

### **Problem 1: Can drop multiple puzzle pieces onto the same drop zone in the puzzle board.**

Thought process: There needs to be some kind of feedback that says if there is already a piece on that spot, and if there is, do not allow another piece to be placed there. If there is no piece already there, allow it to be dropped.

Solution: Needed to add something to check if the drop zone already has an existing child element. Added an if statement to check for child elements in the drop zone. If the drop zone has a child element, the piece is not appended. If it does not, the function acts as normal and drops the piece. Made changes to the handleDrop function as such:

```
function handleDrop(e) {  
  e.preventDefault();  
  console.log('dropped something on me');  
  if (!this.hasChildNodes()) {  
    this.appendChild(draggedPiece);  
  }  
}
```

### **Problem 2: When you change the puzzle/background image the puzzle pieces remain on the puzzle board/in the drop zones.**

Thought process: Puzzle pieces need to reset when the user changes the puzzle/background image. Pieces need to go back to their starting place before being dragged onto the board. I was struggling to get it to work and then thought maybe I am trying to append the pieces back to a wrong place. So I tried making a new variable for the area where the draggable puzzle pieces are.

Solution: I made a variable for the area of the draggable puzzle pieces, then I created a function that goes through all the drop zones and appends the children to the CONTAINER variable rather than puzzlePieces. I realized that that variable was targeting the IMAGES within the puzzle pieces container, so I needed a variable to target the container.

```
puzzlePieceCon = document.querySelector('.puzzle-pieces'),
```

Then I created a function to reset the puzzle using a loop, so as long as there is a child element in a drop zone it will send the piece back to the puzzle piece container until there is none left.

```
function resetPuzzle() {  
  dropZones.forEach(zone => {  
    while (zone.firstChild) {  
      puzzlePieceCon.appendChild(zone.firstChild);  
    }  
  })  
}
```

Lastly, I called this function inside the changeBGImage function before it changes the puzzle image, so all the pieces go back.

```
function changeBGImage() {  
  resetPuzzle();  
  puzzleBoard.style.backgroundImage =  
  `url(images/background${this.id}.jpg)`;  
}
```

I felt so huge brained after I figured this out lol