NEW Unit 3: Responsive Design Theory with Bootstrap

Content Area: **CTE**
Course(s): **Web Builder 3**
Time Period: **October**
Length: **100**
Status: **Published**

Unit Overview:

Students will learn responsive design theory in the bootstrap framework to make websites adjust layout based upon viewport size. Students will learn how to code using breakpoints, classes, cards and other design elements in the bootstrap library. Students will then be responsible for updating the DelseaCTE.com website to improve overall brand awareness for Delsea's Career and Technical Education Programs and post possible employment and business partner information in addition to program events and highlights.

Essential Questions:

- How do I develop a website that responds to different viewport sizes?
- What are the current dimensions of common viewport sizes?

Enduring Understandings:

- Creating a webpage that responds to the users viewport enhances the user experience and increases conversion rate.
- Static webpage design is no longer in practice for modern webdesigners.

Standards/Indicators/Student Learning Objectives (SLOs):

12.9.3.IT-WD.1	Analyze customer requirements to design and develop a Web or digital communication product.
12.9.3.IT-WD.2	Apply the design and development process to produce user-focused Web and digital communications solutions.
12.9.3.IT-WD.3	Write product specifications that define the scope of work aligned to customer requirements.
12.9.3.IT-WD.4	Demonstrate the effective use of tools for digital communication production, development and project management.
12.9.3.IT-WD.5	Develop, administer and maintain Web applications.
12.9.3.IT-WD.6	Design, create and publish a digital communication product based on customer needs.
12.9.3.IT-WD.7	Evaluate the functionality of a digital communication product using industry accepted techniques and metrics.
12.9.3.IT-WD.8	Implement quality assurance processes to deliver quality digital communication products

	and services.
12.9.3.IT-WD.9	Perform maintenance and customer support functions for digital communication products.
12.9.3.IT-WD.10	Comply with intellectual property laws, copyright laws and ethical practices when creating Web/digital communications.

Lesson Titles:

- Bootstrap Cards~ Lab 4-2 (4 days)
- Breakpoints~ Lab 2-2 & 2-3 (5 days)
- DelseaCTE Updates (70 days)
- Getting Started with Bootstrap ~ Lab 1-1, Lab 1-2 & Lab 1-4 (10 days)
- Image Carousels~ Lab 6-2 (4 days)
- Menus and FontAwesome~ Lab 5-2 (4 days)
- Table Classes~Lab 3-2 (4 days)

Career Readiness, Life Literacies, & Key Skills

WRK.9.1.2.CAP.1	Make a list of different types of jobs and describe the skills associated with each job.
WRK.9.1.2.CAP.2	Explain why employers are willing to pay individuals to work.
WRK.9.1.2.CAP.4	List the potential rewards and risks to starting a business.
TECH.9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
TECH.9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
TECH.9.4.2.DC.2	Explain the importance of respecting digital content of others.
TECH.9.4.2.DC.6	Identify respectful and responsible ways to communicate in digital environments.

Inter-Disciplinary Connections:

NJSLS Language Arts Standards

LA.RST.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
LA.WHST.11-12.1.D	Establish and maintain a style and tone appropriate to the audience and purpose (e.g., formal and objective for academic writing) while attending to the norms and conventions of the discipline in which they are writing.
LA.WHST.11-12.2.A	Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

LA.WHST.11-12.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
LA.WHST.11-12.6	Use technology, including the Internet, to produce, share, and update writing products in response to ongoing feedback, including new arguments or information.

NJSLS Arts: Visual Arts

VA.9-12.1.5.12prof.Cr1	Generating and conceptualizing ideas.
VA.9-12.1.5.12prof.Cr1a	Use multiple approaches to begin creative endeavors.
VA.9-12.1.5.12prof.Cr2	Organizing and developing ideas.
VA.9-12.1.5.12prof.Cr2c	Collaboratively develop a proposal for an installation, artwork, or space design that transforms the perception and experience of a particular place.
VA.9-12.1.5.12prof.Cr3	Refining and completing products.
VA.9-12.1.5.12prof.Cr3a	Apply relevant criteria from traditional and contemporary cultural contexts to examine, reflect on and plan revisions for works of art and design in progress.

Equity Considerations

Holocaust Mandate

Topic: Gender inequality in web design

Materials Used: https://www.godaddy.com/garage/developing-gender-equality-in-web-design/

Addresses the Following Component of the Mandate:

- Bias
- Bigotry
- Bullying
- Holocaust Studies
- Prejudice

Climate Change

Topic: Improving web design improves climate change

Materials Used: https://www.smashingmagazine.com/2019/01/save-planet-improving-website-performance/

Addresses the Following Component of the Mandate:

- Economic
- Political
- Social

Asian American Pacific Islander Mandate

Topic: Famous AAPI that are web designers

Materials Used: https://www.apiwho.design/

Addresses the Following Component of the Mandate:

- Economic
- Political
- Social

LGBTQ and Disabilities Mandate

Topic: Designing for hearing and visually impaired

Materials Used: https://www.ada.gov/resources/web-guidance/

Addresses the Following Component of the Mandate:

Designing for those with Disabilities

- Economic
- Political
- Social

Instructional Strategies, Learning Activities, and Levels of Blooms/DOK:

Instructional Strategies

- Extra time to complete programs
- Guided Instruction
- One on One tutoring during Delsea One
- Peer to Peer Troubleshooting

Levels of Blooms/DOK

- Analyzing
- Applying
- Creating
- Evaluating
- Remembering
- Understanding

Modifications

ELL Modifications:

- Choice of test format (multiple-choice, essay, true-false)
- Continue practicing vocabulary
- Provide study guides prior to tests
- Read directions to the student
- Read test passages aloud (for comprehension assessment)
- Vary test formats

- K-W-L charts (what I know - what I want to know - what I've learned).

- Provide support as ELL students move through all levels of language acquisition: scaffold learning, processing time, as well as other modifications mentioned above

IEP & 504 Modifications:

- Allow for redos/retakes .
- Assign fewer problems at one time (e.g., assign only odds or evens) .
- Differentiated center-based small group instruction .
- Extra time on assessments .
- Highlight key directions .
- If a manipulative is used during instruction, allow its use on a test .
- Opportunities for cooperative partner work .
- Provide reteach pages if necessary .
- Provide several ways to solve a problem if possible .
- Provide visual aids and anchor charts .
- Test in alternative site .
- Tiered lessons and assignments .
- Use of a graphic organizer .
- Use of concrete materials and objects (manipulatives) .
- Use of word processor .

G&T Modifications:

- Alternate assignments/enrichment assignments
- Enrichment projects
- Extension activities
- Higher-level cooperative learning activities
- Pairing direct instruction with coaching to promote self-directed learning
- Provide higher-order questioning and discussion opportunities
- Provide texts at a higher reading level
- Tiered assignments
- Tiered centers

At Risk Modifications

- Additional time for assignments
- Adjusted assignment timelines
- Agenda book and checklists
- Answers to be dictated
- Assistance in maintaining uncluttered space

- Books on tape
- Concrete examples
- Extra visual and verbal cues and prompts
- Follow a routine/schedule
- Graphic organizers
- Have students restate information
- No penalty for spelling errors or sloppy handwriting
- Peer or scribe note-taking
- Personalized examples
- Preferential seating
- Provision of notes or outlines
- Reduction of distractions
- Review of directions
- Review sessions
- Space for movement or breaks
- Support auditory presentations with visuals
- Teach time management skills
- Use of a study carrel
- Use of mnemonics
- Varied reinforcement procedures
- Work in progress check

Benchmark Assessments

Skills-based assessment

Reading response

Writing prompt

Lab practical

Alternative Assessments

Performance tasks

Project-based assignments

Problem-based assignments

Presentations

Reflective pieces

Concept maps

Case-based scenarios

Portfolios

Formative Assessment:

- Anticipatory Set - Verbally Recall from pervious days topics/lesson
- Closure - Exit Ticket from todays lesson.
- Warm-Up - Today in Computer History from IECLASS

Summative Assessment:

- Alternate Assessment
- Benchmark
- Marking Period Assessment
- Project Based Learning

Technology Materials and Standards:

- Axure
- Desktop Computers with TouchScreen
- Dreamweaver
- Google Classroom
- Google Sites
- Ieclass
- Photoshop

Describing a problem is the first step toward finding a solution when computing systems do not work as expected.

A computing system is composed of software and hardware.

NJSLS - 8.1 & 8.2 Technology Standards

TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.12.B	Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.1.12.C	Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
TECH.8.1.12.D	Digital Citizenship: Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
TECH.8.1.12.E	Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.
TECH.8.1.12.F	Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
TECH.8.2.12.A	The Nature of Technology: Creativity and Innovation: Technology systems impact every aspect of the world in which we live.
TECH.8.2.12.B	Technology and Society: Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society.
TECH.8.2.12.C	Design: The design process is a systematic approach to solving problems.
TECH.8.2.12.D	Abilities for a Technological World: The designed world is the product of a design process that provides the means to convert resources into products and systems.
TECH.8.2.12.E	Computational Thinking: Programming: Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.

Computer Science and Design Thinking Standards

CS.K-2.1A-AP-15	Using correct terminology, describe steps taken and choices made during the iterative process of program development.
CS.K-2.1A-AP-14	Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops.
CS.K-2.1A-AP-11	Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions.
CS.K-2.1A-AP-08	Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks.
CS.K-2.1A-AP-13	Give attribution when using the ideas and creations of others while developing programs.
CS.K-2.1A-CS-01	Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.
CS.K-2.1A-CS-03	Describe basic hardware and software problems using accurate terminology.
CS.K-2.1A-IC-17	Work respectfully and responsibly with others online.