

**GST REGIONAL SUMMER SCHOOL
2009 COURSE DESCRIPTIONS
CAMPBELL CAMPUS**

6th grade

Purpose - The 6th grade summer school is focused on strengthening students skills so they are better prepared for the academics at 7th grade. Math – The class is a review of basic skills including: addition, subtraction, multiplication and division and word problems. Reading – The reading portion of the program uses the Readers' Workshop and focuses on book clubs and partnerships. Writing – The writing portion of the program uses the Writers' Workshop and focus on improving writing skills. The emphasis of the unit will be centered on essay writing.

Science 7

Life Science: This course is designed to prepare students to explain, both accurately and with appropriate depth, the most important ideas about our living environment. The unit topics include the following: scientific method, cells and cell processes, the five kingdoms, human body systems, heredity and reproduction, evolution, animal behavior, and ecology.

Math 7

This course builds a strong foundation in basic algebra and geometry skills. The topics included are number operations, simplifying algebraic expressions, solving equations and inequalities, constructing and analyzing graphs, probability, geometry and exploring linear equations and patterns.

History 7

The study of the Americas from the European explorers to the Civil War.

English 7

English 7 is designed as a readers and writers workshop. Students will focus on studying character inference strategies used by authors during reading. Students will read independent books of their choice while also reading stories, poems, and texts assigned to all students. Students will gain experience writing and understanding the nature of narrative fiction, short answer questions, thesis essays, formal letters, and original poetry.

Science 8

Physical Science: This course is designed to prepare students to explain, both accurately and with appropriate depth, the most important ideas about our physical environment. The unit topics include the following: scientific method, metric system, matter, atoms and elements, electricity, magnetism, sound, light, motion, forces, energy, moon systems, plate tectonics, solar system, earth materials and resources.

English 8

English 8 is designed as a readers and writers workshop. Students will focus on studying literary technique strategies used by authors during reading. Students will read independent books of their choice while also reading stories, poems, and texts assigned to all students. Students will gain experience writing and understanding the nature of short fiction, short answer questions, thesis essays, journalistic articles, and original poetry.

Math 8

This course prepares students for high school algebra and geometry. The topics included are number operations, simplifying algebraic expressions including operations with polynomials, factoring, solving equations and inequalities, geometry relationships including angle pairs and parallel lines, transformations, and linear equations.

History 8

The study of American reconstruction to present day American History.

English 9

This course covers an in-depth study of literature including novels, drama, epic poem, short stories, and essays. Students will discuss similarities and differences among the genres as well as develop writing skills through thematic, evaluative, critical lens, and listening essays. Vocabulary and grammar studies will also target development in student writing. Independent Reading is an additional component of the course, which encourages students to take responsibility in meeting personal goals.

English 10

This course will focus on students developing mastery ability to analyze various genres of literature, including short fiction, poetry, non-fiction structures, drama, and the novel. Students will examine literary techniques implemented by various authors and relate these techniques to the different genres and their own writing assignments. The goal of this course is for students to feel more comfortable in their writing skills and abilities, both analytical and creative. They will be more independent in their problem solving, and their critiques of literature should be heightened.

English 11

This course will help students attain the advanced skills necessary to research, organize, analyze, and communicate effectively. Stimulating literature from which they will gain insights about themselves and human nature will challenge students. Through the study of literary devices, students will become increasingly aware of the relevance of good literature to life. Students will complete essays that will critically evaluate and analyze works of literature.

English 12

Enrichment and preparation for college will be the emphasis at this level. The students will practice a variety of writings such as persuasive compositions, creative writings and critical and interpretive writings which reflect clear and logical thinking. Research skills should be emphasized with the

students learning to use the resources available at the school library as well as a college library so they are familiar with the differences that exist. Vocabulary development will be stressed with special emphasis on developing a college level vocabulary. Several types of literature will be presented with an emphasis on classical literature, though some more contemporary literature may be introduced as well. Proper literary essay format will be taught as well as additional vocabulary development. Speaking and discussion skills will be developed through class discussion as well as individual speeches in class so as to prepare the students for speaking in public forum.

Global History and Geography I

Global History is designed to focus on the five social studies standards, common themes that recur across time and place, and eight historical eras. The eight historical eras are: Ancient World, Expanding Zones of Exchange, Global Interactions, First Global Age, Age of Revolution, Crisis and Achievement (1900-1945), 20th Century since 1945, and Global Connection and Interaction. Global I covers from early civilizations to the French Revolution.

Global History and Geography II

Global History is designed to focus on the five social studies standards, common themes that recur across time and place, and eight historical eras. The eight historical eras are: Ancient World, Expanding Zones of Exchange, Global Interactions, First Global Age, Age of Revolution, Crisis and Achievement (1900-1945), 20th Century since 1945, and Global Connection and Interaction. Global II covers from the end of the French revolution to present day.

United States History and Government

This course is designed to help students understand America's past and present. Through guided studies in many types of media, students are expected to discover principles about America. The course is a largely chronological study of American History with emphasis placed on government, economics, social change, and foreign affairs.

Participation in Government/Economics

This course will emphasize the interaction between citizens and government at all levels, local, state, and federal. The course will encourage students to understand and participate in the democratic process. It will be based upon knowledge about the formal powers, procedures, and structures of government in the United States which have been developed during previous courses. It will also include the basic economic concepts and understandings which all persons will need to function effectively and intelligently as citizens and participants in the economy of the United States and of the world. Some of the major concepts which will be dealt with are scarcity, productivity, opportunity cost, supply and demand, inflation, profit, interdependence, capital, competition and the market.

Algebra I

Topics of study in Algebra I include various aspects of algebra, Euclidean geometry, and number theory. Real life application and problem solving with math skills learned are emphasized. Chapters 1-6 are emphasized in this course.

Algebra II

Topics of study in Algebra I include various aspects of algebra, Euclidean geometry, and number theory. Real life application and problem solving with math skills learned are emphasized. Chapters 7-12 are emphasized in this course. Students preparing for the Regents exam should register for this course.

Geometry

Geometry is the second course in the new 3 year integrated math series. Topics of study in Geometry include proof, parallel lines and polygons, quadrilaterals, similarity, right triangles, geometry of the circle, coordinate geometry, 3-D geometry, construction and loci, and transformational geometry.

Math B

Math B topics include advanced algebra, geometry, and trigonometry, direct and indirect proof, logical arguments, and complex numbers, geometry of the circle, and relations and functions, advanced algebra, geometry of the circle, relations and functions, conics, logarithms, transformational geometry, trigonometry, probability, and statistics. Real life application of and problem solving with math skills learned are emphasized.

Earth Science

This course is designed to study the Earth and how it functions in the universe. Students will study the basic geology of the Earth from rocks and minerals to reading and interpreting maps. A large part of this course is laboratory experience, with 1200 minutes of laboratory experience required to take the Earth Science Regents exam.

Living Environment

This is a rigorous introductory general biology course. Students will survey the five living kingdoms and the life functions that bind all living things together. They will develop laboratory skills to study their environment from cells to ecosystems. Special topics will include biochemistry, human physiology, reproduction and development, genetics, ecology, and evolution.

Chemistry

Regents Chemistry covers a range of topics that includes the following: **Atomic Concepts** of the atom, its structure and subatomic particles. The **Periodic Table** of the elements is studied along with properties and relationships among the elements. A unit called **Moles/Stoichiometry** is covered which includes chemical formula naming and writing, as well as defining and explaining the mole and stoichiometry in chemistry. **Chemical Bonding** is covered along with **Physical Behavior of Matter**. (This includes phase changes, mixtures and solutions.) **Kinetics and Equilibrium** is a unit that explores the interactions of chemicals and how they will react with each other. **Organic Chemistry** is a unit of chemistry dedicated to chemical compounds made of carbon. Such compounds include acids, fuels, even plastics. **Oxidation -Reduction** is a unit of chemistry involving the electric charges involved in

chemical reactions including batteries, electroplating, and even corrosion. **Acids, Bases and Salts** is the unit that defines what these chemicals are and what they are made of. **Nuclear Chemistry** explores topics such as Half-Life, Nuclear energy, Natural and Artificial radioactivity.

Physics

Regents Physics covers the following units: **Mechanics:** Mechanics includes such topics as displacement, velocity, acceleration, Force, Friction, gravitation and gravity, circular motion, momentum, impulse, kinetic energy, potential energy, work, power, spring forces and spring potential energy. **Waves and Optics:** Waves and optics includes the speed of waves including sound and light waves, the period and frequency of waves, reflected and refracted waves along with mathematical formulas used to describe their behavior. This also includes the Doppler effect, resonance, the Electromagnetic Spectrum and how light behaves when passing through certain optical devices. **Electricity:** This unit includes static electricity and electricity involved with electric currents. Electric circuits, power and energy as well as electrical resistance will be covered in this topic area. **Modern Physics:** Modern Physics looks into the new branch of physics that studies quantum mechanics –specifically how energy and matter are related to each other. This includes photons, and sub atomic particles called quarks along with Einstein's famous equation: $E = mc^2$.

Physical Education

The Physical Education program for students in grades 9 through 12 centers around lifetime and personal fitness activities. Evaluation will be based on skill, knowledge, personal relations and participation.

Health

Areas of emphasis include smoking, alcohol, drugs, first aid, nutrition, aging, death and dying, human development, violence, mental and social health, sexually-transmitted and other diseases. Speakers will make the student more aware of people involved with community health.

Spanish

The student is given the opportunity to develop the four language skills: 1. Listening: comprehending simple statements 2. Speaking: initiating and responding to simple statements 3. Reading: understanding simple material for informative or social purposes 4. Writing: expressing basic needs and composing short messages on very familiar topics based on personal experience. The student demonstrates knowledge of some aspects of the Spanish Latin American Culture. The communication rather than the linguistically approach is emphasized. The focus is on WHAT the student can do with the language and HOW WELL he/she can do it.