

Interim Viva - Pixels and Passion

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2218702



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2. Research
3. Pre-Production
4. Pixel Art
5. Unreal Engine
6. Problems and Solutions
7. References and Bibliography



Introduction



Research

- Market Research
- Trends
- History
- Questionnaires



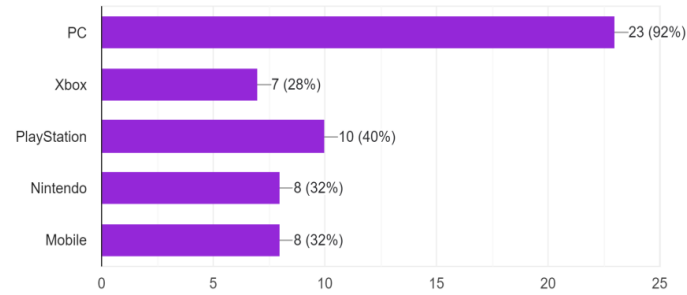
Planning

[illegible]

Questionnaire

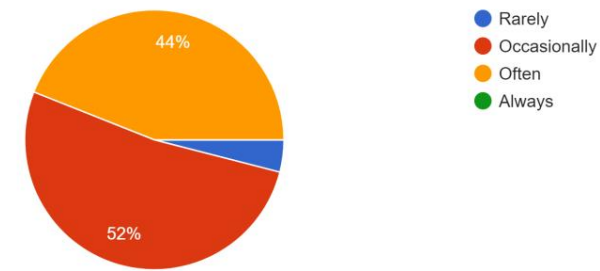
What platform(s) do you primarily use for gaming?

25 responses



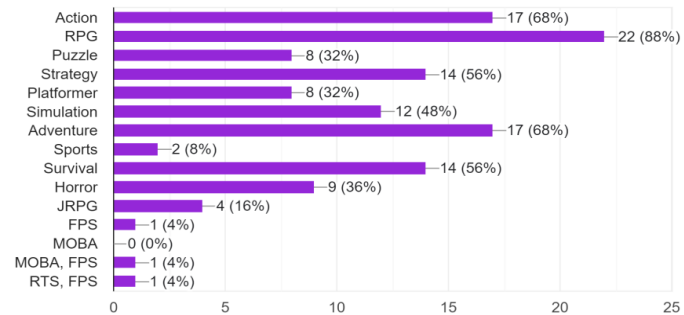
How often do you choose indie games over AAA titles?

25 responses



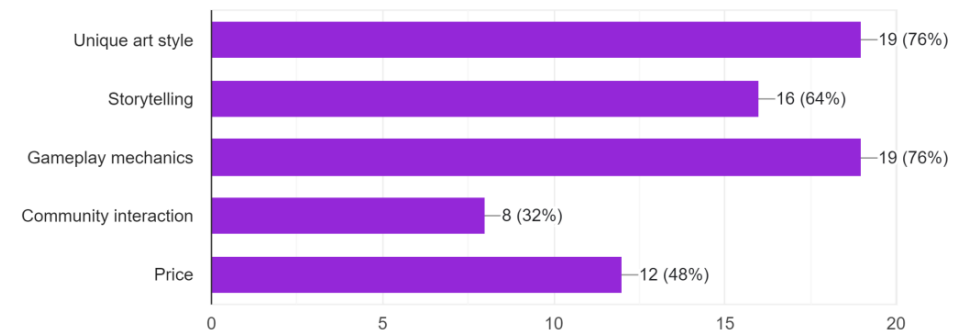
What genres of game do you usually play?

25 responses



What do you enjoy most about indie games?

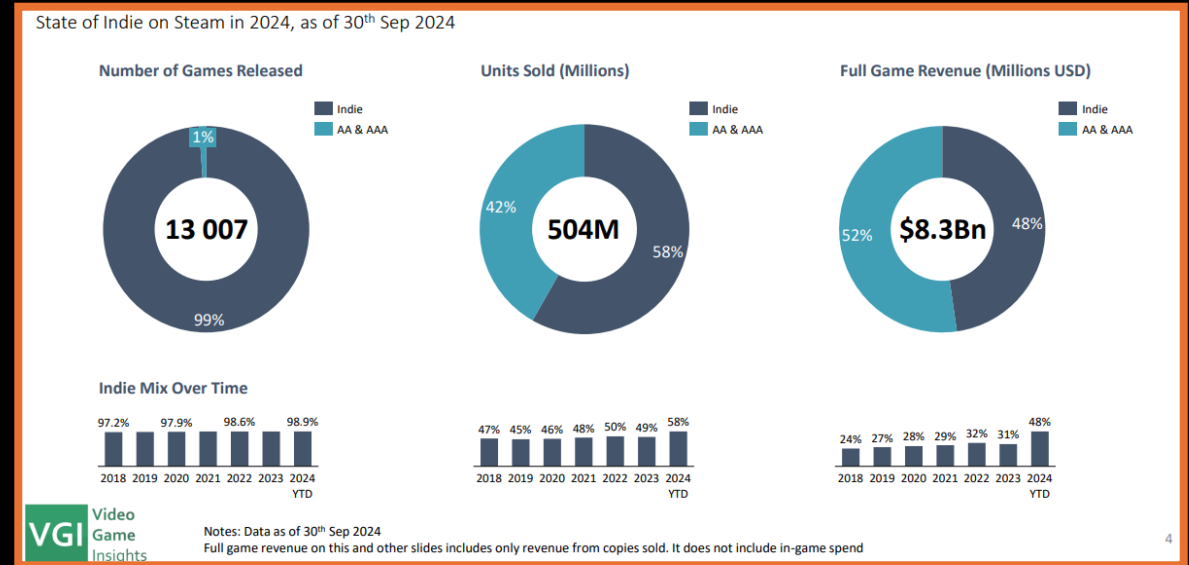
25 responses



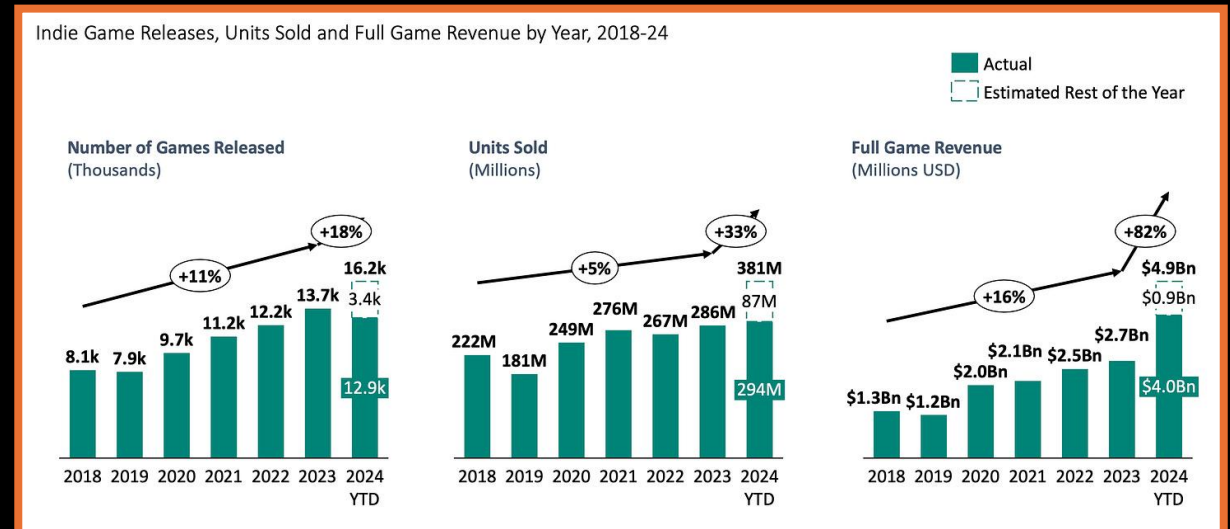
Research

- Indie-developed games made up 98.9% of games released in 2024
- 58% of units sold were indie games in 2024
- Strong competition with AA & AAA titles with 48% full-game revenue
- The average annual growth rate of the indie market by the number of games was 11% up to 2024. In 2024, the number of games is expected to be 18% higher than the previous year

[Figure 1: Dimitriy Byshonkov “Weekly gaming report”] [1]



[Figure 2: Dimitriy Byshonkov “Weekly gaming report”] [1]

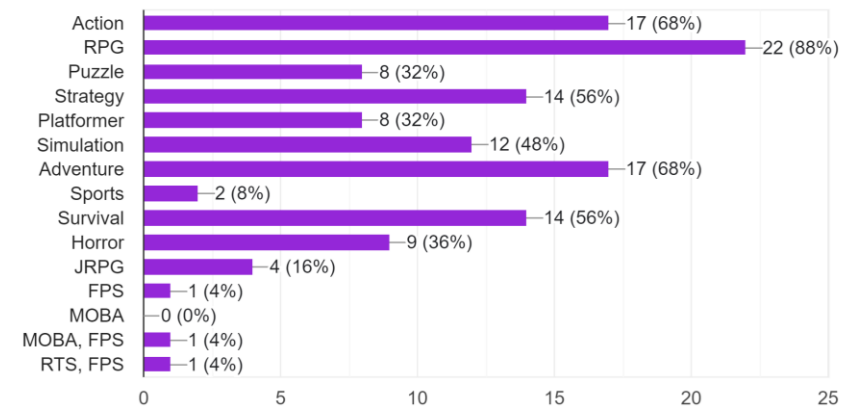


Genre

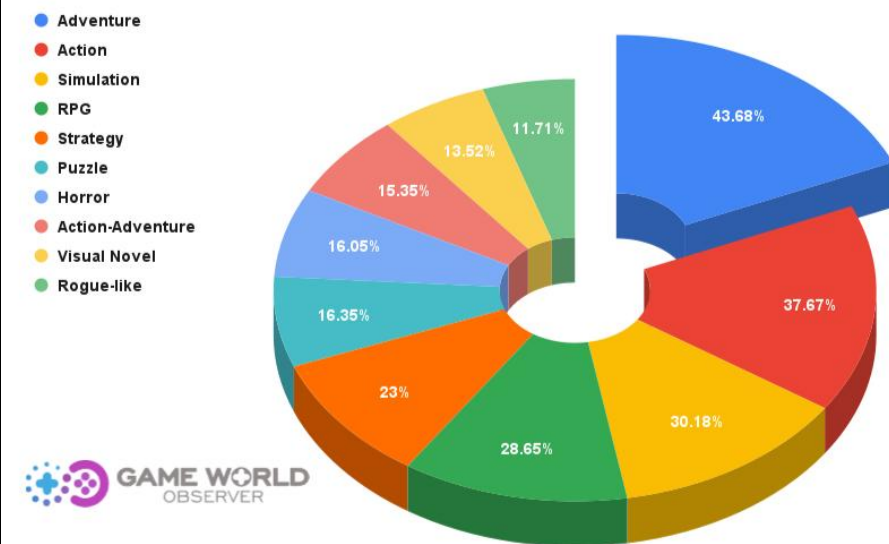
- Action
- Adventure
- RPG

What genres of game do you usually play?

25 responses



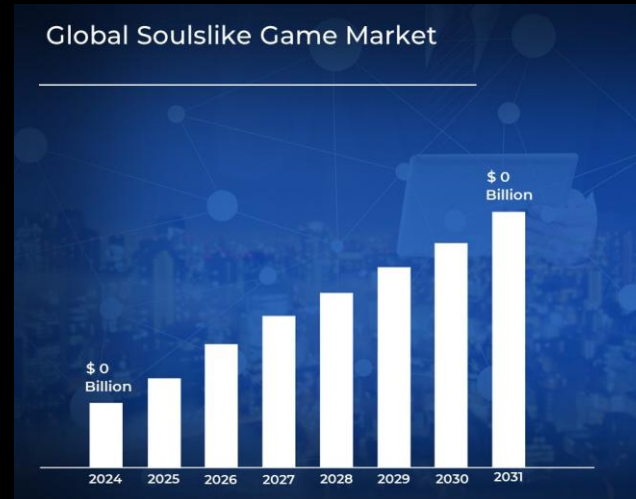
[Figure 3: Questionnaire – Indie & Pixel Art Games: A player's perspective]



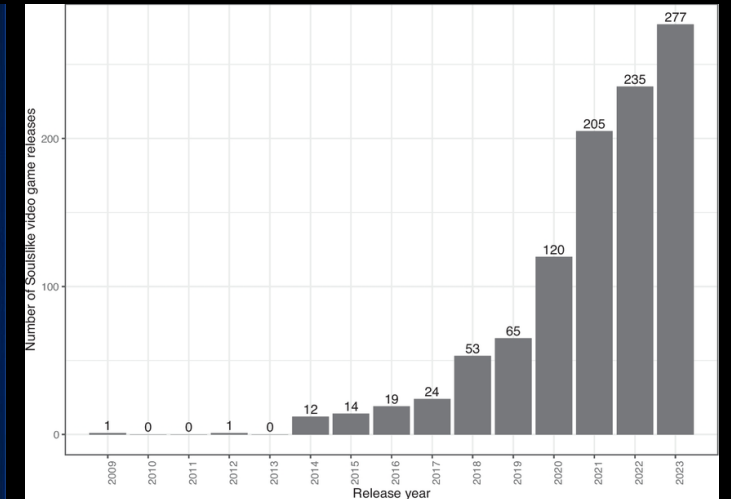
[Figure 4: Gameworld Observer Statistics “Top 10 Steam tags of 2024 (and the percentage of games they are used in)”] [6]

Game Style Trends

- Demand for challenging gameplay
- Evolving game design trends
- Notable success
- Adoption of new tech
- Cross-genre appeal



[Figure 5: Global Soulslike Game Market 2024 – 2031 (Predicted)] [9]



[Figure 6: The Soulsification of video games - Scientific Figure on ResearchGate [11]



[12]



[13]



[14]

Upcoming Releases



Phantom Blade Zero



The First Berserker Khazan

History



Castlevania 1986



Castlevania Symphony of the night 1997



Castlevania Dominus Collection



Castlevania: The Dracula X Chronicles 2007

blasphemous

Case Study

[21]



[21]

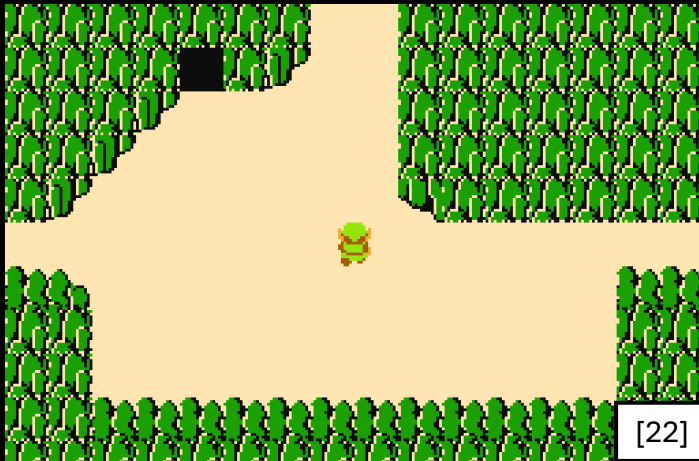


[21]

Pixel Art Styles

- Classic 8 Bit
- 16-Bit
- Isometric
- Minimalist
- High-Res
- Monochrome
- Chibi
- Low-poly
- Abstract





8-Bit – The Legend of Zelda

- Low-resolution
- Simplistic art style
- Bright and colourful



16-Bit – Sonic the Hedgehog

- More detailed than 8-bit
- Richer colour pallet
- More detailed sprites and backgrounds



Isometric / Top-down – SimCity 2000

- Fixed isometric perspective
- Highly detailed environments



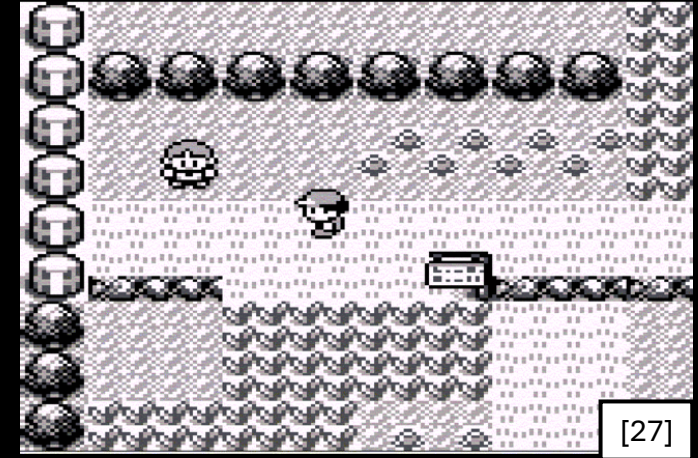
Minimalistic – Sword and Sorcery

- Limited palette
- Focus on simplicity
- Constrained forms



High-Res – Octopath Traveller

- Higher resolution and pixel density
- Lighting and particle effects



Monochrome – Pokémon Blue

- Limited palette (Black & white)
- Relies on contrast and patterns for visual aesthetic



Chibi/Cartoon – Stardew Valley

- Exaggerated proportions
- Vibrant colour schemes



Low Poly – Dave the Diver

- Pixel textures applied to 3D environments
- Modern take on pixel art
- Retains retro aesthetics



Abstract – Hyper Light Drifter

- Unique design and perspectives
- Use of abstract colours, shapes and patterns

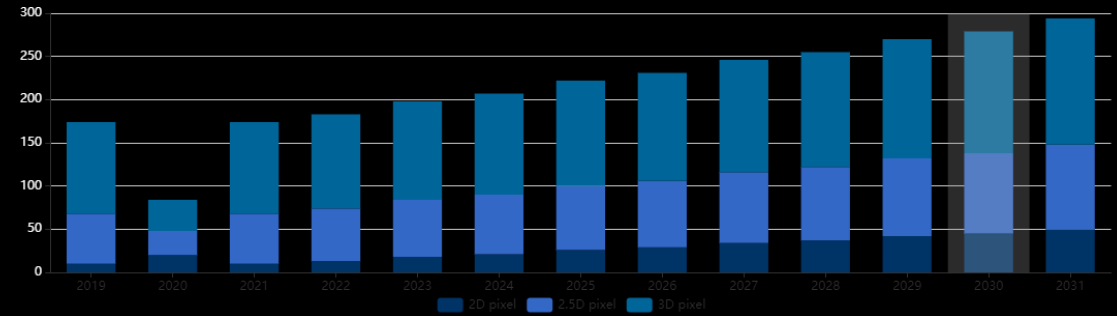
2.5D



In-game footage showing 2.D example

[29]

Pixel Game Market Shares from
2019 to 2031



[29]

Dave The Diver (2023)

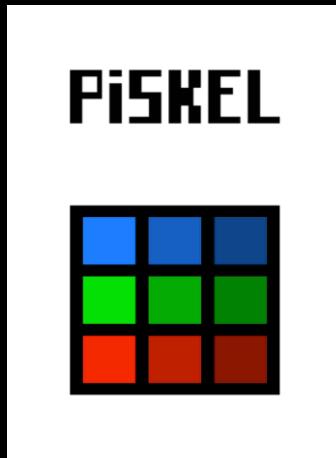
Software



[31]



[32]



[33]



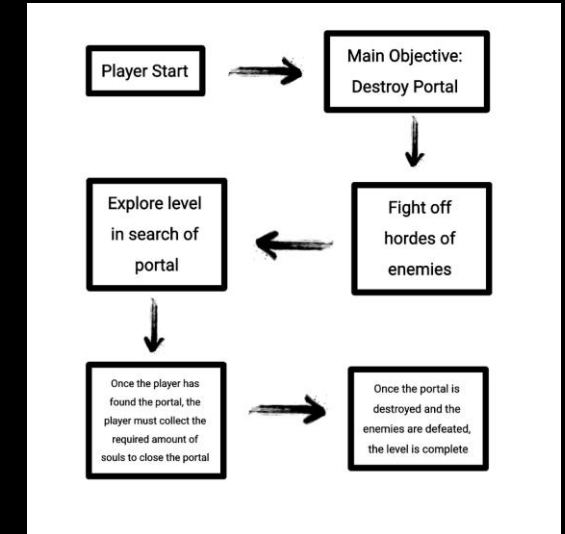
[34]



[35]

Game Design Document

		GAME DESIGN DOCUMENTS: ONE-SHEET TEMPLATE	
GAME TITLE Hellgate (TBC)			
INTENDED PLATFORMS		Windows	
TARGET AGE / DEMOGRAPHIC OF PLAYERS 15+ / Dark fantasy players			
INTENDED PEGI / ESRB RATING Age Rating - PEGI 16/ ESRB M			
SUMMARY OF GAME STORY (FOCUSING ON GAMEPLAY) Step into the armour of Sir Galahad, a legendary knight returning from a decade of war only to find his kingdom ravaged by a sinister blight of madness and decay. Journey across Eldermere's blighted lands, battling horrific abominations, braving perilous terrains, and uncovering ancient secrets. With your pure soul as the kingdom's last hope, reclaim the powerful relic needed to banish the darkness and restore peace. Will you endure the horrors, or will the corruption claim you? The fate of Eldermere lies in your hands.			
UNIQUE SELLING POINTS (USP) 2.5D Pixel game, <u>Souls like</u>			
COMPETITIVE PRODUCTS / SIMILAR GAMES Carrion, Blasphemous			



What features would you like to see more often in pixel art games?

19 responses

Branching storylines, tabletop inspired RPG elements

Less generic 2D side scrolling as I find that having the 2D perspective and having everything flat really takes away from the environment details. For example I would much rather play modern day Mortal Kombat over old school; as even though it's still a 2D perspective, it implements 3D models and depth perception to help bring the environment and characters to life. But I guess the question is, would it be possible to effectively do this 2.5d/side scrolling 3d with pixel art over 3d models?

Branching storylines and Gameplay reactive music.

Evolving

Complex gameplay and humorous events

Potentially more detail in an pixelated style like it's emulating modern animation

I like complexity and deep mechanics in my pixel games, simple as



Pitch

- Action Adventure
- Souls Like
- 2.5D
- Pixel Art



Work In Progress Title/Logo

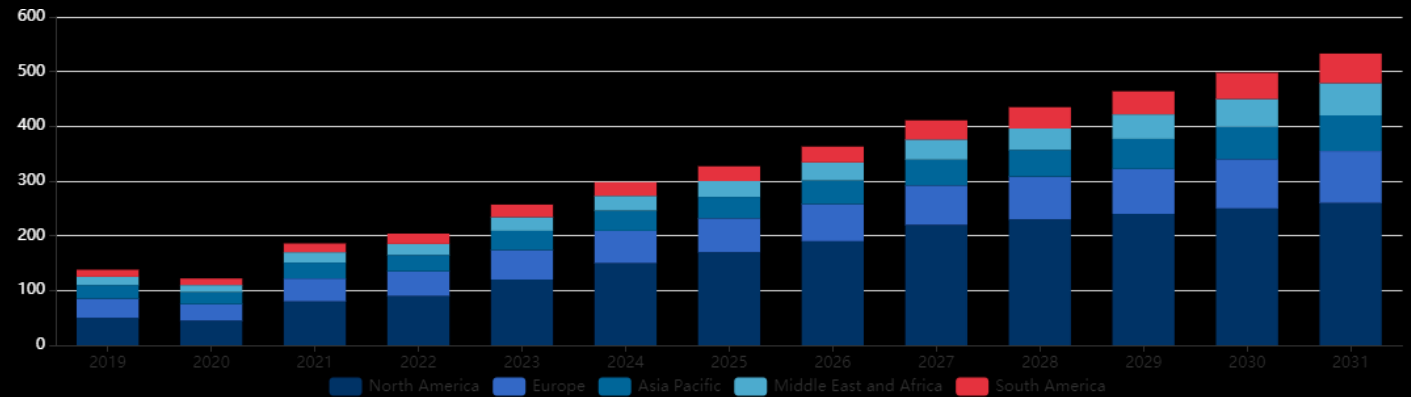
Why Pixel Art?

Popularity Factors

- Nostalgia
- Accessibility
- Indie Development

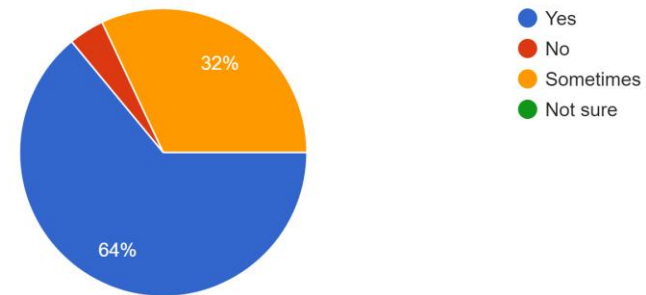
“But then why are Pixel Art and pixel games so popular nowadays? The most obvious reason is nostalgia. Because most early games were made in this style, there's a strong connection between Pixel Art and the vibe of an old-school gaming” [51]

Pixel Game Market share



Do you enjoy video games with pixel art styles?

25 responses



Questionnaire – Indie & Pixel Art Games: A player's perspective



[2]



[3]



[4]

Theme

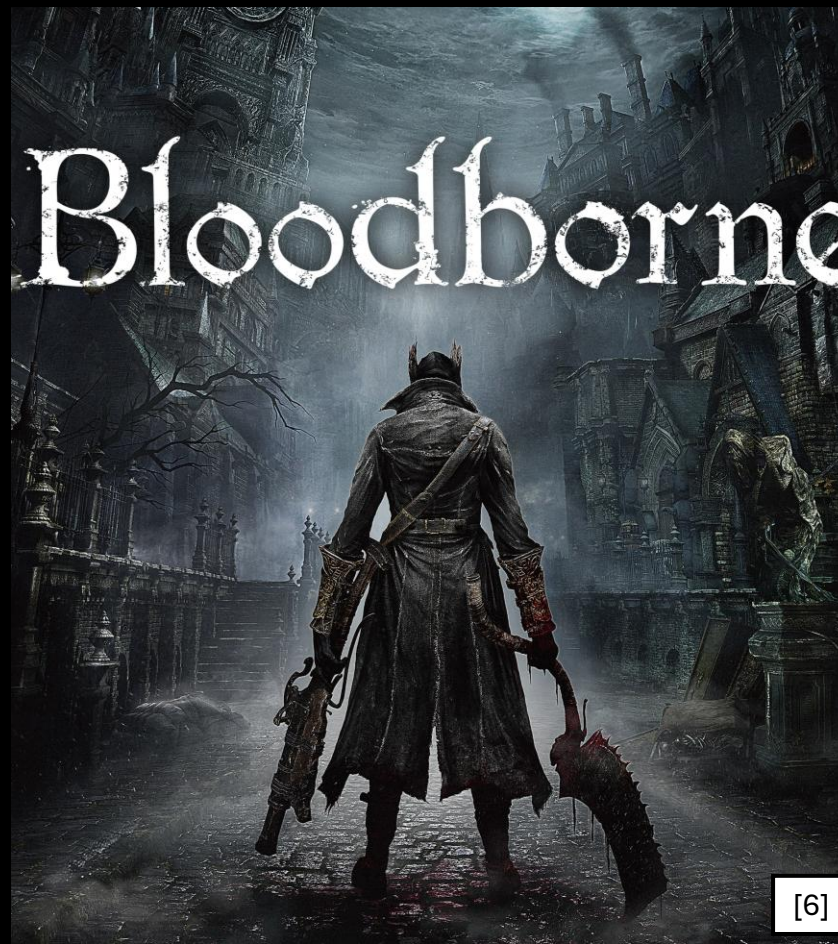
- Dark Fantasy
- Gothic
- Medieval
- Horror



[5]



[7]



[6]

Character Mood Board



Asset list

HELLGATE CHARACTER LIST

TASK	PRIORITY	STATUS	% COMPLETE	NOTES
Main Character Knight	High	In Progress	50%	
Necromancer	High	In Progress	25%	
Skeleton Warrior	High	In Progress	25%	
Demon imp	Normal	In Progress	25%	
Gelatonus cube	Normal	Deferred	25%	
Skeleton Archer	Low	In Progress	25%	
Giant Worm	Low	In Progress	25%	
Demon Beast	Normal	In Progress	25%	
Witch	Low	In Progress	25%	
Zombie	Low	In Progress	25%	
Cultist	Low	In Progress	25%	

Character Asset List

HELLGATE ASSET/TEXTURES LIST

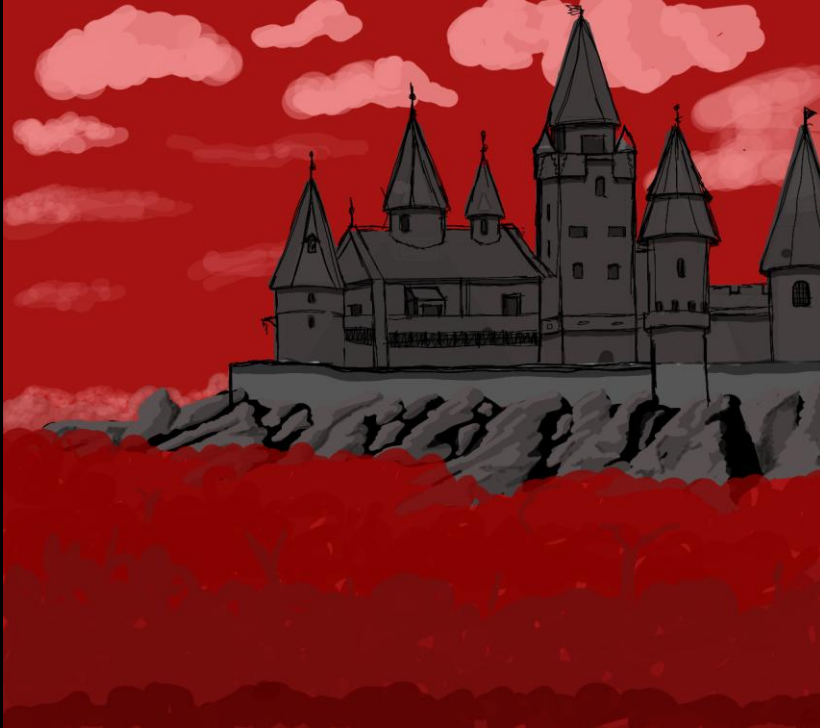
TASK	PRIORITY	STATUS	% COMPLETE	NOTES
Stone Walls	Normal	In Progress	50%	
Corner stone	Normal	Not Started		
Tree 1	Normal	In Progress	75%	
Tree 2	Normal	In Progress	75%	
Tree 3	Normal	In Progress	75%	
Bush	Normal	In Progress	50%	
Gravestone 1	High	In Progress	100%	
Gravestone 2	High	Not Started		
Gravestone 3	High	Not Started		
Broken Gravestone	Normal	Not Started		
Crates	Normal	Not Started		
Grass	High	Not Started		
Lamplight	Low	Not Started		
Torch	High	Complete	100%	
Iron fence	Low	Not Started		
Iron Gate	Low	Not Started		
Barrel	Low	Not Started		
Mausoleum	High	Not Started		
Portal	High	In Progress	25%	
Stone Floor	High	Complete	100%	
Background	High	In Progress	25%	

Asset and Texture list



Concepts

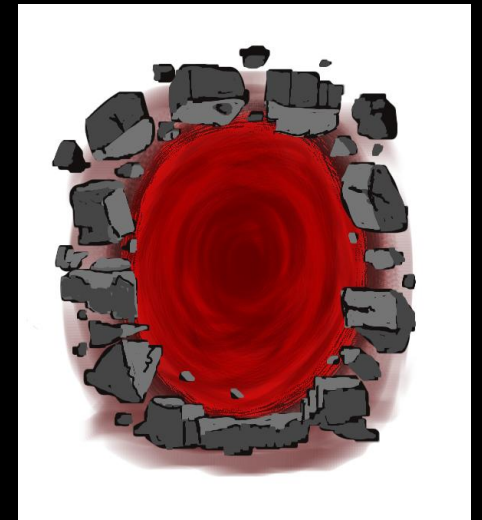
Environment



Backdrop concept

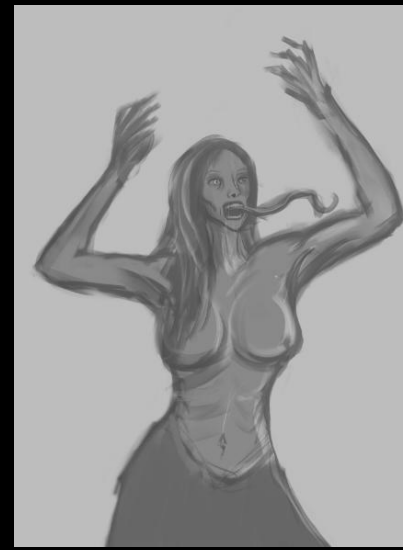
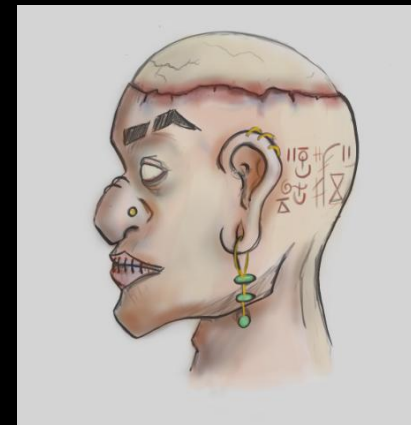
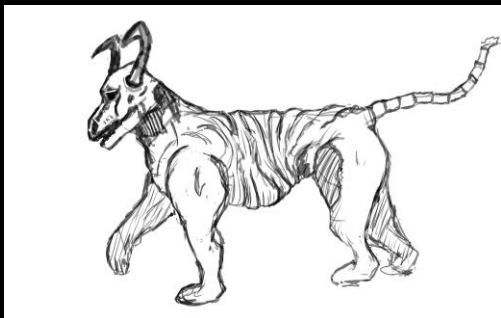


Game theme concept



Portal concept

Characters



Concept to Pixel



Concept Art



Pixel Character test

Sprites



- 1 - Sketch**
Figure out major volumes
Pose with guidelines
Add volume
- 2 - Silhouette**
Use contrasting colours
Refine unclear details
Add sharp and soft corners
- 3 - Shades**
Add actual colours, keep detail limited
Make sure its readable!
Highlights and secondary textures
- 4 - Polish**
Add extra colours for contrast
Tweak small details (like hands)
Check silhouette readability

sprites - 01

Character Test

(Blasphemous)

Test
Character

Original
Character

2nd Test
Character

Reduced colour saturation



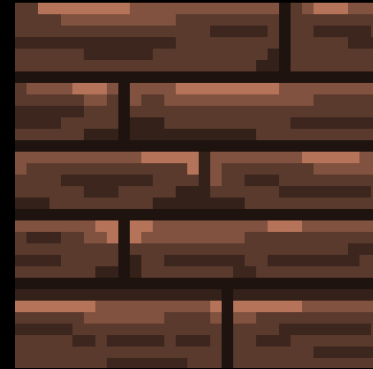
Textures



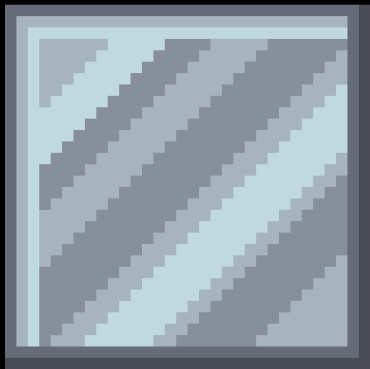
Light Wood



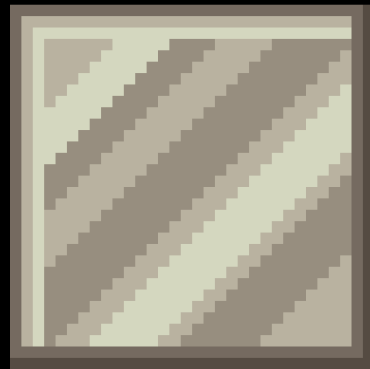
Medium Wood



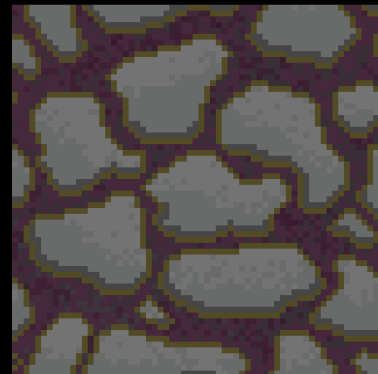
Dark Wood



Silver



Gold

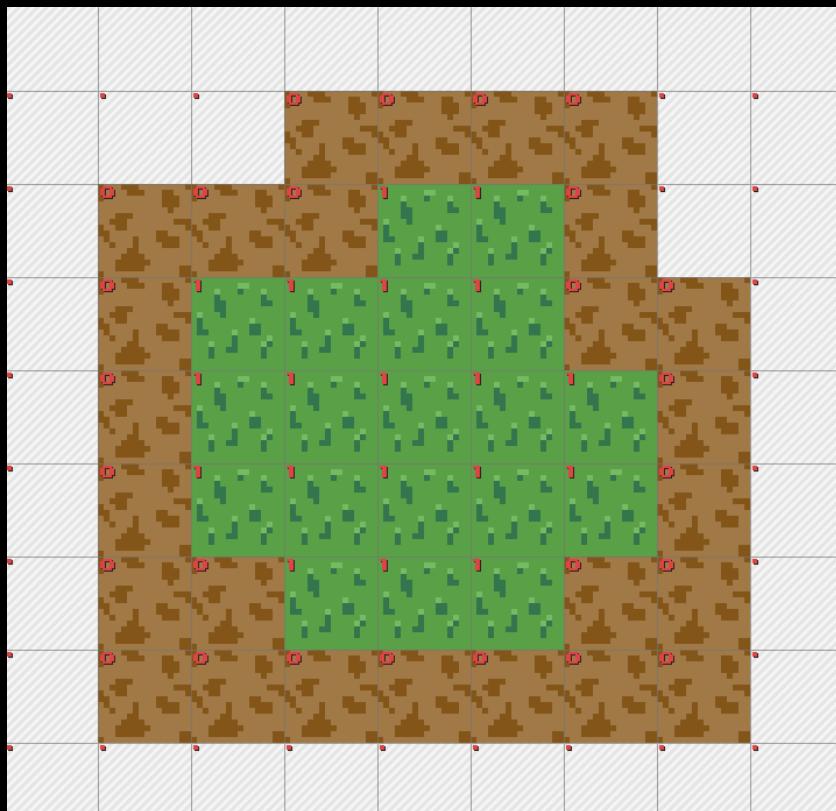


Stone ver.1

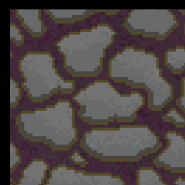


Stone ver.2

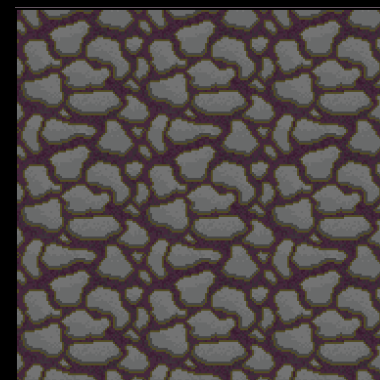
Tile Sets



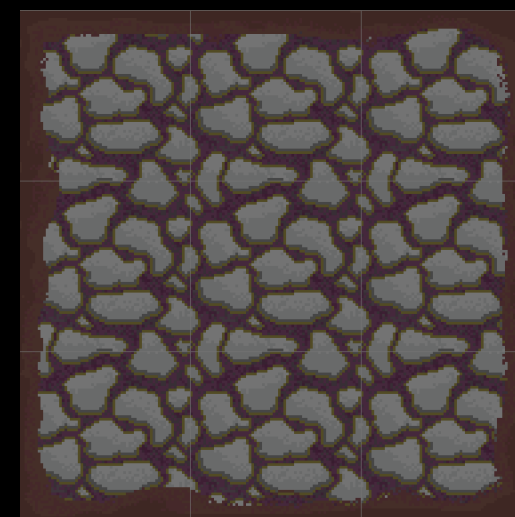
First tile set test



Tile test ground

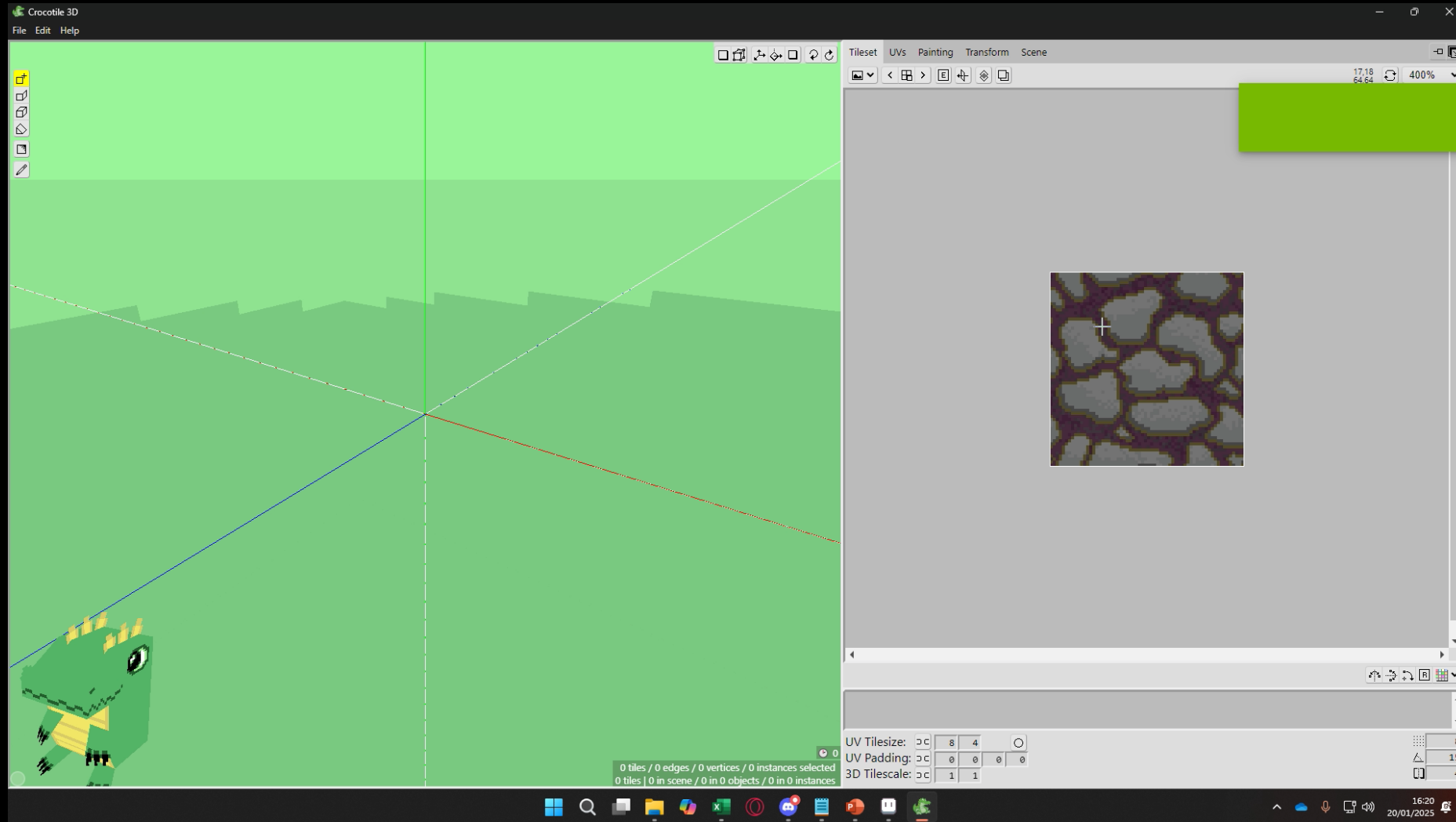


Seamless
texture

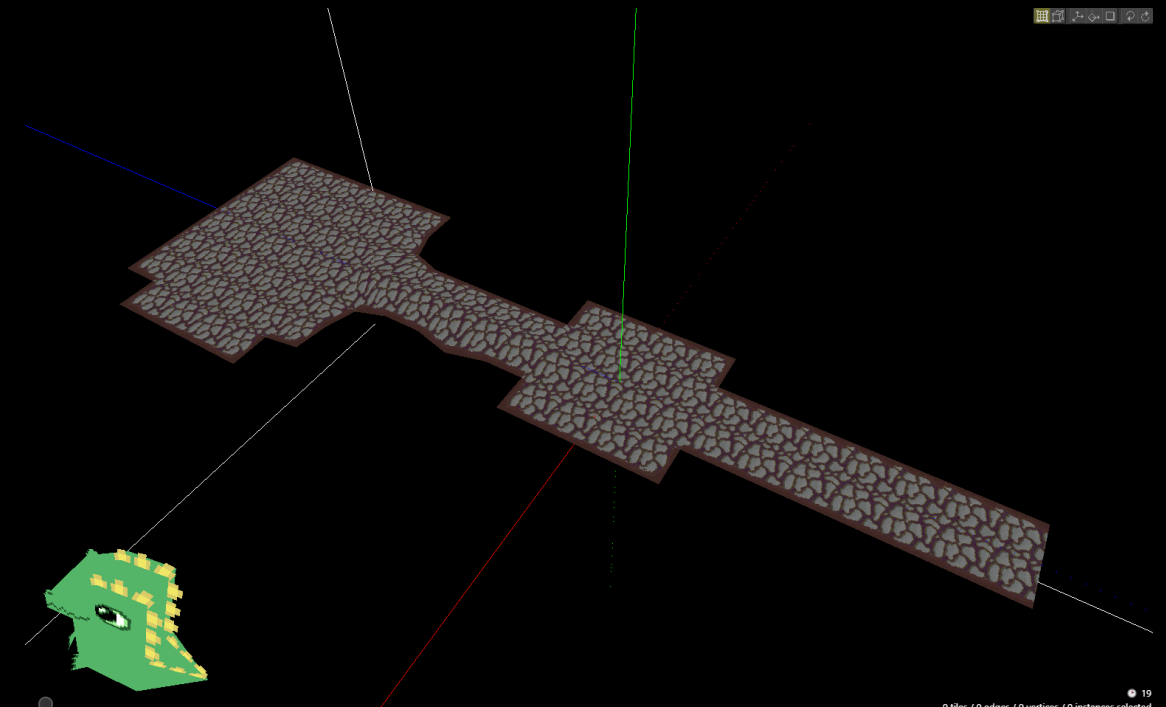
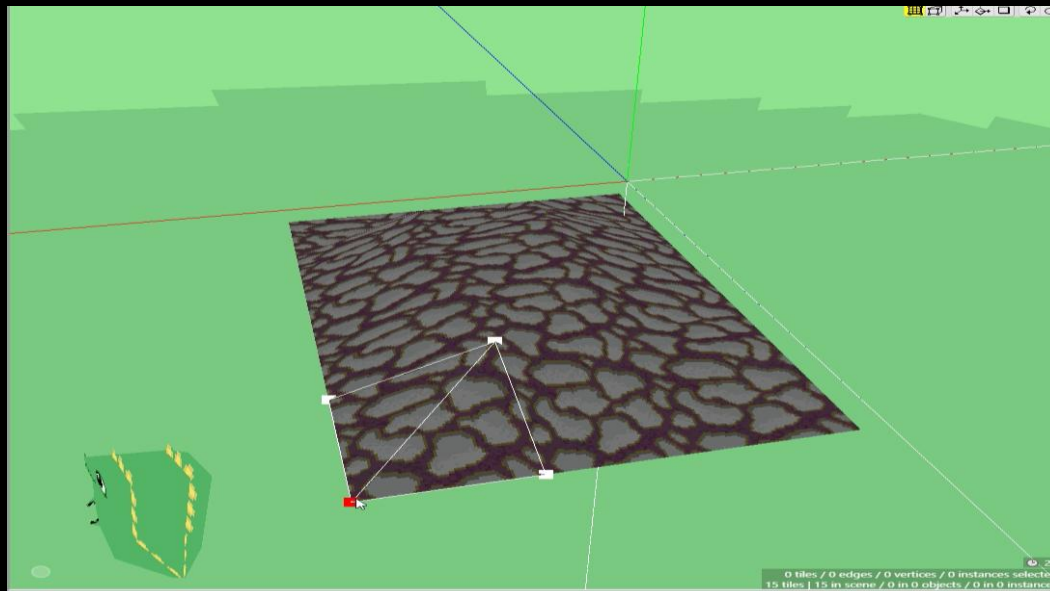


Tile Set

Using Textures In 3D



Using 3D tile software



Low Poly with texture

Characters Tests



Demon



Worm



Knight 1



Knight 2



Slime monster



Ghost

Props and Pickups Tests



Candle



Torch



Gold Coin



Health Potion



Speed Potion



Spell book



Great sword



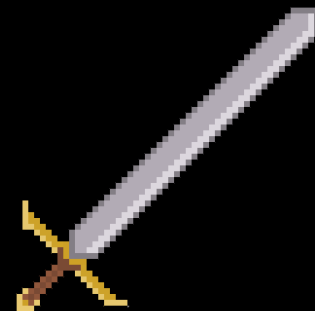
Gravestone 1



Gravestone 2



Test Sword



Basic Sword



Dark Sword



Arrows

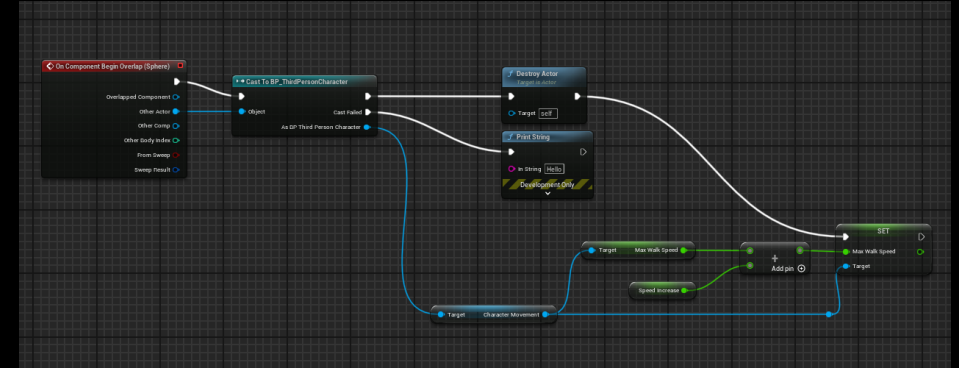
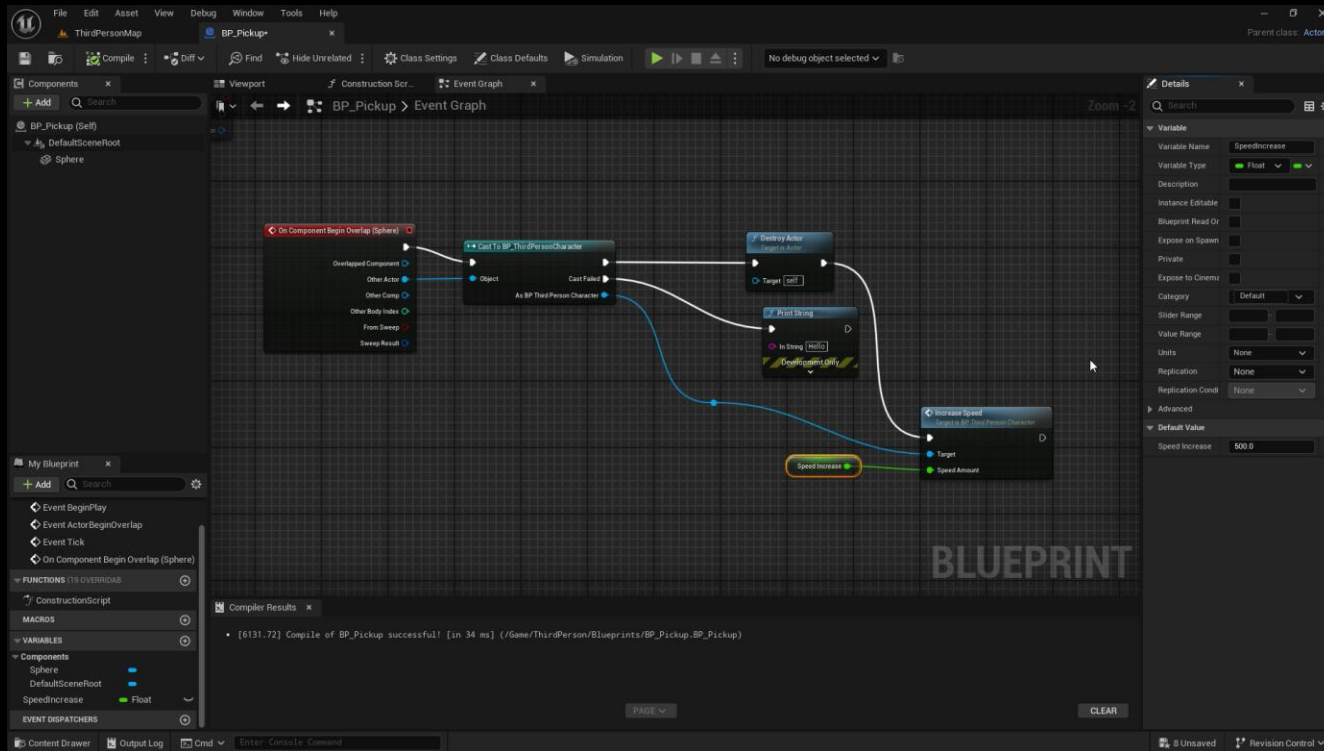


UNREAL
ENGINE

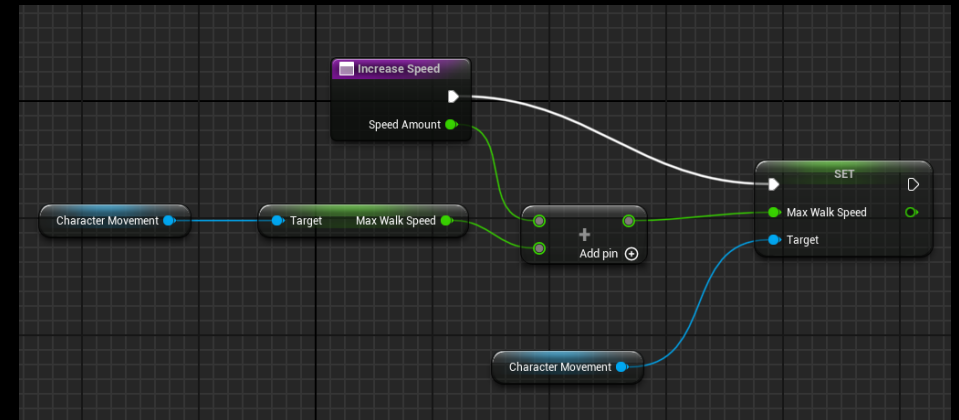
Prototype Testing UE5



Speed Boost



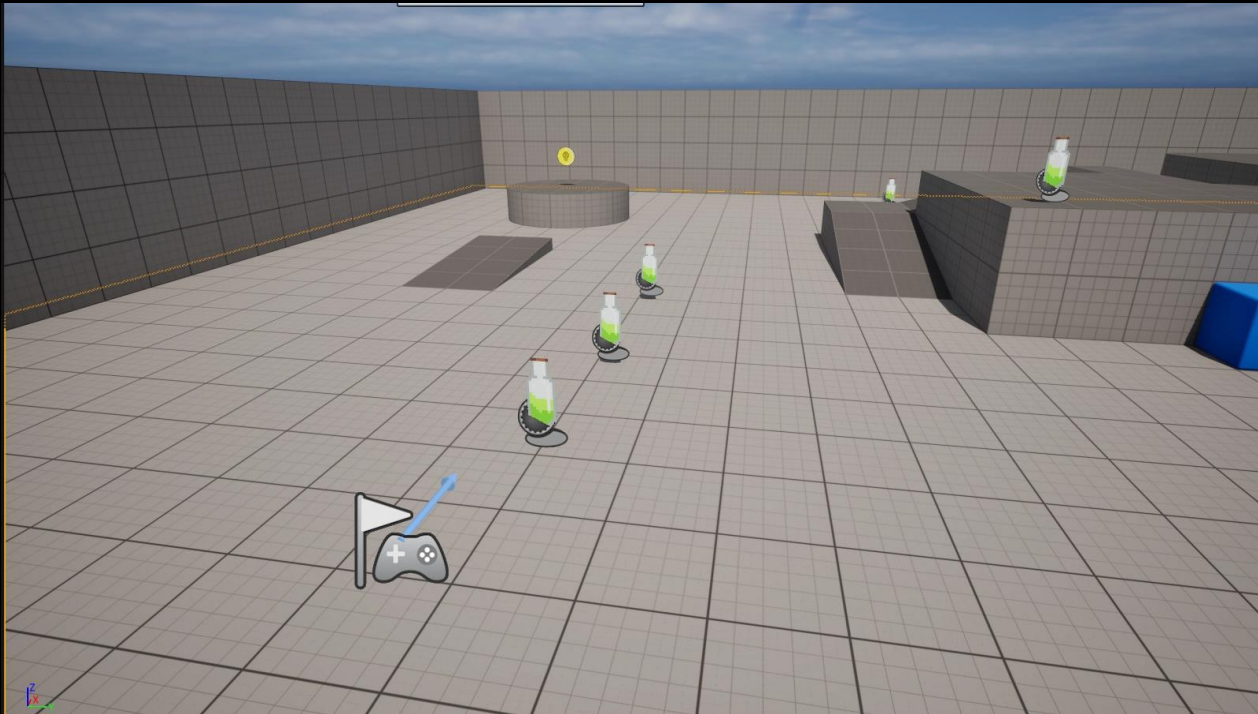
Event Pick up BP



Speed increase component



Pick Up Test

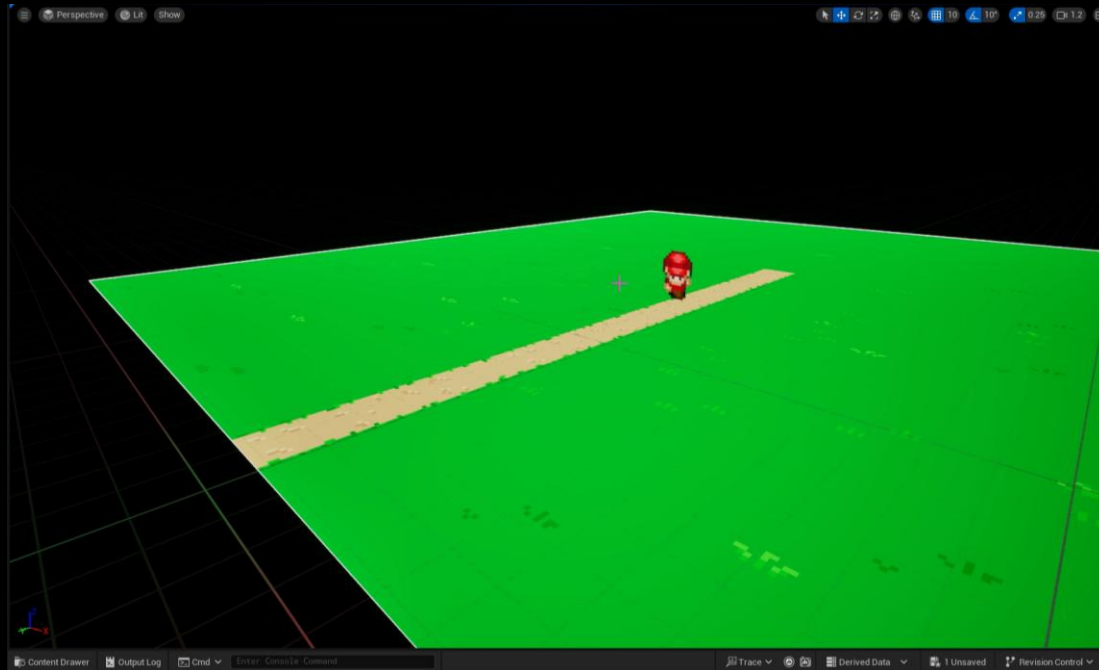


Speed Potion Test



Speed Potion Test

Flipbook animation tests

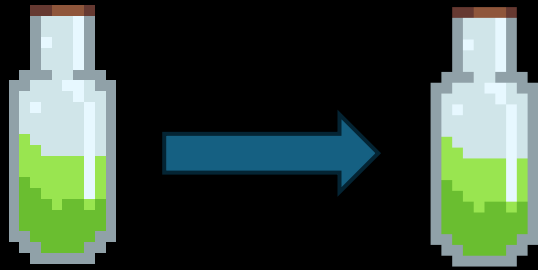


Character Flipbook animations

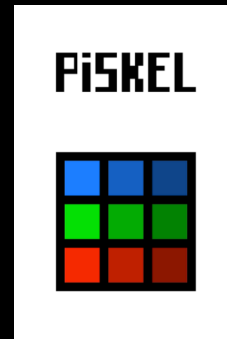


Character Sprite Sheet

Problems and solutions



Pixel to in-game scaling



Juggling software

Working progress...



Still working on defining my own art style

Testing mechanics



Moving Forward

- Create questionnaires based on the findings and research gathered – E.g. Pixel Art style with a focus group (Pixel artist/Indie developers)
- Refine design choices from feedback gathered from the questionnaire and playtesting
- Finish testing mechanics
- Level Design
- Start prototype build

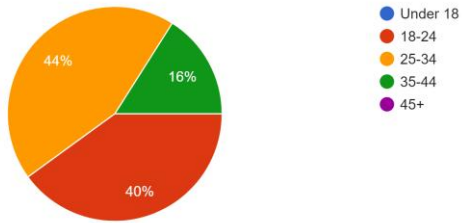
THANK YOU
FOR
LISTENING



Appendices

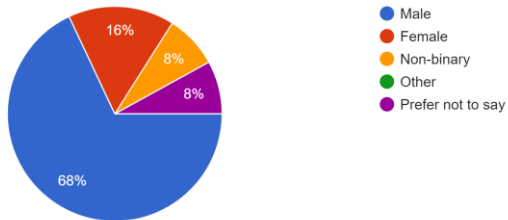
What is your age group?

25 responses



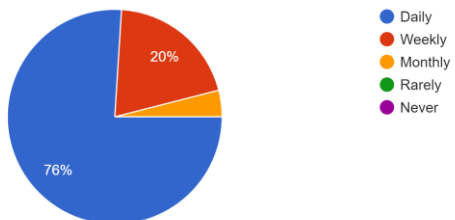
What is your gender?

25 responses



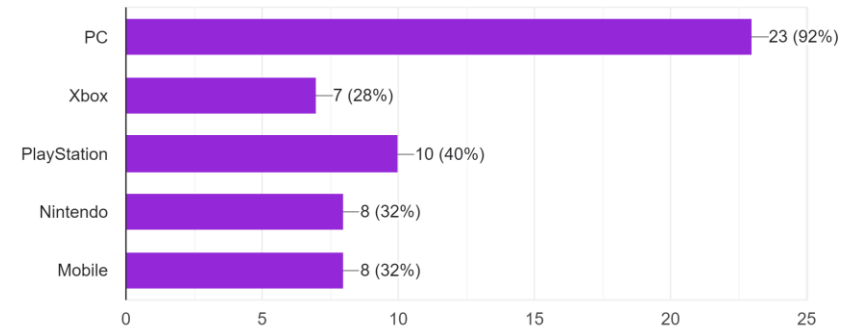
How often do you play video games?

25 responses



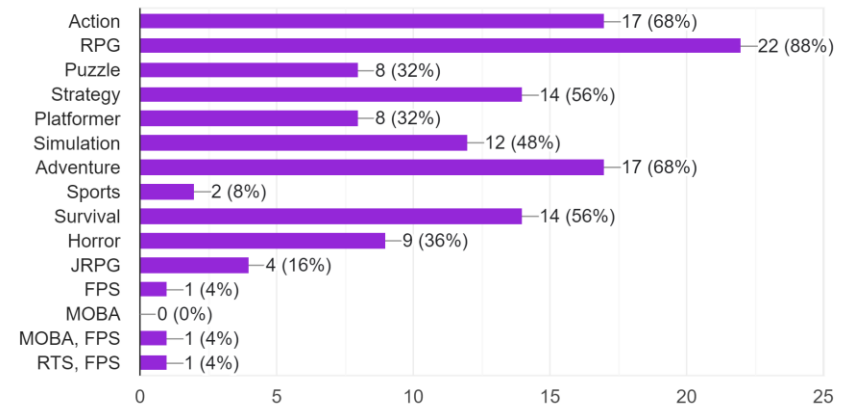
What platform(s) do you primarily use for gaming?

25 responses



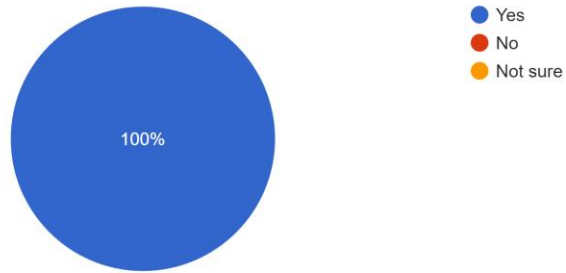
What genres of game do you usually play?

25 responses



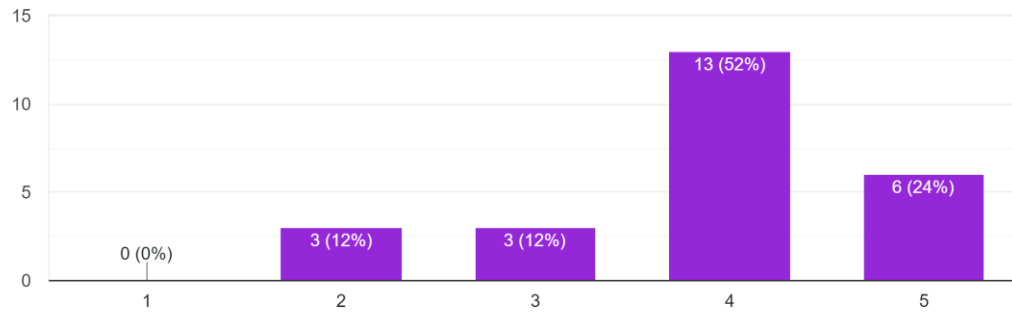
Have you ever played an indie game?

25 responses



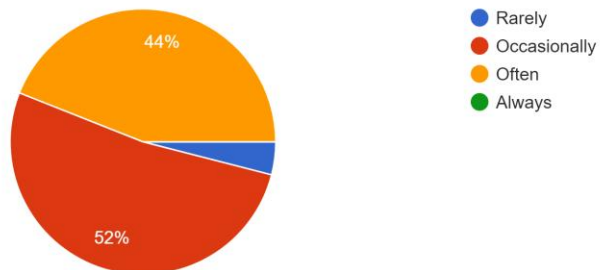
How important is the story in video games to you ?

25 responses



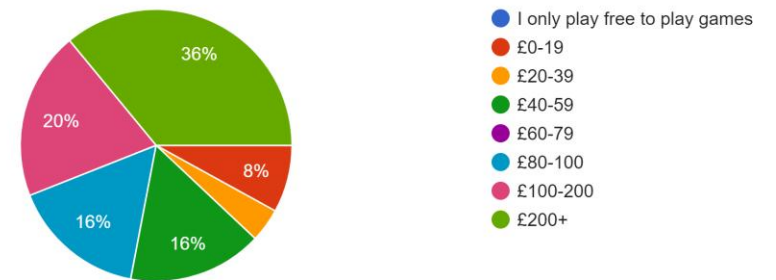
How often do you choose indie games over AAA titles?

25 responses



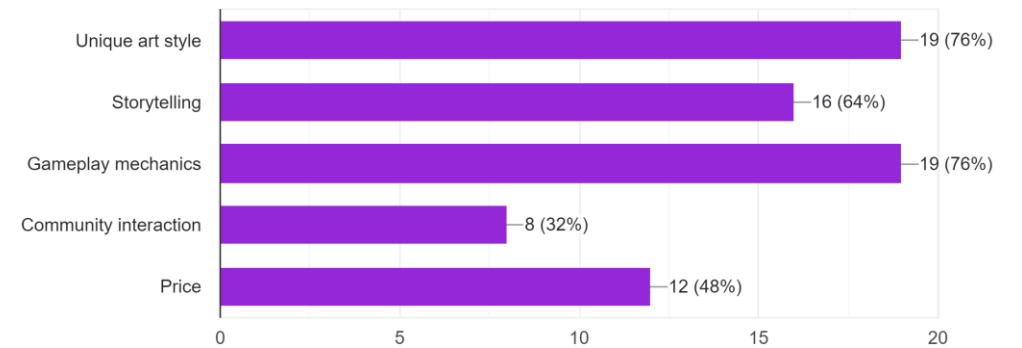
How much do you spend on video games per year?

25 responses



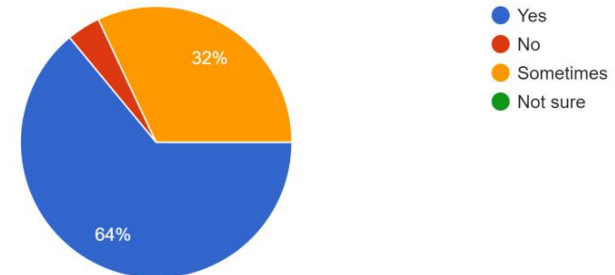
What do you enjoy most about indie games?

25 responses



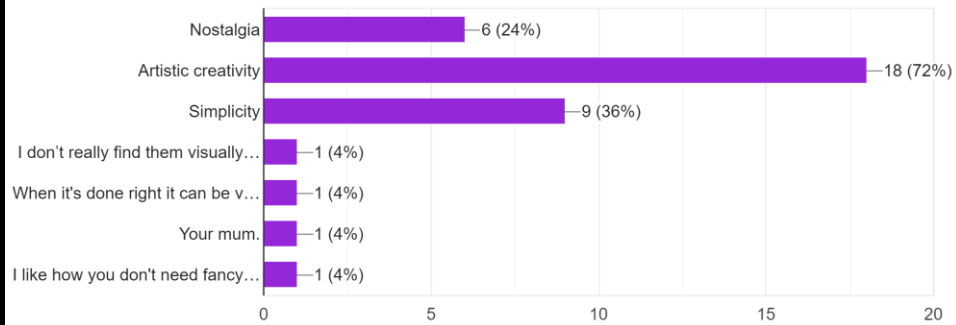
Do you enjoy video games with pixel art styles?

25 responses



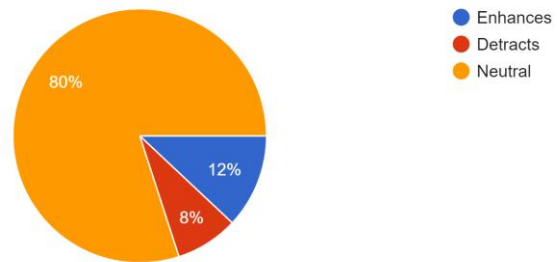
What appeals to you most about pixel art games?

25 responses



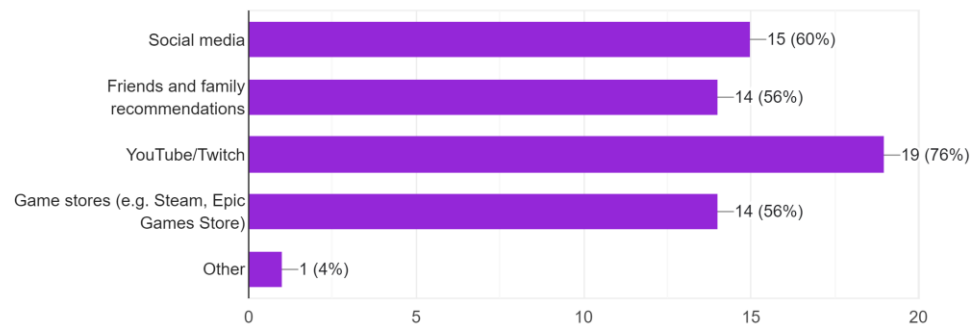
Do you feel pixel art enhances or detracts from the gaming experience?

25 responses



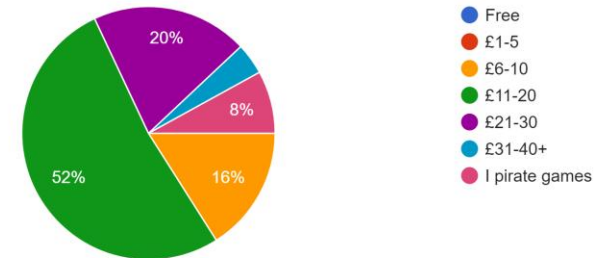
How do you usually discover new games?

25 responses



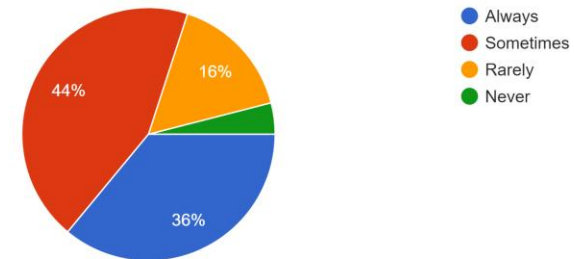
What is the average price you are willing to pay for an indie game?

25 responses

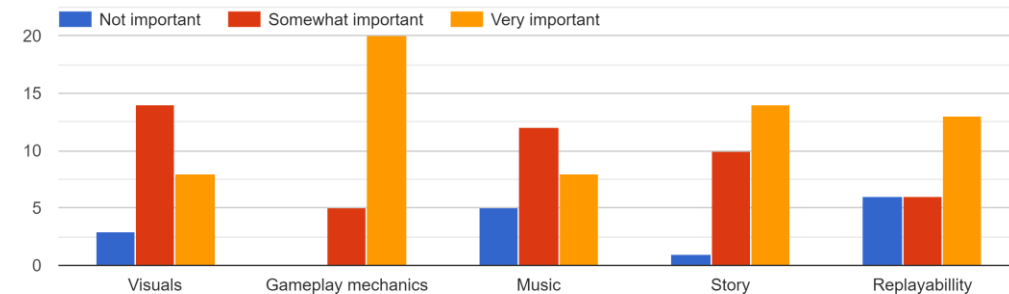


Do you consider reviews before purchasing indie games?

25 responses

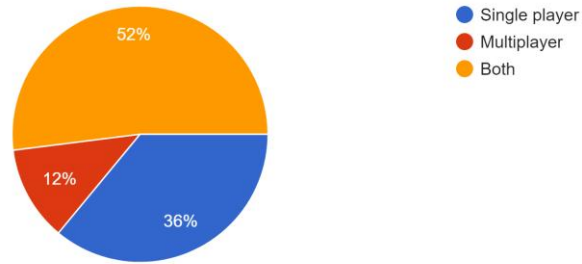


What is the most important to you in a pixel art game?



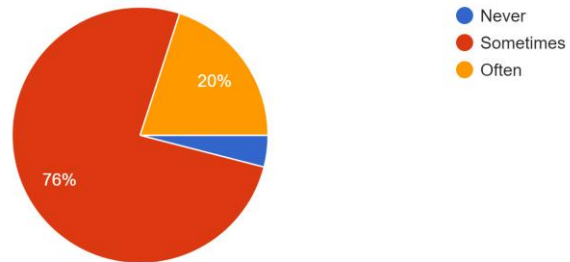
Do you prefer single-player or multiplayer games?

25 responses



How often do you replay indie games?

25 responses



What features would you like to see more often in pixel art games?

19 responses

Branching storylines, tabletop inspired RPG elements

Less generic 2D side scrolling as I find that having the 2D perspective and having everything flat really takes away from the environment details. For example I would much rather play modern day Mortal Kombat over old school; as even though it's still a 2D perspective, it implements 3D models and depth perception to help bring the environment and characters to life. But I guess the question is, would it be possible to effectively do this 2.5d/side scrolling 3d with pixel art over 3d models?

Branching storylines and Gameplay reactive music.

Evolving

Complex gameplay and humorous events

Potentially more detail in an pixelated style like it's emulating modern animation

I like complexity and deep mechanics in my pixel games, simple as

Any other comments you would like to add about indie or pixel art games?

15 responses

usually great stories to escape the grind of the daily

I like indie games particularly because they can portray unique world views and ideas and have more variation than large studios allow for

nahhhhhhhhhhhhhhhhh

Indie games is where the real gaming industry is

Indie games are often better for 'original' or unique experiences (both in mechanics and narrative) and are generally less risk-averse than AAA titles. Cheaper price points also make many indie games a more attractive prospect for impulse purchases even outside of platform sale events

Hawaiian pizza

Nope

I think Pixel art has to be done really well in order for me to appreciate it

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