Environment design
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A broader look

“Game world design is the practice of designing and building a playable location where your story will be set.”

1. World design
2. Level design
Overall design
Now in VR
Movement in VR

A lot of different VR sets

Different technologies

6.5ft x 5ft
User Interface Design

- Physical design
- Interactive objects
- Gestures
- Scale
- Texts and images slightly curved

Dangers of Intuition
Interactions in VR

- The more physical the response of an object is, the wider the range of interactions may be correctly responded to.
- The more specific the interaction, the more specific the affordance should appear.
- Look for real-world affordances that you can reflect in your own projects.
Objects

EVERYTHING SHOULD BE REACTIVE!
Text and Images

Things to consider:

- Resolution limitations
- Lens distortion
Interaction Design

- No movement should take place unless it’s user-driven.
- Keep in mind that human hands naturally move in arcs, rather than straight lines.
- Limit the number of gestures that users are required to learn.
- All interactions should have a distinct initiation and completion state.
- Ensure that users can interact with objects occluded by their hands.
Some more tips

- Include safe poses to avoid “the Midas touch” where everything is interactive.
- Encourage users to keep their fingers splayed out.
- Keep interactive elements in the “Goldilocks zone” between desk height and eye level.
- Use visual feedback to encourage users to keep their hands within the tracking zone.
- Avoid interactions involving fingers that would be invisible to the controller.
Space and Perspective

- Adjust the scale of the hands to match your game environment.
- Use 3D cinematic tricks to create and reinforce a sense of depth.
- Objects rendered closer than 75 cm (within reach) may cause discomfort to some users due to the disparity between monocular lens focus and binocular aim.
- Use the appropriate frame of reference for virtual objects and UI elements.
- Use parallax, lighting, texture, and other cues to communicate depth and space.
Lets try some games and see what design to they have?

https://www.techtarget.com/whatis/definition/room-scale-VR-room-scale-virtual-reality

https://medium.com/@LeapMotion/vr-design-best-practices-bb889c2dc70