**Objective:**

Create a simple web-based puzzle game that illustrates the Theory of Constraints (TOC) concept of "Full-kit" by showing the importance of having all necessary components before starting a task.

**User Flow:**

1. **Welcome Screen:**
   * The game begins with a welcome screen featuring the game title and a brief introduction.
   * A short message explains the game's goal: to assemble a puzzle efficiently.
   * An optional link or button provides more information about the Full-kit concept.
   * The user clicks "Start" to proceed.
2. **Puzzle Selection** 
   * the game can auto-select a default puzzle for simplicity.
3. **Instructions Screen:**
   * A concise instruction page informs the user that puzzle pieces will appear in batches.
   * It highlights that starting assembly without all pieces might lead to inefficiencies.
   * The user is advised to decide whether to start immediately or wait for all pieces.
   * The user clicks "Continue" to begin the game.
4. **Gameplay Start:**
   * The puzzle workspace appears with an empty puzzle frame.
   * A timer starts counting down, indicating the total time allotted (e.g., 5 minutes).
   * The first batch of puzzle pieces (e.g., 30% of total pieces) is available for assembly.
5. **Piece Release Mechanism:**
   * Puzzle pieces are released in multiple batches at set intervals (e.g., every 30 seconds).
   * A progress bar or countdown shows when the next batch will arrive.
   * Each batch adds more pieces until all are available.
6. **User Interaction:**
   * Users can drag and drop available pieces into the puzzle frame at any time.
   * Pieces snap into place when correctly positioned.
   * If users place pieces early, they might need to adjust them when new pieces arrive.
   * Users can rearrange pieces as needed but with time implications.
7. **Challenges Demonstrating Full-kit:**
   * Early assembly without all pieces may lead to misplaced pieces or the need for rework.
   * Users experience delays caused by adjusting the puzzle with each new batch.
   * Waiting for all pieces before starting allows for smoother and quicker assembly.
8. **Visual and Audio Feedback:**
   * Sound effects or visual cues indicate the arrival of new batches.
   * Notifications remind the user of the remaining time and pieces.
9. **Completion:**
   * The game ends when the puzzle is fully assembled or the timer runs out.
   * A summary screen displays the user's performance metrics:
     + Total time taken to complete the puzzle.
     + Number of times pieces were moved or adjusted.
     + Efficiency rating based on their strategy.
10. **Feedback and Reflection:**
    * A message explains how the user's choices affected their efficiency.
    * It connects the gameplay experience to the Full-kit concept:
      + Starting without all pieces led to rework and delays.
      + Waiting for all pieces could have resulted in faster completion.
    * Encourages users to consider how this applies to real-world tasks.
11. **Replay Option:**
    * Users can choose to replay the game to try a different strategy.
    * This allows them to directly compare the outcomes of different approaches.
12. **Exit or Share:**
    * Option to exit the game or share their results on social media (optional).
    * Provides links or resources for learning more about TOC and Full-kit.

**Design Considerations:**

* **Simplicity:**
  + The interface is clean and intuitive, focusing on user engagement.
  + Controls are straightforward: click, drag, and drop.
* **Timing:**
  + Batch intervals and total game time are balanced to create meaningful choices without causing frustration.
  + The timing mechanism is transparent, so users are aware of when new pieces will arrive.
* **Accessibility:**
  + The game is web-based and runs smoothly on common browsers.
  + It's compatible with both desktop and mobile devices.
* **Engagement:**
  + Visuals are appealing but not distracting.
  + Sound effects and animations enhance the experience without overwhelming the user.
* **Educational Emphasis:**
  + The game subtly reinforces the Full-kit principle without overtly lecturing.
  + Reflection prompts encourage users to think critically about their in-game decisions.