**Page 8:**

**Slide Title:** Key Design Choices & Solutions in Our Music Site

Outline:

**Slide Content:**

* **Why We Made It:**
  + Goal: Make learning music fun and easy for everyone.
  + How: By creating a website where you can play with music and learn at your own pace.
* **Cool Feature #1: Music Replay**
  + What we did: Added a feature to replay music pieces.
  + The problem: Making sure it works smoothly on all devices and browsers.
  + Our fix: Used the Web Audio API for better sound control and compatibility.
* **Cool Feature #2: Mix Music Basics**
  + What we did: Let users mix different music elements like rhythm and melody.
  + Cool discovery: Used JavaScript’s async features to mix tracks without slowing down the site.
* **Why JavaScript?**
  + What we did: Used JavaScript for pretty much everything on the site.
  + The problem: Needed to keep the site fast and responsive.
  + Our fix: Broke the code into modules. This keeps things organized and lets parts of the site load only when needed.
* **What We Achieved:**
  + A website that’s not just educational but also fun to use.
  + Overcame technical challenges to ensure everyone gets a smooth learning experience.

**End of Slide**

**SCRIPT:**

Our music tutorial website was designed with a clear goal in mind: to make learning music both engaging and accessible to everyone, regardless of their skill level. We introduced a unique feature that allows users to replay music pieces, aiming to enhance practice and learning efficiency. However, we faced a significant challenge in ensuring seamless audio playback across various devices and browsers, which often have different capabilities and support for audio formats. To overcome this, we implemented the Web Audio API, a decision that not only solved the compatibility issues but also provided us with more control over sound processing, enabling a richer, more interactive learning experience.

Another innovative aspect of our website is the mixing of music fundamentals feature, where users can experiment with different elements of music, such as rhythm and melody, in real-time. This feature required a robust solution to handle the dynamic loading and mixing of audio tracks without affecting the website's performance.

We also use JavaScript across the website to facilitate most of the site's functionality, from interactive tutorials to dynamic content generation. This not only made the codebase more manageable and maintainable but also improved the site's overall performance by enabling lazy loading of scripts and resources as needed.