

GROUNDING the IMPOSSIBLE

Pushing Creativity in VFX

Jeremy Griffith, Senior VFX Artist at Riot Games



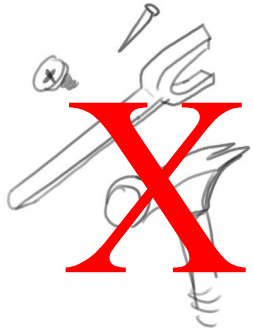


Not so much **TECHNICAL** as...





Not so much **TECHNICAL** as...



CONCEPTUAL





THINKING

THINKING is part of the pipeline

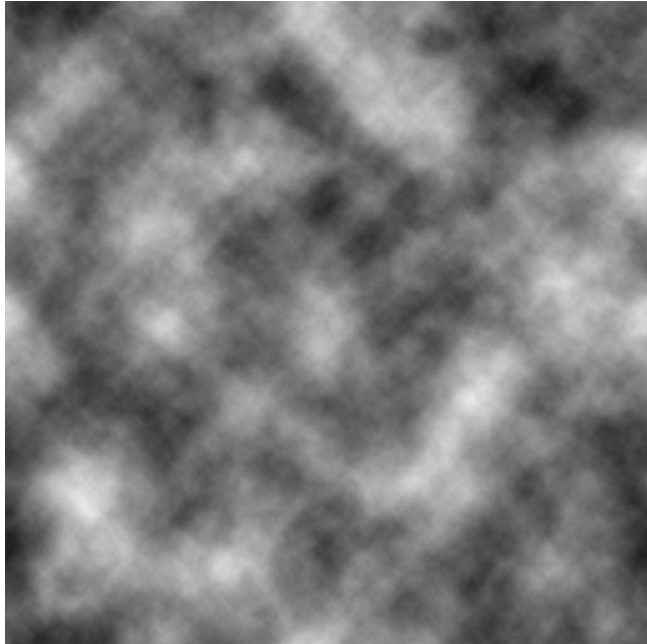


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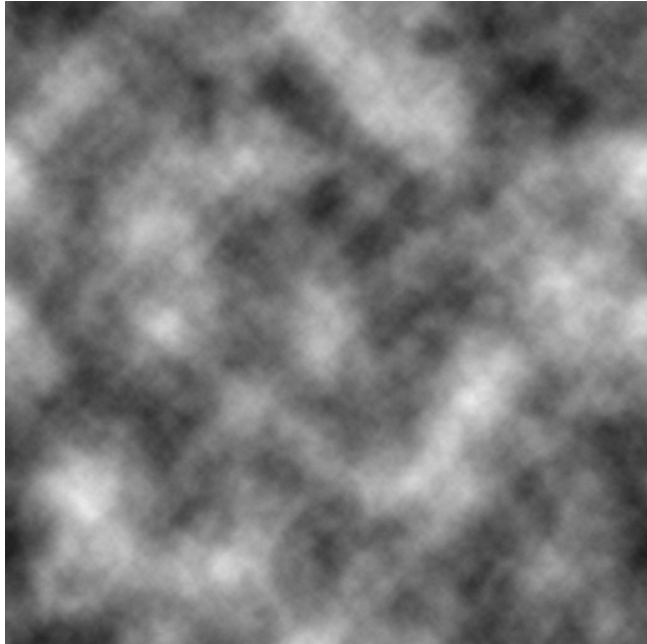
...and will help you be more **CREATIVE**



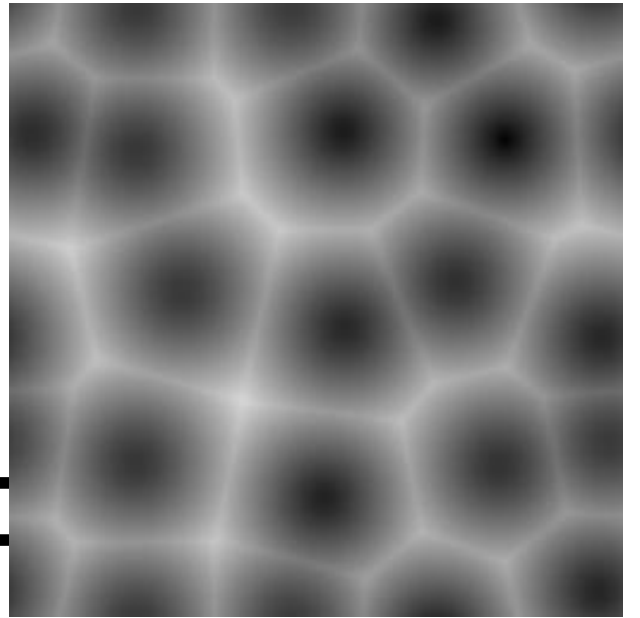
VFX is HARD



/FX is HARD



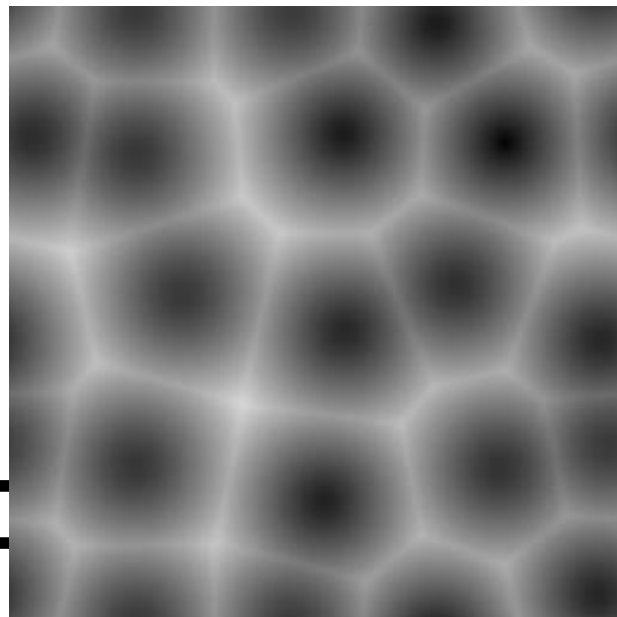
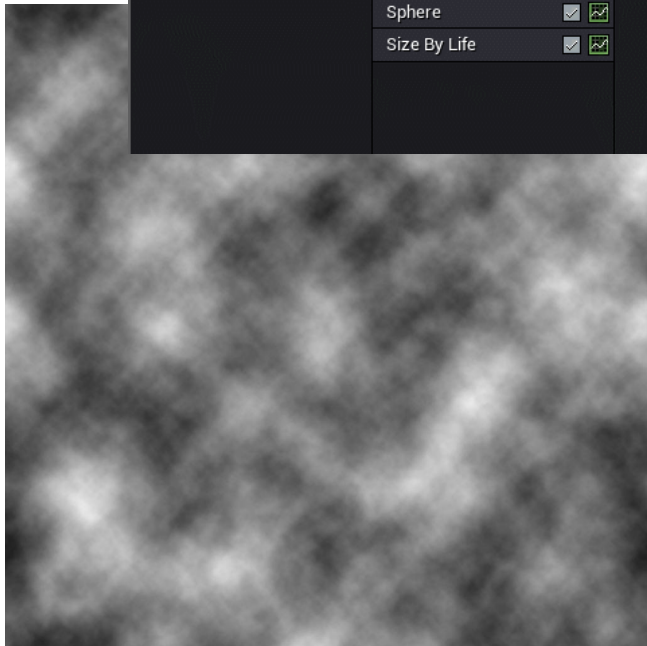
/FX is HARD





Mesh Data		Mesh Data		Mesh Data	
Required		Required		Required	
Spawn	<input checked="" type="checkbox"/>	Spawn	<input checked="" type="checkbox"/>	Spawn	<input checked="" type="checkbox"/>
Lifetime	<input checked="" type="checkbox"/>	Lifetime	<input checked="" type="checkbox"/>	Lifetime	<input checked="" type="checkbox"/>
Initial Size	<input checked="" type="checkbox"/>	Initial Size	<input checked="" type="checkbox"/>	Initial Size	<input checked="" type="checkbox"/>
Color Over Life	<input checked="" type="checkbox"/>	Initial Velocity	<input checked="" type="checkbox"/>	Color Over Life	<input checked="" type="checkbox"/>
Init Mesh Rotation	<input checked="" type="checkbox"/>	Color Over Life	<input checked="" type="checkbox"/>	Init Mesh Rotation	<input checked="" type="checkbox"/>
Dynamic	<input checked="" type="checkbox"/>	Initial Rotation	<input checked="" type="checkbox"/>	Dynamic	<input checked="" type="checkbox"/>
Size By Life	<input checked="" type="checkbox"/>	Dynamic	<input checked="" type="checkbox"/>	Dynamic	<input checked="" type="checkbox"/>
		Sphere	<input checked="" type="checkbox"/>		
		Size By Life	<input checked="" type="checkbox"/>		

ITX IS HARD





Mesh Data		Mesh Data		Mesh Data	
Required		Required		Required	
Spawn	<input checked="" type="checkbox"/>	Spawn	<input checked="" type="checkbox"/>	Spawn	<input checked="" type="checkbox"/>
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Size By Life	<input checked="" type="checkbox"/>	Dynamic	<input checked="" type="checkbox"/>		
		Sphere	<input checked="" type="checkbox"/>		
		Size By Life	<input checked="" type="checkbox"/>		

Spawn

Rate

Distribution

Constant

Can be Baked

Rate Scale

Distribution

Constant

Can be Baked

Apply Global Spawn Rate Scale

Process Spawn Rate

Burst

Particle Burst Method

Instant

Burst List

0 Array elements



Distribution Float Constant

20.0



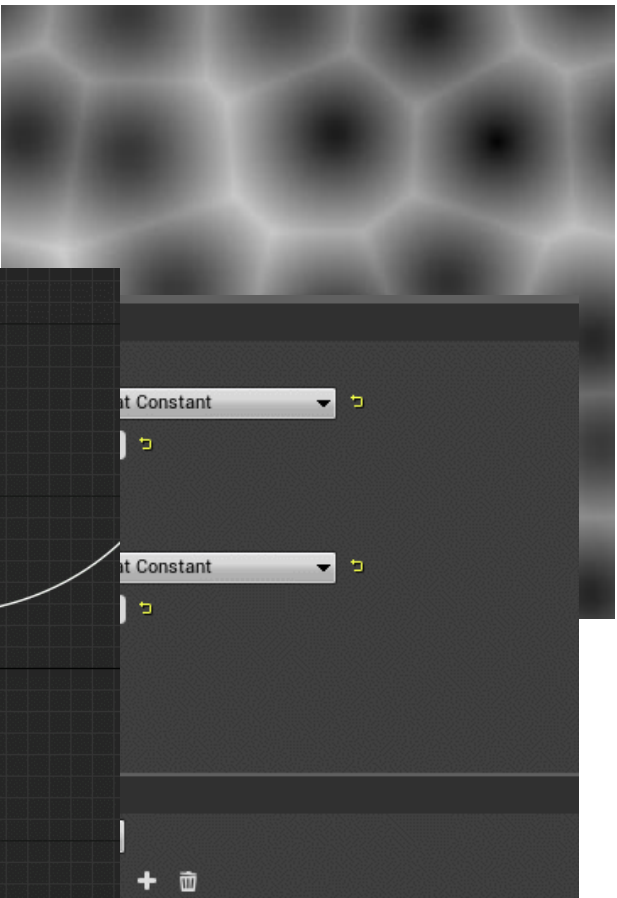
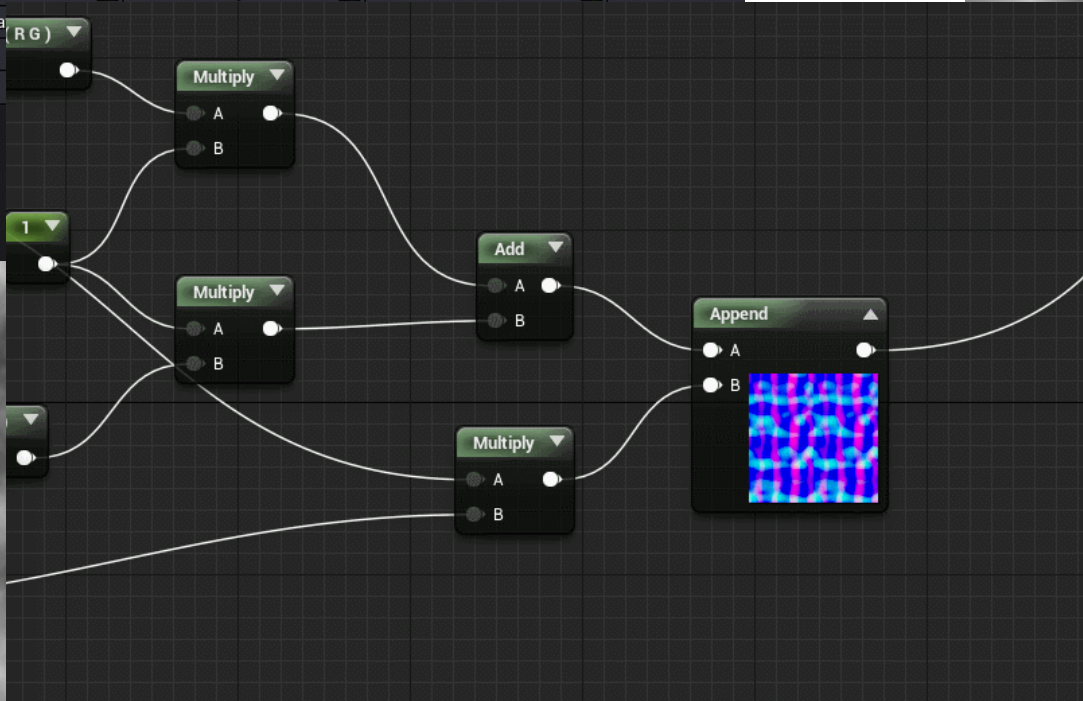
Distribution Float Constant

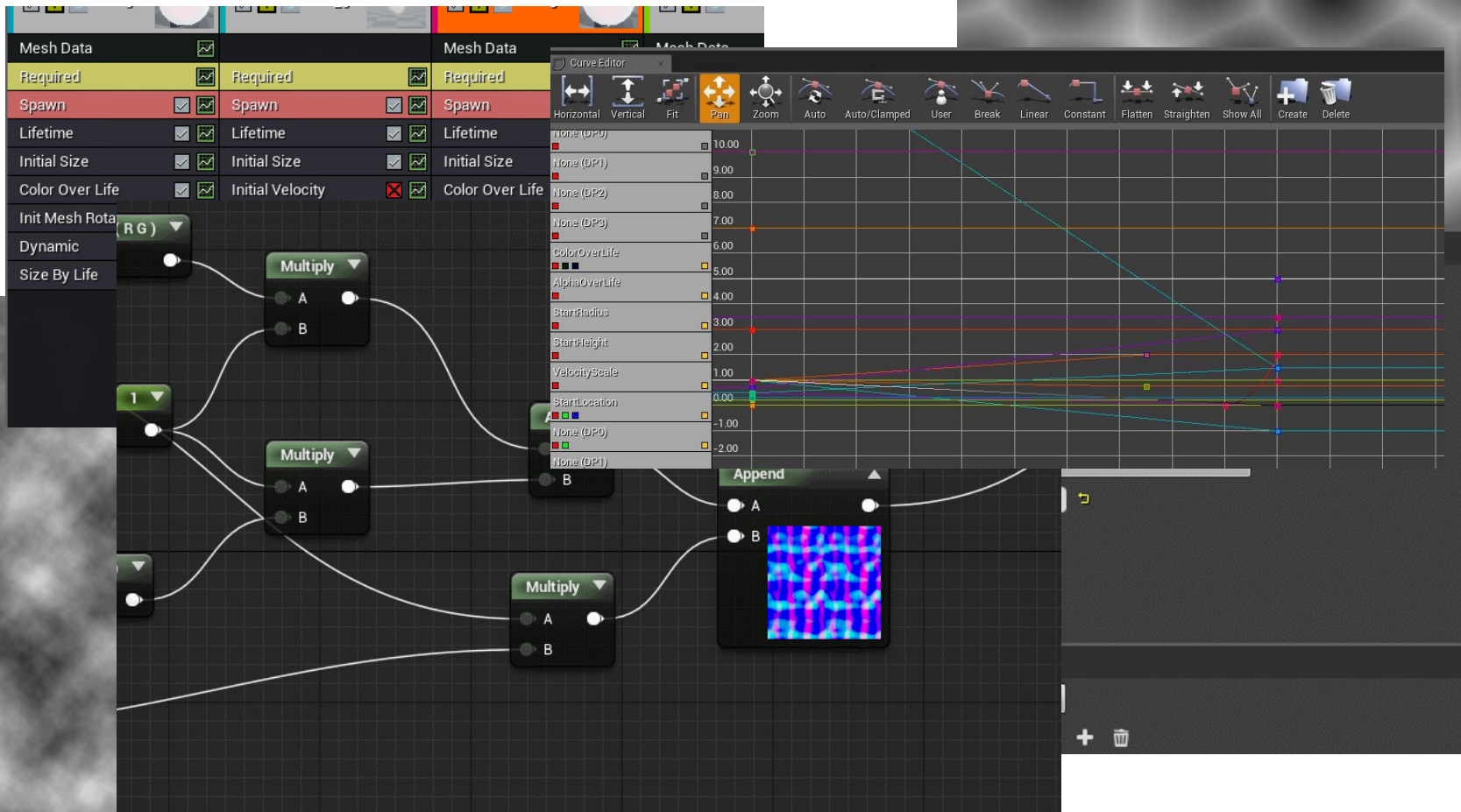
1.0

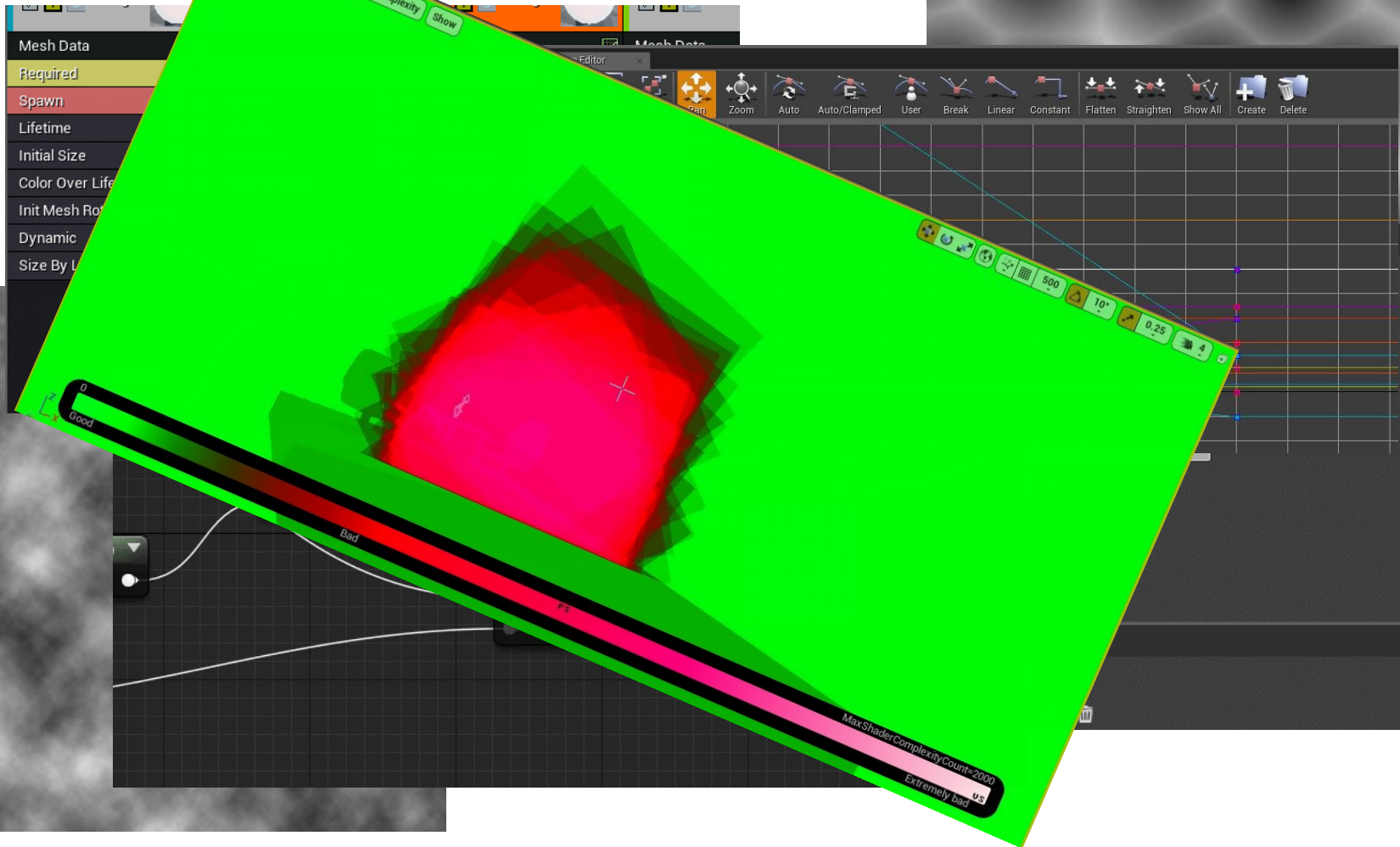




Mesh Data	Required	Mesh Data	Required	Mesh Data	Required
Spawn	<input checked="" type="checkbox"/>	Spawn	<input checked="" type="checkbox"/>	Spawn	<input checked="" type="checkbox"/>
Lifetime	<input checked="" type="checkbox"/>	Lifetime	<input checked="" type="checkbox"/>	Lifetime	<input checked="" type="checkbox"/>
Initial Size	<input checked="" type="checkbox"/>	Initial Size	<input checked="" type="checkbox"/>	Initial Size	<input checked="" type="checkbox"/>
Color Over Life	<input checked="" type="checkbox"/>	Initial Velocity	<input checked="" type="checkbox"/>	Color Over Life	<input checked="" type="checkbox"/>







FPS: 12

Mesh Data

Required

Spawn

Lifetime

Initial Size

Color Over Life

Init Mesh Ro

Dynamic

Size By L

Perspective Shader Complexity Show

Mesh Data

Editor

Spawn

Zoom

Auto

Auto/Clamped

User

Break

Lines

Create

Delete

MaxShaderComplexityCount=2000
Extremely bad us



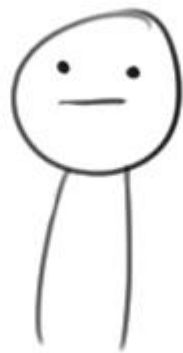
How to keep track of a million pieces?



VFX is STORYTELLING











VFX is STORYTELLING

Help keep a vision of the **whole**.

THIS TALK

- A **tool box** for thinking more creatively about vfx
 - 4 tools
 - “Motivate Your Magic”
 - “Story Structure for VFX”
 - “Exaggerating the Juice”
 - “Study Everything”

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 - “Study Everything”
- A framework to see yourself as an active participant in **creative problem solving** on your project

THIS TALK

- A **tool box** for thinking more creatively about vfx
 - 4 tools
 - “Motivate Your Magic”
 - “Story Structure for VFX”
 - “Exaggerating the Juice”
 - “Study Everything”
- A framework to see yourself as an active participant in **creative problem solving** on your project
- Lots of **GIFs**

CW: **body horror**

Tool 1

MOTIVATE
YOUR
MAGIC

A collection of small blue decorative elements, including dots and stars, arranged in a scattered pattern below the word 'MAGIC'.

KNOW how your VFX *work* in relation
the game world.

BE SPECIFIC

That's not just a challenge!



That's not just a challenge!

It's an **OPPORTUNITY.**



ABSTRACT RULES



CONCRETE WORLD



ABSTRACT RULES

“LUDO-NARRATIVE

DISSONANCE”

CONCRETE WORLD



ABSTRACT RULES



CONCRETE WORLD



ABSTRACT RULES

VFX

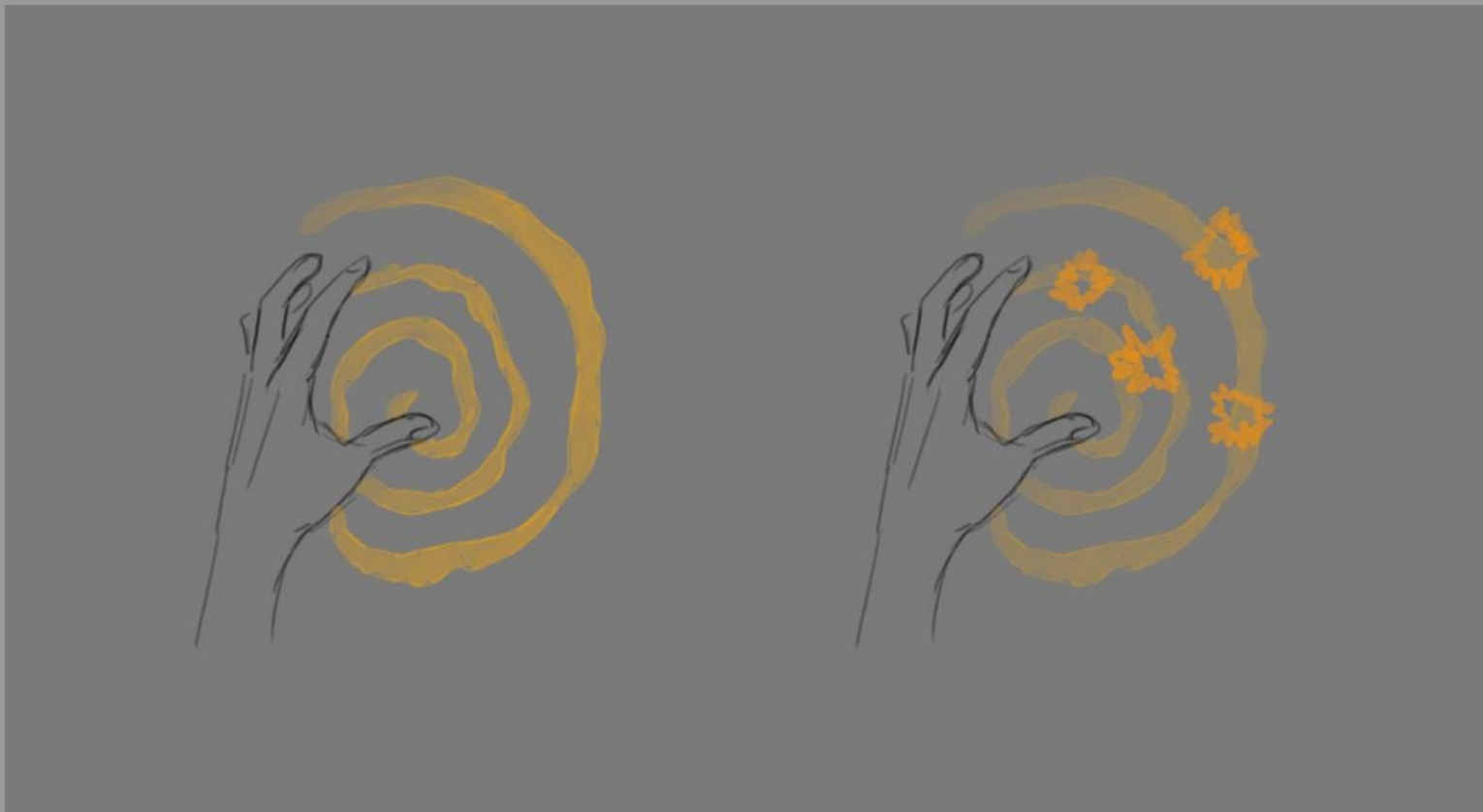
CONCRETE WORLD

Case study: **“Return to Sender”**

Problem introduction:

Problem introduction:

Make **ABSTRACT** damage reduction
into a **CONCRETE** thematic.



Two common problems:

“color shapes” and “lazy symbolism”



ABSTRACT RULES

VFX

CONCRETE WORLD



VFX Art Direction in *Bioshock: Infinite*:

Power *without* “magic”

Defensive shield *without magic*.



cstephenmurray.com







Case Study: “**Possession**”

Problem Introduction:

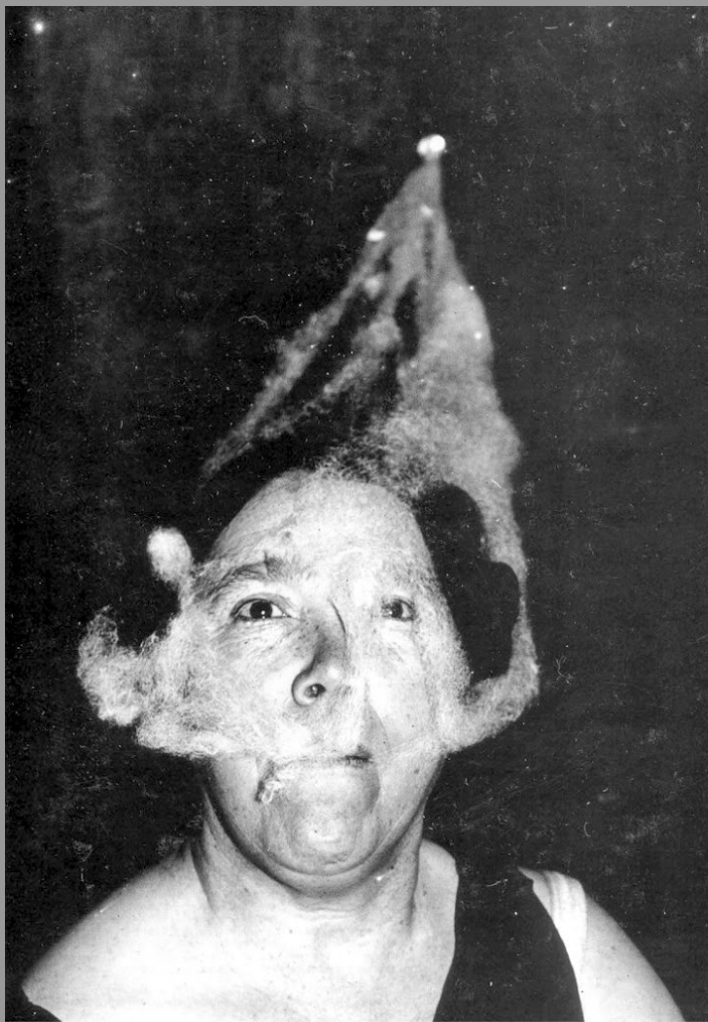
Problem Introduction:

How to ***physically ground*** a ghost?

ECTOPLASM

PERIOD REFERENCE





MORE RECENT REFERENCE









BUT:

Even a single lick of flame
deserves **specificity**.



















Other media: *How to Train Your Dragon*













Being **SPECIFIC** creates room for
SUBTLE *yet CLEAR* **DISTINCTIONS**



SUBTLE DISTINCTIONS are useful for
COMMUNICATING **STUFF**.



SUBTLE DISTINCTIONS are useful for
COMMUNICATING **STORY**.



SUBTLE DISTINCTIONS are useful for
COMMUNICATING **CHARACTER.**



SUBTLE DISTINCTIONS are useful for
COMMUNICATING **GAMEPLAY.**

VAGUE is BORING

VAGUE is *not just* **BORING**



VAGUE is *not just* **BORING**
VAGUE is also **CONFUSING**

So BE SPECIFIC.

MOTIVATE
YOUR
MAGIC

A collection of small blue decorative elements, including dots and stars, arranged in a scattered pattern below the word 'MAGIC'.

Tool 2

Story Structure

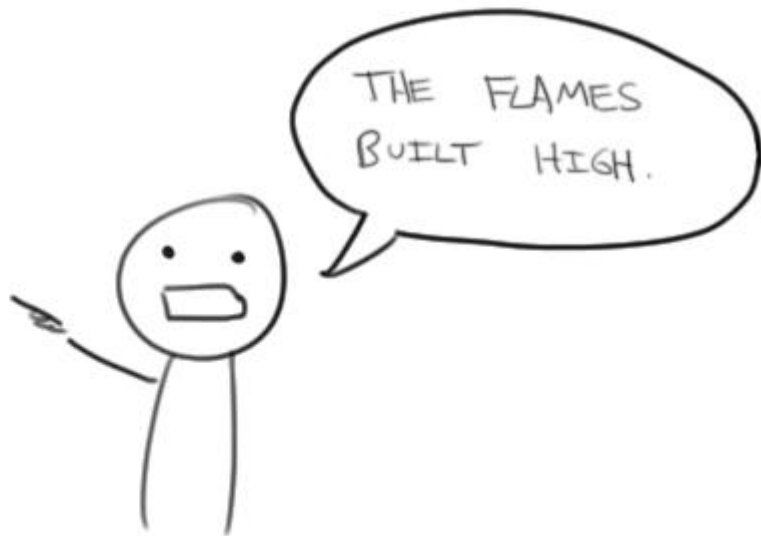
FOR **VFX**





Beginning, Middle, End





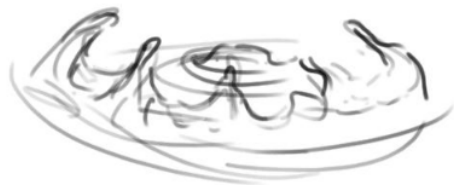


THE FLAMES
DIED AS THE
FUEL EXPIRED.





Enter Stage, Perform, Exit Stage





Anticipation, Action, Aftermath



Thinking in terms of story structure
also helps us ***be specific.***

The **STORY** of what is **HAPPENING**

Case Study: **Devil's Kiss** intro

Case Study: **Devil's Kiss** intro

STORY BEATS



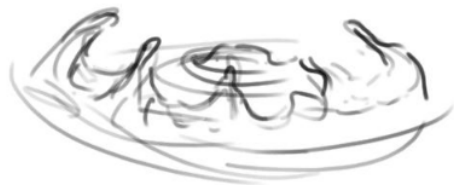






BUT:

Even in a single **puff of dust**
or **splash of water**
there is a multipart story.



ELEMENTAL MAGIC

The Art of Special Effects Animation



Joseph Gilland

Foreword by Michel Gagne



In other words, **KEY POSES**

In other words, **KEY POSES**

Anchors to organize your thinking.



SKETCHING = THINKING





SKETCHING = THINKING

Story Structure

FOR **VFX**

Tool 3

**EXAGGERATING
THE
JUICE**

Classic animation principle of
EXAGGERATION:

Classic animation principle of
EXAGGERATION:

SELECTIVE EMPHASIS

Case Study: **Handcannon**

Howcast.com



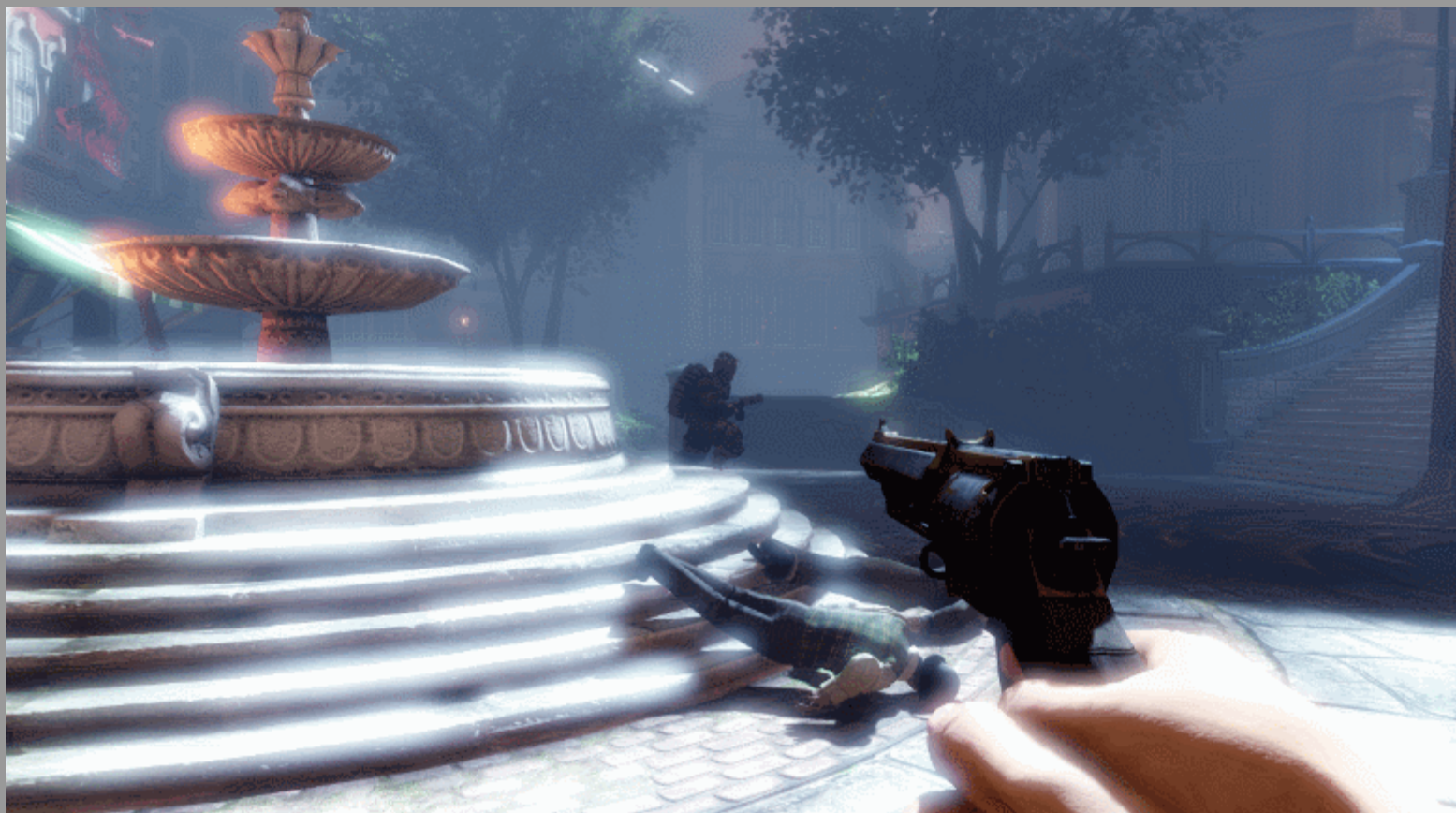














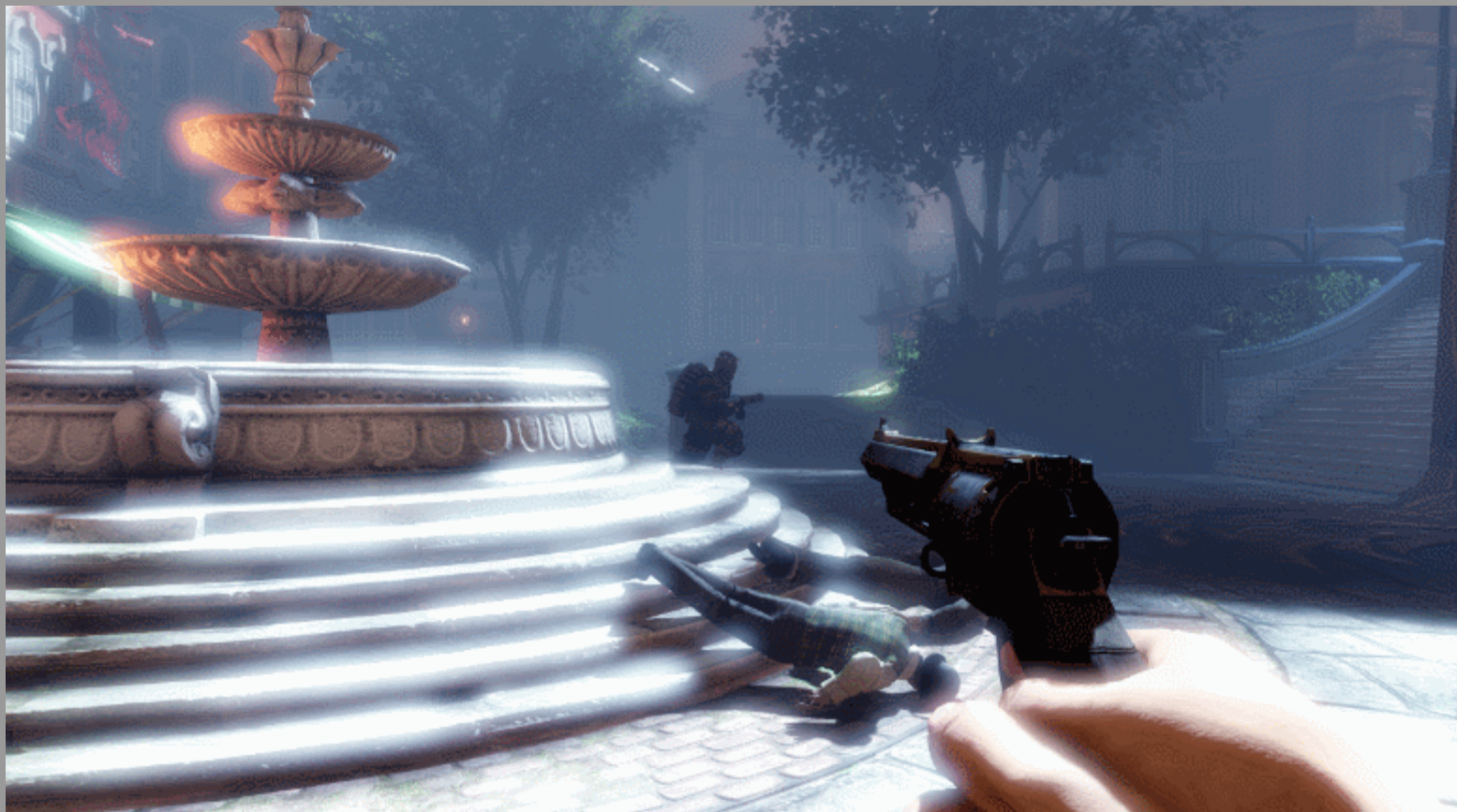
PADDYWHACKER HAND CANNON



3/1

WEAPONS
FROM
GAMES





BUT:

Even a single puff of dust is ripe for
exaggeration

Even a single puff of dust is ripe for
exaggeration

WE choose what shapes to *emphasize*.

Exaggeration can also be related to
SHAPE LANGUAGE



What you choose to exaggerate
contributes to TONE.

[ie: why Bioshock vfx emphasize body
horror]

There's always room for exaggeration,
Even in realism.

**EXAGGERATING
THE
JUICE**

Tool 4

STUDY



EVERYTHING

VFX is INTERDISCIPLINARY

KEEP STUDYING **ART, 3D + 2D**

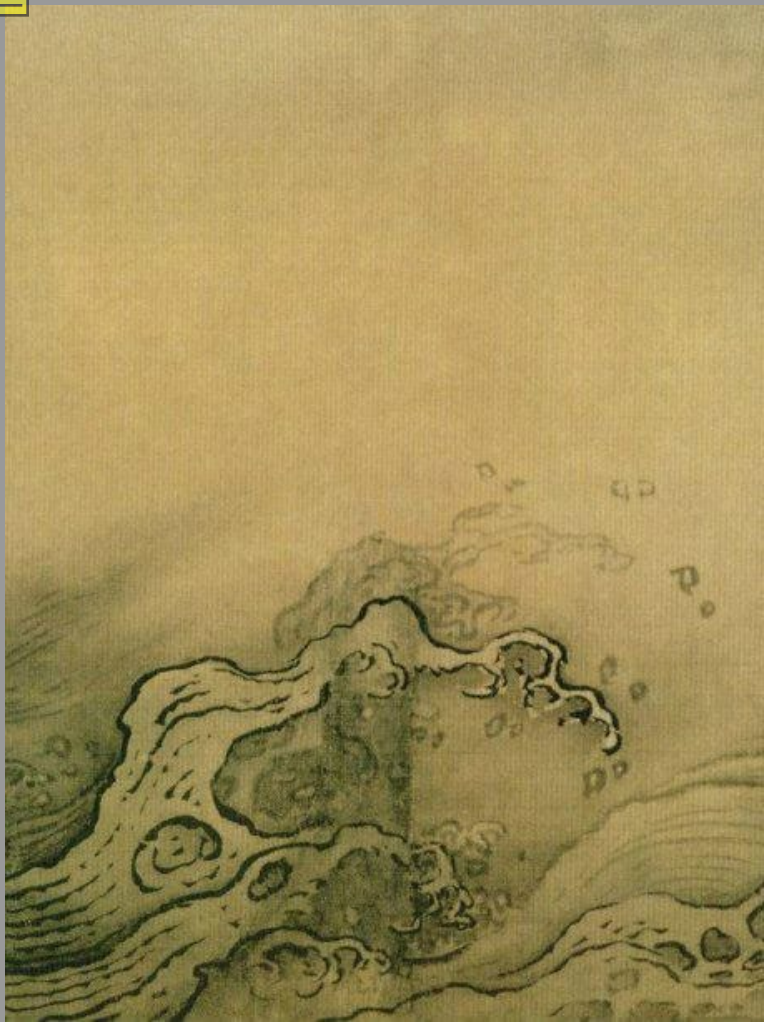
Communication ***inside the team.***

STUDY **ART HISTORY**

An entire human history of
VISUAL LANGUAGE

An entire human history of
VISUAL LANGUAGE

An entire world catalogue of types of
EXAGGERATION + STYLIZATION





The Dao of VFX Animation

Jeremy Griffith (Senior VFX Artist, Riot Games)

Location: Room 2014, West Hall

Date: Thursday, March 21

Time: 10:00am - 11:00am

Pass Type: All Access, GDC Conference + Summits, GDC Conference - **Get your pass now!**

Topic:  Visual Arts

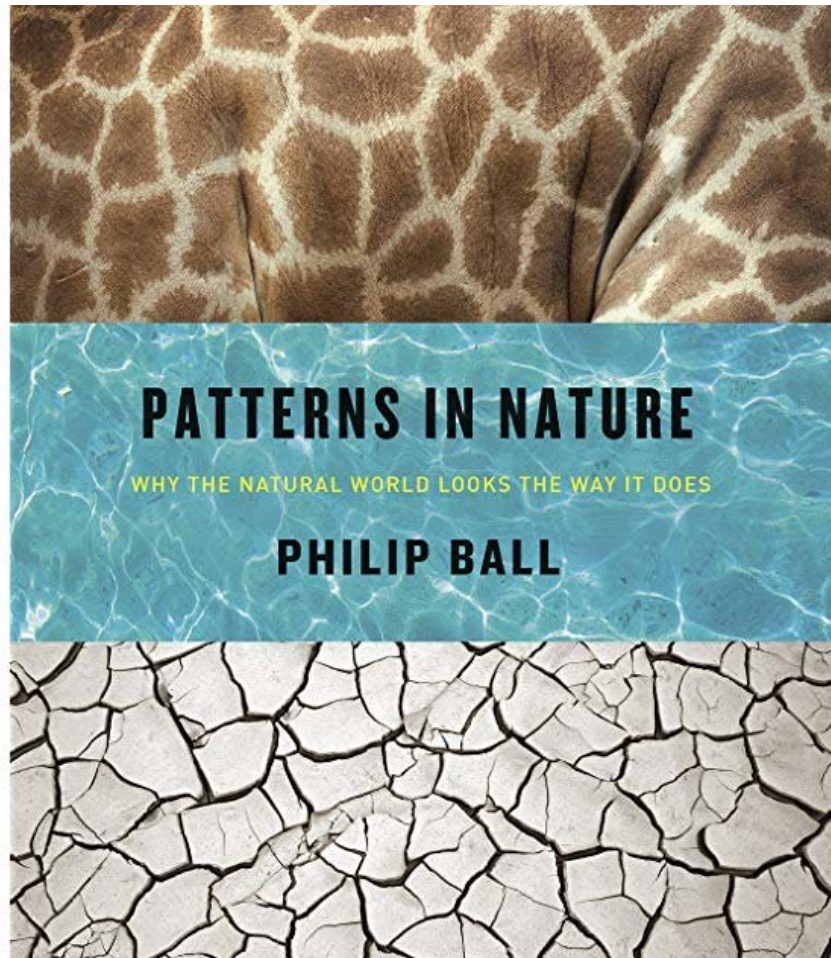
Format: Session

Vault Recording: Video

Audience Level: All

STUDY NATURE







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Build your **VOCABULARY** of **FORM**



“Sapir-Worf Hypothesis”

Our linguistic categories influence our perceptions and thoughts.









If you **KNOW** more stuff,

If you **KNOW** more stuff,

Then you will **SEE** more stuff,

If you **KNOW** more stuff,

Then you will **SEE** more stuff,

And you will be able to **CREATE**
more *and better* stuff.

Because also...



**THE CREATIVE TANK
NEEDS FUEL.**



**DON'T STARVE YOURSELF IN FRONT
OF COMPUTER SCREENS FOR YOUR
ENTIRE LIFE.**



DON'T STARVE YOURSELF IN FRONT
OF COMPUTERS FOR YOUR
BURNOUT
ENTIRE LIFE.



DON'T STARVE YOURSELF IN FRONT
OF COMPUTERS FOR YOUR
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STUDY



EVERYTHING

Putting it all together

Case Study:
TYPES of DRAGON FIRE

Case Study:

TYPES of DRAGON FIRE

DAMAGE

SLOW

DoT

Case Study:

TYPES of DRAGON FIRE

RED
Flames

BLUE
Flames

GREEN
Flames

VAGUE

Case Study:

TYPES of DRAGON FIRE

RED
Flames
+
symbol

BLUE
Flames
+
symbol

GREEN
Flames
+
symbol

LAZY

Case Study:
TYPES of DRAGON FIRE

FIRE

ICE

ACID

BORING

DRAGON BREATH

DRAGON BREATH

DRAGON ***BODILY FUNCTIONS***



SKETCHING = THINKING

SLOW = SNEEZE



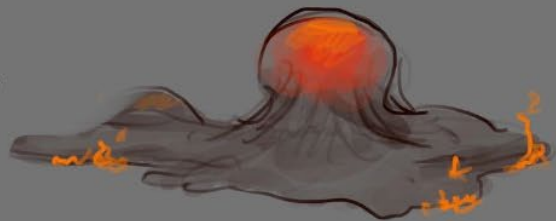
DRAGON
TAR - MUCUS



EMBERS
AT EDGE



FIRE BUBBLES
BUILD UP
FROM WITHIN

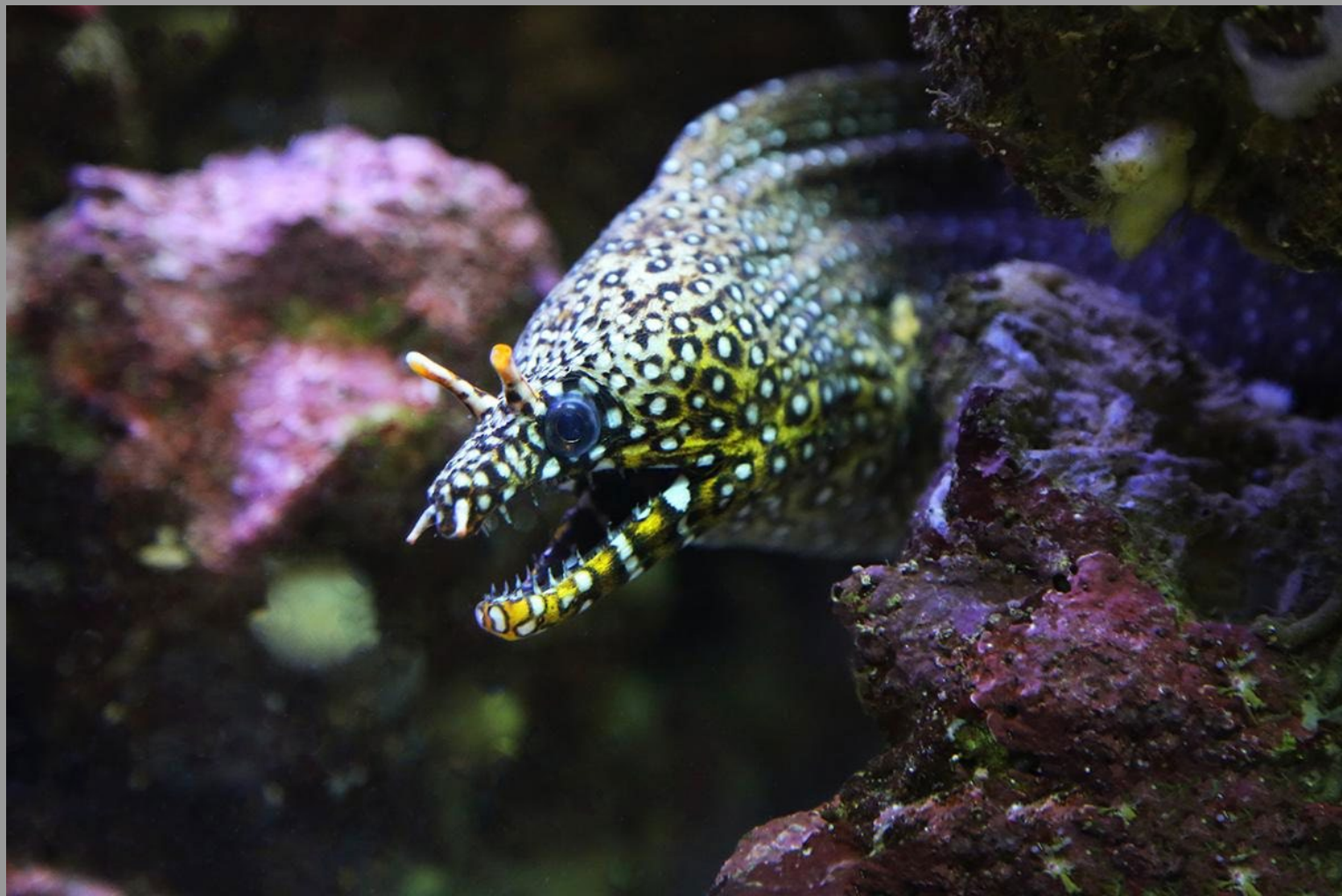


BUBBLES
BURST,
THROWING OUT
FIREBALLS



OPPORTUNITY:

Tie into dragon physiology







NOSE MOST
PROMINENT
FEATURE.



NOSTRILS LEAK
SMOKE.

WRINKLY SKIN,
STOCKY FORM.
LESS "ATHLETIC."



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PROMINENT
FEATURE.



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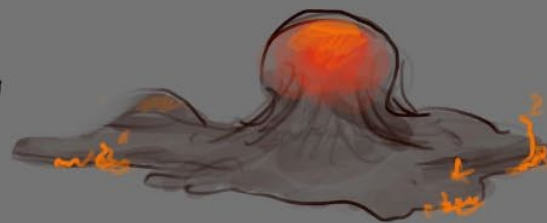


NOSTRILS LEAK
SMOKE.



EMBERS
AT EDGE

FIRE BUBBLES
BUILD UP
FROM WITHIN



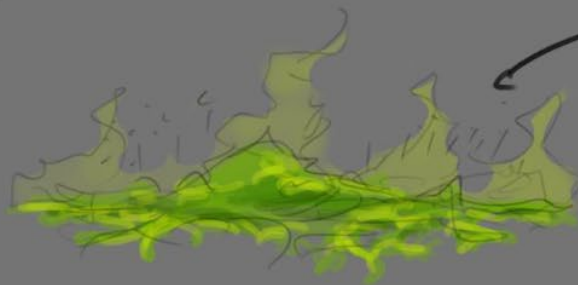
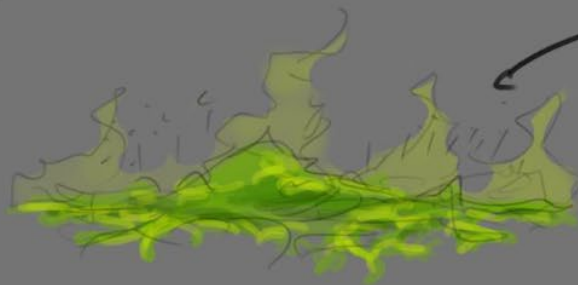
DoT = BILE



VISCOUS
BILE

CORONA
OF
FLAME

FIZZING,
BUBBLING.

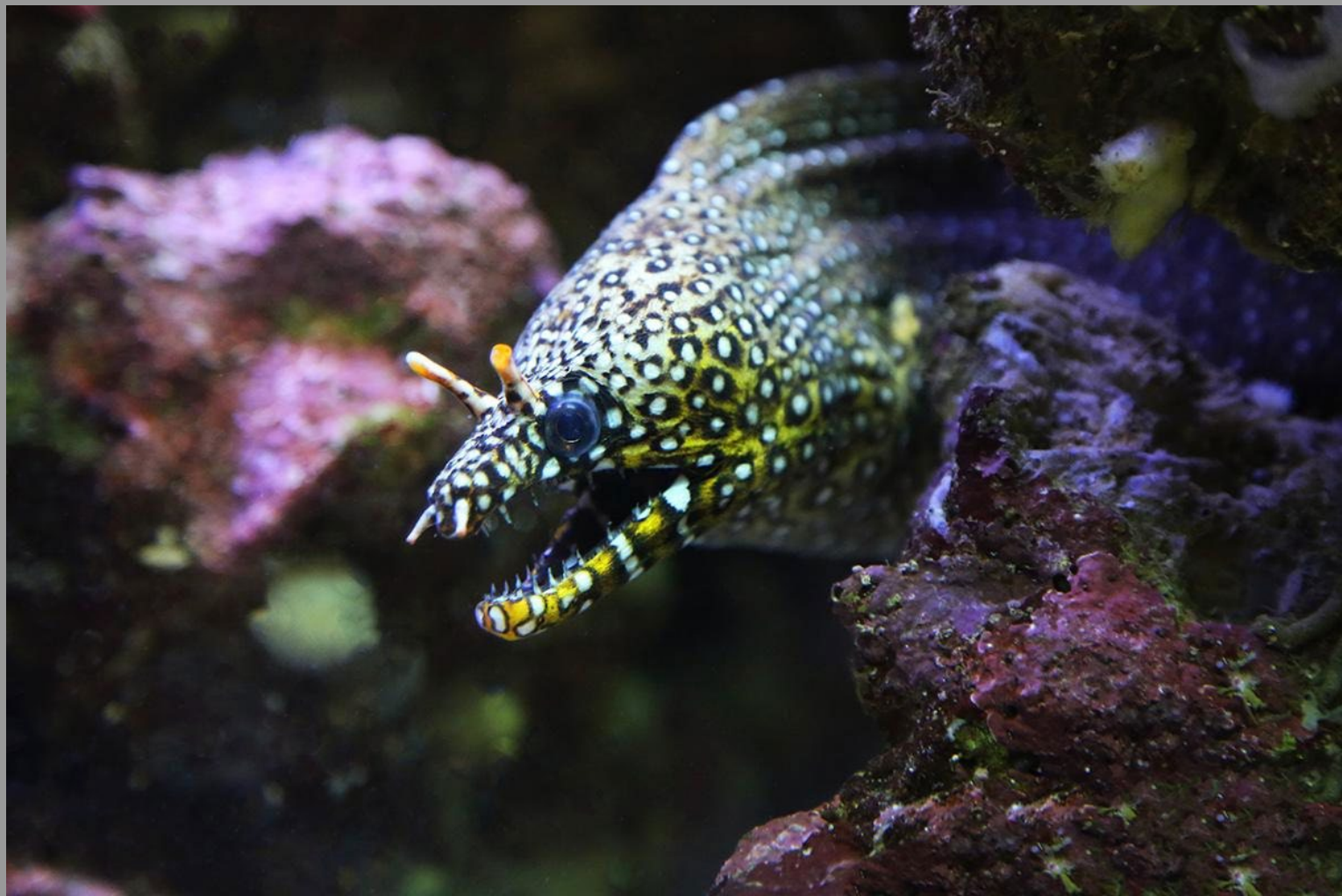


OPPORTUNITY:

Tie into dragon physiology









FRONTAL
SPOUTS.

PRESSURE
RELEASE VALVES.

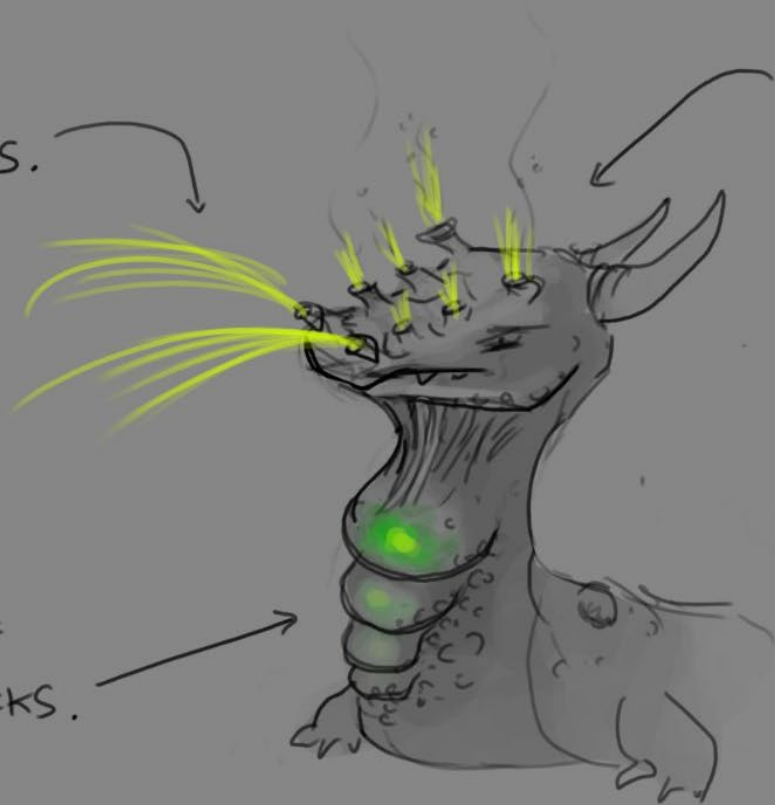
RIDGE OF
BILE SACKS.

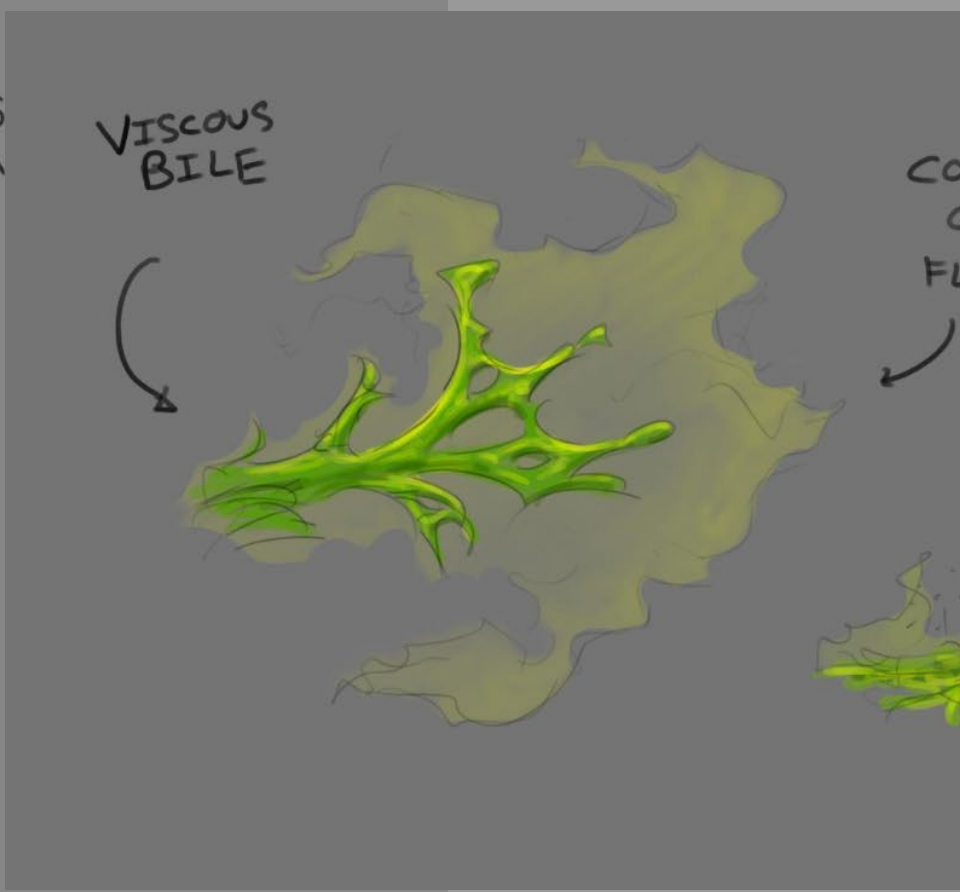
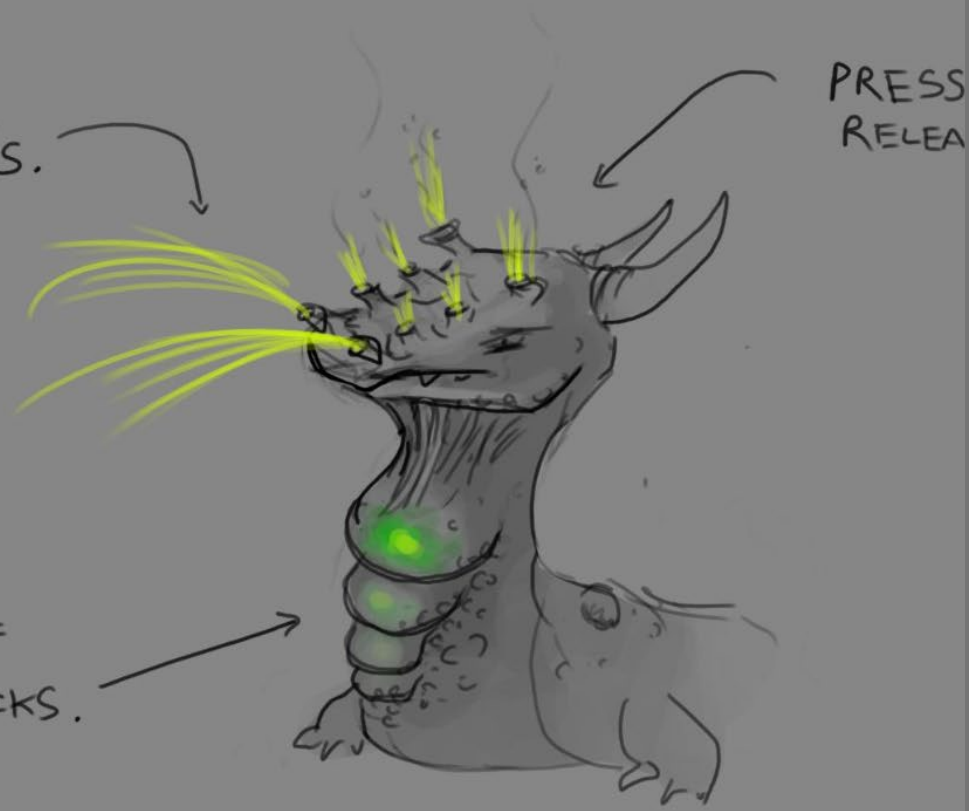


FRONTAL
SPOUTS.

PRESSURE
RELEASE VALVES.

RIDGE OF
BILE SACKS.





“Ok wait but that’s just acid.”

NO -- It's *stomach* acid + bile

NO -- It's *stomach* acid + bile

...which is more **SPECIFIC**

Case Study:

TYPES of DRAGON FIRE

DAMAGE

SLOW

DoT

Case Study:

TYPES of DRAGON FIRE

DAMAGE

BREATH

SLOW

TAR-SNOT

DoT

BILE-FONT

Case Study:
TYPES of DRAGON FIRE

DAMAGE

SLOW

DoT

BREATH

TAR-SNOT

BILE-FONT

UNITED by central theme of
HEAT

Case Study:
TYPES of DRAGON FIRE

FIRE

ICE

ACID

Case Study:
TYPES of DRAGON FIRE

DAMAGE

SLOW

DoT

BREATH

TAR-SNOT

BILE-FONT

UNITED by central theme of
HEAT

"But it's just magic!"

DON'T EVER SAY THAT

DON'T EVER SAY THAT

ARE YOU EVEN PAYING ATTENTION

IT'S *NEVER*
“JUST MAGIC.”

IT'S *NEVER*
“JUST MAGIC.”

It is our **job** to make it *more* than that.

CONCLUSION

ABSTRACT RULES

VFX



CONCRETE WORLD

FILL THAT GAP.

Be an active part of the **creative
problem solving** on your project.

Every effect you make has the potential
to **add clarity** to the **game rules.**

Every effect you make has the potential
to **add richness** to the **game world**.

THE **GOAL** IS **ALWAYS** **BOTH**.

MOTIVATE
YOUR
MAGIC

A collection of small blue decorative elements, including dots and stars, arranged in a scattered pattern below the word 'MAGIC'.

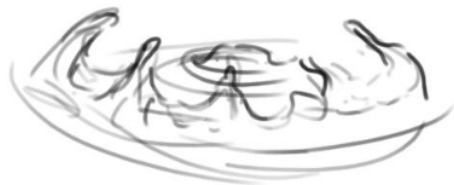
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the game world.

BE SPECIFIC

Story Structure

FOR **VFX**





**EXAGGERATING
THE
JUICE**



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OF COMPUTERS FOR YOUR
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ENTIRE LIFE.

ABSTRACT RULES

VFX



CONCRETE WORLD

ABSTRACT RULES

Be the expert

that can fill the gap.

CONCRETE WORLD

Jeremy Griffith

Senior VFX Artist, Riot Games

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