TIPS AND RESOURCES FOR CONSIDERING THE NEEDS OF DISABLED GAMERS IN YOUR DESIGN

Designing for accessibility means breaking down barriers that prevent some people from playing and enjoying games. Use this toolkit to learn more about different types of disabilities and ways to design more accessible and inclusive games.

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PRO TIPS FOR ACCESSIBLE GAME DESIGN

Begin with Accessibility.
Most accessibility features are easier to implement when you keep them in mind from the very *beginning* of your design.

Focus on the Gamer, Not a List of Requirements.
Every gamer is unique. If you want to design for someone with a particular disability, reach out to people and talk to them about their gaming experiences, what they appreciate about accessible game design, and what they want to see more thought put into. Ask them if they'd be interested in playtesting and offering suggestions.

Get the Entire Team's Buy-in.
Getting everyone on the same page about accessible design helps make sure that accessibility is built into your game design process across the entire experience.

Keep Accessibility in Mind While Playtesting.
Assign team members different ways to play through the game. One person might play through with the sound off, someone could try to play using mouse-only, another keyboard-only, another with a single button or switch adaptive controller. Maybe one person tries to play your game wearing thick winter gloves. Get creative about how your playtesting can help recreate the player experience of people with unique needs and abilities.

TYPES OF DISABILITIES AND CONSIDERATIONS

Visual Disability - May include low vision, blindness, and visual sensitivity disorders (ex: epilepsy and motion sickness).

- Can the player navigate the game's menu, start, and successfully play the game without looking at the screen?
- Are the colors of all menuing and gameplay elements color-blind friendly?
- Are fonts and any other crucial visual elements large, high contrast, and easy to read?
- Is voice-over available? Is the game compatible with a screen reader?
- Does the game avoid flashing lights? Can screen shake and motion blurring be turned off?
- Reference this GameMakers Toolkit [video](#) for guidelines and best practices for designing for this disability

Auditory Disability - May include impaired hearing, deafness, and auditory processing disorders.

- Can the player navigate the game's menu, start, and successfully play the game without sound?
- Are subtitles available, easy to read, and labeled by speaker so you know who is talking?
- Are there visual cues or controller vibrations for sound effects, including proximity sound effects like the footsteps of an approaching enemy?
- Can the player adjust the volume settings for music, sound effects, and voice?
- Reference this GameMakers Toolkit [video](#) for guidelines and best practices for designing for this disability

Motor Disability - May include varying degrees of paralysis, limited strength, limited muscle control, reduced mobility, reduced dexterity, limited range of motion, and limited reaction times.

- Can the controls be remapped?
- Does the game limit the number of buttons you need to press at the same time? Can you play with a single button/switch?
- Does the game avoid instances of pressing + holding, fast tapping, or double-tapping buttons?
- Can the game use alternate input devices (ex: an adaptive controller) and adjust its sensitivity settings?
- Can the game be played with eye-tracking software?
- Is there a setting that allows the player to remove timers?
- Reference this GameMakers Toolkit [video](#) for guidelines and best practices for designing for this disability

Cognitive Disability - May include learning disabilities, slower cognitive processing times, impaired memory, issues of overstimulation, and limited or impaired literacy.

- Can the player adjust their difficulty level?
- Is there a setting that allows the player to remove timers?
- Can the player choose to slow down gameplay?
- Are in-game objectives and instructions available in a simplified form where they can be re-read throughout gameplay?
- Can tutorials be re-played throughout the game experience?
- Can all in-game text be read at the player's pace, not auto-advancing?
- Reference this GameMakers Toolkit [video](#) for guidelines and best practices for designing for this disability

BASIC WAYS TO MAKE YOUR GAME MORE ACCESSIBLE

Below is a list of common accessibility features that can be included in almost every type of game (regardless of genre, game mechanics, length of gameplay, etc.).

- **Subtitles** – Subtitles offer a text alternative to speech and should be included for all dialogue; use an easy-to-read font, make the text large enough and in high contrast to background objects.

- **Remappable Controls** – Give players the freedom to assign the game's controls to buttons and/or inputs they choose (ex: remapping buttons or keys, adjusting sensitivity, Y/X axis inversion, and/or allowing for more than one input device).

- **Colorblind-friendly** – Including red-green and blue-yellow for colorblind people. Avoid conveying info via color alone; instead, include icons, patterns, and shapes.

- **High Contrast** – Helps players distinguish text, objects, and other visuals in a game (Check out the [Color Oracle](#) tool).

- **Include Non-Visual Cues** – Such as sound and haptic feedback to help direct players and navigate gameplay.

- **Tutorials/Training Mode** – Helps players understand gameplay, navigate the user interface, and more.

- **Provide a Range of Difficulty** – Let players choose a difficulty setting to match their abilities. Consider allowing players to turn off timers.

- **Zoom** – The ability to increase the size of all objects on the screen.

RESOURCES & TOOLS FROM ACCESSIBILITY EXPERTS

[THE ACCESSIBLE GAMES WEBSITE](#) – Powered by [AbleGamers,](#) a charity dedicated to improving accessibility in video games and supporting gamers with disabilities. This website offers tools and example designs to teach accessibility design principles to game designers. Be sure to check out these pages:

> – [Accessible Player Experiences (APX)](#) helps game makers understand the needs of players and suggests ways to create content that is supportive and accessible

> – Accessibility designs to inspire YOUR games: [Clear Text](#), [Same Controls But Different](#), [Distinguish This from That](#)

CAN I PLAY THAT? – A website by disabled gamers, for disabled gamers offering accessibility game reviews, commentary, and news. The site offers helpful Accessibility Reference Guides, which highlight design features that accommodate players with different types of disabilities.

FAMILY VIDEO GAME DATABASE – Sponsored by The Playability Initiative, this database offers lists of accessible games broken down by category. Each game in the database has an accessibility section which details the accessible features within that game. Students might use this resource to see how accessibility features have been included in games they already play and gain inspiration for how to approach similar accessibility features in their own games.

GAME ACCESS – Created by Special Effect, a charity that helps players with physical disabilities play and enjoy video games. This website compiles video game accessibility resources and provides information on games, equipment, and software for physically disabled players. Accessibility designs to inspire YOUR games: Intro to Voice Control, How to Set-Up Copilot, Jabberwocky, (a free utility for Android enabling gameplay via head movements and eye-tracking).

GAME ACCESSIBILITY GUIDELINES – A collaboration between many game studios and educators, This website that offers guidelines to creating accessible games, specifically broken down into beginner, intermediate, and advanced guidelines.

GAME DISABILITY MAPPING GUIDE FOR GAMERS (PDF) – Created by Bridge Multimedia. A downloadable PDF for the types of barriers that may exist in video games for individuals with the specific disabilities identified in the Individuals with Disabilities Education Act (IDEA).

MICROSOFT GAMING ACCESSIBILITY VIDEOS – A series of short YouTube videos that give specific accessibility how-tos, exploring just a single topic per video. Topics include goals for gamers, visual contrast in video games, text size, gamer choice, audio customization, enabling deaf gamers with subtitles and captions, enabling colorblind gamers, and narrated menus on the Xbox console.

INCLUSIVE DESIGN TOOLKIT – A website that shares Microsoft's Inclusive Design perspective which focuses on creating products and experiences that can be enjoyed by people with different abilities and perspectives. This site includes many different resources including toolkits, booklets, and videos to help people think about inclusive design in new and creative ways.