Topics: Planning, Details; More Counters and Variables

Approach: WTP, WTS, HIW, LMTO

Main Ideas: Look carefully, Think, Plan, Code, Test, Repeat

Mantra: What Repeats (loops)? What Changes (variables)?

1. Admin
   Keep puttering on your Scratch Project
   office hours set: T 6-9, W 12-1:30, R 1:30-3:00

2. Solving Problems Takes Time and Attention
   a. Problem → Algorithm → Code; which is more difficult?
   b. Let’s look at some problems we solved and see how we did it
      - Nested boxes for lab02
      - Call tree for hw1 (drawings, treesim)
      - HW2.a - using nested loops
   c. Notes on Work and Grading
      - Grading will include points for
        clarity(hubris), brevity(laziness), efficiency(impatience)

3. More Changin’ and Countin’
   a. A counting project
      - Click and count goes up by 1 each time
      - Click and number doubles each time
      - Figure out the sum of 1 + 4 + 8 + 16 + ... + 4096
   b. A project: Race between elephant and car
      A man counts down, lowers flag
      Jumbo and car accelerate across the screen
      First to reach finish line wins
      What do we need? What do we know?
      Let’s build little test projects
   c. First, review counters to count things
      - Cow counts clicks -
        after 10 clicks, shrinks, then a puff of smoke
      - Cow moos after each ten clicks
      - Jumbo counts down 10 to 1, then runs away
      - Jumbo counts down 10 to 1, then accelerates upward

4. Laws vs Radar Guns
   a. Read code, predict outcome
   b. Explain

5. Even More Variables
   a. Then, more practice using variables to change things
      - Moonbounce

6. The race project
   - Do we know enough now?