FIRST® Robotics Competition Guided Experience

Course Outline and Standards Alignment Overview



This document provides a summary of each module of the Guided Experience as well as a comprehensive standards alignment overview for all 12 modules.

Course Outline: Complete Training Path

Module 1: Intro to *FIRST* Robotics Competition

Online Training Content: 2.5 hours | Recommended Guided Activities: 3-7+ hours

Participants in the *Intro to FIRST Robotics Competition* module will learn more about *FIRST* Robotics Competition teams, games, competitions, resources, and more.

LESSON	OBJECTIVE
Lesson 1: *FIRST* Robotics Competition Ethos	Explore *FIRST* Robotics Competition and its community spirit (ethos). Then, learn how your team can create a Core Values poster to foster teamwork, inclusion, impact, discovery, innovation, and fun.
Lesson 2: *FIRST* Robotics Competition Games	Explore the types of exciting *FIRST* Robotics Competition games and learn the anatomy of a match. Then, analyze, reflect, and discuss various aspects of the games with your teammates using guided questions.
Lesson 3: Subteams and Career Connections	Learn about the roles on *FIRST* Robotics Competition teams and their connections to jobs in different industries. Then, explore which career opportunities best fit your personality and interests and connect those to the roles on *FIRST* Robotics Competition teams.
Lesson 4: Team Organization	Explore best practices for building team leadership, fostering communication, and leveraging your team's brand. Then, follow a step-by-step guide on how to create your *FIRST* account and officially join your *FIRST* Robotics Competition team.
Lesson 5: *FIRST* Community Resources	Explore the numerous resources in the *FIRST* Robotics Competition community that will help your team succeed, including how to find inspiration and help during build season.
Lesson 6: *FIRST* Competitions	Explore how *FIRST* Robotics Competition events are both similar to and unlike other sporting events, filled with learning and team-building opportunities. Then, learn how your team can prepare by hosting a fun team-building party or attending an off-season event.

Assessments	Formative assessments include knowledge checks, guided activities, and class and team discussions. The guided activities are Core Values Poster Project, Career Exploration, Resource Scavenger Hunt, and Plan and Host a Team Building Party. The Guided Experience Rubric serves as the summative assessment.

Module 2: How Do *FIRST* Robotics Competition Robots Work?

Online Training Content: 2 hours | Recommended Guided Activities: 2-4+ hours

Participants in the *How Do FIRST Robotics Competition Robots Work?* module will learn more about basic drivetrains, mechanisms, power, and programming commonly used by *FIRST* Robotics Competition teams.

LESSON	OBJECTIVE
Lesson 1: Robot Chassis and Drivetrain	Explore robot chassis considerations, including the frame, bumpers, and belly pans, as well as the pros and cons of common drivetrains. Then, explore a variety of wheels used in *FIRST* and watch drivetrains in action in order to reflect and discuss with your teammates using guided questions.
Lesson 2: Manipulators	Explore a wide variety of mechanisms that can be integrated into a robot in order to play a *FIRST* Robotics Competition game. Then, use the Engineering Design Process to take part in a fun engineering challenge: Lift Larry.
Lesson 3: Power and Control	Learn how robots are powered and controlled by exploring motors and actuators, electronics, and the control system as well as the Driver Station. Then, test your knowledge of these components.
Lesson 4: Software and Programming	Explore robot programming languages and decide which language your team wants to use to code your robot. Then, install important software tools and explore useful programming tools and resources.

Assessments	Formative assessments include knowledge checks, guided activities, and class and team discussions. The guided activity is the Lift Larry Engineering Challenge. The Guided Experience Rubric serves as the summative assessment.

Module 3: Intro to CAD and 3D Printing

Online Training Content: 2.5 hours | Recommended Guided Activities: 2-4+ hours

Participants in the *Intro to CAD and 3D Printing* module will learn the fundamentals of computer-aided design (CAD) and how it's used in engineering, robotics, and other careers. Then, this module explores 3D printing through hands-on design activities and troubleshooting exercises.

LESSON	OBJECTIVE
Lesson 1: What Is Computer-Aided Design?	Learn how computer-aided design (CAD) is used to digitally create 2D drawings and 3D models of real-world products and parts before they are manufactured. Then, explore careers that use CAD software.
Lesson 2: CAD for Product Design	Navigate the CAD software program Onshape by exploring basic tools and processes. Then, learn how to design a *FIRST* keychain using CAD.
Lesson 3: Intro to 3D Printing	Explore how 3D printing has revolutionized manufacturing, the types of 3D printers and how they work, and tips and tricks to 3D printing. Then, complete a guided exploration to evaluate whether your team's keychain design will print correctly.
Lesson 4: CAD Resources for *FIRST* Robotics	Explore a variety of CAD resources that help *FIRST* Robotics Competition teams design their robot. Then, use KrayonCAD to complete a Guided Activity, Lift Larry: The Iterative Sequel!

Assessments	Formative assessments include knowledge checks, guided activities, and class and team discussions. The guided activities are *FIRST* Logo Keychain Design, Will My Part Print?, and Lift Larry: The Iterative Sequel. The Guided Experience Rubric serves as the summative assessment.

Module 4: Fabrication Tools and Safety

Online Training Content: 1.5-2 hours | Recommended Guided Activities: 4-8+ hours

Participants in the *Fabrication Tools and Safety* module will learn how to safely and effectively operate fabrication tools commonly used in robotics. This module emphasizes safety protocols, tool and fastener selection, and organization strategies, preparing students to confidently contribute to the physical construction of robot components.

LESSON	OBJECTIVE
Lesson 1: Safety Resources for *FIRST* Teams	Explore the best safety practices for *FIRST* Robotics Competition teams, including the use of Personal Protective Equipment (PPE) and a variety of resources provided by *FIRST*. Then, test what you've learned in a safety Kahoot!
Lesson 2: Subtractive Manufacturing	Learn about common subtractive manufacturing tools used by *FIRST* teams, including power saws, drills, and more advanced tools such as mills, lathes, laser cutters, and CNC machines. Then, complete a Guided Experience to tour your team's shop and manufacturing tools.
Lesson 3: Tools and Fasteners	Explore the most common fasteners and their associated tools used by *FIRST* Robotics Competition teams. Then, utilize your tool training to complete a Team Activity: Build a Battery Cart!

Assessments	Formative assessments include knowledge checks, guided activities, and class and team discussions. The guided activities are Safety Kahoot!, Tools Tour, and Battery Cart Build. The Guided Experience Rubric serves as the summative assessment.

Module 5: Rapid Prototyping

Online Training Content: 1.5 hours | Recommended Guided Activities: 3-9 hours

Participants in the *Rapid Prototyping* module will learn ways to test design ideas, quickly iterate, and make changes to a mechanism for a robot. Explore commonly used materials for the structure of a robot as well as tips, tricks, and materials for rapid prototyping through hands-on exercises.

LESSON	OBJECTIVE
Lesson 1: Robot Structural Materials	Navigate a variety of materials that *FIRST* teams use for the structural parts of their robots and learn which materials are best used for rapid prototyping. Then, test your knowledge about these materials and their uses through an interactive scenario.
Lesson 2: Intro to Rapid Prototyping	Learn tips and helpful materials for rapid prototyping to create "aha!" moments. Then, complete a Guided Activity, Low-Fidelity Prototype, to use a drill and hex shaft to test how different wheels might interact with different potential scoring elements.
Lesson 3: Building a Better Prototype	Learn what it means to make a medium- or high-fidelity prototype by following a step-by-step guide to build a frisbee launcher. Then, test your prototype and use what you've learned to continue making improvements or create a new frisbee launcher prototype with an alternate design.

Assessments	Formative assessments include knowledge checks, guided activities, and class and team discussions. The guided activities are Quick and Easy Prototyping, Medium-Fidelity (Circular) Frisbee Launcher, and High-Fidelity (Linear) Frisbee Launcher. The Guided Experience Rubric serves as the summative assessment.

Module 6: Preparing for Build Season

Online Training Content: 2 hours | Recommended Guided Activities: 3-6+ hours

Participants in the *Preparing for Build Season* module will learn how to prepare for success in Build Season through evaluating resources, planning schedules and meals, fundraising, and holding a Mock Kickoff.

LESSON	OBJECTIVE
Lesson 1: Inventory Resources	Identify the resources that your *FIRST* team needs to be successful during Build Season, from mentors to materials to meals. Then, complete a Guided Activity, Team Materials and Budget, to detail what the team needs to be ready by Kickoff.
Lesson 2: Develop a Fundraising Plan	Navigate a variety of resources provided by *FIRST*, including advice for gaining sponsorships, in-kind donations, grants, and the possibility of creating a 501(c)(3) or a booster club. Then, complete a Guided Activity, Fundraiser Event Template, to create a plan for a fundraising event.
Lesson 3: Hold a Mock Kickoff	Get ready to take on a new *FIRST* Robotics Competition game by learning tips and tricks for reading the game manual, understanding the rules and specifications, and conducting a game analysis to create a strategy. Then, test your understanding of the game by taking a rules quiz.

Assessments	Formative assessments include knowledge checks, guided activities, and class and team discussions. The guided activities are Team Materials and Budget as well as Fundraiser Event Template. The Guided Experience Rubric serves as the summative assessment.

Module 7: Kickoff: Game and Robot Strategy

Online Training Content: 1.25 hours | Recommended Guided Activities: 1-2 hours

Participants in the Kickoff: Game and Robot Strategy module will prepare for the early Build Season by analyzing the Game Manual, establishing game and robot strategies, and using project management practices to organize the team's work.

LESSON	OBJECTIVE
Lesson 1: The Game Manual	Learn how to locate, read, and interpret game rules, scoring requirements, robot constraints, Team Updates, and official clarifications. Then, apply that understanding through game-analysis activities and a rules quiz.
Lesson 2: Game Strategy	Act out the game, analyze scoring opportunities, and evaluate match priorities to determine the robot actions and alliance roles that can make the greatest strategic impact.
Lesson 3: Robot Design Strategies	Connect game strategy to robot capabilities by researching proven designs, brainstorming and documenting concepts, comparing tradeoffs, and planning for reliable, maintainable, and adaptable systems.
Lesson 4: Project Management	Use schedules, task boards, meeting routines, communication tools, and defined responsibilities to coordinate subteams, monitor progress, and meet Build Season deadlines.
Assessments	Formative assessments include the Game Manual rules quiz, game-analysis discussions, Acting Out the Game, Scoring Analysis, robot-design planning, and project-management artifacts. The Guided Experience Rubric may be used as a summative assessment.

Module 8: Design and Mechanical

Online Training Content: 8 hours | Recommended Guided Activities: Varies by selected sections and team projects

Module 8 guides the design and mechanical team through transforming game strategy into a functional robot. Participants apply engineering principles to robot architecture, materials, motion systems, drivetrains, fabrication, subsystem development, testing, and refinement.

Modules 8, 9, and 10 are intended to act as subteam guides that run concurrently through build season.

SECTION	OBJECTIVE
Section 1: Robot Design and Resources	Apply strategic design principles, compare CAD and COTS-based workflows, research proven robot solutions, and develop concepts that match the team's goals, resources, and manufacturing capabilities.
Section 2: Robot Structure and Materials	Select structural materials, fasteners, fabrication methods, and assembly practices that support safe construction, dimensional accuracy, durability, serviceability, and efficient repair.
Section 3: Motion and Actuators	Analyze gears, chains, belts, linear-motion systems, motors, torque, speed, and power transmission to select and test effective solutions for robot mechanisms.
Section 4: Chassis and Drivetrain Fabrication	Compare drivetrain architectures, wheels, chassis layouts, differential drive, and swerve drive while considering mobility, weight, packaging, reliability, maintenance, and game strategy.
Section 5: Subsystems	Explore intakes, indexers, elevators, arms, linkages, launchers, placers, and climbers, then evaluate how subsystem choices integrate into a reliable scoring solution and complete robot.

SECTION	OBJECTIVE
Assessments	Formative assessments emphasize authentic engineering work, including concept sketches or CAD, design reviews, material and mechanism selection, calculations, fabrication, prototype testing, engineering documentation, and evidence-based design iteration.

Module 9: Electrical and Programming*

Estimated Online Training Content: 6-8 hours | Recommended Guided Activities: Varies by selected sections and team projects

Module 9 prepares electrical and programming teams to build, configure, program, and troubleshoot a reliable robot control system. Participants progress from control-system fundamentals and safe wiring to Java programming, sensors, feedback control, autonomous movement, vision, testing, and software collaboration.

*This information is provisional pending completion of the content. Modules 8, 9, and 10 are intended to act as subteam guides that run concurrently through build season.

SECTION	OBJECTIVE
Section 1: Control System Components and Structure	Trace electrical power and data through batteries, breakers, power distribution, controllers, radios, motor controllers, actuators, sensors, and operator-console components while applying current rules and product documentation.
Section 2: Wiring and Electrical Best Practices	Select wire, connectors, breakers, tools, and layouts; assemble and label reliable circuits; manage batteries; and practice safe, serviceable electrical construction using a control-system test board.
Section 3: Control System Troubleshooting	Use diagnostic lights, Driver Station information, logs, multimeters, inspection routines, and systematic testing to identify and resolve power, communication, CAN, sensor, and wiring problems.
Section 4: Basic Java Programming	Install and use WPILib tools, learn core Java and command-based programming concepts, control motors and subsystems, use dashboards, and apply version-control and code-organization practices.
Section 5: Intermediate Programming	Integrate sensors, PID control, trajectory following, swerve drive, autonomous logic, vendor APIs, vision systems, simulation, telemetry, and repeatable testing to improve robot performance.
Assessments	Formative assessments may include building and inspecting a control-system test board, reading wiring diagrams, diagnosing faults, documenting tests, developing Java and command-based programs, using version control, and demonstrating sensor, autonomous, feedback-control, or vision functions on a robot or simulation.

Module 10: Business, Awards, Marketing, and Media

Online Training Content: 2.25 hours | Recommended Guided Activities: Varies by selected sections and team projects

Module 10 supports the business, awards, marketing, and media work that keeps a team organized, visible, and sustainable. Participants create practical systems and communication products that support team operations, awards, branding, media, and public engagement.

Modules 8, 9, and 10 are intended to act as subteam guides that run concurrently through build season.

SECTION	OBJECTIVE
Section 1: Business and Team Operations	Develop communication, documentation, scheduling, food, travel, purchasing, budgeting, and financial-tracking systems that support coordination, accountability, and sustainable team operations.
Section 2: *FIRST* Robotics Competition Awards	Identify award opportunities and requirements, document team impact, prepare evidence-based submissions and presentations, practice judge interviews, and understand advancement pathways.
Section 3: Marketing and Media Resources	Apply *FIRST* branding, graphic-design, photography, videography, social-media, website, accessibility, consent, and professional-communication practices to tell the team's story responsibly.
Assessments	Formative assessments use authentic team products, including communication plans, calendars, budgets, logistics documents, award drafts, interview practice, brand assets, photographs, videos, social posts, websites, task trackers, and revisions based on feedback.

Module 11: Preparing for Competition

Online Training Content: 2 hours | Recommended Guided Activities: Varies by competition preparation needs

Module 11 brings the full team together to prepare for competition. Participants plan event logistics, organize the pit, prepare scouting and awards work, practice event roles, complete inspection, support match strategy, and navigate alliance selection and playoffs.

SECTION	OBJECTIVE
Section 1: Before the Competition	Prepare schedules, travel and event information, pit systems, scouting processes, award presentations, drive-team and event roles, tools, spare parts, batteries, documentation, and packing plans.
Section 2: At the Competition	Navigate load-in, robot inspection, pit and queuing routines, qualification matches, scouting analysis, match strategy, alliance selection, playoffs, advancement, safety, and professional interactions at the event.
Assessments	Formative assessments include readiness check-ins, pit and packing reviews, role rehearsals, inspection and repair documentation, scouting records, match-strategy recommendations, and demonstration of assigned event responsibilities, safety, and Gracious Professionalism.

Module 12: End of Season Activities

Online Training Content: 1.5 hours | Recommended Guided Activities: Varies by team reflection and planning needs

Module 12 helps teams close the season with purpose by gathering evidence, reflecting on performance and team systems, setting priorities for improvement, planning for continuity, and celebrating the people and partnerships that supported the season.

SECTION	OBJECTIVE
Section 1: Post-Season Analysis	Gather quantitative and qualitative evidence, evaluate robot and team performance, identify strengths and recurring challenges, analyze root causes, and document lessons learned.
Section 2: Planning for the Future	Assess team sustainability, leadership continuity, recruitment, finances, resources, and knowledge transfer; set measurable goals; and plan offseason learning, outreach, and improvement activities.

SECTION	OBJECTIVE
Section 3: Celebrating Your Team	Recognize students, coaches, mentors, volunteers, families, sponsors, and partners through thoughtful appreciation and an inclusive end-of-season celebration.
Assessments	Formative assessments include season-data summaries, structured reflection, root-cause analysis, sustainability reviews, goals and action plans, offseason plans, knowledge-transfer documents, appreciation materials, and celebration planning.

FIRST® Robotics Competition Guided Experience

Standards Alignment: Modules 1–12

Each portrait matrix identifies standards fully or partially addressed across the complete Guided Experience. Blank cells indicate that a standard is not substantively addressed.

* Module 9 is provisional pending verification against the completed instructional content.

Advance CTE

CAREER CLUSTER, SUBCLUSTER, OR PRACTICE	1	2	3	4	5	6	7	8	9*	10	11	12
Career Clusters and Subclusters												
Advanced Manufacturing												
Engineering	●	●	●	●	●	–	●	●	●		–	–
Industrial Machinery		●		●	●			–	–			
Production & Automation		●	●	●	●	–	●	●	●		–	–
Robotics	●	●	●	●	●	–	●	●	●		–	–
Safety & Quality Assurance		–		●	–	–	–	●	●		–	–
Construction												
Architecture & Civil Engineering			●		–			–				
Construction Planning & Development						●		●				
Equipment Operation & Maintenance		●		●	–			–	–			
Skilled Trades		●		●	●	–		●	–			
Arts, Entertainment & Design												
Design & Digital Arts	–		●		–	–				●		
Media Production & Broadcasting						–				●		
Hospitality, Events & Tourism												
Conferences & Events						–				●	●	●
Culinary & Food Services						–						
Travel & Tourism										–	–	–
Financial Services												
Accounting						●				–		
Financial Strategy & Investments						●				●		
Education												
Learner Support & Community Engagement	●					–					●	●
Teaching, Training & Facilitation	●					–					●	●
Public Service, Safety and Health & Human Services												

CAREER CLUSTER, SUBCLUSTER, OR PRACTICE	1	2	3	4	5	6	7	8	9*	10	11	12
Emergency Response		–		●								
Local, State & Federal Services	–											
Public Safety		●		●							–	
Community & Social Services	–					–				–	–	–
Agriculture and Energy & Natural Resources												
Utilities		●							●			
Marketing & Sales												
Market Research, Analytics & Ethics						●				–		
Marketing & Advertising	–					●				●		
Strategic Sales						●				●		
Brand Management	–					–				●		
Management & Entrepreneurship												
Business Information Management	●				●		–			●	–	–
Entrepreneurship & Small Business						●	–			●	–	–
Leadership & Operations	●					●	–			●	●	●
Project Management	●	–	–	●	–	●	●	–	–	●	●	●
Regulation				●								
Digital Technology												
IT Support & Services	–	●		–	–	–			●	●		
Network Systems & Cybersecurity		–		–					●			
Software Solutions	–	●	●		–	–			●	–		
Unmanned Vehicle Technology		–						–	●			
Web & Cloud			●		–	–			–	●		
Supply Chain & Transportation												
Planning & Logistics						●	●			●	●	●
Purchasing & Warehousing						●	●			●	●	●

Advance CTE (continued)

CAREER READY PRACTICES												
CAREER CLUSTER, SUBCLUSTER, OR PRACTICE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9***	**10**	**11**	**12**
1. Lead as a contributing and professional employee	●	–	–	●	–	●	–	–	–	●	●	●
2. Communicate clearly, effectively, and with reason	●	–	●	–	–	●	●	●	–	●	●	●
3. Think critically to make sense of problems and persevere in solving them	–	●	●	●	●	–	●	●	●	–	●	●
4. Collaborate productively while using cultural and global competencies	●	–	–	–	–	●	●	●	–	●	●	●
5. Use digital skills and technologies to enhance productivity and make data-informed decisions	–	●	●	●	–	●	–	●	●	●	●	–
6. Remain resilient in a changing workplace and world of work	●	–	–	●	–	●	–	●	●	–	●	●
7. Manage time and space effectively	●	–	–	●	–	●	●	●	–	●	–	–
8. Demonstrate a creative and innovative mindset	–	●	●	–	●	–	●	●	●	●	–	●
9. Act as a good steward of organizational and personal finances and resources	–	–	●	–	–	–	–	–	–	●	●	●
10. Navigate an education and career path aligned to strengths, work style, interests, and goals	●	–	–	–	–	●	–			●	–	●
11. Consider the environmental and social impacts of decisions	–	–	–	–	●	–	–	–	–	●	–	●
12. Apply appropriate academic and technical skills	●	●	●	●	●	●	●	●	●	●	●	●

● Fully Addressed – Partially Addressed

Next Generation Science Standards (NGSS)

NGSS STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
HS-ETS1-1	●			●		●	●	●	–			
HS-ETS1-2	●	●			●		●	●	●			●
HS-ETS1-3	●					●	●	●	●		–	●
HS-ETS1-4			●		●			●	●			
HS-PS1-1			●									
HS-PS1-3			●									
HS-PS2-1				●								
HS-PS2-6		●										
HS-PS3-1						●						
HS-PS3-3		●			●				–			

● Fully Addressed – Partially Addressed

ISTE Standards

STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
1.1.a	●		●		●	●			–	●	●	●
1.1.b	●					●						
1.1.c	●							–	–	–		
1.1.d		●	●	●			●	●	●	●	●	●
1.2.a										●		
1.2.b	●		●	●		●				●		
1.2.d										●		
1.3.a	●	●	●		●	●	●	●	●	●	●	●
1.3.b	●						●	●		●		
1.3.c		●	●					●	●	●		
1.3.d							●	●	●	●	●	●
1.4.a	–	●	●	●	●	●	●	●	●	●	–	●
1.4.b		●	●		●	●	●	●	●	●		
1.4.c		●	●	●	●		●	●	●	●		
1.4.d							●	●	●	●	–	●
1.5.a		●	●		●	●	●	●	●			
1.5.b		●	●		●		●	●	●	–	●	●
1.5.c	–	●	●	●	●	●	●	●	●		●	●
1.5.d	–	●	●						●			
1.6.a	●		●		●	●	●	●	●	●	●	●
1.6.b	–	●	●	●	●	●		●	●	●	●	●
1.6.c							–	–	–	●		
1.6.d								–	●	●		
1.7.a	●	–	–	–	–	–					●	●
1.7.b	●				●	●	●	●	●	●	●	●
1.7.c	●	●	●	●	●	●	●	●	●	●		
1.7.d	●					●			–			

● Fully Addressed – Partially Addressed

ITEEA Standards for Technological and Engineering Literacy (STEL)

ITEEA STEL STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
1N	•						•	•	•	•	•	•
1O	•	•	•			•	•	•	•	•	•	•
1P	•											
1Q	•		•		•		•	•	•	•	•	•
1R	•	•	•		•	•	•	•	•	•	•	•
2T		•	•	•	•		•	•	•			
2U		•		•				•	•		•	•
2V		•		•				•	•		•	•
2W		•		•		•	•	•	•	•	•	•
2X		•	•	•	•		•	•	•	•	•	•
2Y		•	•	•	•			•	•	•	•	•
2Z		•		•		•	•	•	•	•	•	•
3H							•	•	–			
3I		•				•		•			•	
3J	•		•		•	•	•	•			•	•
4O								•			•	
4P	•	•	•	•	•	•		•	–	•	•	•
4Q												
4R			•									
4S				•	•	•						
4T	•	•										
5H	•					•		•		•	•	•
5I	•									•	•	•
5J										•	•	
6F	•						•	•				•
6G	•											
6H	•					•						
6I	•											
6J	•							•			•	•
7W		•	•		•	•	•	•	•	•	•	•
7X			•		•	•	•	•	•	•	•	•
7Y		•	•		•	•	•	•	•		•	•
7Z					•	•		•	•			
7AA			•		•		•	•	•	•	•	•

ITEEA STEL STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
7BB			●		●			●	●			
7CC			●		●		●	●	●			
7DD				●	●							
8N				●		●			●			
8P		●		●					●			
8Q			●	●		●			●			
8R						●			●			

ITEEA TECHNOLOGY & ENGINEERING PRACTICES	1	2	3	4	5	6	7	8	9*	10	11	12
TEP-1 Systems Thinking	●	●	●	●	●	●	●	●	●	–	●	●
TEP-2 Creativity	●	●	●	–	●	–	●	●	●	●	–	●
TEP-3 Making and Doing	–	●	●	●	●	–	–	●	●	–	–	–
TEP-4 Critical Thinking	●	●	●	●	●	●	●	●	●	●	●	●
TEP-5 Optimism	●	–	●	–	●	●	●	●	●	–	●	●
TEP-6 Collaboration	●	●	–	–	–	●	●	●	–	●	●	●
TEP-7 Communication	●	–	●	–	–	●	●	●	–	●	●	●
TEP-8 Attention to Ethics	●	–	–	●	●	●	–	–	–	●	–	●

● Fully Addressed – Partially Addressed

CSTA Standards

CSTA STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
3A-CS-01		–	–						●			
3A-CS-02		–							●			
3A-CS-03		●		–	–				●			
3A-NI-04									●			
3A-NI-06									●	–		
3A-NI-07									●	–		
3A-DA-09			–						●			
3A-DA-10						–			●	–		
3A-DA-11					–	–			–			
3A-DA-12		–			–				–			
3A-AP-13		–			–				●			
3A-AP-15		–							●			
3A-AP-16		–							●			
3A-AP-17		●			●	●			●			
3A-AP-18		–							●			
3A-AP-20									●			
3A-AP-21					–				●	–		
3A-AP-22	●	●	●	●	●	●			●			
3A-AP-23	●	●	●	●	●	●			●			
3A-IC-24	●											
3A-IC-25	–											
3A-IC-26		–			–				–			
3A-IC-27	–				–				–	–		
3A-IC-29										–		
3A-IC-30										–		
3B-CS-02		–							–			
3B-NI-03									●			
3B-NI-04									●	–		
3B-DA-05					–	–			–		–	
3B-DA-06					–				●	–		
3B-DA-07		–			–				–			
3B-AP-08									●			
3B-AP-10		–							●			

CSTA STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
3B-AP-11									●			
3B-AP-14		–							●			
3B-AP-15									●			
3B-AP-16		–							●			
3B-AP-17									●			
3B-AP-20		–	–	–	–				●			
3B-AP-21		–			–				●			
3B-AP-22		–							●			
3B-AP-23		–							●			
3B-AP-24		–							●			
3B-IC-25	●									–		
3B-IC-26	–											
3B-IC-27	–								–			

● Fully Addressed – Partially Addressed

Note: Module 9 standards correlations are provisional pending completion of the content.

Common Core State Standards: English Language Arts (CCSS.ELA)

CCSS ELA STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
Reading in Science and Technical Subjects												
RST.9-10.1							●	●	●	●	●	●
RST.9-10.2							●	●	●	●	●	●
RST.9-10.3	●	●	●	●	●	●	●	●	●		●	●
RST.9-10.4							●	●	●			
RST.9-10.7							●	●	●	●	●	●
RST.9-10.9							–	–				
RST.11-12.1							●	●	●	●	●	●
RST.11-12.2							●	●	●	●	●	●
RST.11-12.3							●	●	●		●	●
RST.11-12.4							●	●	●			
RST.11-12.7	●	●	●	●	●	●	●	●	●	●	●	●
RST.11-12.9	–	–	–	–	–	–	–	–				
Writing												
W.9-10.4	●	●	●	●								
W.9-10.6	–	–	–	–	–	–						
W.9-10.7	–	–	–	–	–	–						
W.11-12.6	–	–	–	–								
W.11-12.7	–	–	–	–	–							
Writing in History, Science and Technical Subjects												
WHST.9-10.2	–	–	●	●	●	●	–	–	–	●	–	●
WHST.9-10.4							–	–	–	●	–	●
WHST.9-10.5								–	–	●		
WHST.9-10.6								–	–	●		
WHST.9-10.7							–	–	–	●	–	–
WHST.9-10.8							–	–	–	●	–	–
WHST.9-10.9							–	–		–		
WHST.11-12.2	–	–	●	●	●	●	–	–	–	●	–	●
WHST.11-12.4							–	–	–	●	–	●
WHST.11-12.5								–	–	●		
WHST.11-12.6	–	–	–	–	–	–		–	–	●		
WHST.11-12.7	–	–	–	–	–	–	–	–	–	●	–	–
WHST.11-12.8							–	–	–	●	–	–

CCSS ELA STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
WHST.11-12.9	–	–	–	–	–	–	–	–		–		
Speaking and Listening												
SL.9-10.1	●	●	●	●	●	●	●	●	●	●	●	●
SL.9-10.4	●	●	–	–	–	–		–	–	●	●	–
SL.9-10.5								–		●		
SL.9-10.6	–	–	–	–	–	–		–		●		
SL.11-12.1	●	●	●	●	●	●	●	●	●	●	●	●
SL.11-12.4	●	●	–	–	–	–		–	–	●	●	–
SL.11-12.5								–		●		

● Fully Addressed – Partially Addressed

Common Core State Standards: Mathematics (CCSS.Math)

CCSS MATH STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
MP1	●	●	●	●	●	●	●	●	●	●	●	●
MP2	–	●	●	●	●	●	●	●	●	–	●	●
MP3	–	●	●	●	●	●	●	●	●	–	●	●
MP4	–	●	●	●	●	●	●	●	●	–	●	●
MP5	–	●	●	●	●	●	●	●	●	–	●	–
MP6	–	●	●	●	●	●	●	●	●	–	●	●
MP7		–	●	●	●	–	●	●	●		–	–
MP8		–	●	●	●	–	–	●	●		–	–
Number & Quantity												
N-Q.1		●	●	●	●	●	●	●	●	–	●	●
N-Q.2		●	●	●	●	●	●	●	●	–	●	●
N-Q.3		●	●	●	●	●	●	●	●		–	–
Algebra												
A-CED.1		●	●	●	●	●	–	●	●			
A-CED.2		–	●	●	●	●	–	●	●			
A-CED.4			●	●	●	●		●	●			
A-REI.3			●	●	●	–		–	–			
Functions												
F-IF.4		–	●	–	●	–			–			
F-IF.6		–	●	–	●	–			–			
Geometry												

CCSS MATH STANDARD	1	2	3	4	5	6	7	8	9	10	11	12
G-MG.1			●	●	●		●	●	●			
G-MG.2			●	●	●		–	●	●			
G-MG.3			●	●	●		●	●	●			
G-CO.1		●	●	●	●			●	●			
G-CO.2		●	●	●	●			●	●			
G-CO.12			●	●	●			●	●			
G-CO.13			●	●	●			●	●			
Statistics & Probability												
S-ID.5			–	–	●	●	–	–	●		●	●
S-ID.6			–	–	●	–	–	–	●		●	●
G-MG.2			●	●	●		–	●	●			

● Fully Addressed – Partially Addressed