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Promoting Growth Through Gaming is Simply Good Game Design

Dr. Elizabeth Kilmer, Take This

Dr. Jared Kilmer, Game to Grow

#GDC23



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Take This

OUR MISSION

Our mission is to decrease the stigma and increase the support for mental health within the game industry and the game enthusiast community.



TakeThis.Org
@TakeThisOrg

Take this.

OUR MISSION

Game to Grow is a 501(c)(3) non-profit organization dedicated to the use of games for therapeutic, educational, and community growth.



Game to Grow

GameToGrow.org
@GameToGrow

COZY GROVE



CELESTE



EndeavorRx[®]



IDEAL PLAYERS



STRONG
EMOTIONAL
BONDS



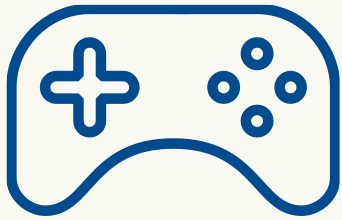
FORM
HEALTHY
COMMUNITIES



HIGH
LEVELS OF
ENGAGEMENT



DEDICATE
PERSONAL
RESOURCES



Players with a Growth Mindset...

**Are open
to learning
new skills**

**Select
challenging
activities**

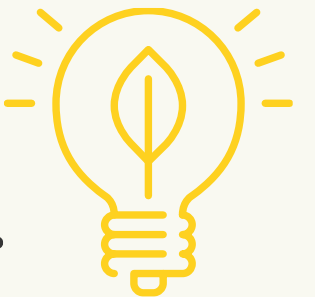
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**Persist
through
challenges**

2,3

**Experience
positive
responses to
failure**

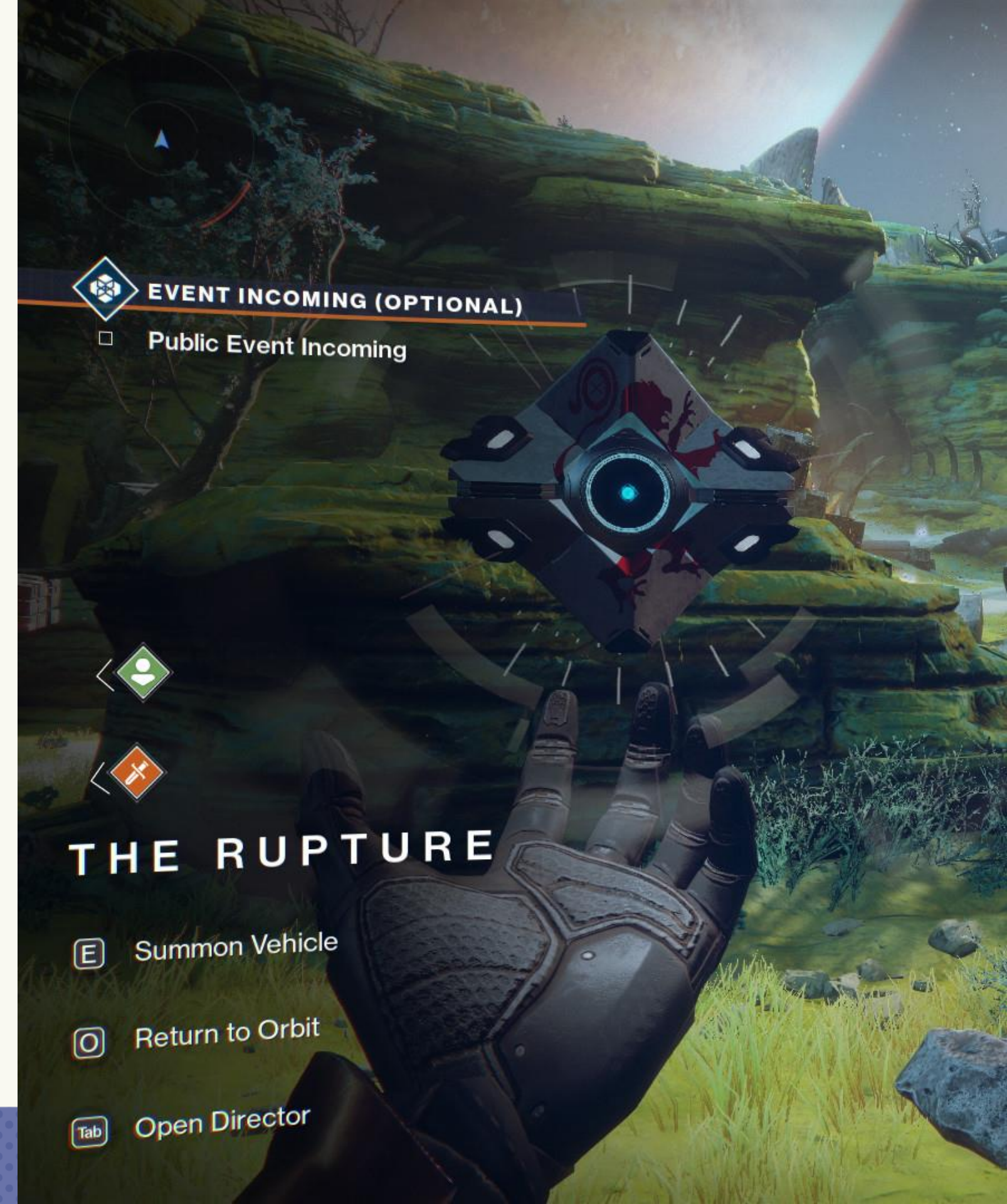
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Growth Mindset

The belief that one's talents and abilities can be developed through deliberate practice and feedback from others.





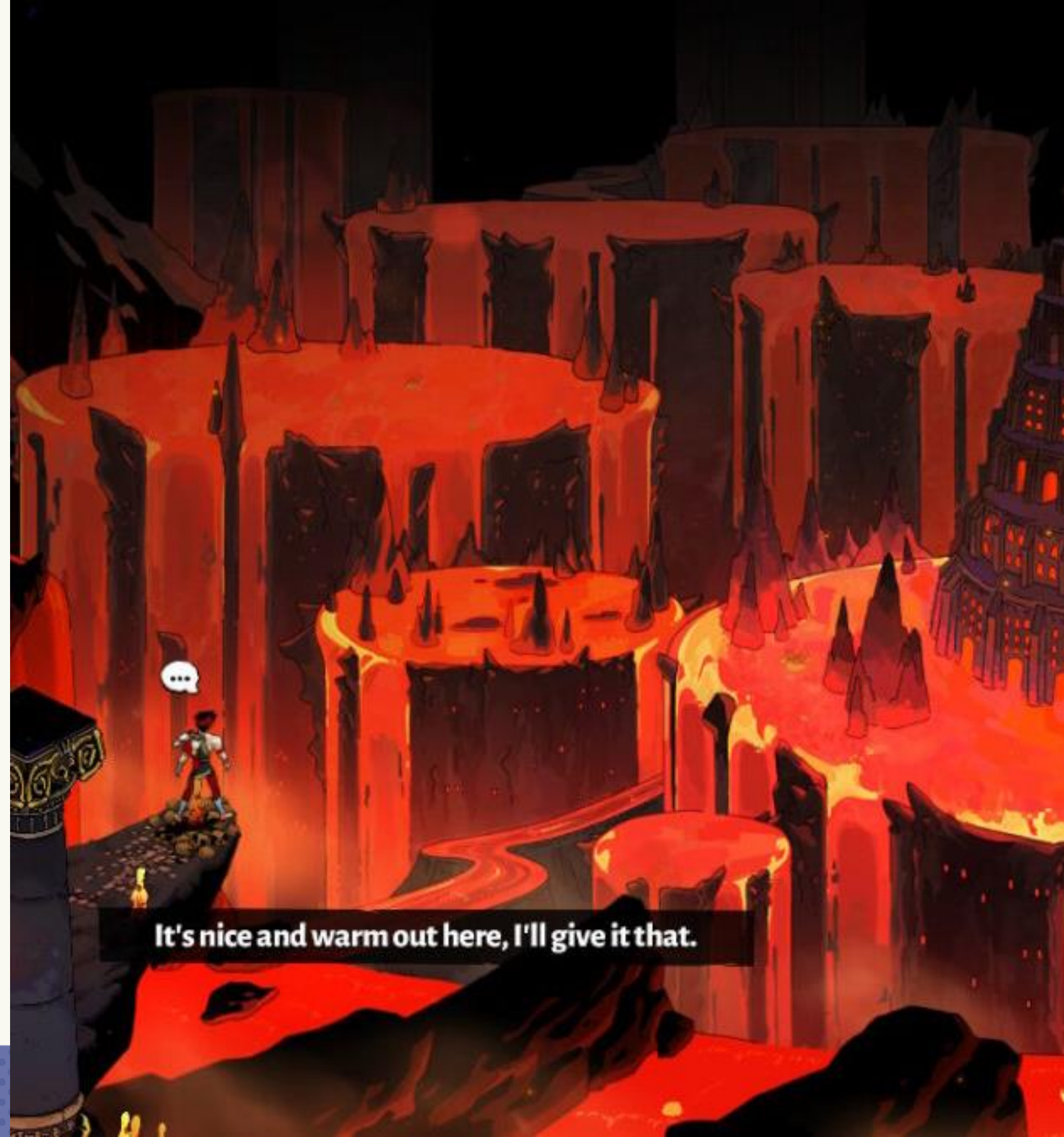
YOU DIED

Fixed Mindset

The belief that one's talents and **abilities are set** (e.g. innate gifts) and unchangeable

Grit

Passion and perseverance
while navigating obstacles.



Growth Mindset Research

- Higher SES is correlated with growth mindset.^{5,6}
- Parent's mindset can predict children's academic persistence.⁷
- Growth mindset is related to higher academic success for low SES students.⁵
- Individuals with a growth mindset have a more positive response to critical feedback.⁸

Instilling a Growth Mindset

- Growth mindset interventions can reduce racial achievement gaps in undergraduate STEM programs.¹⁰
- Training in a growth mindset can improve academic performance.¹¹
- Growth-mindset focused game elements can support player persistence and problem solving.^{2,3}

Implications of Research

1. Tendency towards growth mindset can be impacted by areas of privilege.
2. Growth mindset interventions can increase the use of growth mindset.
3. Supporting growth mindset may increase player engagement and intentional play.

**PROCEED
WITH
CAUTION**



PROCEED WITH CAUTION

SYSTEMIC BARRIERS



PROCEED WITH CAUTION

SYSTEMIC BARRIERS
ACCESSIBILITY



PROCEED WITH CAUTION

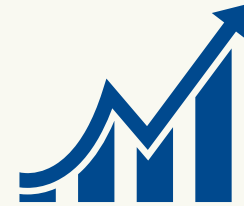
SYSTEMIC BARRIERS
ACCESSIBILITY
GENERALIZABILITY



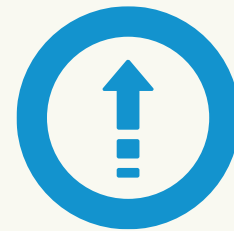
Mechanics That Support Growth Mindset



Low consequences for failure.



Direct messaging about growth through failure.



Rewarding effort.



Support/feedback from others.



Narrative or mechanical expectations that failure is normative.

Consequences for Failure





GUARDIAN DOWN



Nevermore
Misadventure

WAITING TO REVIVE

Consequences for Failure

156 You

 TroyBird 08

  CHANGE VIEW

 Respawn in 12

Consequences for Failure

YOU DIED

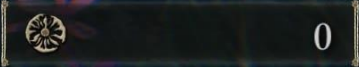


Kick

Heal



Flask of Crimson Tears +1





Failure is just a
lesson in
tactics.

Direct
Messaging

Direct Messaging

HYPNOS
SLEEP INCARNATE

Welcome to the House of Hades, where... wait I know you, I guess that means you died out there, huh? Well don't be sad, though, pretty much everybody dies sometime!

Rewarding Effort

FUSION RIFLE CALIBRATION

Daily Bounty

Calibrate Fusion Rifles against any target. Opposing Guardians and rapidly defeated targets grant the most efficient progress.

☐  Fusion Rifle 0%

"Fusions pack a lot of punch at short range. Gotta get the timing down." – Banshee-44

REWARDS:

-  XP
-  Mod Components +2
-  Enhancement Core

Expires 1 Day 3 Hours after purchase.

 Glimmer 122,414 / 250

 Acquire

 122,414  2,918  1,600  4,109

BOUNTIES



WEAPONS



MATERIAL EXCHANGE



GUNSMITH

BANSHEE-44

Banshee-44 has lived many lives. As master weaponsmith for the Tower, he supplies Guardians with only the best.



Level Up

Level	9 →	9
Runes Held	1579 →	1579
Runes Needed		811

Base Stats

HP	455	→	455
FP	71	→	71
Stamina	97	→	97
Max Equip Load	52.9	→	52.9
Poise	29	→	29
Discovery	109.0	→	109.0

Defense Power

Physical	79	→	79
VS Strike	79	→	79
VS Slash	79	→	79
VS Pierce	79	→	79
Magic	93	→	93
Fire	83	→	83
Lightning	75	→	75
Holy	91	→	91

Attribute Points

Vigor	12 →	< 12 >
Mind	11 →	11
Endurance	13 →	13
Strength	12 →	12
Dexterity	15 →	15
Intelligence	9 →	9
Faith	8 →	8
Arcane	8 →	8

Attack Power

R Armament 1	133	→	133
R Armament 2	88	→	88
R Armament 3	73	→	73
L Armament 1	72	→	72
L Armament 2	23	→	23
L Armament 3	23	→	23

Body

Immunity	190	→	190
Robustness	220	→	220
Focus	168	→	168
Vitality	175	→	175

Confirm

Choose attribute to level up

Rewarding Effort

Rewarding Effort

VO.31726





Feedback &
Support

COMMENDATIONS

SEASON 20: ENDS IN 82 DAYS 18 HOURS

Feedback &
Support

♥ ALLY



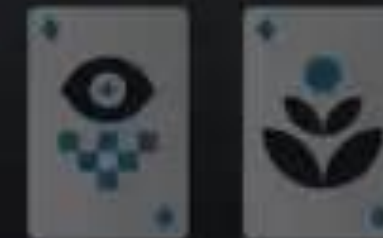
▲ FUN



♣ MASTERY



◆ LEADERSHIP



Dismiss



Narrative & Mechanical Expectations

Narrative & Mechanical Expectations



Ow.

Narrative & Mechanical Expectations

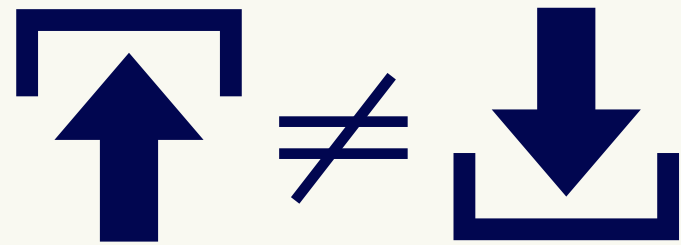


The Fallacy of “Git Gud”



Git gud at swimming, n00b

Mechanics That Support a Fixed Mindset



**Inputs feel
unrelated to
outputs**



**High reliance on
luck or chance
for success.**



**High
consequences
due to failure.**

5 ACTIONABLE TAKEAWAYS

```
graph TD; A[5 ACTIONABLE TAKEAWAYS] --- B[Limit consequences for failure]; A --- C[Communicate clearly]; A --- D[Reward effort]; A --- E[Provide multiple pathways to success]; A --- F[Utilize multifaceted difficulty settings];
```

Limit
consequences
for failure

Communicate
clearly

Reward
effort

Provide
multiple
pathways to
success

Utilize
multifaceted
difficulty
settings

Questions for Devs



How is your game supporting a growth mindset?

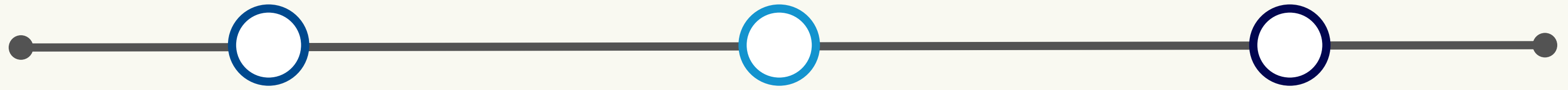


How is your game supporting a fixed mindset?



What is one change you can make to support your players?

Conclusions



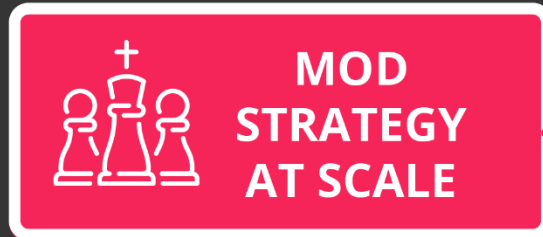
Engaging play
is often play
that supports
growth.

It's not just for
educational
games.

Designing with
the intent to
support growth
can make a big
impact.

Disrupting Video Games-Based Radicalization Through Collaborative Cross-Sector Networks

RESEARCH STREAMS



SOLUTIONS

METHODS OF
DETECTION

GAME DESIGN
BEST PRACTICES

TOOLKIT TO
COMBAT
EXTREMISM

We are
here

Currently booking
interviews for:

- San Francisco
- Montreal
- Seattle
- Virtual

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Middlebury

Logically.



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Thank you!



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