

# PUZZLES

# Topics

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  - **Kim's Eight Steps of Digital Puzzle Design**

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  - **Seven Goals of Effective Puzzle Design**

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  - Seven Goals of Effective Puzzle Design
- **Puzzle Examples in Action Games**

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- **Both single-player games and puzzles rely on the game system to provide challenge to the player**
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- **Learning to design puzzles will aid your design of any game with a single-player mode**

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  - **The basis of most of the content in this chapter**

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    - Best to create a puzzle that appears to be simple though it is actually quite difficult

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  - If the correctness of the answer isn't easily evident, the puzzle can seem muddled and unsatisfying.

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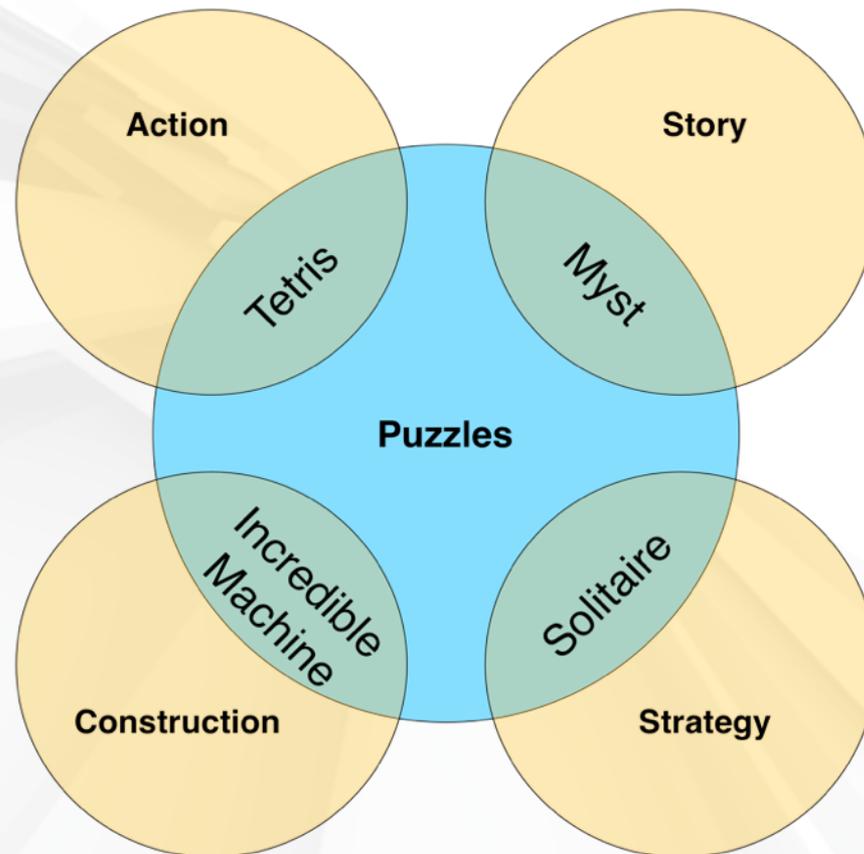
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  - Combine construction, engineering, and spatial reasoning with puzzles

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  - Don't combine puzzles with anything other genre

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- Puzzle games of this type should be relatively simple and repetitive rather than relying on a specific insight (as is common in puzzles played for challenge).

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    - The player starts in regular life and encounters a puzzle that sends her into a realm of struggle
    - She fights against the puzzle for a while, gains an epiphany of insight, and then can easily defeat the puzzle that had stymied her just moments earlier

# Modes of Thought Required by Puzzles



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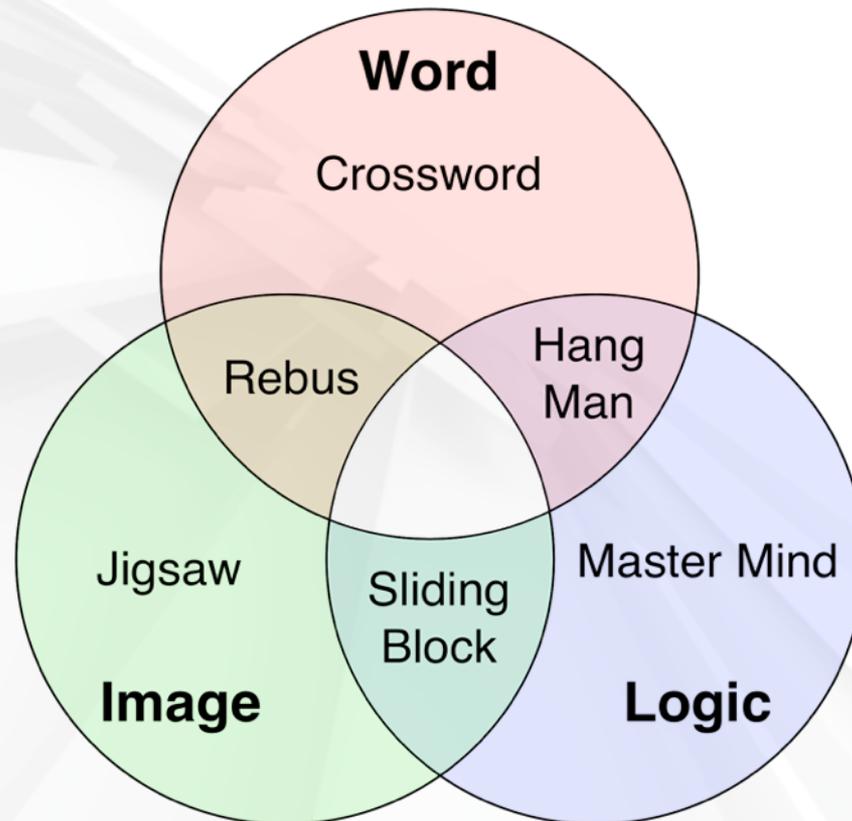
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- **Image** – Example: *Jigsaw, Hidden-object games*
  - Exercise the parts of the brain connected to visual/spatial processing and pattern recognition

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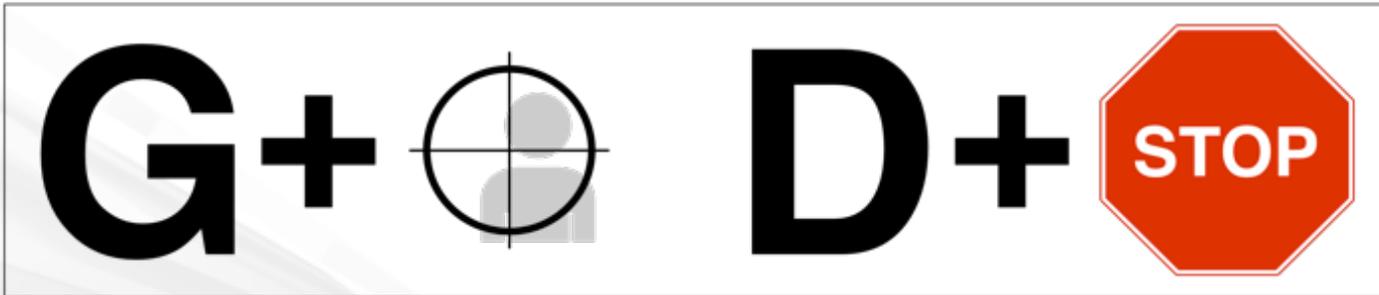
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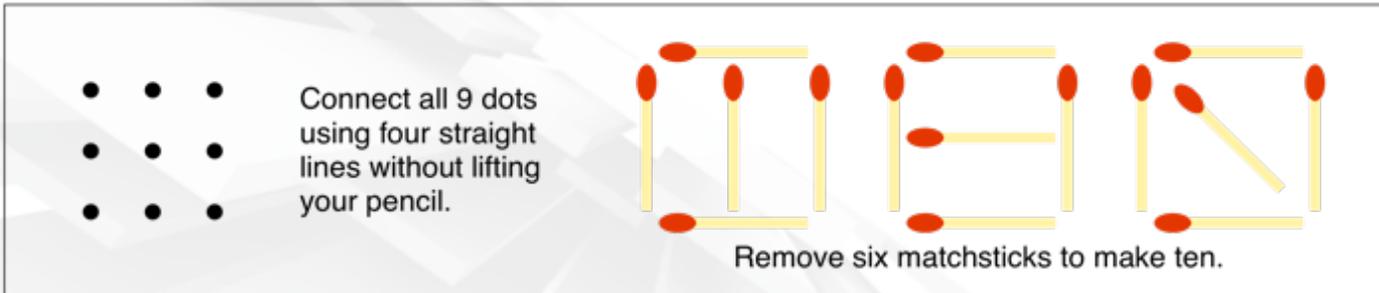
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  - Require player to use logic and vocabulary

# Examples of Mixed-Mode Puzzles

## Word / Image Rebus:



## Image / Logic Puzzles:



## Logic / Word Puzzles:

What walks on four legs in the morning, two legs in the day, and three legs at night?

What gets wetter and wetter the more it dries?

# Kim's Eight Steps of Digital Puzzle Design



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  - Pajitnov felt there were too many different five-block pentomino shapes
  - He reduced it to the seven four-block tetrominoes found in Tetris

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  - Playtesting and iteration are key in all forms of design!

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  - The puzzle should actively react to player input in a way that feels physical, active, and energetic.

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- **Appropriate difficulty is critical to making the experience fun**

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- *Tetris* combines apparent simplicity with the chance for deep strategy and steadily increasing intensity
- *World of Goo* and *Angry Birds* have juicy, reactive gameplay

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  - Most stages of boss fights throughout the modern Legend of Zelda series can be defeated in three attacks, as long as the player understands the solution to the puzzle of that boss.

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