



Redesign a Stoplight - Lesson 4.3 Formative Assessment

- 1) In Stoplight, what is the goal of the game?
 - a) To build a traffic simulation using a motor and sensors.
 - b) To create a sound-based game where tones change depending on the light color.
 - c) To program a single LED to blink at different speeds.
 - d) To build and program 3 LEDs to light up in sequential order, similar to a stoplight.

- 2) Which pins should the yellow LED be connected to?
 - a) 5, 6
 - b) 10, 11
 - c) 23, 24
 - d) 30, 31

- 3) What is the first step in the engineering design process?
 - a) Start building immediately without a plan.
 - b) Identify the needs and constraints of what you're trying to accomplish.
 - c) Design the final product first.
 - d) Test different solutions before identifying the problem.

- 4) What kind of programming is used in Stoplight?
 - a) Block coding (which generates Python code - so either answer is acceptable)
 - b) JavaScript coding
 - c) Command-line scripting
 - d) HTML and CSS coding

- 5) Which block allows the circuit to loop continuously?
 - a) Start over block
 - b) Next block
 - c) Repeat forever block
 - d) Wait until block

- 6) What does the term Game Design mean?
 - a) Process of creating and shaping the rules, mechanics, and feel of a game.
 - b) The process of choosing colors and artwork for a game.
 - c) The act of playing games to understand their structure.
 - d) The process of testing games for bugs and errors.

- 7) Explain why, on a stoplight, each color stays on for different amounts of time.