# **Key Takeaways**

## **Main Problem**

* Great designs by end of unit
* Weak coding skills
* **Same issue as Y4 mazes:** As complexity and personalization grew, lost ability to support or provide adequate scaffolding
* Minor but worth noting - original context was based on the previous topic Mission to Mars - As with Class topic. However it slowly morphed into space, space base and eventually morphed into ‘LunarBase’. Concepts all the same but maybe start off on a more solid theme of LunarBase, built in models supporting this.

## **Proposed Lesson Reorder**

### **Week 1: Foundation**

* Build base project first
* Establish core structure before adding complexity

### **Weeks 2-4: Introduce Core Concepts**

* **Parallel Paths** - develop in one lesson
* **Space Walk** - develop in one lesson
* **Grav Room Lists** - develop in one lesson
* Each concept gets dedicated development time

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### **Week 4 +: Differentiated Choice**

Students choose ONE focus area to develop:

**Option 1: Space Walk**

* Focus on velocity concepts

**Option 2: Grav Room**

* Focus on lists ( hardest option)

**Option 3: Lunar Base**

* Focus on parallel paths

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## **Key Insight**

* Teach concepts separately and thoroughly before letting students personalize
* Give students choice of which advanced concept to pursue
* Match concept difficulty to student readiness

**\*Devils Advocate\***

**Y4 Coding Platform Concerns:**

I don't think Y4 students should use this as their primary coding platform. While it works well for building animations, there are several issues with the code editor:

* Visibility problems: Code gets cut off and can't be fully viewed
* Cognitive load: The constant screen switching is challenging for pupils who haven't yet mastered core concepts
* Design over learning: Students get too focused on visual design rather than developing solid coding fundamentals
* Turning items on requires navigating through additional lists/menus
* Co Blocks library isn't always visible during coding
* Even in split-screen mode, you still need to click play separately
* If objects aren't in the camera view, students can't see their code executing

Recommendation - Switch to Scratch for Y3/4:

I know this goes against what we previously discussed, but if we stick to the local Scratch editor and have students save their work to the computer each session, it removes the headache of managing logins—which might be worth the trade-off.

Scratch would be more appropriate because:

* Raspberry Pi offers excellent downloadable examples that can be uploaded to the local Scratch editor
* The block library remains visible at all times, even in split-screen mode
* Students can focus on mastering coding concepts without excessive distraction
* I think at least look at starting on scratch - first 4 lesson focus on skill or strand from concepts then look at how can apply those in delighet ex once become secure e.g events on clicked, if statements, possibly variables