

Design CTE - (Tech Ed, Business Ed, Computer Science, and Families and Consumer Sciences)

Class	Unit	Key Concepts	Related Concepts	Global Contexts	Statement of Inquiry	Objectives & Strands	ATL Skills	Content	Summative Assessment(s)	Learner Profile	International-mindedness	Service Learning
MYP Year 1 (6th Grade) Design Tech; Families and Consumer Sciences 6												
September to January												
Design Technology	Keyboarding	Communication	Form, Function	Scientific and Technical Innovation: systems, models, methods	Learning how to use keyboarding effectively with appropriate form and function is an important method of communicating.	A: i, ii, iii, iv. B: i, ii, iii, iv. C: i, ii, iii, iv. D: i, ii, iii, iv.	Communication skills	C/T 6-8.1 C/T 6-8.2	Accuracy/Speed Typing Test Typing Documents	Communicator		
September or February												
Family And Consumer Sciences	Families	Communities	Collaboration, Sustainability	Identities and Relationships: Independence	Collaboration with their family community is the path toward sustainability and independence.	A: i. B: i. C: i. D: i.	Communication and Thinking Skills	CTE Competencies: 36. Define Family 37. Describe the function of the family 38. Identify strategies to strengthen families 39. Demonstrate ways to conserve natural resources within the family. 40. Maintain a clean and safe environment. 41. Organize personal space.	Family Fun Project	Caring		
October or March												
Family And Consumer Sciences	Cooking Fundamentals	Systems	Function, Resources	Scientific and Technical Innovation Methods	Systems function best with the use of proper methods and resources.	A: i. B: i. C: i, ii, iii, iv. D: i, ii, iii, iv.	Communication and Self-Management Skills	CTE: Competencies	Creating healthy snacks	Communicators	Students make international pizza from around the world (they select the country).	
November or April												
Family And Consumer Sciences	Babysitting	Communication	Adaptation Evaluation	Fairness and Development Human Capability and Development	As children's development and capability change, people use communication and adaptation to care for them.	A: i, ii, iii, iv. B: i. C: ii, iii. D: i, ii, iii, iv.	Social and Thinking Skills	59. Describe responsible behaviors in caring for children. 60. Identify stages of early childhood development. 61. Identify developmentally-appropriate & nutritious snacks. 62. Demonstrate storytelling techniques. 66. Explore entrepreneurship opportunities for adolescents.	Babysitting Project	Caring		
December or May												
Family And Consumer Sciences	Sewing	Development	Form, function	Personal and Cultural Expression: Craft	Form and function are essential considerations in the development of a craft.	A: i. B: i, ii. C: ii. D: ii, iii.	Self-management and thinking skills	55. Demonstrate clothing maintenance techniques. 56. Describe factors affecting clothing choices. 57. Create a sewing project. 58. Construct a textile project.	Creating a felt ornament for a gift	Open-minded		
January or June												
Family And Consumer Sciences	Money Management	Systems	Resources, Markets and Trends	Globalization and Sustainability: Consumption and Conservation	Students need to understand financial systems in order to manage consumption and conservation of their financial resources.	A: i, ii, iii, iv. B: i, ii, iii, iv. C: i, ii, iii, iv. D: i, ii, iii, iv.	Self-management and thinking skills	49. Apply steps in a problem-solving/decision-making model 50. Manage personal resources. 52. Analyze personal saving & spending habits. 53. Identify consumer rights & responsibilities. 54. Identify consumer resources.. 64. Identify ways to be a responsible citizen. 65. Identify career clusters and pathways that lead to FACS careers.	Money Test	Thinkers		Students make sandwiches to donate to Arlington Street People's Assistance Network (ASPAN).

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MYP Year 2 (7th Grade) Digital Input Technologies, Inventions and Innovations; Families and Consumer Sciences 7												
September to October or February												
Digital Input Technologies	Exploring Digital Input Technologies Mix	Communication	Collaboration, Innovation	Scientific and technical innovation: Digital life, virtual environments and the Information Age	The information age often requires communication, collaboration and innovation.	B: i., ii., iii., iv. C: i., ii., iii., iv.	Communication and Social skills	C/T 6-8.1 C/T 6-8.2	Create a website using Adobe Dreamweaver/Notes	Communicators		
November or March												
Digital Input Technologies	Career Unit	Development	Adaptation, Resources	Identities and Relationships: Identity formation	Finding a good career often depends on developing relationships, using resources and adapting to changing times.	A: i., ii., iii., iv. B: i., ii., iii., iv.	Communication and Self-management	C/T 6-8.5	Write a resume Mock Interview Create a budget	Principled		
December to January or April												
Digital Input Technologies	Photoshop/Movie Maker	Communication	Perspective, Collaboration	Personal and Cultural Expression: Social constructions of reality	Making a movie communicates personal or cultural expressions of reality from a particular perspective.	C: i., ii., iii., iv. D: i., ii., iii., iv.	Communication, Social and Research skills	C/T 6-8.6 C/T 6-8.9	Create and present a video	Open-minded		
September or February												
Inventions and Innovations	2D and 3D CAD Design	Creativity	Form, Innovation	Orientation in Space and Time	Creative use of software to innovate solutions in context of space and time.	A: i. B: ii. C: ii.	Self-Management and Thinking skills	44, 45, 48, 54, 55, 56	Unit Quiz Final Test	Knowledgeable		
October or March												
Inventions and Innovations	Transportation	Systems	Resources	Globalization and sustainability	Current transportation systems around the world use large amounts of resources that may not be sustainable	A: i., ii., iii. B: ii., iii., iv. C: ii., iii.	Self-Management and Thinking skills	C/T 6-8.10	By understanding the current model of fossil fuels is not sustainable, students can begin to explore the need for implement-able models for replacement. These are far more mundane than "flying cars" or other science fiction, rather looking at sources of friction, traction, transfer of kinetic to mechanical energy, etc. to maximize return on the energy used.	Risk-taker	Examining the energy systems of other countries around the world how they could become more sustainable.	
November to December or April to May												
Inventions and Innovations	Guitar Making	Creativity	Adaptation, Form	Identities and Relationships	Creativity within an adaptive window can allow for expression of identities.	B: i., ii. D: i., ii., iii., iv.	Social and Collaboration skills	C/T 6-8.11	Build a deliverable guitar that has 4 strings, tuned to drop D. Students are then encouraged to work with other county students to perform at an annual concert. (This is encouraged but not required)	Open-Minded		
January or June												
Inventions and Innovations	Urban Design	Communities	Sustainability, Function	Globalization and Sustainability	Communities that focus on sustainability thrive in a globalization-focused world.	A: i., ii., iii., iv. B: i., ii., iii., iv. C: i., ii., iii., iv.	Self-Management and Thinking skills	C/T 6-8.12	Unit Quiz Final Test	Balanced	Students will examine cities from around the world.	
September or February												

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Family And Consumer Sciences	Families	Communities	Collaboration, Sustainability	Identities and Relationships: Independence	Collaboration with their family community is the path toward sustainability and independence.	A: i., ii., iii., iv. B: i., ii., iii., iv. C: iv. D: iv.	Communication and Thinking Skills	CTE Competencies: 36. Define Family 37. Describe the function of the family 38. Identify strategies to strengthen families 39. Demonstrate ways to conserve natural resources within the family. 40. Maintain a clean and safe environment. 41. Organize personal space.	Family Project	Caring		
October or March												
Family And Consumer Sciences	Cooking Fundamentals	Systems	Function, Resources	Scientific and Technical Innovation Methods	Systems function best with the use of proper methods and resources.	A: i. B: i., ii. C: i., ii., iii. D: i., ii., iii.	Communication and Self-Management Skills	CTE: Competencies	Safety Test Grilled Cheese Challenge	Communicators	Students choose which country they want to cook food from.	
November or April												
Family And Consumer Sciences	Babysitting	Communication	Adaptation Evaluation	Fairness and Development Human Capability and Development	As children's development and capability change, people use communication and adaptation to care for them.	A: i., ii. B: i. C: ii., iii. D: ii., iii.	Social and Thinking Skills	59. Describe responsible behaviors in caring for children. 60. Identify stages of early childhood development. 61. Identify developmentally-appropriate & nutritious snacks. 62. Demonstrate storytelling techniques. 66. Explore entrepreneurship opportunities for adolescents.	Babysitting Project	Caring		
December or May												
Family And Consumer Sciences	Sewing	Development	Form, function	Personal and Cultural Expression: Craft	Form and function are essential considerations in the development of a craft.	A: i., ii., iii., iv. B: i., ii. C: ii. D: ii., iii.	Self-management and thinking skills	55. Demonstrate clothing maintenance techniques. 56. Describe factors affecting clothing choices. 57. Create a sewing project. 58. Construct a textile project.	Create a pillow design	Open-minded		
January or June												
Family And Consumer Sciences	Money Management	Systems	Resources, Markets and Trends	Globalization and Sustainability: Consumption and Conservation	Students need to understand financial systems in order to manage consumption and conservation of their financial resources.	A: i., ii., iii., iv. B: i., ii., iii., iv. C: i., ii., iii., iv. D: i., ii., iii., iv.	Self-management and thinking skills	49. Apply steps in a problem-solving/decision-making model 50. Manage personal resources. 52. Analyze personal saving & spending habits. 53. Identify consumer rights & responsibilities. 54. Identify consumer resources.. 64. Identify ways to be a responsible citizen. 65. Identify career clusters and pathways that lead to FACS careers.	Budgeting Project	Thinkers		Students make sandwiches to donate to Arlington Street People's Assistance Network (ASPAN).
MYP Year 3 (8th Grade) Technological Systems; Family and Consumer Sciences; Technology of Robotics; Investigating Computer Sciences												
September or February												
Technological Systems	Structural Design and Testing	Systems	Function, Collaboration	Scientific and Technical Innovation: Processes	Structural design affects the outcome of physical construction's ability to support weight.	A: i., ii., iii., iv.	Communication and Research Skills	C/T 6-8.10	Unit Test The bridge computer model must meet guidelines for design (cost and number of members-varies by student needs)	Thinkers		
October or March												

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Technological Systems	Electricity and Electronics	Systems	Invention, Function	Scientific and technical innovation	Electricity and electronics shape our modern world through inventions and devices	C: i., ii., iii., iv. D: i., ii., iii., iv.	Social and Thinking Skills	33, 37, 41, 47, 55	Unit Quiz Final project	Knowledgeable		
November or April												
Technological Systems	2D and 3D CAD Design/Printing	Creativity	Form, Innovation	Orientation in Space and Time	Creative use of CAD software to innovate solutions in context of space and time.	A: i. B: ii. C: ii.	Self-management and Thinking skills	44, 45, 48, 54, 55, 56	Unit Quiz Final Test	Inquirer		
December or May												
Technological Systems	Urban Design	Communities	Sustainability, Function	Globalization and Sustainability	Communities that focus on sustainability thrive in a globalization-focused world.	A: i., iii. B: ii. C: i., ii., iii.	Self-Management and Thinking skills	C/T 6-8.10	Unit Quiz Final Test	Balanced		
January or June												
Technological Systems	Transportation	Systems	Resources	Globalization and sustainability	Current transportation systems around the world use large amounts of resources that may not be sustainable	A: i., ii., iii. B: i., ii., iii., iv. C: ii., iii.	Self-Management and Thinking skills	C/T 6-8.11	By understanding the current model of fossil fuels is not sustainable, students can begin to explore the need for implement-able models for replacement. These are far more mundane than "flying cars" or other science fiction, rather looking at sources of friction, traction, transfer of kinetic to mechanical energy, etc. to maximize return on the energy used.	Risk-taker		
September or February												
Family And Consumer Sciences	Families	Communities	Collaboration, Sustainability	Identities and Relationships: Independence	Students will understand that collaboration with their family community is the path toward sustainability and independence.	A: iv. B: iv. C: iv. D: iv	Communication and Thinking skills	CTE Competencies: 36. Define Family 37. Describe the function of the family 38. Identify strategies to strengthen families 39. Demonstrate ways to conserve natural resources within the family. 40. Maintain a clean and safe environment. 41. Organize personal space.	Family Project	Caring		
October or March												
Family And Consumer Sciences	International Foods	Communities	Collaboration, Perspective	Personal and Cultural Expression	Communities and collaboration can expand a student's perspective and products.	A: i., ii., iii., iv. B: i., ii., iii., iv. C: i., ii., iii., iv.	Communication and Self-Management Skills	CTE: Competencies	Creating International Food	Communicators		
November or April												
Family And Consumer Sciences	Nutrition	Systems	Collaboration, Evaluation	Identities and Relationships	Students will evaluate their health and well-being using systems and collaboration.	A: i., ii., iii., iv. C: i., ii., iii., iv. D: i., ii., iii., iv.	Self-Management Skills	46. Research the effects of food choices on long-term health 47. Evaluate the importance of considering food allergies and special dietary needs 48. Describe the various nutrients and their effects on the body.	Nutrition Test	Balanced		Students make sandwiches to donate to Arlington Street People's Assistance Network (ASPAN).
November or April												

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Family And Consumer Sciences	Babysitting	Communication	Adaptation, Evaluation	Fairness and Development	Students will evaluate children's development and capability, and use communication and adaptation to care for them.	A: i. B: i. C: ii., iii. D: ii., iii.	Social and Thinking skills	59. Describe responsible behaviors in caring for children. 60. Identify stages of early childhood development. 61. Identify developmentally-appropriate & nutritious snacks. 62. Demonstrate storytelling techniques. 66. Explore entrepreneurship opportunities for adolescents.	Babysitting Project	Caring		
December or May												
Family And Consumer Sciences	Sewing	Development	Form, Function	Personal and Cultural Expression	Form and Function are essential in the development of a craft.	A: i. B: i., ii. C: ii. D: ii., iii.	Self-management and thinking skills	55. Demonstrate clothing maintenance techniques. 56. Describe factors affecting clothing choices. 57. Create a sewing project. 58. Construct a textile project.	Create a pillow design	Open-minded		
January or June												
Family And Consumer Sciences	Interior Design	Development	Form, Function	Personal and Cultural Expression	Interior Designers develop living spaces that are functional and beautiful.	C: i., ii., iii., iv. D: i., ii., iii., iv.	Thinking skills	44. Describe how clean environments protect the community. 45. Demonstrate design ideas for a living environment through visual presentation.	Dream Bedroom Project	Reflective		
September												
Technology of Robotics	The Design Process	Communication	Adaptation, Innovation	Scientific and Technical Innovation: Processes	Design process involves innovations and adaptations to communicate and idea for new products.	A: i., iii., iv. B: ii., iii., iv.	Communication, Thinking	Demonstrate creativity and innovation. Demonstrate critical thinking and problem solving. Demonstrate the engineering design process Examine technical skills required of workers within an industry Explain the universal systems model (i.e., input, process, output, and feedback).	Document a System Follow a Design Brief What we use Robots For	Communicators		
October to November												
Technology of Robotics	Mechanical Systems	Systems	Invention, Evaluation	Scientific and Technical Innovation: Solutions	Mechanical systems involve inventions and evaluations to develop solutions to problems.	C: i., ii., iii., iv.	Research, Thinking	Identify the primary concepts and components of mechanical systems.	Design a Pull Toy	Thinkers		
November to December												
Technology of Robotics	CAD and 3D Modeling	Development	Form, Function	Scientific and Technical Innovation: Process and Solutions	Modeling involves the process of manipulating form to develop functional solutions.	B: ii., iv. C: i., ii., iii., iv. D: i., ii., iii., iv.	Self-management, Thinking	Examine technical and production skills required of workers within an industry/organization.	Pull Toy Handle Sketch Robot Part	Inquirers		
January												

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Technology of Robotics	Electronics	Systems	Function, Evaluation	Scientific and Technical Innovation: Mathematical principles	Electronics involves application and evaluation of mathematical principles to develop functional systems	A: i. B: i., iii., iv. C: ii., iii.	Research, thinking	Describe the concepts of voltage, current, and resistance in electricity. Explain the primary functions of electronic systems components. Describe the operation of basic logic circuits. Measure circuit values with a multimeter.	Circuit Design Electronics Principles	Knowledgeable		
February												
Technology of Robotics	Programming	Development	Function, Evaluation	Scientific and Technical Innovation: Digital Life & info age	Programming involves the development and evaluation of digital innovations	C: ii., iii.	Research, thinking skills	Implement basic programming procedures. Program an automated system. Assemble and automated system	Program an Arduino. Program a virtual robot in Robot Virtual Worlds	Reflective		
March to April												
Technology of Robotics	Integrated Systems and Assembly	Systems	Innovation, Function	Scientific and Technical Innovation: Systems, solutions	Integrated systems involves developing solutions via innovation and technical systems	A: i., ii. C: ii., iii.	Research, Self-management, Thinking skills	Describe the function of a microcontroller/logic controller. Simulate control, robotics, and automation systems.	Design an automated system. Build and program an automated system	Balanced		
May to June												
Technology of Robotics	Capstone Project	Communities	Collaboration, Invention, Evaluation	Globalization & sustainability: Consumption	A capstone project may involve developing an innovative solution, through collaboration and evaluation, that will address issues of consumption and sustainability.	A: i., ii., iii., iv. B: i., ii., iii., iv. C: i., ii., iii., iv. D: i., ii., iii., iv.	Research, Self-management, Communication skills	Implement basic programming procedures. Program an automated system. Assemble and automated system	Capstone Design Project	Caring	These students created project often address sustainability issues from around the world.	
September												
Investigating Computer Science	Computer hardware	Systems	Function, invention	Scientific and Technical Innovation: Systems, models, methods	Computer hardware involves the function of technical systems invented to solve problems	A: i., iii.	Thinking, Self-management	Describe the development of computers. Describe the functions of computer hardware	Hardware Test. What's inside a computer video	Knowledgeable		
October												
Investigating Computer Science	Computer software, Problem solving	Logic	Evaluation, Function	Scientific and Technical Innovation: Systems, models, methods	Computer software involves using logic and evaluation as methods for solving problems	A: i., iii. B: i., iii.	Thinking	Describe the functions of computer software. Analyze the problem statement. Create possible solutions to the problem.	Software Test	Thinkers		
November												
Investigating Computer Science	Programming basics	Development	Evaluation, Perspective	Scientific and Technical Innovation: Systems, models, methods	Programming involves the development and evaluation of methods for problem solving	A: i., ii., iii., iv. C: ii., iii.	Thinking	Design a program using an algorithm and pseudocode. Code the program, using a programming language. Debug the program.	Programming Basics Test. Make a calculator project	Inquirers		
December												

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Class	Unit	Key Concepts	Related Concepts	Global Contexts	Statement of Inquiry	Objectives & Strands	ATL Skills	Content	Summative Assessment(s)	Learner Profile	International-mindedness	Service Learning
Investigating Computer Science	Game Development	Development	Collaboration, Adaptation	Scientific and Technical Innovation: Adaptation, ingenuity	Game development involves using collaboration and adaptation to develop an innovative solution to a problem	C: i., ii., iii., iv. D: i., ii., iii., iv.	Research, Social, Self-management	Code a program to incorporate multimedia. Code a program to animate objects. Examine the history of game design and development. Code a program from a storyboard. Develop a game program that uses a scoring method. Create a game program with multiple levels.	Design a game. Code a game	Risk-takers		
January to April												
Investigating Computer Science	Programming with Python	Systems	Evaluation, Function	Scientific and Technical Innovation: Systems, models, methods	Programming involves evaluating the functions of a system to develop solutions	B: i., ii., iii., iv. C: i., ii., iii., iv. D: i., ii., iii., iv.	Thinking, Self-management	Identify syntax errors of a given programming language. Code an application that uses mathematical operations and built-in functions. Write a program that: uses variables, accepts user input, uses conditional structures, uses looping structures. Complete an industry certification examination.	Python programming Test. Code a shopping list program. MTA Python Certification Exam	Open-minded		
May to June												
Investigating Computer Science	Career Readiness	Communities	Markets and Trends, Innovation	Globalization & sustainability: Markets, commodities and commercialization	Career readiness involves evaluating how markets, trends and innovations affect communities	A: i., ii., iii., iv.	Research, Thinking	Examine technical and production skills required of workers within an industry/organization. Examine principles of technology that underlie an industry/organization. Examine community issues related to an industry/organization. Examine health, safety, and environmental issues related to an industry/organization.	Career Presentation	Reflective	The environmental and health issues students focus often involves other countries.	
September or February												
Computer Applications and the Internet	Computer basics	Systems	Function, Collaboration	Scientific and technical innovation	Systems often function in virtual environments to enable collaboration between users.	A: i., ii., iii., iv.	Communication and Research Skills	C/T 6-8.1 C/T 6-8.2	Unit Test	Knowledgeable		
October or March												
Computer Applications and the Internet	Internet Cloud Services and the World Wide Web	Systems	Innovation, Function	Globalization and Sustainability: Commonality, diversity and interconnection	Systems are designed with given functions that depend on interconnection and are improved by innovation.	A: i., ii., iii., iv. B: i., ii., iii., iv.	Research and Thinking skills	C/T 6-8.9	Unit Test	Inquirers		
November to December or April to May												
Computer Applications and the Internet	Digital Lifestyle	Communication	Collaboration, Perspective	Globalization and Sustainability: Data-driven decision-making	Effective communication often requires collaboration, recognizing different perspectives and using data-driven decision making.	C: i., ii., iii., iv. D: i., ii., iii., iv.	Communication, Research and Thinking skills	C/T 6-8.5 C/T 6-8.6	Unit Test	Communicators		
January to February or May to June												

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Computer Applications and the Internet	Microsoft Office Suite and Photoshop	Development	Adaptation, Form	Personal and cultural expression: Products, Systems and Institutions	Developing products requires adapting to new situations and changing forms.	B: i., ii., iii., iv. C: i., ii., iii., iv. D: i., ii., iii., iv	Self-management and Research skills	C/T 6-8.9 C/T 6-8.10	Computer Project	Thinkers		Teaching 6th graders how to use ppt