

Quiz 3

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Baseball

In baseball, the pitcher throws a ball, the batter tries to hit it, and the catcher gets the ball if the batter misses.

- Characters: Pitcher, Catcher, Bat, Ball.
- Variables: strikes, baseball

Table of values for the ball:

baseball	meaning
1	pitcher has ball
2	ball is thrown (pitched)
3	catcher has ball
4	ball was hit by bat (heading toward outfield)

In the questions below, you will write code for the Ball sprite. In each question, change the status of the baseball if appropriate.

1. The ball gets hit by the bat. Glide to the “Outfield” sprite and change a variable to represent what is happening.
2. Hit “p” for the ball to move as if pitched. It should show and move to x:100 y:200. When the pitcher does not have the ball, the ball should say “You need me to play!” Update variables as appropriate.
3. When a hit ball touches the pitcher, it disappears and one strike is recorded. Update variables as appropriate.

Stair stepping

1. Going up stairs is slow, choppy motion. Move up 5 steps each time the “up” key is hit. The stairs on the screen appear to be at 15 degrees.

2. Moving left is a smooth, quick motion. Move left 5 steps for exactly the time during which the “left” key is depressed.

Pencil Making

Making one pencil requires one wood and one graphite. The main character can carry a maximum of 5 wood and 100 graphite.

Sprites: main character, rock, tree, pencil.

- Tree: gives the main character one wood every 2 seconds when the main character is touching it.
- Rock: gives twenty graphite every time that you click on it at the same time that the main character is touching the rock.
- Pencil: hitting “p” uses up 1 wood and 1 graphite, and creates 1 pencil. The pencil disappears after 0.3 seconds but you remember how many pencils were made.
- Motion: no need to write code for motion.
- Costumes: omit.

Write the code for everything but the motion.