

Lesson Plan

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Subject : JavaScript

Level: JS beginner

Topic : Knitting Calculator I

Lesson Focus and Goals :

Focus: Using the modulo operator with `Math.floor()`

Goal: create a calculator using only JavaScript to solve a real world problem.

Real world problem = the need for knitting calculators in general, narrowed down to one in particular.

Structure / Activity :

- 1.Explain goals (presentation)
- 2.Real world context and problem definition (presentation)
- 3.Pseudocode (presentation)
- 4.Commentated code (coding exercise, CodePen)
- 5.Description of aspects of JavaScript/coding/real world tasks not covered in the video, to be covered in the future
- 6.Context: knitting and coding

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Materials Needed :

1. Presentation slide deck
2. CodePen with starter code
3. Image repository
4. YouTube video (with description box text, timestamps, subtitles, links)

Risks:

The audience is not interested in the topic for the video (knitting).

Solution: coding sometimes involves less interesting subject. Knitting, is a very popular hobby, so chances are that the audience at least knows at least one person in their close circle who knits, so get them to visualise helping that person.

Reinforce links between coding and knitting

The underlying knitting task is too difficult to grasp or, conversely, too obvious and therefore wasted time ahead of actual coding.

Solution: Explain the task using clear visual representations of the problem. Well-suited graphics should give extra information to help the audience understand the task and reduce the need for lengthy audio explanations.