

Rational Game Design: Gameplay Sheet

Game: **Elemental Run**

Gameplay: **Overcoming Obstacles**

Step 1: Goal

Helped a doomed man battle against fae monstrosities by harnessing the power of elementals.

Step 2: Game Mechanics – Gameplay Loop

1. Choose an element to use in your game session.
2. When an obstacle enters the screen that requires your element to overcome, decide which of your abilities best suits the need of the situation¹
3. Use your ability at the correct time and help Jace avoid being hit by said obstacle or else lose a health point
4. If all health points are lost, the game restarts

NB:

1. The situation will change depending on how the player needs to interact with the game. The player uses offensive and utility abilities to interact with enemies and the environment respectively.

Step 3: Required Skills

Reflex –When you see an obstacle, you need to react quickly to it or risk running into the obstacle.

Precision– You must use your ability on the right spot on the screen; you need to swipe in the correct direction you want to send a projectile, or tap on top of an enemy to damage them.

Timing – The players need to correctly time when to use their elemental abilities to overcome obstacles. It can't be timed too early or too late otherwise the player will end up hitting the obstacle and losing one point of health.

Step 4: Expected Inputs/Outputs

Air Element

Tap and hold(anywhere there's no enemy) – Makes Jace jump into the air

Swipe Down – Makes Jace do a sliding crouch

Swipe Left/Right – Changes screen scroll speed, & the rate the multiplier increases

Single Tap – Electric shock the enemy

Fire Element

Sends a fireball in the direction the player swipes from Jace

Single Tap – Combusts enemies

Water Element

Sends a water jet in the direction the player swipes from Jace

Single Tap – Drowns enemies in a bubble

Earth Element

Tap and hold – creates a shield

After holding a tap, swipe in a direction – throws the shield

Single Tap – Encases enemies in rock

Step 5: Parameters – Air Element

Air abilities

(starting property) – Makes Jace jump into the air

- Jump Heights for amount held
- Jump Speed
- Air time

Makes Jace do a sliding crouch

- How long you slide for

Changes screen scroll speed, & the rate the multiplier increases

- The amount the screen scrolling speed is increased/slowed
- The rate the multiplier increases

Single Tap (starting property) – Electrocutes enemies

- How much damage the tap does to enemies

Step 5: Parameters – Fire Element

Fire Abilities

All the fire elemental abilities revolve around the fireball that is spawned when the player swipes the screen. The fireball starts with a single property. As more properties are bought, they're added to the fireball toolset. The fireball deletes itself after it touches something.

- How far fireball travels
- How fast fireball travels
- The size of the fireball
- The cooldown of when the next fireball can be used

Fireball Properties

(starting property) Incinerates certain objects in Jace's way

- What object can be incinerated

The area around the fireball lights up dark areas so you can clearly see the screen again

- How bright it lights up the area
- Radius around fireball that is lit up

Light a bonfire that ends the game, but adds your distance travelled to your base score

- How often bonfires spawn

Single Tap (starting property) – Combust enemies

Step 5: Parameters – Water Element

Water Abilities

All the water elemental abilities revolve around the water jet that is spawned when the player swipes the screen. The water jet starts with a single property. As more properties are bought, they're added to the water jet toolset. The water jet deletes itself after it touches something.

- How far water jet travels
- How fast water jet travels
- The size of the water jet
- The cooldown of when water jet can be used

Water Jet Properties

(starting property) Create a puddle that slows down enemies

- How big is the puddle
- Does it spawn from left to right or from the middle out from where the water jet landed
- How long does puddle last
- How much does it slow enemies

Puts out fire patches

- Does it put out entire patch or only part of it

Cleans dirty obstacles before other elementals can interact with them/protect from fire

- Do some obstacles require more "cleanings" than others

Single Tap (starting property) – Drowns enemies in a bubble

Step 5: Parameters – Earth Element

Earth Abilities

The player using the earth element will have a bar on their screen that will deplete any time an ability is used. The bar will deplete every second the ability is held and a chunk will be used when throwing the shield. When the screen is not being tapped then the bar will regenerate gradually.

- How much the bar will deplete/regenerate

(starting property) – Block projectiles/ environmental hazards

- What projectiles can be blocked

Shield bash to ram through objects

- What objects can be rammed

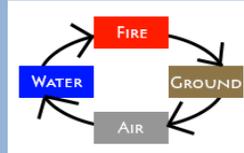
Shield throw to activate levers and collect powerups

- How fast shield travels
- How far it travels before boomeranging back

Single Tap (starting property) – Encase enemies in rocks

Step 5: Parameters – Enemies

Enemies can be attacked by players tapping them. The catch is that only the element that is strong against the enemy type will work using a rock, paper, scissor style. The following is a breakdown of which enemy types are weak to which elemental types:



Enemy types will be identical to the wisps types and are weak to their opposing types.

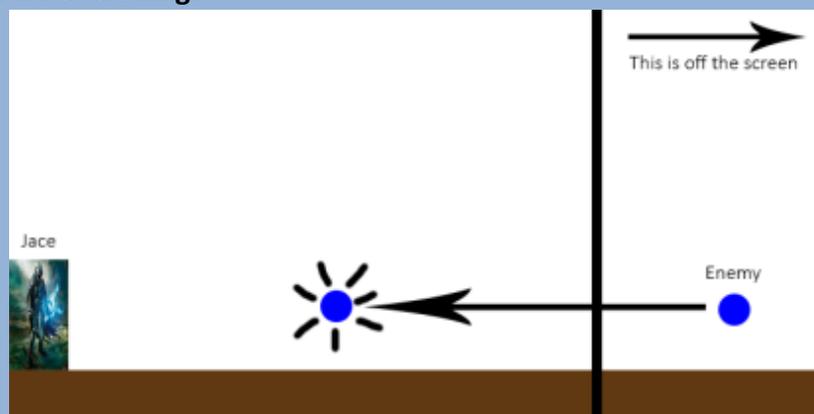
- **Enemy Health**
- **How fast enemies move**
- **Enemy movement patterns**

There are three enemy types:

1. A basic enemy that a normal tap will kill
2. An enemy that's invulnerable to all taps, and you must time a tap as it goes to attack you resulting in breaking its poise and stunning it momentarily. The next tap will kill it
3. An enemy that will cycle through requiring different random element types to attack it before it dies.

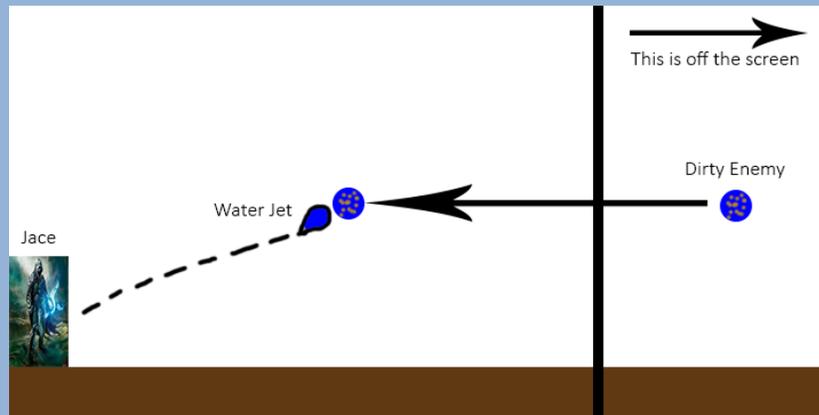
Step 6: RLD Patterns - Reflex

In all of these RLD examples, imagine the background of the image is constantly moving to the left to simulate scrolling.



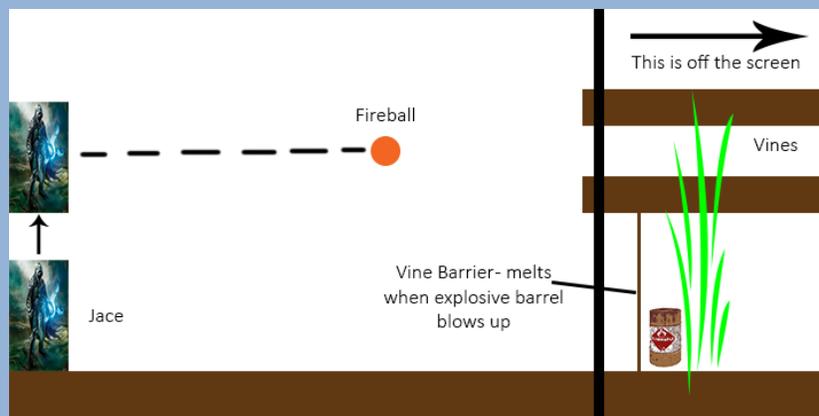
Required Actions: The player needs to wait and look for an obstacle to enter the screen, like an enemy. As soon as the obstacle enters the screen the correct player needs to react as fast as possible to get rid of the threat. In this case the player controlling the air elemental would have to tap the enemy to kill it because the water element is weak to the air element.

Step 6: RLD Patterns - Precision



Required Actions: The player has to anticipate where to shoot the water jet to make it hit the dirty object, so they need to lead their shot a bit. The water elemental player will have to precisely swipe in the correct direction that will result with the water jet colliding with the dirty enemy which will allow the now clean enemy to be tapped and killed by the person controlling the air elemental.

Step 6: RLD Patterns - Timing



Required Actions: This scenario requires all 3 player skills. Reflex is required the same as always to react as quickly as possible. We would first need the air elemental player to jump a certain height (precision) that Jace has a line of sight to the vines. Then the fire elemental player will need to time when Jace is at the peak of his jump and use precision to swipe a fireball that will hit the vines. This will burn them away, igniting the barrel which will explode and melt the vine barrier allowing Jace to safely travel forwards.

Step 7: Sign and Feedback

As the core gameplay revolves around Jace and the four different elements, the feedback will be focused more towards each element's abilities as well as Jace himself.

Air Elemental

- When Jace jumps, there will be a little gust of wind beneath his feet to explain how he was able to jump. The higher the height of the jump, the more of a gust there is.
- When Jace goes into a sliding crouch, it will happen instantaneously. Jace's character model will become much lower during this time.
- The screen scrolling speed will have obvious feedback in the sense that the environment will speed up or slow down accordingly.

Fire Elemental

- When an object is incinerated, it will glow (give off light) and will have a flame effect for the duration it is burning.
- When a fireball travels, it has a glow effect surrounding it. When it hits a wall it will cause a little explosion and disappear.
- When a bonfire is lit, it will roar into a fire and bring Jace to a stop where he'll warm his hands.

Water Elemental

- When enemies walk into the water, there will be ripples to signify the slowing effect of the water.
- When a water jet hits anything on fire, the fire will go out and the water jet will disappear into a bunch of steam. If a water jet hits the ground it will burst and form a puddle around that area.
- If a water jet hits a dirty obstacle, the water jet will burst and the dirty object will give off a shining effect for a second.

Earth Elemental

- When an object is blocked with the shield, it will make a clinking noise and the object will drop off the bottom of the map.
- When the shield bash is used, the part of the map will break apart as the player moves through it.
- Using the shield throw will throw out an object that looks like a boomerang.

Jace

- When Jace hits an obstacle, his health bar will go down and he will flash for a few seconds to show that he's temporarily invulnerable.
- If Jace walks into a burning obstacle he will be set on fire.
- Jace would be animated where one hand controls the fireball and the other controls the water jet.
- Walking into a puddle will remove the fire effect and give off a little steam.

