**problem formulation:**

1. **Initial state:** a blank screen with no obstacles, and a pixelated Tyrannosaurus rex shown on the page.
2. **Successor function:** update the game state with each action taken, the Lonely T-Rex continuously moves from left to right across a black-and-white desert landscape, with the player attempting to avoid oncoming obstacles such as cacti and Pteranodons by jumping or ducking.
3. **Goal test:** the goal is to survive as long as possible by avoiding obstacles. The goal test would check whether the dinosaur has collided with an obstacle or has reached a certain score threshold, indicating that the player has won.
4. **Path cost:** the amount of time the player has survived, with a higher cost for states where the dinosaur has collided with an obstacle or failed to jump over one.