

# Class Descriptions

## 1st Session 2014

### 1<sup>st</sup> Session

#### **Dan:**

Dan – Astronomy Earth Science / Science Elective

In this astronomy class, we will study the structure of the universe, the composition and life span of stars, and components of our solar system. The theories used to explain astronomical events will be explored.

**Dan – Introduction to STEM LAB (SMART Lab) Any Science**

**2nd and 3rd periods; students must sign up for both periods. The Englewood school bus will take and return students to EMS (our new building) for this class. What's a SmartLab?**

"A SmartLab is a 21st century learning lab. It's a next-generation learning environment, rich in professional-standard technology. It's a project-based, student-centered curriculum supporting STEM (science, technology, engineering, and mathematics) and other core academic content. It's a powerfully integrated system of furniture, hardware, software, electronics, multimedia equipment, construction kits and manipulatives, curriculum and assessment tools. It's an intelligent turnkey solution that includes curriculum, professional development, systems integration, and robust support. But that's just the beginning."

**Dan – Advanced STEM LAB Any Science**

**This class is for students who have already taken Introduction to STEM LAB.**

**2nd and 3rd periods; students must sign up for both periods.**

**The Englewood school bus will take and return students to EMS (our new building) for this class.**

Dan – Chemistry of Fire Physical Science / Science Elective

Students will observe the effects of exothermic and endothermic reactions and from that refine their definitions of heat, temperature, and thermal energy. The first two laws of thermodynamics will be exploring using thermal equilibrium, specific heat capacity and latent heat. Using this information, students will explore combustion reactions (yes, fire). Students will then look at what calories are, how they are measured, and how different fuels compare.

#### **Kendrick:**

Kendrick – Introduction to Cells (9/10) Biology / Science Elective

What do cells look like? What are cells made of and what makes some cells look different from others? How do molecules enter and exit cells? Students will study how molecules form a variety of specialized structures in cells. Students will explore specialized structures in cells that affect human health.

**Kendrick – Introduction to Chemistry (9/10) Physical Science / Science Elective**

Kendrick – Ice Ages (9/10) Biology / Science Elective

We will analyze data and evidence to determine how often the Earth has been in an Ice Age and what the effect of those ice ages had on the land and sea life.

## **Matt:**

Matt – Green Energy

Earth Science / Physical Science / Science Elective

Students will learn and understand that energy exists in many forms such as mechanical, chemical, electrical, radiant, thermal, and nuclear. Additionally, they will learn that there are costs, benefits, and consequences of exploration, development, and consumption of renewable and nonrenewable resources. Activities will include the building of a solar oven and possibly a wind turbine.

Matt – Science Inquiry

Science Elective

This is the first class in the science sequence. Students should take this if they have no science credit. The process of science inquiry will be the main focus of this class. Experimental design and analysis will be emphasized.

Matt – Darwin's Studio with Kiim

Biology / Science Elective

Students will spend half their time learning about Charles Darwin and how he changed the understanding of the evolution of species. They will spend the other half of their time learning how to draw different types of organisms (Plants, animals, etc.).

## **Alex:**

Alex – Math Skills (any math level)

Math Elective

Is to help students at all math levels become proficient in specific areas. It is for students needing help in their current math classes, seniors working to pass the MAP, students struggling with number sense (fractions, decimals, %, +- numbers) or students who have not started the math sequence and need to practice to get prepared for Algebra or Geometry.

Alex – Pre Algebra 1

Math Elective

In this course, students will review and practice decimals, percents, and fractions. Students will learn how to solve expressions involving adding, subtracting, multiplying, and dividing real whole numbers, integers, fractions, decimals, and percents. Students will also convert numbers to different representations of numbers.

Alex – ALGEBRA A3 - Take this after Algebra A2

Algebra / Math Elective

Students begin the course by graphing situations and interpreting the situations represented by a graph. They then use the vocabulary and mathematical notation for functions, and model functions with rules, tables, and graphs. Students examine two particular functions called a direct variation and an inverse variation. Students will also focus on the connection between a linear equation and its graph. The topic of slope is introduced and then expanded to the slope-intercept form of an equation. Finally, students explore transformations and the effect of transformations on graphs.

Alex – Geometry 1

Geometry / Math Elective

**Take this after completing the Algebra series (A1 – A6) and to start the Geometry Series (1 – 6)**

This course begins with the basic tools of geometry. Students will explore segments, rays, types of lines, planes, types of angles, and measuring angles. Students will use inductive reasoning to formulate and verify conjectures. The concepts of perimeter, circumference, and area of various figures will be reviewed. Then the course develops a number of area formulas, principally for triangles, quadrilaterals, circles, regular polygons, and sectors. Students will learn, apply, and investigate the Pythagorean Theorem.

Alex – Functions

Math Elective

This course will explore the concept of functions, function notation, graphing functions, as well as vertical line test, and independent versus dependent variables. Real-world applications will be explored as applications of functions. If time permits, the absolute value and squaring functions will be covered.

**Eric:**

Eric – Geometry 2    Geometry / Math Elective

GEOMETRY 2 - Take this after completing the Algebra series (A1 – A6) and after completing Geometry 1

This course discusses and applies the properties of special quadrilaterals and other polygons. Students will also examine properties of circles, including arcs of circles, as well as the segments and angles associated with circles. It applies deductive methods to establish relationships among and between angles, arcs, chords, secants, and tangents.

Eric – Algebra A1    Algebra / Math Elective

Take this after Pre-Algebra or to start the algebra series. In this course students will build on previous knowledge and use the Order of Operations, the Distributive Property, substitution and other properties of real numbers to simplify expressions and to write equivalent expressions. Students will also explore basic exponents and combining Like Terms, including multiplying variables.

Eric – Algebra II (B1)    Algebra / Math Elective

(Math elective or algebra boxes with instructor permission.) This course is a continuation of the algebra sequence.

**Students must have successfully completed the algebra sequence prior to enrolling and have instructor permission.** Topics covered may include but are not limited to using function notation to explore linear, quadratic, exponential, rational and other special functions; graphing and solving systems of inequalities; working with polynomial expressions using factoring procedures.

Eric – Statistics    Math Elective

In this course, students will learn how to find, use, and apply the Measures of Central Tendency. They will organize data into various pictorial representations including Box-and-Whisker, Stem-and-Leaf Plots, Circle Graphs, Bar Graphs, and Histograms.

Eric – Math Skills (any math level)    Math Elective

Is to help students at all math levels become proficient in specific areas. It is for students needing help in their current math classes, seniors working to pass the MAP, students struggling with number sense (fractions, decimals, %, +- numbers) or students who are have not started the math sequence and need to practice to get prepared for Algebra or Geometry.

**Ginger:**

Ginger – Algebra A4    Algebra / Math Elective    *Take this after Algebra A3*

This course examines systems of two linear equations and systems of two linear inequalities. Students first graph two equations on a single coordinate system and identify the point of intersection to find the solution. Students then explore solving a system of two linear equations or inequalities through algebraic methods such as substitution and elimination.

Ginger – Geometry 3    Geometry / Math Elective

Take this after completing the Algebra series (A1 – A6) and after completing Geometry 2

Students will apply postulates and theorems of triangle congruence to prove that triangles are congruent. Students will also expand on congruence properties to examine other congruent figures. The course continues with discussing the four isometric transformations: translations, reflections, glide reflections, and rotations. Isometric transformations describe hoe geometric objects change position, orientation, or even shape though the properties that characterize their identity remain unchanged.

Ginger – Geometry 1    Geometry / Math Elective

GEOMETRY 1 – Take this after completing the Algebra series (A1 – A6) and to start the Geometry Series (1 – 6)

This course begins with the basic tools of geometry. Students will explore segments, rays, types of lines, planes, types of angles, and measuring angles. Students will use inductive reasoning to formulate and verify conjectures. The concepts of perimeter, circumference, and area of various figures will be reviewed. Then the course develops a number of area formulas, principally for triangles, quadrilaterals, circles, regular polygons, and sectors. Students will learn, apply, and investigate the Pythagorean Theorem.

Ginger – Geometry Clean-Up                      Geometry / Math Elective  
Come finish those Geometry points on your box sheet.

### **Dylan:**

Dylan – Early Americans                      US History / SS Elective

Have you ever wondered what the United States of America was like. . . before it was the United States of America? This course will study the history of European colonization of the Americas with a primary focus on the English colonies that eventually achieved independence as the United States of America. We will also look at the combinations of customs, traditions, and social practices that governed the daily lives of the citizens of British colonies in North America prior to the American Revolution.

Dylan – History of Genocide                      World History / Geography / SS Elective

This class will be designed to study what is really happening in Rwanda and Darfur. Students will study what happened during the Holocaust and other events in history. We will examine why genocide has occurred and the global impact it has left behind.

Dylan – Current Events                      Any Social Studies

This class will focus on news and political/economic happenings with an emphasis on current hot spots and crises.

### **Chris:**

Chris – Financial Literacy: for Juniors & Seniors ONLY

Economics / SS Elective

Chris – Big Brothers/Big Sisters                      Sociology / PE / Community Service

STUDENTS MUST SIGN UP WITH CHRIS, TEACHER APPROVAL TO TAKE THIS CLASS. Co-teaching this with Jana  
STUDENTS MUST TAKE BOTH 2nd and 3rd PERIODS.

This class will be a block class, and students will be taking a school bus to Charles Hay Elementary School daily. We will be working with various grade levels helping elementary students develop teamwork, physical education skills and boosting self esteem.

Chris – Google Earth                      Geography / SS Elective

*Mac Lab will be used.*

This class will focus on creating a mental map of the world. This will occur through memorization of country locations and physical features on the planet. We will use Google Earth to navigate around the planet comparing and contrasting different places on the Earth's surface.

Chris – Surviving the Elements                      Geography / SS Elective

*In Dan's Room*

In this class we will read the book *Touching The Void*, which documents the experience of mountain climbers in Peru. It is a survival story and we shall explore the risks that humans face in the wild environments of our planet.

Chris – Elections                      Government / SS Elective

In this class we will focus on the function of government and how people can participate in the political process. We shall also focus on why people get involved and the issues that motivate this involvement.

### **Sherri:**

Sherri – Taboo                      Psychology / SS Elective

Things we may think are strange or "Taboo" are actually quite acceptable in other cultures. We will be learning about some of these things and world cultures.



Students will be reading this famous Shakespearean play in small groups and whole groups to best role play some of the piece. They will take part in short writings and discussions over all the major literary devices used, as well as, plot development.

Breez – Newspaper

Comp / English Elective

Newspaper is a journalism class. It will focus on improving journalistic writing skills, while discussing and researching current events and hot topics. The goal of this class will be to compose a newspaper to share with the school.

Breez – Writing Competency

Comp /English Elective

This course is designed to help you pass the writing competency test. This is a workshop style class so be ready to write everyday and revise until it's perfect! Be ready to experience intensive writing practice. This class is for students who have scored at 10th grade or lower.

Breez – 090 Literacy: College Prep Writing

Comp /English Elective

### **Bob:**

Bob – Reading Plus

English Elective

In Lab

Reading Plus® picks up where phonics and oral reading instruction leave off, providing rapid and sustainable comprehension and silent reading fluency gains. The system's assessments, individualized dynamic intervention, and progress monitoring provide the solutions needed to effectively identify and remediate struggling students, as well as others who could benefit from silent reading fluency development.

Bob – Writing Skills

Comp / English Elective

In Jon's Room

The goal of this class is to prepare students for academic writing at the high school level and beyond. It will be helpful for a variety of writing challenges, and it is a great review for students who have not taken a composition class in a while. This class is for students who have scored a "10" or below.

Bob – Merchant of Venice

World Literature / English Elective

This Shakespearean Play looks at what happens when a merchant borrows money to impress a lady, but agrees to some odd terms with the moneylender. The merchant is loaned the money without interest, but if he cannot repay the loan he has to give the moneylender a pound of his own flesh in repayment

Bob – Speech

Speech / English Elective

Students will research, compose and speak a variety of formal speeches in front of their peers. The speech modes delivered are demonstration, information, and persuasive. They will apply standard conventions to their speeches and will use formal delivery techniques. This is a graduation requirement and speech credit will be awarded.

### **Becky:**

Becky – Writing Skills B

Comp / English Elective

The goal of this class is to prepare students for academic writing at the high school level and beyond. It will be helpful for a variety of writing challenges, and it is a great review for students who have not taken a composition class in a while. This class is for students who have scored between 7-9.

Becky – Research Paper

Comp / English Elective

You will learn and put into practice all of the steps required for a five to ten page research paper. At the end of the session, you will have written the rough draft as well as editing, rewriting, and formatting you finished paper.

### **New LA Teacher:**

New LA – Choice Reading                                      American Literature / World Literature / Comp / English Elective  
After choosing your own book, learn literary tools to enhance your reading experience. The book choices are CFAHS student approved, so I'm sure you'll find a book you'll like.

New LA – Speech    Speech / English Elective  
Students will research, compose and speak a variety of formal speeches in front of their peers. The speech modes delivered are demonstration, information, and persuasive. They will apply standard conventions to their speeches and will use formal delivery techniques. This is a graduation requirement and speech credit will be awarded.

New LA – Poetry    Comp / American Lit / World Lit / English Elective  
Independent writing of any style of poetry will be taught in this class through a structured portfolio format. Students will learn technique, style, purpose and a variety of forms. Students will assess their problem areas and improve those areas through rewriting and student work shopping. Be prepared to read, write and perform a variety of poetry, including slam poetry, haiku, limerick, sonnet, and many more!

New LA – Teen Issues: The Struggle to be Strong "Project Resilience"                                      English Elective  
This class will focus on resilience and where it comes from. We'll read true stories written by teens about overcoming tough times. We'll write about and discuss how we handle stress & troubles, live through adversity, and move forward with confidence, courage and hope. You'll find tools that can help build the skills and strengths you need to win your own battles. We'll also study The 7 Habits of Highly Effective Teens to improve self-image, build friendships, resist peer pressure, achieve goals, and much more! All are welcome to take this journey with me, but you must be open to self-help & life skills lessons!

## Jana:

Jana – CPR & First Aid    Health / Science Elective  
Don't get caught unaware in an emergency situation, which may involve your loved ones! Learn basic emergency principles, rescue breathing, CPR, and more in this class designed to meet your graduate requirement for first aid. A must for all seniors! There will be tests! **This class will be limited to 20 students.**

Jana – Big Brothers/Big Sisters    PE / Sociology / Community Service  
STUDENTS MUST SIGN UP WITH CHRIS, TEACHER APPROVAL TO TAKE THIS CLASS.  
Co-teaching this with Chris Anderson  
STUDENTS MUST TAKE BOTH 2nd and 3rd PERIODS.  
This class will be a block class, and students will be taking a school bus to Charles Hay Elementary School daily. We will be working with various grade levels helping elementary students develop teamwork, physical education skills and boosting self esteem.

Jana – Football    PE / Elective  
We will be playing flag football in this class. You will and must participate everyday to earn your point. There will be absolutely no tackling or rough play tolerated. Also, no whining! We will be outdoors so dress appropriately and with proper footwear.

Jana – Fitness    PE / Elective  
This course is designed to give students the opportunity to learn about the five areas of health-related physical fitness and various conditioning techniques used for obtaining optimal physical fitness. Activities may include weightlifting, circuit-training, and other activities geared toward improving students' current fitness levels. Students will be empowered to make wise choices, meet challenges, and develop positive behaviors in fitness, wellness, and movement activity for a lifetime.

Jana – Team Sports    PE / Elective  
This course is designed to give students the opportunity to learn and develop skills and strategies in a variety of team activities. Emphasis will be on participation and learning the basic rules and regulations of each sport/activity. Activities may include, but are not limited to, two or more sports such as Football, Basketball, Softball, Ultimate Frisbee and

Volleyball. Students will be empowered to make wise choices, meet challenges, and develop positive behaviors in fitness, wellness, and movement activity for a lifetime.

**Kim:**

Kim – Darwin's Studio with Matt

Art / Elective

Students will spend half their time learning about Charles Darwin and how he changed the understanding of the evolution of species. They will spend the other half of their time learning how to draw different types of organisms (Plants, animals, etc.). There will be multiple field trips where students will play the role of Darwin as they draw and infer why different species have specific anatomical characteristics.

Kim – Yoga

PE / Health / Elective

This class is a physical education class. We will be doing yoga (a stretching and relaxation exercise), mainly from tapes on the VCR. Students will be working on wellness, monitoring water intake, and practicing healthy living. They won't just be bending their bodies into pretzel shapes!

Kim – Painting

Art / Elective

In this class students will learn basic aspects of painting with acrylic paint. Students will create their own paintings and be involved discussing their work and the works of master painters.