Beehive Science and Technology Academy

2024-25
Middle School Course Catalog

LANGUAGE ARTS

Language Arts 6 (full year)

Required 6th grade English class.

Language Arts 7 (full year)

Learn essential reading and writing skills as well as publish and present quality work with accuracy and attention to detail.

Language Arts 8 (full year)

Learn essential reading and writing skills as well as publish and present quality work with accuracy and attention to detail.

MATHEMATICS

Math 6 (full year)

Mathematics 6 covers the Utah state standards for 6th grade including arithmetic topics such as dividing decimals, multiplication and division with fractions, order of operations, and the basics of working with negatives. After covering the foundations of arithmetic, students will use those skills to study ratios, percentages, variables in expressions and equations, inequalities, area, volume, and statistics.

Math 6 Honors (full year)

Honors Mathematics 6 covers the Utah state standards for 6th grade but in more depth and includes a few more challenging topics. Sixth graders start by reviewing basic arithmetic topics such as dividing decimals, multiplication and division with fractions, order of operations, and negatives. After covering the foundations of arithmetic, students will use those skills to study ratios, percentages, variables in expressions and equations, inequalities, area, volume, and statistics. In addition, the honors class may introduce other topics like radicals and the Pythagorean Theorem.

Math 7 (full year)

Mathematics 7 covers the Utah state standards for 7th grade with a focus on ratios and proportional relationships. The class starts with a review of fractions and percents before moving to ratios in fractions and unit rates. Then, students will begin pre-algebra topics working with expressions and equations before adding in proportions and proportional relationships. In the second semester students focus on geometry: angles, shapes, and scaling according to a ratio. Finally, the semester wraps up with statistics and probability, again relating to ratios of likelihood.

Math 7 Honors (full year)

Honors Mathematics 7 covers the Utah state standards for 7th grade with a focus on ratios and proportional relationships with a more in-depth approach. The class starts with a review of fractions and percents before moving to ratios in fractions and unit rates. Then, students will begin pre-algebra topics working with expressions and equations before adding in proportions and proportional relationships. The honors class does an activity that studies population density comparing different functions to proportional relationships and explores exponential functions. In the second semester students focus on geometry: angles, shapes, and scaling according to a ratio. The honors students will study relationships between quadrilaterals and triangles by writing proofs. Finally, the semester wraps up with statistics and probability, again relating to ratios of likelihood.

Math 8 (full year)

Math 8 Honors (full year)

SCIENCE

Science 6 (full year)

Science 7 (full year)

Science 8 (full year)

SOCIAL SCIENCE

US History I (full year)

Learn about events and issues in United States history from the Age of Exploration through Reconstruction, emphasizing the 18th and 19th centuries. Topics include, but are not limited to, American Indian life, European exploration and colonization, the Revolutionary War, constitutional issues, nation building, expansion, the Civil War, and Reconstruction.

Utah Studies (semester)

Learning about this amazing place we live in, Utah, rich in resources, in geographic wonders, in inspiring history, and in the diversity of its people.

World Studies (semester)

HEALTH & PHYSICAL EDUCATION

Health Education 1 (semester)

Health I is dedicated to teaching middle school students the skills they need to establish a healthy and safe lifestyle and enhance behaviors to resist unhealthy choices through adolescence. Health Education will focus on:

- Health Foundations and Protective Factors of Healthy Self (HF) is intended to be the foundation of the Health Education Core. Protective factors are attributes such as skills, strengths, or coping strategies which increase the health and well-being of individuals. These attributes help people deal more effectively with stress, peer-pressure, and other potentially harmful situations. Students with strong protective factors are less likely to develop mental illness or substance use disorders. Students will use goal-setting, decision-making, and communication skills to promote health. Students will also practice resiliency skills.
- Mental and Emotional Health (MEH) teaches students how to advocate for the mental and emotional health of self and others. Students will learn and adopt behaviors which will also maintain and enhance physical and social health. Strategies to help students manage their thoughts, feelings, and behaviors are key components of this strand. Students will explore resources for suicide prevention.
- Safety and Disease Prevention (SDP) helps students understand their role in protecting themselves and others from unintentional danger, risk, injury, or disease. Students will learn and adopt behaviors which will maintain and enhance health. Students will explore how their personal decisions influence their health and safety.
- Substance Abuse Prevention (SAP) provides students with the knowledge and skills to make choices to avoid substance abuse. Students will practice resisting peer pressure and investigate the consequences of substance abuse.
- Nutrition (N) helps students understand the vital role food preparation and consumption will have on their health throughout their life. A healthy diet supports the immune system and reduces the occurrence of many diseases. Proper nutrition is linked to learning readiness, academic achievement, and decreased discipline and emotional problems. Students will learn how proper nutrition contributes to lifelong personal health and wellness.
- Human Development (HD) teaches students how their body changes throughout their lifespan, how to care for and protect their bodies in a way that is developmentally and age appropriate, and characteristics of a healthy relationship. Students will learn medically accurate and unbiased facts about human reproduction, anatomy, physiology and disease prevention. Students will also recognize characteristics of healthy relationships.

Physical Education (PE) 6 (semester)

Physical Education (PE) 7 (semester)

PE 7 will be focused on more sports related skill work and building up to better game play of sports.

DIGITAL LITERACY

Digital Studies (full year)

This course provides a foundational understanding of digital literacy, equipping students with essential skills and knowledge to navigate the digital world confidently.

Coding & Design (semester)

This course explores the intersection of art and technology through coding. Students will learn to create interactive visuals, games and animations using Python, JavaScript, and Processing programming languages.

Computer Science Discoveries (semester)

This course unlocks the world of computer science with hands-on projects and exploration. It covers topics such as programming fundamentals, web development, data analysis, and robotics in an engaging and accessible way.

ADDITIONAL REQUIRED CLASSES

Character Education 6 (full year, one day/week)

Character Education helps students develop the skills they need to thrive in school and in life. Students will build their competence and confidence to take on learning challenges, make good decisions, manage strong emotions, and get along with others.

Underlying Goals: Manage Emotions, Have Empathy, Solve Problems, Make Responsible Decisions, Maintain Healthy Relationships.

Character Education 7 (full year, one day/week)

Character Education helps students develop the skills they need to thrive in school and in life. Students will build their competence and confidence to take on learning challenges, make good decisions, manage strong emotions, and get along with others.

Underlying Goals: Manage Emotions, Have Empathy, Solve Problems, Make Responsible Decisions, Maintain Healthy Relationships

Themes: Academic Success, Belonging, Growth Mindset, Helping Others, Perspective-Taking, Planning Ahead, Resilience, Starting Right.

FINE ARTS

Art 6 (semester)

This is our beginning Art Course for Middle School.

Art Foundations 1 (semester)

This course will build on what you learned in 6th grade beginning Art. Easy A. Just work in class

and turn things in.

CAREER & TECHNOLOGY EDUCATION

College and Career Awareness (CCA) (full year)

A course designed to increase awareness of college and career pathways through hands-on projects and WorkBased Learning experiences such as career fairs, field studies, guest speakers, and/or job shadows. Based on interests, skills, and aptitudes, students will explore high school, postsecondary, and career opportunities to develop an individual Plan for College and Career Readiness (PCCR). Students will investigate high-skilled, in demand and/or emerging jobs in the Utah labor market while developing essential workplace skills for future academic and career goals.

Flight & Space (semester)

Intro to Engineering (semester)

MIDDLE SCHOOL ELECTIVE COURSES

Advanced Art (semester)

This course is designed to take you further on your art journey. We will do many different projects designed to teach you how to do and appreciate art in your life more fully. This is for students who are serious about developing this part of you. You do not have to be "good". You just have to have a desire.

Art Design (semester)

This is a more advanced Art Course that will focus on your grasp of design. We will design many types of art forms including, 2D and 3D, Web Page or advertisement and photography. The students will have a say in some of the projects we do and the direction we go. *7th and 8th grade only*

Artificial Intelligence (semester)

This course dives into the fascinating world of AI. Explore machine learning, neural networks, natural language processing, and robotics. Develop practical skills through coding projects and real-world applications.

Creative Coding (semester)

Creative Coding Through Games is a one semester course for introduction to programming for the early secondary grades. The course is designed to attract and reach a broard and diverse range of

students, including those who may have never considered programming. Students learn how to code by working in a real software development environment to design and program games. Learning to code by creating real products, students discover how to make amazing things and have an impact on their world. (not offered 2024-25)

Creative Writing

Students will read and write poems and short stories as well as learn how to tell and refine their own powerful stories!

Ecology (semester)

The Ecology SEEd Standards explore the energy and material resources found on Earth and how these resources are obtained, used, managed, and conserved to support sustainable societies and ecosystems. Students model and analyze data to explain the organizations, factors, cycles, and changes that determine dynamic ecosystems. Students construct arguments for the risks and benefits of using renewable and nonrenewable energy sources and design energy management plans to identify sustainable energy solutions. Students construct explanations for how humans obtain and use natural resources; why resources can be abundant, scarce, and/or scattered around the world; and design a resource management plan to identify sustainable methods of obtaining and using resources. Students create arguments and explanations for how human use of natural and energy resources have an effect on the environment and what can be done to reduce or reverse human impacts on environments. **(not offered 2024-25)**

FLL Robotics (full year)

Students must try out for the FLL Robotics team, and will automatically be placed in this elective if they are chosen for the team.

Hillbilly Band (semester)

This course provides opportunities for students to develop their musical potential and aesthetic understanding through learning to play percussion. Emphasis will be placed on playing position, tone production, fundamental technique, reading music, and composing songs/lyrics. Students will plan, create, and perform on homemade instruments. Class projects include: Kazoo, Drum, Spoons, and anything else we can think of to create music using objects around the house. One man's trash is another man's instrument. Knowledge and skills will include experiences in creating, performing, responding, and connecting to American folk songs and BlueGrass. *No pre-requisite course is required.*

Intro to Computer Engineering (semester)

Intro to Sports (semester)

Intro to sports is a PE elective that will allow students to get introduced to different sports and games to stay active!

MathCounts (semester or full year)

MathCounts is an elective class that enhances your skills in mathematics and prepares you for taking national math competitions.

Math Foundations (semester or full year)

This course provides students with additional support in mathematics. Students are invited to attend this class based on need.

Physics Exploration/science elective (semester)

TBD (This elective will be taught by a physics teacher)

Study Table-MS (semester)

This class is for students to work on homework, get help from their teacher and complete or lessen schoolwork at the school. Great for students who may need extra class time to work on assignments.

Technology & Society 1 (semester)

In the first semester of Tech & Society we learn all about where our water and power come from and the pros and cons of different sources of power. Then we learn about transportation technology and infrastructure - for example, how does Amazon manage to send anything anywhere in 2 days? Finally we learn about the science and technology of food production (agricultural technology), like the cool machines that harvest our food. Students develop an understanding of the cultural, social, economic, environmental, and political effects of technology, the role of society in the development and use of technology, and the influence of technology on history. Students use what they have learned to analyze and make hypotheses about the role of current and future technologies on society and the world around us. Students can take either semester of Tech & Society without taking the other **or** they can take both semesters.

Technology & Society 2 (semester)

The second semester of Tech & Society we explore how the technology in our homes actually works and what we did before these things existed. Then we look at the evolution of communication technologies from writing all the way to cellular phones. We explore what things are made of (material sciences) and where those materials come from. Finally, we explore a variety of medical technologies (like robotic limbs, pacemakers, and anesthesia) and computer technologies (the invention of the computer, the Internet, games, and apps). Students develop an understanding of the cultural, social, economic, environmental, and political effects of technology, the role of society in the development and use of technology, and the influence of technology on history. Students use what they have learned to analyze and make hypotheses about the role of current and future technologies on society and the world around us. Students can take either semester of Tech & Society without taking the other **or** they can take both semesters.

TSA (semester)

This class will branch off of the Technology Student Association Club. Students previously in TSA will have priority when registering for this course.

TSA stands for Technology Student Association. This is a competitive team that competes in the spring semester. Students who register for this elective are required to compete in the TSA state competition and attend the TSA club on Thursdays during club time.

The Technology Student Association (TSA) is a national organization of students engaged in STEM (science, technology, engineering, and mathematics). Competitions are categorized by careers in Architecture and Construction Technology, Communications Technology, Computer Science and Information Technology, Leadership, Manufacturing and Transportation Technology, STEM (General), STEM and the Arts, and Technology and Research.
In this class, students will learn about the different TSA categories, choose several they are interested in, and create their projects to compete in the state TSA competition in the spring.
Reach out to Mrs. Welsh if you have any questions.

Ukelele (semester)

This course provides opportunities for students to develop their musical potential and aesthetic understanding through learning to play the ukulele. Emphasis will be placed on playing position, tone production, fundamental technique, simultaneous playing and singing, reading music, and composing songs/lyrics. Knowledge and skills will include experiences in singing, creating, performing, responding, and connecting to cultures. *No pre-requisite course is required. School ukulele can be provided if needed.*

Zoology (semester)

The Zoology Science Standards explore the patterns, processes, structures, functions, and relationships of animals on Earth. Students model and explain the major structures, functions, and processes animals use to survive in their environment. Students construct explanations and arguments to classify animals into major animal taxa and determine their relationships, adaptations, and evolution. Students will analyze data and build models to explain comparative zoology principles and how animal phyla increase in complexity from the phylum porifera to chordata. Students investigate and explain the many ways that humans use and depend on animals and how humans have an impact on animal populations. Students evaluate plans to control invasive animal species in Utah and/or conserve native Utah animal species.

Take a look at how the animals we know today came to be. We will look at the evolution of different animals, and see how they relate to each other, as well as explore embryology and the distribution of organisms. In this class, there will be multiple dissections of animals like rabbits, sharks, fetal pigs, etc. All students will be expected to participate in these dissections.