

Responsive Web Design

Web Development

Time: 60 mins

Introduction

In this class, student/s will learn to create a responsive website. Students/s will make the pizza website responsive to multiple screen sizes using media queries. They will also learn to apply custom fonts on websites.

HTML Tags & CSS Properties Introduced

- **@media** Media query applies styling to HTML elements when the conditions mentioned are satisfied.
- **@font-face** Loads a custom font from the specified location. The font can further be applied to HTML elements using font-family.

Vocabulary

- **Media Query** is the technique used to make a website responsive to different device sizes, device orientations, etc. A group of style properties are mentioned in the CSS which will be applied to the webpage when the mentioned conditions are satisfied.

Learning Objectives

Student/s should be able to:

- **Recall** how to use media queries in CSS files.
- **Demonstrate** how images and text can be rearranged when the device size changes.
- **Demonstrate** how to toggle between desktop view and mobile view in Tynker.
- **Explain** the use of custom fonts.
- **Create** a responsive pizza website that adapts to different screen sizes.

Activities

1. Class Narrative: (2 mins)

- Brief the student/s that websites may be accessed from desktops, laptops, tablets, or smartphones of different sizes. The websites that we create should look appealing on all devices, In this class students will learn how to make the pizza website responsive.

2. Concept Introduction Activity: (5 mins)

- Let the student/s open the explore-activity and observe the difference in the pizza website when viewed in mobile view and desktop view. Guide the students to click on the toggle button next to the Play button before exploring the mobile view.

Note: The button would be visible only when index.html is selected in the file explorer.



- Using the slides, explain how:
 - to apply different styles on a webpage using media queries.
 - to add and use custom fonts in the CSS file.

3. Activity 1: Make the Images Responsive: (16 mins)

Teacher Activity: (6 mins)

- Explain to the student/s how to add media queries in CSS files.
- Explain how the same CSS file can be used to write multiple media queries.
- Demonstrate the 2 different media queries written for 600px and 480px by resizing the preview pane and observing the images in the Bestsellers section align in a single row, 2 in a row, and 1 in a row.

Student Activity: (10 mins)

- Guide the student/s to add multiple media queries for 600px and 480px to make the Best Sellers section responsive.
- Guide the student/s to make the background images in the banner, welcome section, and category section responsive by adding them inside the media query.

Note: The banner image is added using the tag. Guide students on how to change the image within the CSS using content:url().

Probing question: Why is the width set to be larger when the screen size is smaller?

Expected answer: When the screen size is smaller, there is not enough room 2 or more images, so the width of the single image is set to be large that fills the screen.

Tag to be styled	CSS Property	Value
pizzas img	@media (max-width: 600px) { } @media (max-width: 480px) { }	any numeric value (unit percentage) 40% 80%
welcome-section img	@media (max-width: 480px) { }	any numeric value (unit percentage) 100%
banner-img	content: url(" ");	Filename with relative path
category-section	background-image: url(" ")	Filename with relative path

italian-pizza mexican-pizza		
	background-size	two numeric values (unit percentage) 100% 100%

4. Activity 2: Add Custom Fonts: (13 mins)

Student Activity:

- Guide the student/s to load and name to custom fonts available in the assets folder and use them to style HTML elements.

Tag to be styled	CSS Property	Value
@font-face	font-family	myFont (any custom name)
	src: url()	font file with path.
#category-section .heading .customize-pizza-buttons	font-family	name of the font family

5. Activity 3: Align the Buttons and Coupons: (14 mins)

Student Activity:

- Guide the student/s to make the customise pizza section responsive.

Tag to be styled	CSS Property	Value
#pizza-base-toppings-section #customize-pizza-buttons .topping-button .crust-button #offers img	width	Numeric value in percentage or pixels 90% 100% 80px 120px 80%
#footer	display	block, inline-block, grid
	text-align	left, center, right
.topping-icons	width	(30px)Numeric value in percentage or pixels
	padding-left	(5px)Numeric value in pixels

Note: Ask the student/s to check the output after each step.

6. Introduce the Post class project: (3 min)

- Make the Pixie website responsive.

7. Test and Summarize the class learnings: (6 mins)

- Check for understanding through quizzes and summarize learning after respective missions.
- Summarize the overall class learning towards the end of the class.

8. Additional activities:

- Encourage the student/s to add a new font and style the website using it.
- Encourage the student/s to show and hide sticky notes by making them responsive to different screen sizes..

9. State the Next Class Objective: (1 min)

- We will learn to create websites using the framework called Bootstrap.

U.S. Standards:

Links Table		
Activity	Activity Name	Link
Class Presentation Part 1	Narrative	https://s3-whjr-prod-labinapp-applet.whjr.online/SwiftLibrary/V3.2.1_stage/index.html?appletID=English US CODM ML4 C032 One C032_One_01
Explore Activity	Website Navigation: Explore link	https://tynker.com/code/project/635a4f6e4d7b3377c93df9b2
Class Presentation Part 2	Concept Introduction- Make the Images Responsive	https://s3-whjr-prod-labinapp-applet.whjr.online/SwiftLibrary/V3.2.1_stage/index.html?appletID=English US CODM ML4 C032-2b One C032-2b_One_01
Teacher Activity 1	Responsive Images	https://tynker.com/code/project/635a3e962a4102585d7e1232
Teacher Activity 1 Solution	Responsive Images - Solution	https://tynker.com/code/project/635a33ab2aa474036b7387e2
Class Presentation Part 3	Concept Introduction- Multiple Media Queries	https://s3-whjr-prod-labinapp-applet.whjr.online/SwiftLibrary/V3.2.1_stage/index.html?appletID=English US CODM ML4 C032-3 One C032-3_One_01
Student Activity 1.1	Multiple Media Queries	https://tynker.com/code/project/635a332954976f0b83014482
Teacher Reference: Student Activity 1.1 Solution	Multiple Media Queries- Solution	https://tynker.com/code/project/635a2a9fde0a390e8b3137f2

Class Presentation Part 4	Concept Introduction - Make the Images Responsive	https://s3-whjr-prod-labinapp-applet.w-hjr.online/SwiftLibrary/V3.2.1_stage/index.html?appletID=English US CODM ML4 C032-4 One C032-4_One_01
Student Activity 1.2	Make the Images Responsive	https://tynker.com/code/project/63904b5716d2b114d82db6e2
Teacher Reference: Student Activity 1.2 Solution	Make the Images Responsive - Solution	https://tynker.com/code/project/63904aa1e9808b65dd044902
Class Presentation Part 5	Concept Introduction - Add Custom Fonts	https://s3-whjr-prod-labinapp-applet.w-hjr.online/SwiftLibrary/V3.2.1_stage/index.html?appletID=English US CODM ML4 C032-5b One C032-5b_One_01
Student Activity 2	Add Custom Fonts	https://tynker.com/code/project/635a46727e1ca33e5a6b2d92
Teacher Reference: Student Activity 2 Solution	Add Custom Fonts - Solution	https://tynker.com/code/project/635a4337bee50157e74b85e2
Class Presentation Part 6	Concept Introduction - Complete the webpage	https://s3-whjr-prod-labinapp-applet.w-hjr.online/SwiftLibrary/V3.2.1_stage/index.html?appletID=English US CODM ML4 C032-6 One C032-6_One_01
Student Activity 3	Align the Buttons and Coupons	https://tynker.com/code/project/635a51b50b90e0332e699c62
Teacher Reference: Student Activity 3 Solution	Align the Buttons and Coupons - Solution	https://tynker.com/code/project/635a4f6e4d7b3377c93df9b2
Class Presentation Part 7	Concept Introduction - Project, Summary and AA1	https://s3-whjr-prod-labinapp-applet.w-hjr.online/SwiftLibrary/V3.2.1_stage/index.html?appletID=English US CODM ML4 C032-7b One C032-7b_One_01
Student's Additional Activity 1	Add Custom Font and Media Query	https://tynker.com/code/project/635a71b1aa55f06fb86c79c2
Teacher Reference: Student's Additional Activity 1 Solution	Add Custom Font and Media Query - Solution	https://tynker.com/code/project/635a7064d450ad59782845e2
Class Presentation Part 8	Concept Introduction - AA2	https://s3-whjr-prod-labinapp-applet.w-hjr.online/SwiftLibrary/V3.2.1_stage/index.html?appletID=English US CODM ML4 C032-09 One C032-09_One_01
Student's Additional Activity 2	Responsive Sticky Note	https://tynker.com/code/project/635a7278f8ff640fad643c82
Teacher Reference: Student's Additional Activity 2 Solution	Responsive Sticky Note - Solution	https://tynker.com/code/project/635a537600a5ca107e01c842

Class Presentation Part 9	Wrap Up	https://s3-whjr-prod-labinapp-applet.whjr.online/SwiftLibrary/V3.2.1_stage/index.html?appletID=English US CODM FL1 C032-10 One C032-10_One_01
Post Class Project	Responsive Pixie Website	https://tynker.com/code/project/636e4e483fee386d3d374002
Teacher Reference: Post Class Project Solution	Responsive Pixie Website - Solution	https://tynker.com/code/project/636e4187c3b0d80430066a02