**Module 2: Interactive Resume**

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| **Title of Unit** | Interactive Resume | **Grade Level** | 9-10 |
| **Subject** | Web Design | **Time Frame** | 21 Days |
| |  |  | | --- | --- | | **Description** | In this project students will learn to make a resume. Students learn about website layouts, and how to construct a website so that it is aesthetically pleasing. Students will use these concepts to evaluate the quality of formatted resumes. Students will draft their interactive resume and make changes based on constructive feedback after learning how to make an interactive webpage. | | | | |
| **Stage 1 - Identify Desired Results** | | | |
| **Learning Outcomes**  What relevant goals will this unit address? | | | |
| * *SC. 1: Understand the basic principles of computer program development in order to create a foundation on which to base more complex software design.* * *SC. 3: Understand event handling and user interaction in order to understand data flow and control.* * *Students will create their own interactive digital resume* | | | |
| **Enduring Understandings** | | **Essential Questions** | |
| *Students will understand that…*   * *EU. 4: The student will understand that different target audiences use certain platforms for particular usability.* * *EU. 5: The student will understand that proper planning and documenting programs allows for maintenance and sustainability.* * *EU. 7: The student will understand that incorporating critique and feedback into design creates more robust programs.* | | *Content specific….*   * *How do we write a resume?* * *How do we make a webpage interactive?* * *How can we animate a webpage?* | |
| **Knowledge:** | | **Skills:** | |
| *Students will know...*   * *Define what a resume is and its components* * *Differentiate between different website layouts* * *Explain the importance of choosing a website layout* * *Define the Gestalt Principle, F and Z Layouts, and Visual Hierarchy and explain their use in web design* * *Provide constructive feedback on a peer’s project* * *Explain the purpose of the DOM, and how it is used to manipulate HTML files* * *Will learn how to create elements using document.createElement* * *Distinguish between .attribute and setAttribute notation and determine the advantages and disadvantages of both* * *Articulate the difference between dynamic and static websites* * *Explain the difference between how this is used with onclick and with eventListeners* * *Distinguish between key.code and key.key, and when it’s appropriate to use each* * *Describe what animation is, and how it works* * *Explain the difference between all the position attributes* * *Explain the limitations of “vanilla” JavaScript and how jQuery eliminates some of those limitations.* * *Articulate what libraries in programming are, and how they are used.* * *Explain when each should and should not be used for any given jQuery selection.* * *Define synchronous and asynchronous, and explain how those concepts show up in computer science* * *Explain why the order of script loading impacts usability and performance* | | *Students will be able to…*   * *Write a resume* * *Create a visually appealing interactive resume* * *Make changes based on feedback* * *Incorporate JavaScript into their HTML pages* * *Use the console to debug scripts* * *Modify existing elements on a web page using document.getElementById* * *Modify existing elements on a web page using document.getElemenyByTagName* * *Add created elements to an existing webpage* * *Utilize setAttribute appropriately to style elements in JavaScript* * *Create buttons with onclick events* * *Use functions to create working, dynamic buttons* * *Appropriately use the keyword this* * *Create a working, clickable keyboard using only JavaScript* * *Use keydown and keyup events to read keyboard information* * *Use timers to successfully animate web page elements and terminate animations* * *Use position to animate elements* * *Successfully incorporate a library into their own program.* * *Use the each function to iterate through selected jQuery elements and appropriately use the each function parameters.* * *Animate elements using jQuery* * *Sequentially execute animations* * *Use a callback function correctly in their programs* * *Write js files with the correct syntax* * *Properly load js files in the correct order* | |

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| **Stage 2 – Assessment Evidence** | | |
| **Performance Task** | | |
| Interactive Resume  In this project, students learn how to write a resume. Students will use this skill to develop an interactive resume on a website. Students learn about website layouts, and how to construct a website so that it is aesthetically pleasing. Students will use these concepts to evaluate the quality of formatted resumes. Students will draft their interactive resume and make changes based on constructive feedback.  Objective  Students will be able to:   * Define what a resume is and its components * Write a resume * Differentiate between different website layouts * Explain the importance of choosing a website layout * Define the Gestalt Principle, F and Z Layouts, and Visual Hierarchy and explain their use in web design * Create a visually appealing interactive resume * Provide constructive feedback on a peer’s project * Make changes based on feedback   Activities  3.1.1 Interactive Resume Project Overview  3.1.2 What is a Resume?  3.1.3 What is a Resume?  3.1.4 Draft Your Resume  3.2.1 Layout and Web Design Theory  3.2.2 Layout and Web Design Theory  3.2.3 Learning More About the Z and F Layouts  3.2.4 Explore Resume Layouts  3.2.5 Explore Resume Layouts  3.2.6 Sample Interactive Layouts  3.3.1 Draft Your Interactive Resume  3.3.2 Online Interactive Resume Draft  3.3.3 Evaluating an Interactive Resume  3.3.4 Final Draft Interactive Resume  [Rubric](https://docs.google.com/document/d/1cQZAVt-td_lGjwd_m6UhdZy9Q2DRLjQm2W-Ls_WQRQE/edit?usp=sharing) | | |
| **Other Evidence** | | **Student Self-Assessment** |
| * Challenge Completion suggest DOK 3 * Regular task Completion suggest DOK 2 * Peer Evaluation | | * Work Ethics Self Evaluation * Reflection on Design |

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| **Stage 3 – Learning Plan** | | | | |
| *Homework*   * Video and micro quizzes   *Tasks*   * Examples and Exercises   *Challenges*   * Advanced Exercises to challenge student to try something beyond their basic understanding   *Project Tracker*   * A digital log of work done on the project. | | | | |
| **How will you engage students at the beginning of the unit? (motivational set)** | | | | |
| Project 1 Creating a Resume  In this lesson, students learn how to write a resume. Students will use this skill to develop an interactive resume on a website.  Objective  Students will be able to:  Define what a resume is and its components  Write a resume  Activities  3.1.1 Interactive Resume Project Overview  3.1.2 What is a Resume?  3.1.3 What is a Resume?  3.1.4 Draft Your Resume | | | | |
| **#** | **Lesson Title** | **Lesson Activities** | **CCCs** | **Resources** |
| P1 | Project 1 Creating a Resume | In this lesson, students learn how to write a resume. Students will use this skill to develop an interactive resume on a website.  Objective  Students will be able to:   * Define what a resume is and its components * Write a resume   Activities  3.1.1 Interactive Resume Project Overview  3.1.2 What is a Resume?  3.1.3 What is a Resume?  3.1.4 Draft Your Resume |  |  |
| 1 | Lesson: 2.1 The Script Tag | In this lesson, students learn how to incorporate JavaScript into their HTML pages using the script tag.  Objective  Students will be able to:   * Incorporate JavaScript into their HTML pages * Use the console to debug scripts   Activities  1.2.1 The Script Tag  1.2.2 The Script Tag Quiz  1.2.3 Debugging Functions  1.2.4 Using the Console  1.2.5 Writing in the Console  1.2.6 Alert Introduction  1.2.7 Debugging with the Console |  |  |
| 2 | Lesson: 2.2 Using the DOM | In this lesson, students learn how to modify HTML tags on a webpage using the DOM. The DOM, or Document Object Model, translates HTML files into accessible objects that can be manipulated or added to a webpage.  Objective  Students will be able to:   * Modify existing elements on a web page using document.getElementById * Modify existing elements on a web page using document.getElemenyByTagName * Explain the purpose of the DOM, and how it is used to manipulate HTML files   Activities  1.3.1 getElementById  1.3.2 getElementById Quiz  1.3.3 Welcome to My Site!  1.3.4 Let's Get to Know You  1.3.5 Simple Math  1.3.6 Using the DOM  1.3.7 Using the DOM Quiz  1.3.8 Multiple p tags  1.3.9 Menu Opinion  1.3.10 Longest Paragraph |  |  |
| 3 | Lesson: 2.3 Creating Elements Using the DOM | In this lesson, students will learn how to create elements using the Document Object Model.  Objective  Students will be able to:   * Create elements using document.createElement * Add created elements to an existing webpage   Activities  1.4.1 Creating Elements Using the DOM  1.4.2 Creating Elements Using the DOM  1.4.3 Make a Button  1.4.4 The Whole Family  1.4.5 Roll Call  1.4.6 Add to Calendar |  |  |
| 4 | Lesson: 2.4 Styling Elements Using Javascript | In this lesson, students learn how to style elements in HTML using JavaScript and the Document Object Model.  Objective  Students will be able to:   * Utilize setAttribute appropriately to style elements in JavaScript * Distinguish between .attribute and setAttribute notation and determine the advantages and disadvantages of both   Activities  1.5.1 Styling Elements Using JavaScript  1.5.2 Styling Elements Using JavaScript  1.5.3 Frankenstein Footnote  1.5.4 .(attribute) vs. setAttribute  1.5.5 Add a Link  1.5.6 Create a Flag  1.5.7 Checkerboard |  |  |
| 5 | Lesson: 2.5 Functions in HTML | In this lesson, students learn how to use functions to make their web pages more dynamic.  Objective  Students will be able to:   * Articulate the difference between dynamic and static websites * Create buttons with onclick events * Use functions to create working, dynamic buttons   Activities  1.6.1 Functions in HTML  1.6.2 Functions in HTML  1.6.3 Changing Text Color  1.6.4 Change Text Color with Parameters  1.6.5 Announcement Function  1.6.6 Random Number Generator  1.6.7 Add Colors! |  |  |
| 6 | Lesson: 2.6 This Keyword | In this lesson, students learn how to use the keyword this to pass elements as parameters in their click events.  Objective  Students will be able to:   * Appropriately use the keyword this * Explain the difference between how this is used with onclick and with eventListeners   Activities  1.7.1 This Keyword  1.7.2 This Keyword  1.7.3 Clicking Multiple Paragraphs  1.7.4 Clicking with Event Listeners  1.7.5 Click Box  1.7.6 Cross Out |  |  |
| 7 | Lesson: 2.7 Challenge: Make a Keyboard | In this lesson, students will implement the skills they’ve learned from the previous lessons to create a working, clickable keyboard.  Objective  Students will be able to:   * Create a working, clickable keyboard using only JavaScript   Activities  1.8.1 Challenge Overview!  1.8.2 Make Button  1.8.3 Make Text  1.8.4 Make a Keyboard |  |  |
| 8 | Lesson: 2.8 Keyboard Interactions | In this lesson, students learn about another event listener - keyboard interactions. Students learn how to listen for a keyboard press, and how to access information about each keyboard stroke.  Objective  Students will be able to:   * Use keydown and keyup events to read keyboard information * Distinguish between key.code and key.key, and when it’s appropriate to use each   Activities  1.9.1 Keyboard Events  1.9.2 Keyboard Events  1.9.3 Coordinate Plane  1.9.4 Make a Keyboard with Key Events  1.9.5 Key Alert  1.9.6 Light Up Squares  1.9.7 Light Switch Squares |  |  |
| 9 | Lesson: 2.9 JavaScript Animations | In this lesson, students learn how to animate web page elements using timers.  Objective  Students will be able to:   * Describe what animation is, and how it works * Use timers to successfully animate web page elements and terminate animations   Activities  1.10.1 Animations in JavaScript  1.10.2 Animations in JavaScript  1.10.3 Growing Square  1.10.4 Changing Colors  1.10.5 Rotating Div  1.10.6 Lucky Lotto Number  1.10.7 Rotating Div with Keyboard Interaction |  |  |
| P2 | Project 2 Layout and Web Design Theory | In this lesson, students learn about website layouts, and how to construct a website so that it is aesthetically pleasing. Students will use these concepts to evaluate the quality of formatted resumes.  Objective  Students will be able to:   * Differentiate between different website layouts * Explain the importance of choosing a website layout * Define the Gestalt Principle, F and Z Layouts, and Visual Hierarchy and explain their use in web design   Activities  3.2.1 Layout and Web Design Theory  3.2.2 Layout and Web Design Theory  3.2.3 Learning More About the Z and F Layouts  3.2.4 Explore Resume Layouts  3.2.5 Explore Resume Layouts  3.2.6 Sample Interactive Layouts |  |  |
| 10 | Lesson: 2.10 Positioning and Animations | In this lesson, students learn how to use the position style in CSS to improve animations.  Objective  Students will be able to:   * Explain the difference between all the position attributes * Use position to animate elements   Activities  1.11.1 Positioning and Animations  1.11.2 Positioning and Animations  1.11.3 Positioning Elements  1.11.4 Moving Square in Container  1.11.5 Hidden Nav Bar  1.11.6 Moving a Square  1.11.7 Add Div Animation |  |  |
| 11 | Lesson: 2.11 Introduction to jQuery | In this lesson, students learn how libraries can be used to make JavaScript easier to read and write, and how they can incorporate them in their own projects.  Objective  Students will be able to:   * Articulate what libraries in programming are, and how they are used. * Successfully incorporate a library into their own program. * Explain the limitations of “vanilla” JavaScript and how jQuery eliminates some of those limitations.   Activities  2.1.1 Introduction to jQuery  2.1.2 Introduction to jQuery  2.1.3 Using the Selector  2.1.4 jQuery Functions  2.1.5 Exploring the jQuery Documentation  2.1.6 Exploring the jQuery Documentation  2.1.7 High School Info  2.1.8 Change Paragraph Size  2.1.9 jQuery Table  2.1.10 Smart jQuery Table |  |  |
| 12 | Lesson: 2.12 Iterating with jQuery | In this lesson, students learn how to iterate through selected jQuery elements using the .each function.  Objective  Students will be able to:   * Use the each function to iterate through selected jQuery elements and appropriately use the each function parameters. * Explain when each should and should not be used for any given jQuery selection.   Activities  2.2.1 Iterating with jQuery  2.2.2 Iterating with jQuery  2.2.3 Printing To Do List  2.2.4 Smart Table Using Each  2.2.5 Mark Complete  2.2.6 Fix Width  2.2.7 Strobe Light |  |  |
| 13 | Lesson: 2.13 Animations with jQuery | In this lesson, students learn how to animate elements using jQuery.  Objective  Students will be able to:   * Animate elements using jQuery * Sequentially execute animations   Activities  2.3.1 Animations with jQuery  2.3.2 Animations with jQuery  2.3.3 .animate Grow  2.3.4 Animation Queue  2.3.5 Toggle  2.3.6 Bouncy Ball  2.3.7 Extracurriculars  2.3.8 FrankenDiv |  |  |
| 14 | Lesson: 2.14 Callback Functions and Synchronization | In this lesson, students learn how callback functions are used in programming to execute code segments after a particular action has been completed. Students learn how programs can execute synchronously and asynchronously, and how to use callback functions to control program execution flow.  Objective  Students will be able to:   * Use a callback function correctly in their programs * Define synchronous and asynchronous, and explain how those concepts show up in computer science   Activities  2.4.1 Callback Functions and Synchronization  2.4.2 Callback Functions and Synchronization  2.4.3 .animate Execution Delay  2.4.4 .animate Per-Element Callback  2.4.5 Grow and Shrink Counter  2.4.6 Progress Bar  2.4.7 The Wave |  |  |
| 15 | Lesson: 2.15 Using Multiple Files in JavaScript | In this lesson, students learn how to better organize their HTML files by separating their scripts into a separate js file.  Objective  Students will be able to:   * Write js files with the correct syntax * Properly load js files in the correct order, and explain why the order of script loading impacts usability and performance   Activities  2.5.1 Using Multiple Files in JavaScript  2.5.2 Using Multiple Files in JavaScript  2.5.3 Execution Order  2.5.4 Accessibility Button  2.5.5 Our First js File  2.5.6 Fix Load Order  2.5.7 The Wave with .js |  |  |
| P3 | Project 3 Interactive Resume Development | In this lesson, students will draft their interactive resume and make changes based on constructive feedback.  Objective  Students will be able to:   * Create a visually appealing interactive resume * Provide constructive feedback on a peer’s project * Make changes based on feedback   Activities  3.3.1 Draft Your Interactive Resume  3.3.2 Online Interactive Resume Draft  3.3.3 Evaluating an Interactive Resume  3.3.4 Final Draft Interactive Resume |  |  |

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| **Stage 4 - Assess and Reflect** | |
| **Considerations** | **Comments** |
| **Is there alignment between outcomes, performance assessment and learning experiences?** |  |
| **Have I made purposeful adjustments to the curriculum content (not outcomes), instructional practices, and/or the learning environment to meet the learning needs and diversities of all my students?** | For struggling students:                    For students who need a challenge: |
| **Do I use a variety of teacher directed and student centered instructional approaches?** |  |
| **Do the students have access to various resources on an ongoing basis?** |  |
| **Have I nurtured and promoted diversity while honoring each child’s identity?** |  |