

# World Views & Level Design

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# Game world view and levels

- The world view is what the player sees at any given level. It's called the camera model.
- Game levels are like nodes. They are *often* a series of world views linked together through gameplay.
- But level design is really about evolving challenges and actions in the game – and challenges typically escalate the longer the player plays the game (and builds up skills).
- There can be multiple levels of challenge in a single world view. New challenges can be introduced through new NPC's, for example, or new actions the player can take.
- Level design is schematic, and is often shown like a map. It can also be represented in a flow chart of branching decisions.

# Levels

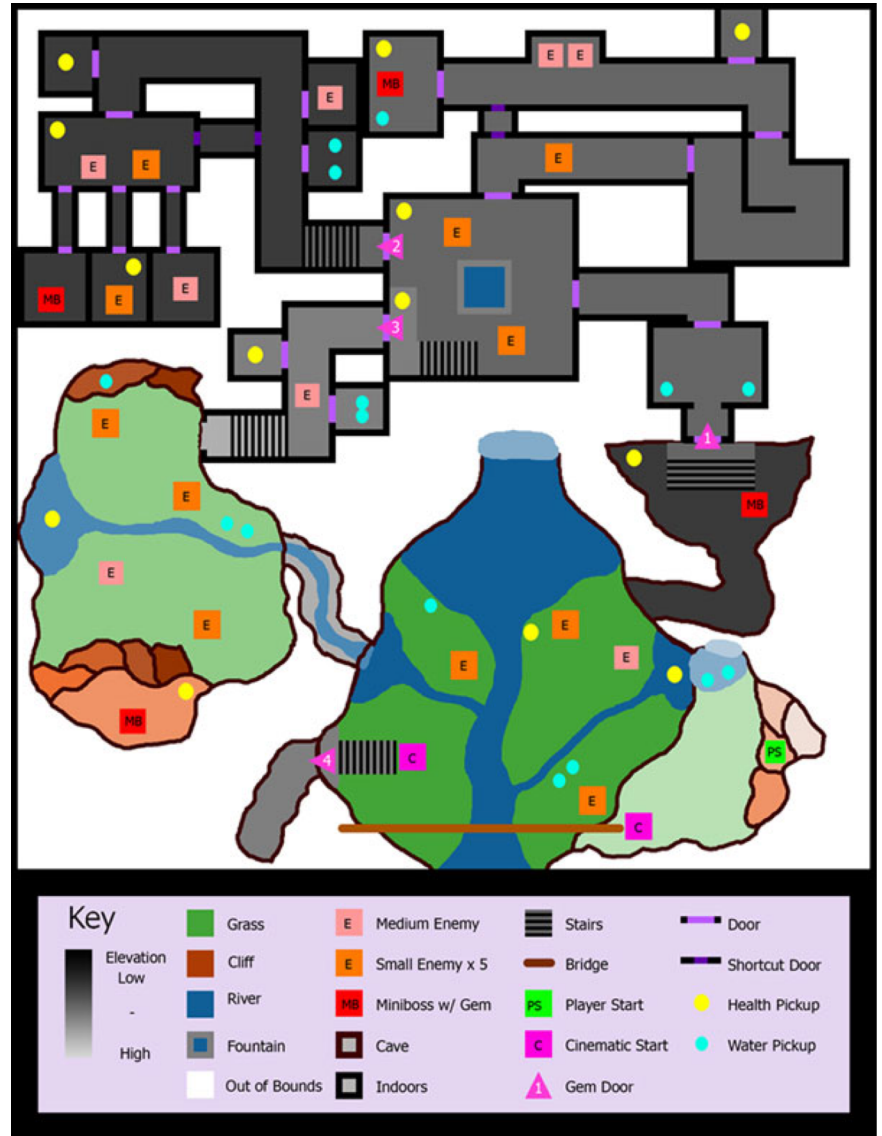
- Levels add variety to gameplay. For example, in an Action/Adventure RPG, the challenges on some levels would be combat, and on other levels it might be solving a puzzle, or finding a path through a maze.
- Levels also add variety to the aesthetics of the game, either by introducing new world views, or by introducing new challenges in the form of new NPC's.

# Level Designers Define ...

- Space where game takes place
- Initial level conditions
- Set of challenges for the level
- Termination conditions of the level
- How gameplay relates to storyline
- Aesthetics and mood

# Level Layouts

- Open
- Linear
- Parallel
- Ring
- Network
- Hub



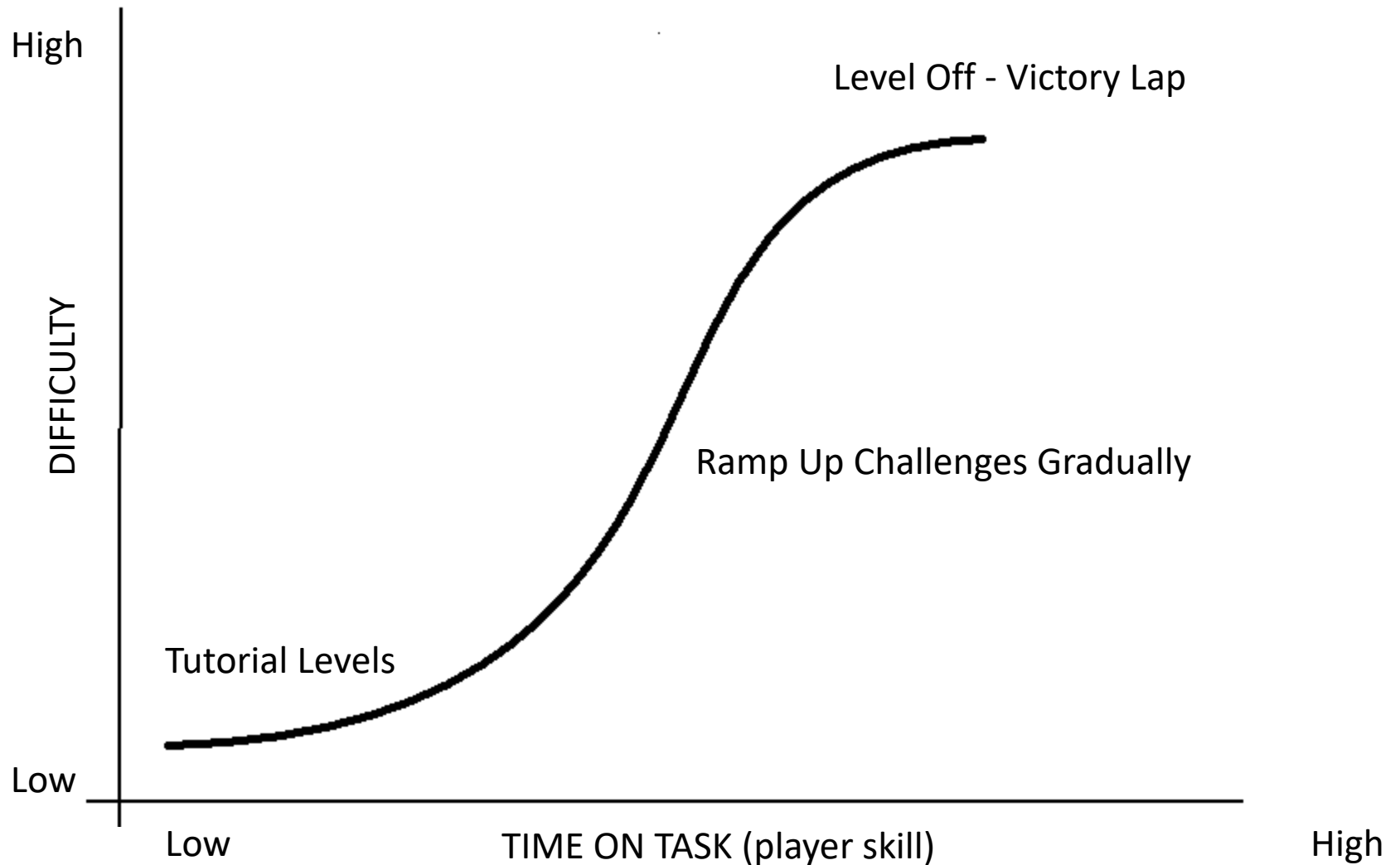
# Level Design Principles

- Make early game levels serve as tutorials
- When completing a challenge consumes all the players' resources, provide more
- Avoid conceptual non sequiturs (things that don't follow)
- Clearly inform player of short-term goals
- Be clear about risks, rewards, & consequences of decisions

# Level Design Principles

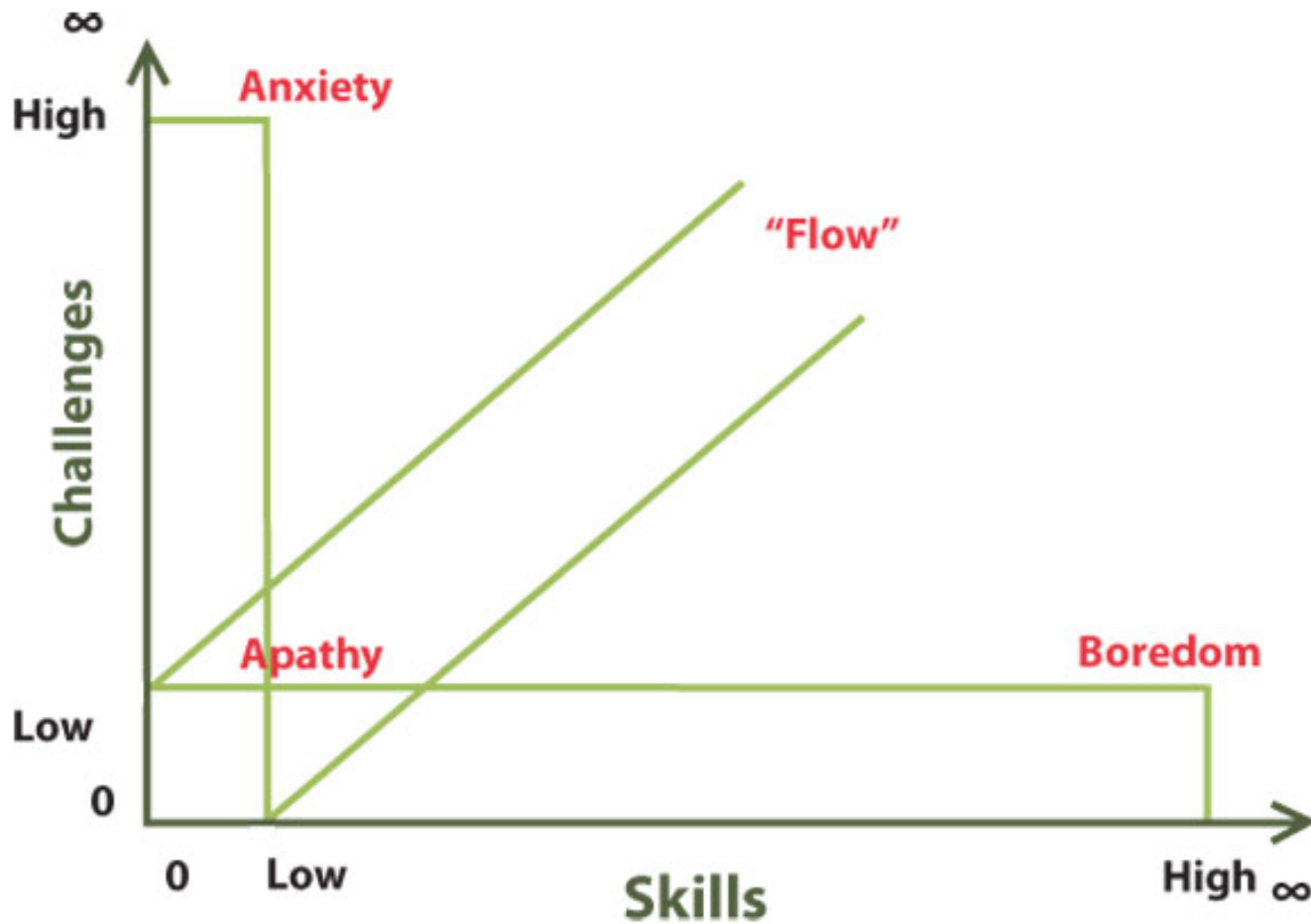
- Reward player for skill, imagination, intelligence, dedication
- Reward in big ways, punish in small ways
- Foreground takes precedence over background
- Artificial opponents must put up a good fight, then lose
- Implement multiple difficulty settings

# Level Difficulty S-Curve





# Player Flow Experience



# Dimensions of the game world

- Game worlds have a physical dimension
  - Can be 2D, played from a bird's-eye view, or from a profile view (as in a side-scrolling game)
  - Can be 2.5D, modeled in 3D but rendered as 2D images
  - Can be 3D, traversed in real time
- Game worlds have a temporal dimension
  - Turn based
  - Timer based
  - Anomalous (1 minute = 1 day)

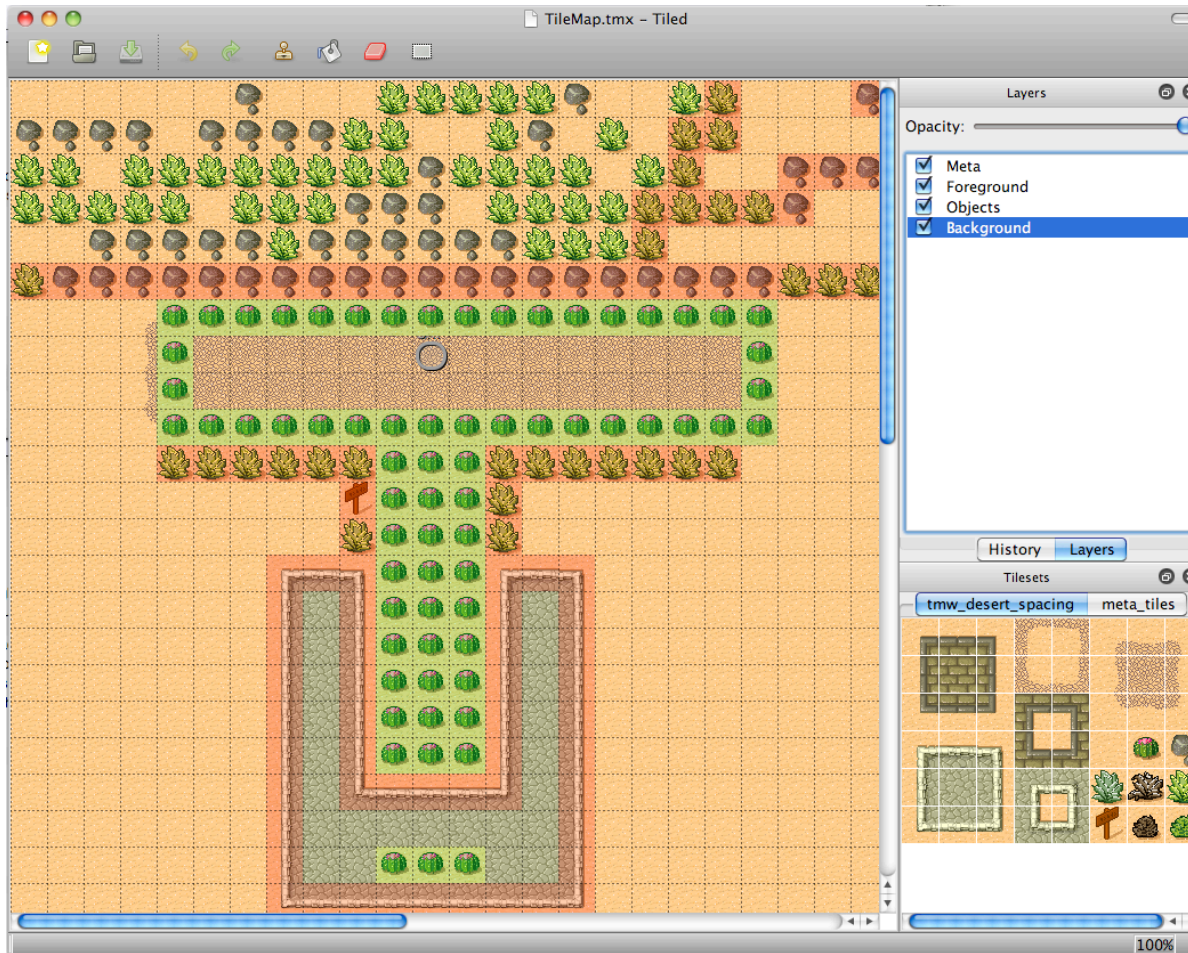
# Attributes of the game world

- Physical
  - Boundaries
  - Level of detail
  - Physics
- Aesthetic
  - Realistic rendering or cartoon style (cell shaded)?
  - Deliberate distortions of scale
- Cultural
  - What historical or cultural touchstones are implicit in the game world?
  - Good research is needed for the game world to be convincing

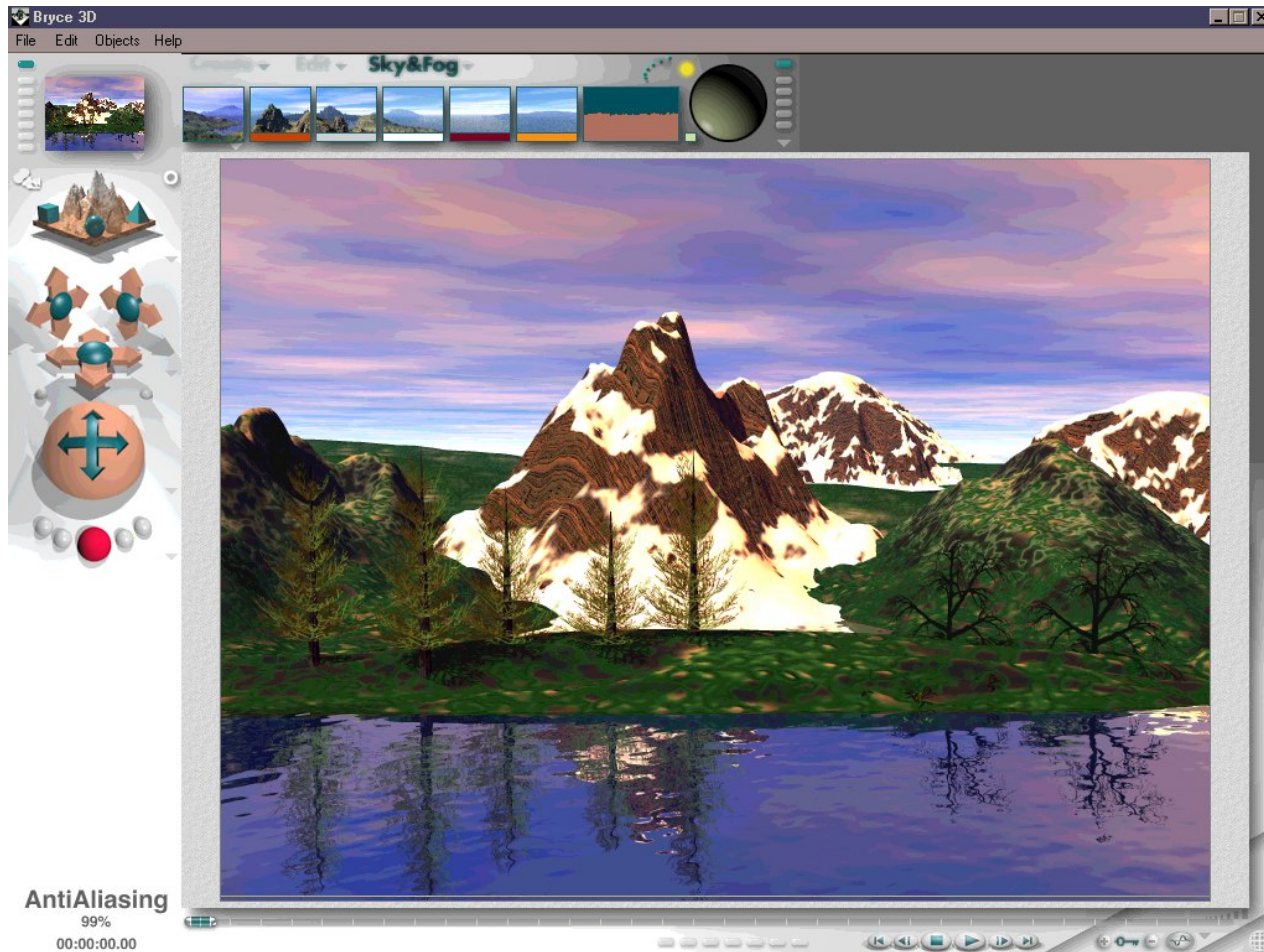
# World generation software

- Basic rule of games: “Show, don’t tell”
- Graphics software, such as Photoshop or GIMP, Adobe Illustrator or Inkscape
- Various freeware tile map generators, such as Tiled
- 3D modeling software, such as SketchUp, Maya, Blender, or Carrara
- 3D terrain generation software such as Bryce or Terragen

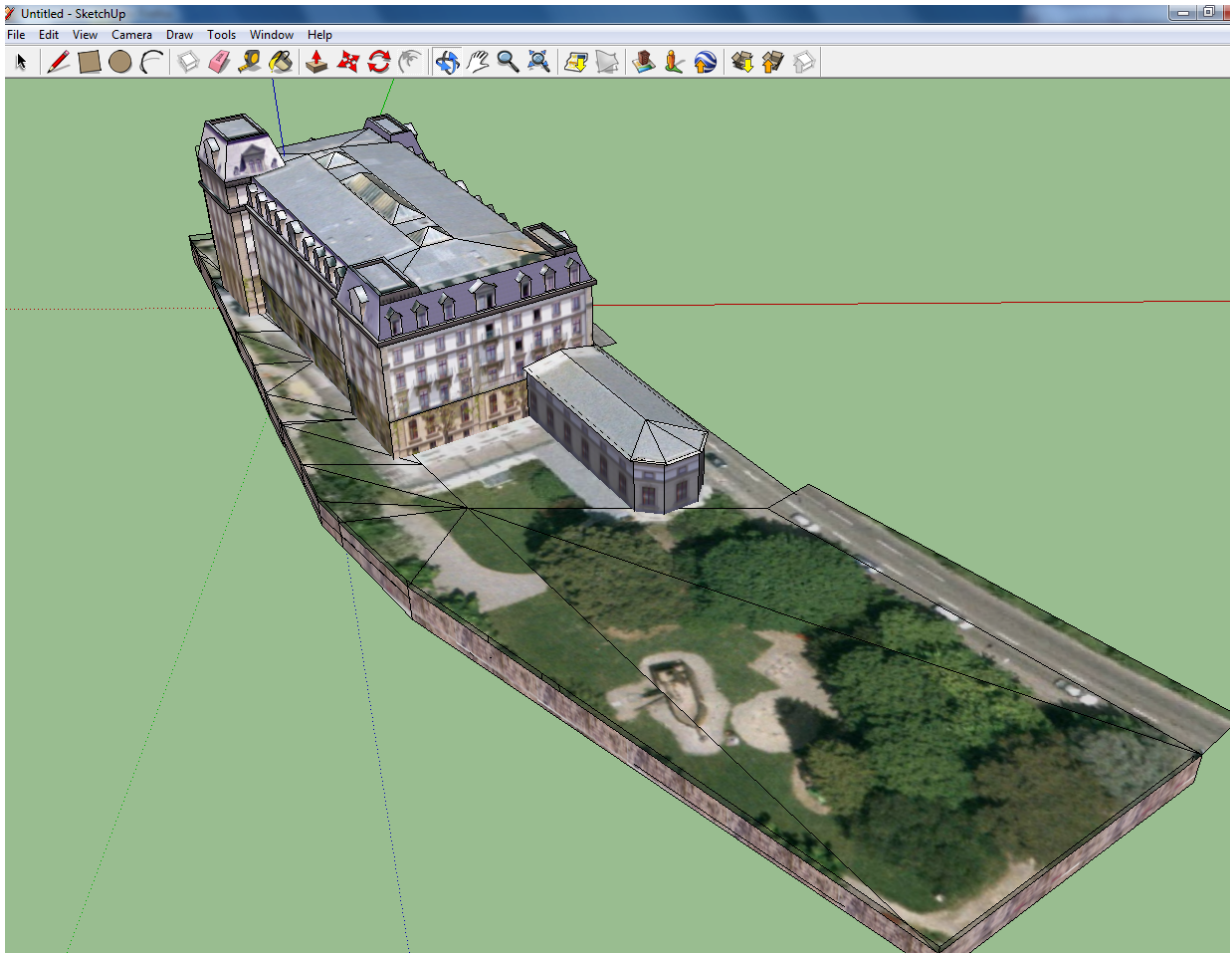
# Tile Map Generation in Tiled



# Terrain Generation in Bryce



# Model and Terrain in SketchUp



# 3D Warehouse in Sketchup

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## KNIGHT

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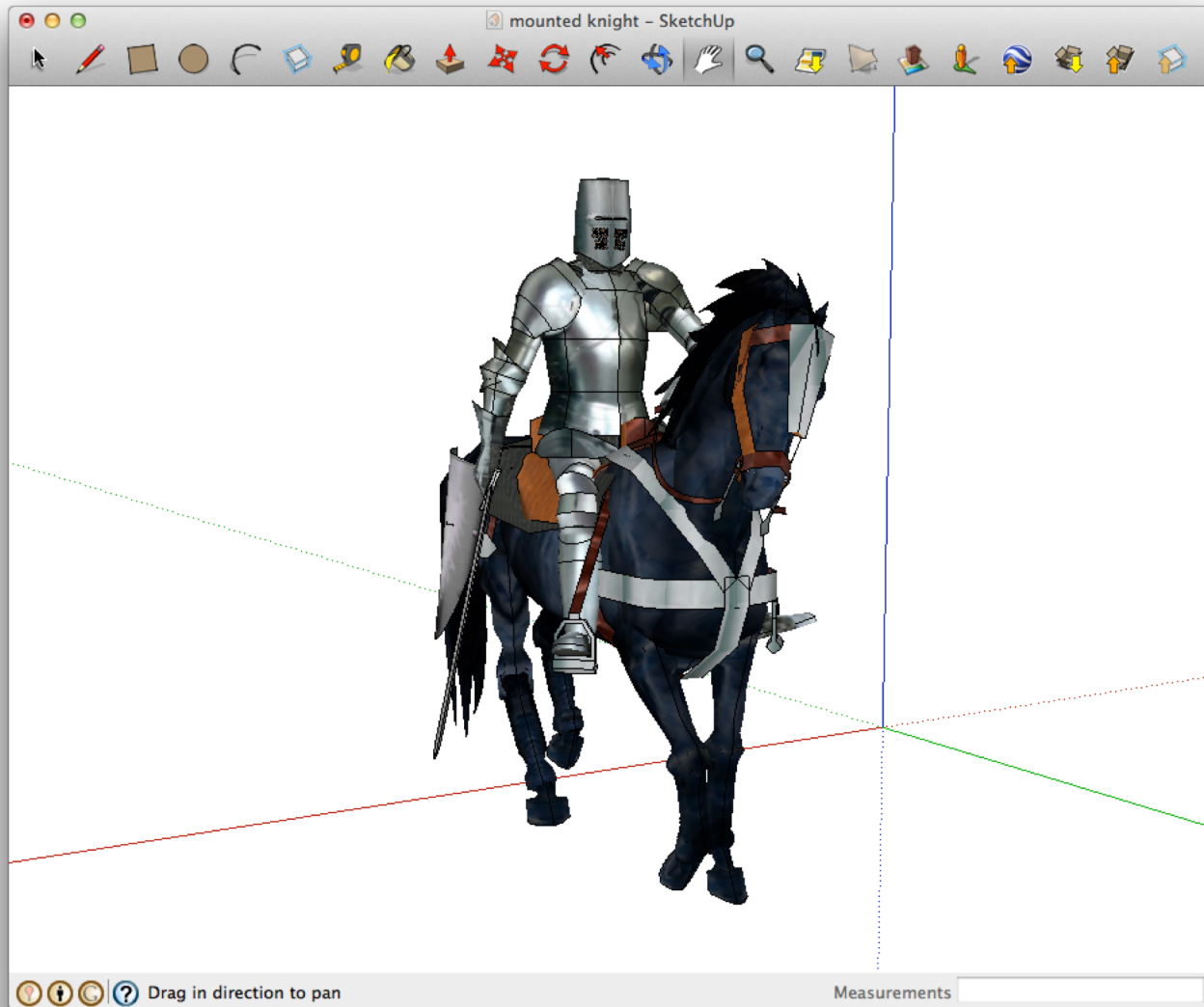
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# Model in SketchUp



# World design with SketchUp and Photoshop



# Level Design with Illustrator



# Where to Begin: Imaginary Worlds



# Quests



# Strategy Game World

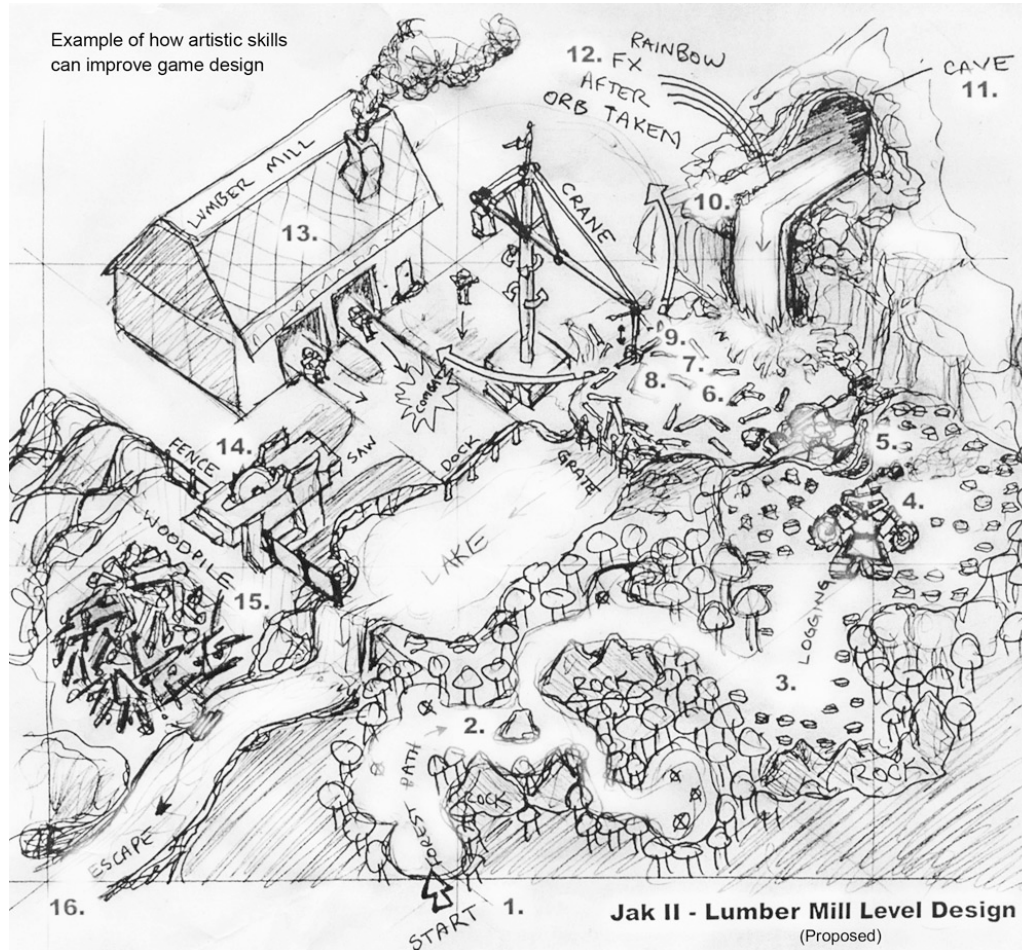


# Construction Game World



# Level Design

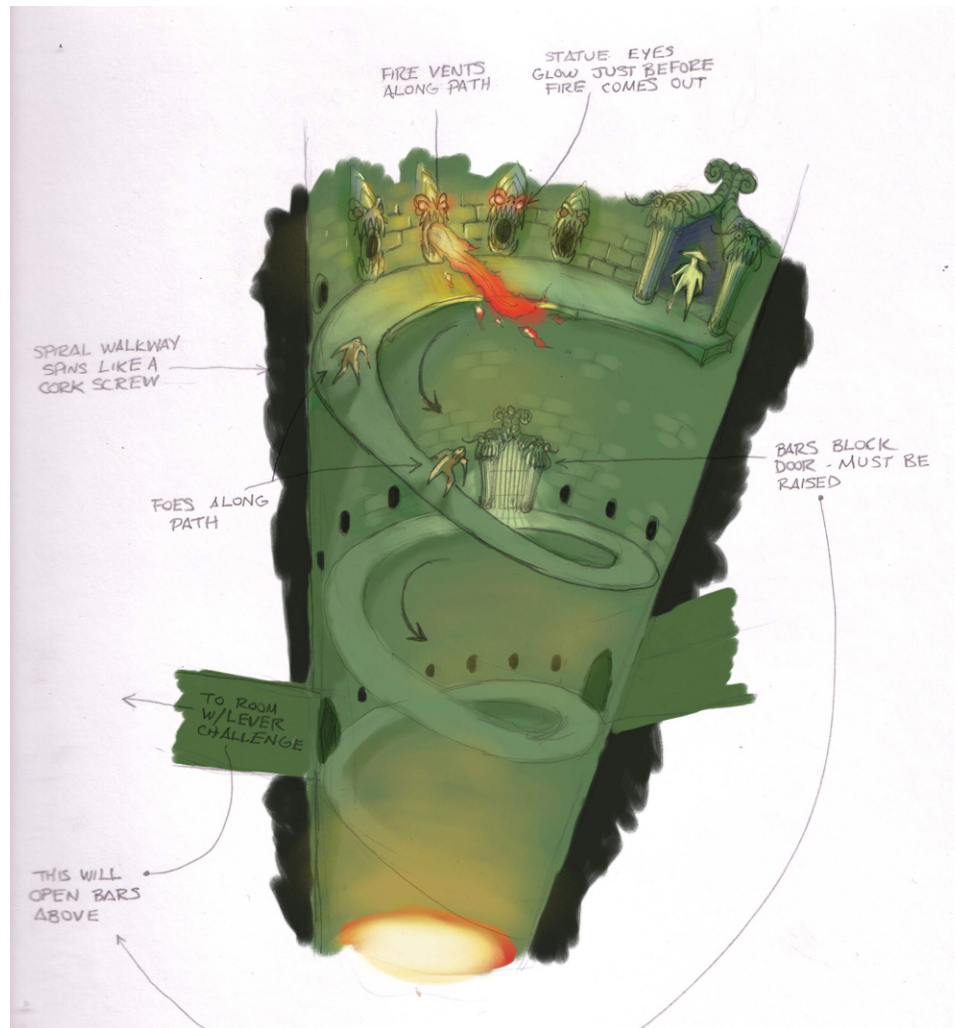
Example of how artistic skills can improve game design



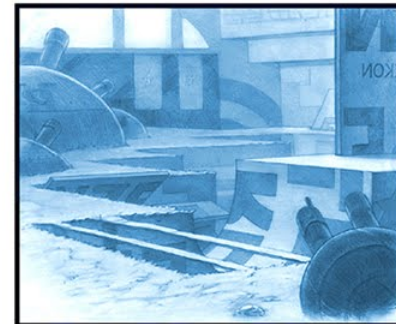
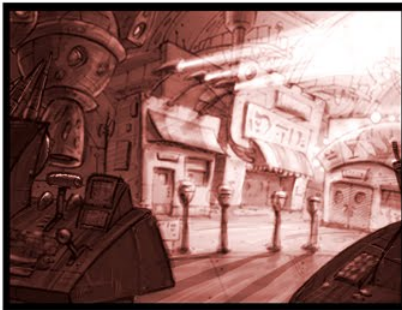
Jak II - Lumber Mill Level Design  
(Proposed)



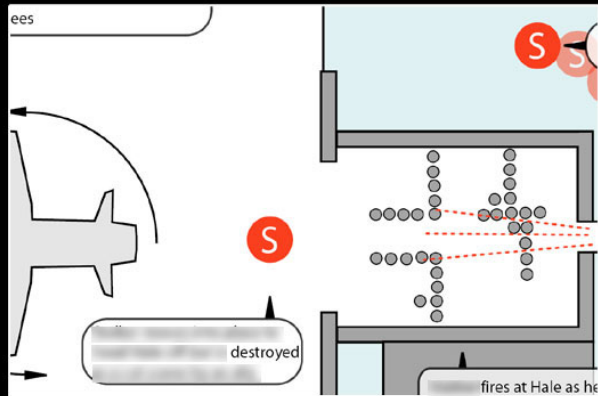
# Level Design



# Game World Sketches



# Level Design & World Design

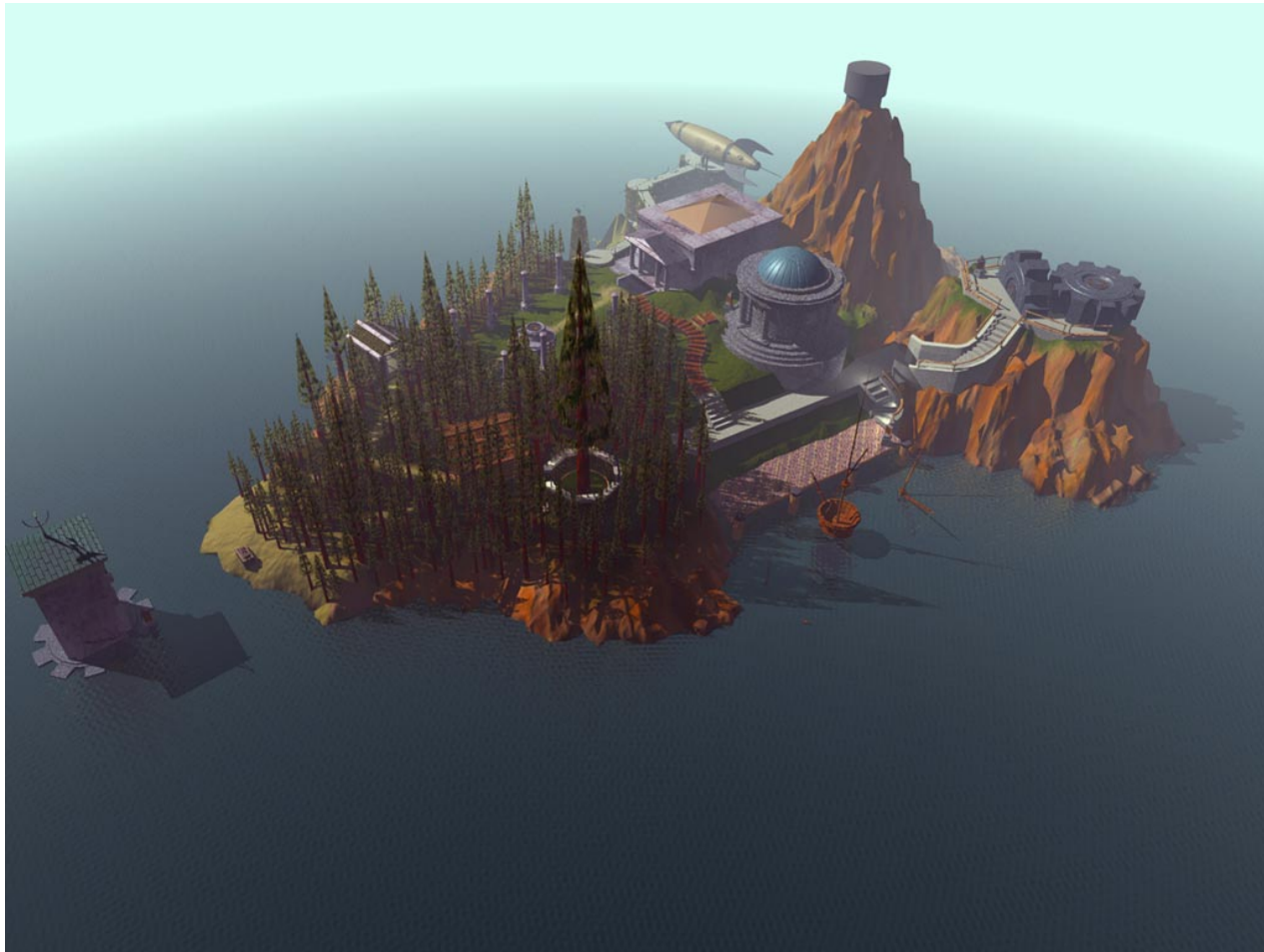


In situations like this aircraft hanger, the Designers have left the room rather vague in terms of call-outs in the map, and work closely with the Environment artists to bring the area to life.

What was once a small box leading to a troop-transport aircraft is now a moody hanger.



# Famous Game Worlds: Myst



# Famous Game Worlds: Crysis



# Famous Game Worlds: Farmville



# Famous Game Worlds: Second Life



# Famous Game Worlds: Sim City

