skills and Concepts:

- Individual skills taught in earlier middle school grades are reviewed, and are practiced at game speed with defensive pressure applied by a partner.
- Advanced intermediate individual skills are introduced with defensive pressure applied by a partner at near game speed.
- Two and three step tactical applications are used during live and dead ball situations.
- Review rules learned in the 7th grade and introduce more advanced rules to prepare students should they wish to pursue the sport at the high school level.
- One vs. one, two vs. one, two vs. two, and 7 vs. 7 situation play to give students an opportunity to use their individual skills in simulated game conditions.
- Review intermediate tactical applications involved in game situations that were introduced in the 7th grade, and then build on them by introducing advanced and intermediate tactical applications.
- Continue combining footwork and movement patterns learned in the 5th, 6th and 7th grade to add to the student's repertoire of individual offensive and defensive moves.

Text and Supplementary materials used:

- Bulletin boards using photos, diagrams, checklists, and color-coded rosters.
- Handouts describing rules and regulations of the sport, as well as a brief history, and quizzes.
- Videotapes. DVDs and iPad applications of skill demonstrations and game footage.

Units and Activities

- **Year-round**: Physical Fitness activities including stretching, jogging, jumping rope, and President's Physical Fitness testing, large-group games (dodgeball, tag, etc.)
- **Fall**: Soccer, touch football, ultimate frisbee, volleyball, floor hockey
- **Winter**: Basketball, floor hockey, gymnastics, table tennis, new games
- **Spring**: Softball, track & field, team handball

Drama

Teacher: Paul Hope
Class Time: Two classes per six-day rotation for one semester
Class Size: 6-11 students (7th and 8th Grade)

Performance-Based Class
Students will explore various acting techniques and exercises to explore the text of Shakespeare. Students will perform a selection from Shakespeare.

Skills and Concepts:

- **Concentration**: Focusing on a given task, activity, or characterizations and maintaining that focus.
- **Collaboration**: Working with classmates toward a mutual, creative goal while incorporating ideas and talents of others with one's own.
- **Non-Verbal Expression**: Communicating ideas and emotions clearly through the use of gesture, movement, and facial expression.
- **Verbal Expression**: Communicating ideas and emotions clearly and articulately through the use of spoken language.
- **Critical Analysis**: Evaluating a dramatic work, looking for historical context, character subtext, and other insights which will inform a production of the work.
- **Characterization**: Creating holistic portrayals using various acting techniques such as characters histories and analyses.
- **Text Analysis**: Understanding text, specifically Shakespearean text, through the use of scansion and paraphrasing.
- **Cooperative Interaction**: Contributing to group efforts, listening courteously and attentively to others, appreciating the talents of others, appreciating drama and other art forms, supporting each other through constructive feedback, assuming roles of leader and follower, showing respect for the teacher and fellow students.

Text/Supplementary Materials Used:

- Published plays, scenes, and monologues from Shakespeare
- Sources regarding historical and social contexts
- Props, music, costumes

Music

Teachers:

- Chip Carvell: Guitar, Songwriting/Sound Design, Musical
- Paul Hope, Musical

Class Time: Two classes per six-day rotation for one semester
Group Size: Songwriting and Sound Design: 8 students; Guitar: 2 students; all 7th and 8th grade students participate in the musical

Songwriting and Sound Design

Students will explore how various elements of music interact and are used to create original works. Focusing on how rhythm, melody, and harmony interact, they will analyze examples and develop their own pieces. Additionally, they will discover how sound interacts and how elements such as timbre, balance, and frequency, are used in the presentation of music. Students will create their own compositions and sound collages and have the opportunity to perform their music at the end-of-semester Mods Night. Essential questions that will be addressed include:

- How are elements of music used to communicate?
- What differentiates sound from music?
- How and why is sound represented visually?
- How do individuals work together to make music?

Skills include:

- Practicing basic instrumental technique
- Recording in GarageBand
- Learning and applying music theory concepts like scales and chords
- Studying professional music recordings and extrapolating concepts to students' compositions

Guitar

Each student will receive instruction in guitar at a beginning or advanced beginner level. Songs selected by the students and teacher will be used to develop targeted skills selected by the student and teacher and based on assessment of current playing ability. Students will work toward playing in solo, duo, and group settings. The mod will culminate with an evening performance for parents and will address essential questions including:

- How do elements of music affect the listener?
- How do individuals work together to make music?
- What differentiates sound from music?
- What can I do to make an ensemble sound better?

Skills include:

- Tuning the guitar
- Developing and using good technique for holding the guitar, fingering with the left hand and stroking or strumming with the right hand
- Playing melodies and chord sequences on the guitar
- Reading standard musical notation, chord charts, and tablature
- Playing solo and as part of an ensemble

- Performing music representing a variety of styles
- Practicing regularly between class sessions

Musical

The Green Acres 7th and 8th grade musical tradition dates back to 1973. In addition to having the opportunity to sing, act, and/or play in the pit orchestra, students make up the crews, which include set, stage, technical, props, publicity and house crews. Some students also serve as crew chiefs, with teachers acting as advisors. All 7/8 students participate, and we strive to create a sense of student ownership.

Skills include:

- Introducing, Practicing, and increasing understanding of musical theater performance and production
- Providing leadership and making artistic decisions
- Collaborating with other students and teachers to achieve a common goal

Ceramics

Teacher: Shellie Marker
Class Time: Two classes per six-day rotation for one semester
Class Size: 14 students (7th and 8th Grade)

Skills and Concepts:

- To explore the nature of clay and its properties
- To appreciate the role of diverse cultures and their contributions to the history of ceramics
- To appreciate the historical significance of ceramic art
- To demonstrate basic technical skills such as creating with coils, slabs, and pinching, associated with sturdy hand building
- To look at work with a critical eye and to respectfully discuss others' work
- To learn the application of glaze techniques and alternative surface treatments
- To use patterns and texturing to add depth and interest
- To discuss the areas of difference and commonality in functional ware and sculpture
- To access the imagination and process through art
- To foster creative problem-solving through students' interpretations of the assigned projects
- To learn and properly use ceramics vocabulary
- To understand the firing process of low-fire clay
- To know and use safe practices in the ceramics studio

Units and Activities (possible themes to explore):

- Exploring the purpose of art and how it reflects the world around us
- Art as self-portrait (how do we experience the world as individuals?)
- Art as an expression of the world (world themes including poverty, race, human rights, climate change)
- Functional ceramics vs. sculptural/decorative
- Ceramics from non-western cultures (African, Asian, Middle Eastern)
- Historical ceramics and their function (Greek, Ancient Middle East, Native American)
- Glazing techniques and alternative surface decoration (underglazes, scraffito, acrylics, watercolors)
- Ceramics and literature (interpreting a piece of literature through clay)

Possible Projects

- Clay bells, clay instruments
- Self-portraits/masks
- Greek friezes (art as storytelling)
- Slab built boxes
- Endangered animals in their habitats
- Native American coil pots
- Art Nouveau Tiles
- Medieval gargoyles
- Judy Chicago-inspired installations

Art

Teacher: Shellie Marker
Class Time: Two classes per six-day rotation for one semester
Class Size: 15 students (7th and 8th Grade)

Skills and Concepts:

- Participate in formal critiques during fall semester - students will practice talking about their own work and providing feedback to their peers.
- Explore different media including drawing, painting, printmaking, and assemblage
- Understand and properly use perspective in drawing and painting
- Use good craftsmanship
- Learn and properly use art terms
- Set design
- Apply scale and proportion to drawing and painting
- Use shading to create dimensionality
- Understand and apply elements of art (line, shape, color, value, form, texture)
- Understand and apply the principles of design (balance, emphasis, movement, proportion, rhythm, unity, and variety)
- Understanding the importance of art in society
- Develop critical thinking skills while solving design problems

Units and Activities:

- Exploring the purpose of art and how it reflects the world around us
- Art as self-portrait (how do we experience the world as individuals?)
- Art as an expression of the world (world themes including poverty, race, human rights, climate change)
- Elements of art (line, shape, form, color, texture, space)
- Abstract art and exploration of different media
- Careers in art
- Art and activism
- Conceptual art
- Art from non-western cultures (African, Asian, Middle Eastern)
- Purpose of art through history (Greek, Ancient Middle East, Native American)
- Art and literature (interpreting a piece of literature)
- Music and art

Possible Projects

- Comic book art
- Facial proportions
- portraits/self-portraits
- Perspective in landscapes
- Still lifes and shading
- Endangered animals in their habitats
- Album cover illustrations
- Book illustrations
- Graphic design/advertising
- T-shirt design and screenprinting

Photography

Teacher: Victor Stekoll
Class time: Two classes per six-day rotation for one semester
Class Size: 7-9 students (7th and 8th Grade)

Skills and Concepts:

- To appreciate the art of black and white photography
- To "Learn How to See with a Camera"
- To develop abilities at photographing interesting and appropriate subject matter and to look for shape, geometry, lines, shadows, reflections, and texture
- To understand the rules of composition and contrast range
- To understand the use of chemicals and their management
- To become familiar with enlargers and to learn how to "print."
- To handle negatives in a way that will preserve them and keep them clean
- To manage digital images in organized folders
- To learn how to use Photoshop CS6 to enhance their images
- To begin to understand critiquing and the objective standards of photography
- To dry-mount prints on mount board cleanly and evenly

Materials/Activities:

- Canon film and digital cameras
- Nine high-quality enlargers with easels
- Ten computers with Photoshop CS6
- Numerous books and magazines on photography
- Teacher and student photographs for critique
- Photographic darkroom paper to make contact sheets, 5x7s, and 8x10s
- One summer assignment and one field trip
- Three professional judgings during the year

Students will take photographs using film and digital cameras during the summer and again on a photography field trip in the fall. They will work in total darkness to put their film in development tanks and then develop their film; they will make contact sheets and edit their images, choosing the ones they think are best to print. They will then learn how to print in the darkroom, first producing 5x7 prints, then 8x10 size and perhaps larger. Students will manage their digital folders on the school server and enhance their images using Photoshop CS6, printing out their best photos for display and competition.

At the end of the class, they will dry-mount their favorite black and white and color images and enter them into a photo judging juried by a professional photographer.

Engineering Arts

Teacher: Merita Zajmi
Class time: Two double classes per six-day rotation for one semester
Class Size: 12 students (7th and 8th Grade)

This year's project: Future City Project
Students will be introduced to a challenge that exists in today's urban environments and engineer two research-based innovative solutions. This year's challenge is based on water supply systems.
This cross-curricular program gives students an opportunity to do what engineers do -- identify the problems; brainstorm ideas; design solutions; test; retest and build; and share their results.

Students will complete:

- A virtual city design (using SimCity 5) meeting given criteria
- A 1500- word city research essay
- A project plan
- A scale model of the city that includes at least two innovative solutions
- A presentation to engineer judges at Mid-Atlantic Regional Competition in January

Regional winners represent their region at the Finals in Washington, DC in February

Students will:

- Apply math and science concepts to real world problems
- Develop writing, public speaking, problem-solving and time management skills
- Research and propose solutions to engineering problems
- Learn how communities work and become more informed citizens
- Discover the Engineering Design Process and different types of engineering
- Build 21st Century Skills

Advisory

Teachers: Merita Zajmi, Kara Combs, Victor Stekoll
Class Time: Two classes per six-day rotation (one 25-minute class, one 45-minute class)
Group Size: 10-11 students, some whole-grade activities

The overarching goals of the advisory program are to ensure that each student is known well, feels a part of the overall community, and finds ways to be academically and socially successful. The advisory program engages students in discussion and activities of important life issues generated by both students and advisors.

Skills and Concepts:

- Advisory provides a time to address issues of importance to young adolescents and to ensure that they have accurate information about these topics.
- Advisory gives students a forum for exploring their values.
- During advisory, students have an opportunity to develop discussion abilities in a nonacademic setting.
- During advisory, students work cooperatively in small groups.
- The advisory period is used to plan for class trips and to evaluate them afterwards.

Units and Activities:

- Study skills and organizational habits
- Overview of the high school application process
- Diversity and the "Big Nine"
- Internet safety and cyber-citizenship
- Body image, media literacy, and conformity
- Conflict resolution and peer relationships
- Sexuality education, including examining cultural and gender stereotypes and pressures, developing healthy patterns of behavior, personal decision making, sexual orientation, birth control, and sexually transmitted diseases
- Substance abuse education
- Reflection and preparation for Student-Led-Conferences

Texts and Resources:

- The *Green Acres Middle School Advisory Handbook*
- Scholastic *Choices*, a life skills magazine for teens
- Videos and materials from Discovery Education
- Guest Speakers