FOOL'S GOLD

DESIGN DOCUMENT

EXECUTIVE SUMMARY

Fool's Gold is a chaotic couch co-op tomb-raiding game in which two players work together to grab as much treasure as they can and use a variety of transportation mechanisms to get the treasure back to their escape vehicle before time runs out. It mashes the frantic, quick-fire co-op play of Overcooked with Indiana Jones-style tombs, traps, and adventure to create a uniquely tumultuous teamwork experience.

OVERVIEW

Fool's Gold plays from a third-person perspective, with an overhead camera. The gameplay has a strong focus on co-operative play and teamwork, with many elements of the game often heavily incentivising or requiring co-operation between players.

Each level features a new tomb for players to ransack, and the objective of each level is for players to score as many points as they can and climb aboard the escape vehicle before the tomb explodes. The only way to score points is to 'bank' treasure by loading it into the escape vehicle, so in order to achieve higher scores, players are challenged to get treasure out in the quickest way possible (see SCORING for more information).

DEMOGRAPHIC

Fool's Gold is targeted towards players who enjoy co-operative party-action games, such as *Overcooked!*, *Moving Out*, and *Tools Up!*.

One of the design pillars is playability/streamlining, with the intention of imbuing the game with a real 'pick up and play' factor. Ideally, this will allow even those who have little gaming experience and literacy to learn our game and start having fun relatively quickly. That said, the game will still provide an engaging and exciting experience for seasoned game players.

The game will have a light-hearted, cartoony aesthetic, but also some deadly traps and spooky monsters. As such, will be suitable for anyone over the age of 7.

PLATFORMS

Fool's Gold will be developed for PC and released on Steam first. If successful, the plan is then to bring the game to current consoles (Switch, Xbox One/Xbox Series X, PS4/PS5) within six months.

Steam is a prominent platform for indie game releases and has an established player base for games of this kind, as shown by the sales of similar games, such as *Overcooked!*, *Tools Up!*, and *Moving Out*. Furthermore, as Steam has no certification process, this allows us to be more agile with releasing and updating the game, which we feel is important early on in the game's life, as we want to respond quickly to player feedback to help shape the game and fix any missed bugs.

If the game proves successful on Steam, we will then put those profits towards the cost of porting the game to console platforms. By the time the game releases on consoles, any issues with bugs or balancing should already have been ironed out from updating the PC release, and we anticipate this will help us avoid having to release numerous updates on the console platforms, each of which would require us to have to go through each platform's certification process.

DESIGN PILLARS
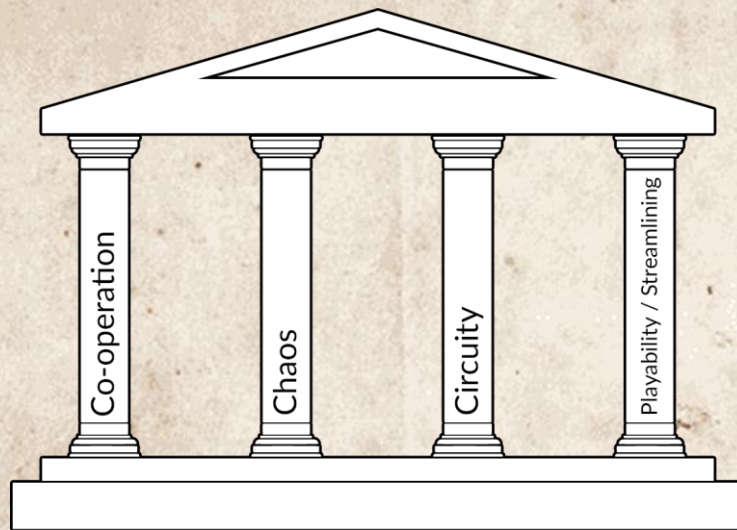
Co-operation

The game is built around player co-operation. As such, I am attempting to design all interactions, tasks, objectives, and mechanics so that either they are easier or quicker to accomplish with another player, or co-operation is *required*.

Chaos

I think a little chaos and unpredictability can make a game more fun, and this is what I aim to achieve in this game. I will aim to design level-unique events, hazards, and interactions that introduce complications for the players, which should prevent them from settling into comfortable roles and routines. These will force players to react accordingly to what's happening, communicate with each other, and make quick decisions.
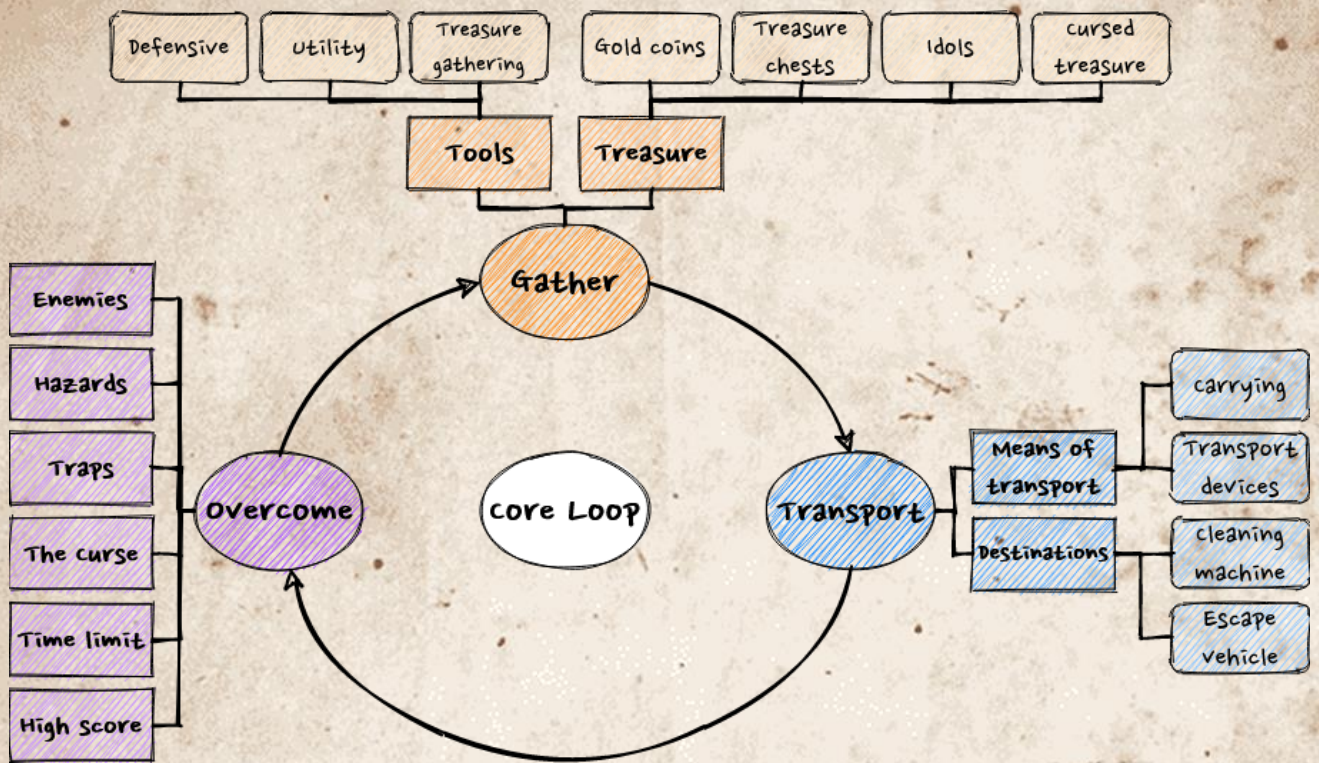
Circuity

For the various tasks and actions the player must take, I aim to design these in a way so that they are not simply straightforward. I want players to have to go through multiple steps in order to complete tasks and accomplish goals. This will give players more to think about and will prevent the game from being too simple.

Playability/Streamlining

I want the controls and game mechanics to be fairly easy to grasp, so it's easy for newcomers to pick up and play. The complexity comes from the tactics and strategizing within the levels. The idea is that *Fool's Gold* will be the kind of game people can fire up at social gatherings or parties for a few rounds. Rounds will be quick, which will allow players to rotate often, but also enables players to be flexible with the time commitment they give to the game while still providing them a meaningful experience.

CORE LOOP

Defensive | Utility | Treasure gathering | Gold coins | Treasure chests | Idols | cursed treasure

Tools | Treasure

Gather

Enemies | Hazards | Traps | The curse | Time limit | High score

Overcome | Core Loop | Transport

Means of transport | Destinations

carrying | Transport devices | Cleaning machine | Escape vehicle

Gather: Players gather items and tools, and use them to gather treasure to take back to the escape vehicle.

Transport: Players transport treasure around the tomb to where it needs to go, such as the cleaning receptacles and the escape vehicle, making use of transportation devices as well as transporting the treasure on foot where appropriate.

Overcome: Players must contend with enemies, hazards, and deadly traps, and overcome all of these to achieve the highest score possible.

COMPULSION LOOP
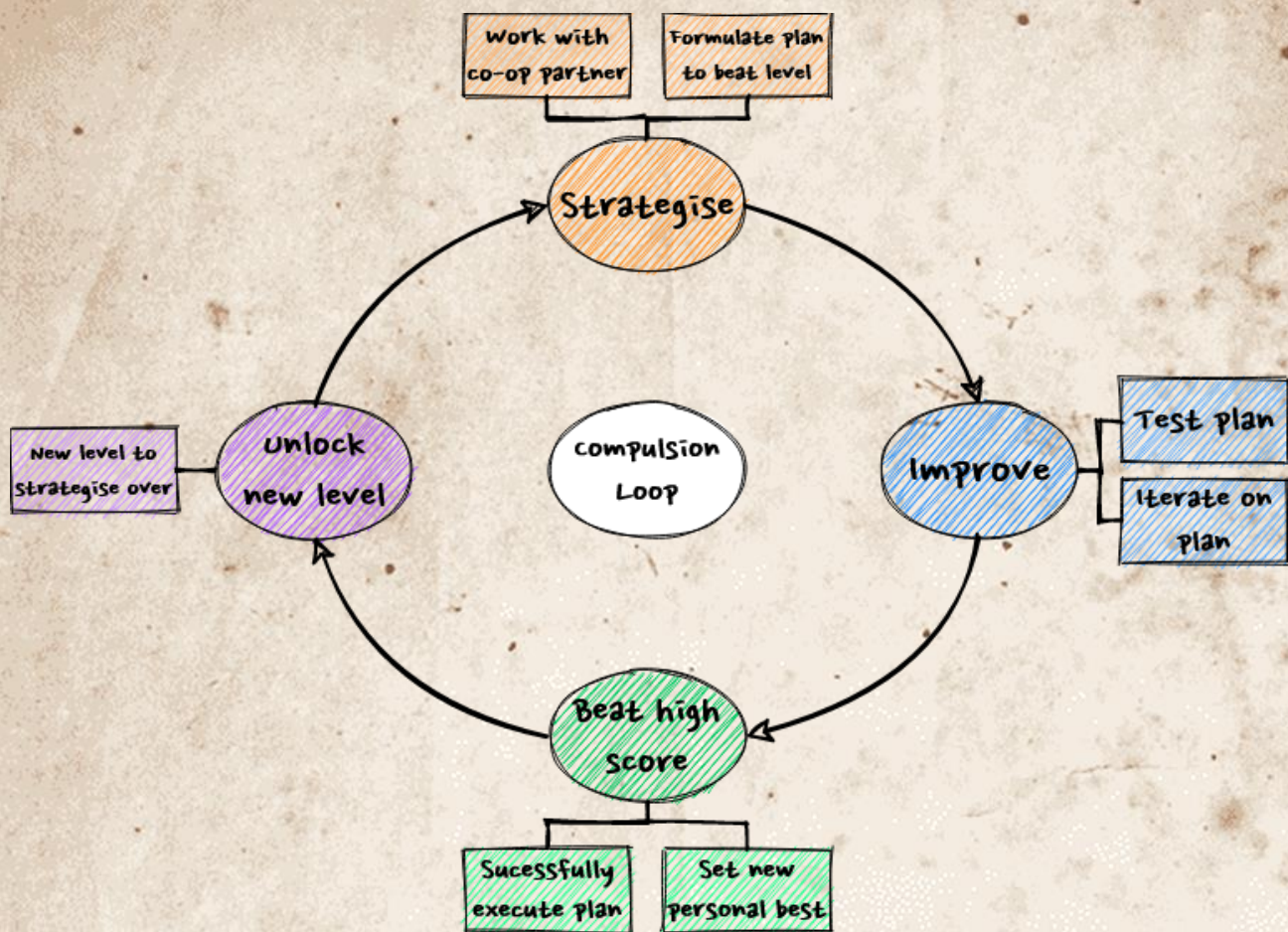
Strategise: Players will work together to strategise and formulate a plan in order to get the treasure out as quick as possible.

Improve: Players test out their plan and iterate upon it over several replays of the level.

Beat high-score: Players finally settle on a plan and successfully execute on it, which enables them to beat the high score and set a new personal score record.

Unlock new level: Beating a set high-score will unlock the next level for players to play, giving them the opportunity to play out this compulsion loop over again.

CORE MECHANICS

PLAYERS

Both player characters are equally skilled and capable of performing all actions. The actions available to players are:

- Move
- Look / rotate facing direction
- Sprint
- Jump
- Pick up an item
- Drop currently held item
- Use currently held item
- Whack (perform an attack)
- Interact with something

Players move at a speed of 2m per second when running, and 4m per second when sprinting. Players can jump a maximum of 2m high. Pressing and holding the jump button will perform a higher jump in comparison to a quick tap of the jump button.

HEALTH / DEATH

Each player's health is comprised of eight segments. Taking damage from an enemy, hazard, or other threat will deplete one or more of these segments. When all segments have been depleted, the player will die.

Full health   *Dead*

Players may replenish health segments by running over bandages. Bandages have a 50% chance of dropping when players defeat a mummy. Each time a player picks up bandages, it will restore four of their health segments.

When a player dies, their body remains at the location where they died. However, if a player dies in an inaccessible location, such as lava, their body will be transported to the Chamber of Immortality after 10 seconds.

If a player dies, the other player may resurrect them. To resurrect them, a player must carry the dead player's body to the Chamber of Immortality if it is not already there. Once there, they can pick up the Golden Chalice, fill it with resurrection juice from the nearby fountain, and pour it on the dead player. This will bring them back to life with four segments of health. Players must not take the Golden Chalice outside of the Chamber of Immortality. If they do, the game will immediately enter the 'Danger Phase' and remain so for the rest of the time limit.

SCORING

The only way to earn points is to 'bank' treasure by loading it into the escape vehicle. Treasure has a value amount (see Core Mechanics – Treasure) which is the amount of points that will be added to the score when the treasure is 'banked'. Because players have limited time, the way to achieve higher scores is to collect and transport treasure as quickly as possible.

If only one player escapes, the final score will be halved. If both players die, the game ends and the final score will be ZERO.

If a player dies, they may still escape. If a dead body passes the 'escape line' (see next section 'TIMER & END OF GAME), either by being loaded into the escape vehicle and driven across or carried across by another player, the dead body counts as escaped and players will retain their full amount of points.

TIMER & END OF GAME

Every level has a time limit. The time limit will differ for each level based on the size and complexity of the level. Bigger, more complex levels will have a longer time limit.

For the last 20% of the level timer, the game shifts into the 'Danger Phase'. For example, if a level lasted 10 minutes, the last 2 minutes would be the Danger Phase.

During the Danger Phase, the tomb begins to collapse, enemy spawn rates are doubled and hazards become more dangerous, but points for collecting treasure are doubled.

When the timer expires, the tomb will explode. Any player that has not yet escaped will be instantly killed.

To escape, players must cross an 'escape line' outside the tomb. Players may drive the escape vehicle over this line or cross it on foot.

Players can choose to end the game at any time by crossing the escape line, so they always have the option to play it safe and end the game with their current amount of points rather than risk dying and losing them.

The level ends when one of the following conditions are met:

- All surviving players have escaped.
- All players have died.

Once the game has ended, a score screen will appear, informing players of their final score.

TREASURE

The game revolves around the collection and transportation of treasure. Collecting treasure is the only way in which players can earn points, and there are several different treasure types with varying point values. These are listed below...

GOLD COINS

Gold coins are the lowest value treasure but are plentiful and quick to transport.

Where to find: Inside vases. Smash open a vase for a burst of 10 coins. The coins bounce and roll away, so players will want to catch them quick before they roll into lava or off into a chasm.

How it's collected: *Without sack:* Walk into a coin to automatically pick it up. When players get near the escape vehicle, any coins not being carried in a sack will be automatically banked.

With sack: While carrying the sack, hold the use item button to hold open the sack. Coins will be attracted to the sack and automatically added to the sack when they get close enough (see TOOLS > Sack for more information). Players must manually place the sack in the escape vehicle to bank it.

Max carry capacity: 50 / 150 with sack

Movement speed reduction: *Without sack:* 0.2% per coin, up to 10%.

With sack: 0.1333% per coin, up to 20%

Value: 2 per coin

TREASURE CHESTS

Treasure chests are medium-value treasure. Players will be able to find several per level (exact number depends on the level), but are not as common as gold coins.

Where to find: Buried under sandy ground.

How it's collected: When standing directly over a buried treasure chest, use a shovel to dig it up. You can use a metal detector to help you locate buried treasure chests. The chest raises out of the ground as you dig. Once it is fully dug up, you can pick it up and carry it. Players must manually place the treasure chest in the escape vehicle to bank it.

Max carry capacity: 1

Movement speed reduction: 30%

Value: 500

IDOLS

Idols are high-value treasure, but involve more time and effort in order to acquire. They're kept in more dangerous areas of the tomb, guarded by ancient contraptions and deadly traps that players must pass to get to the idol.

Where to find: Hard-to-reach locations that require co-operation to get to.

How it's collected: Picked up, and requires co-operation to get out. Players must manually place the idol in the escape vehicle to bank it.

Max carry capacity: 1

Movement speed reduction: 50%

Value: 800

CURSED TREASURE

Cursed treasure is the highest-value treasure that players can find, and like idols, it's hidden away in hard-to-reach areas, requiring players to overcome puzzles, traps, and skeleton guardians to reach. If players manage to get to it, removing the cursed treasure from its altar will trigger the curse.

Where to find: On an altar, in a hard-to-reach location that requires co-operation to get to.

How it's collected: Picked up, and requires co-operation to get out. Players must manually place the cursed treasure in the escape vehicle to bank it.

Max carry capacity: 1

Movement speed reduction: 50%

Value: 1600

Extra: Picking up the cursed treasure triggers the curse.

And here are the treasure statistics in relation to each other...

Treasure type	Move speed reduction (%) per treasure	Carry capacity	Move speed (%)	Speed reduction (%) total	Seconds to walk 10m	Value per treasure	Value of full capacity bank	Value per meter
Coins (Pocket)	0.002	50	0.9	0.1	5.5	2	100	18.18
Coins (Sack)	0.001333	150	0.8	0.2	6.0	2	300	50.00
Treasure Chest	0.3	1	0.7	0.3	6.5	500	500	76.92
Idol	0.5	1	0.5	0.5	7.5	800	800	106.67
Cursed treasure	0.5	1	0.5	0.5	7.5	1600	1600	213.33

TRANSPORTATION MECHANISMS

Transportation mechanisms are the primary method in which players manoeuvre treasure around the tomb and towards the escape vehicle. Effective use of transportation is what will allow players to get treasure to the escape vehicle as quick as possible, and as a result, achieve the highest scores.

PULLEY

The pulley is used to transport treasure vertically. A rope ladder next to the pulley allows a player to climb up to the higher level if they're not carrying anything. To climb a ladder, a player must walk up to it and press the interact button to attach themselves to it. They can then use their movement inputs to move up and down the ladder, and the jump button to detach themselves from the ladder. When players reach the top or bottom of the ladder, they will automatically detach themselves from the ladder.

How it carries treasure: Treasure is loaded into a basket attached to a hook, the pulley carries the basket up and down.

How it's operated: A wheel at the top of the pulley controls the movement of the basket. Hold the interact button next to the wheel to pull the basket up. Whack the wheel to send the basket down again.

How it encourages/requires teamwork: Treasure is moved quicker by having two players there to load/unload treasure.

Maintenance status depletion rate: 3% per second of use.

HORIZONTAL CART

How it carries treasure: Similar to the pulley but horizontal. Treasure is loaded into the basket and carried across to the other side.

How it's operated: There are two wheels, one at either end. Operating a wheel will bring the basket towards the side that wheel is on. While the basket is already moving in one direction, a player may operate the *other* wheel to speed up the movement of the basket. In other words, the first player to operate a wheel determines the direction the basket travels in, another player may then assist by operating the other wheel to speed up the basket.

How it encourages/requires teamwork: One player must get to the other side to bring the treasure across. Players working together and operating both wheels speeds up the travel time of the basket.

Maintenance status depletion rate: 3% per second of use.

RAIL CART

A cart that travels along a rail. Players load contents into the cart, climb aboard, and operate a lever to push it down the track. There may be dirt piles on the track. If the cart collides with these, the cart will fly off the tracks, break, and spill its contents out.

How it carries treasure: The rail cart has three slots that can be filled with treasure or dead players. The rail cart then follows a track to take its contents to another part of the tomb.

How it's operated: At the back of the rail cart is a platform with a pump lever. Players climb aboard the platform by walking up to it and pressing the interact button. Players then stand on either side of the lever and pump it by pushing their use item button to propel the rail cart along the track.

To gain speed, players should wait until the lever has risen to its apex on their side before pushing it down again. This will give the biggest possible speed boost. Pushing the lever down while it is already low down will not give much speed. As the speed of the rail cart increases, the rate at which the level rises and lowers increases too, so players must adjust the rhythm at which they pump the lever.

Players can disembark the rail cart by pressing the interact button again.

How it encourages/requires teamwork: Players must co-ordinate and time their button presses to find the correct 'rhythm'. Maintaining the correct rhythm will continually increase the speed of the car. While the rail cart can be operated by a single player, two players working together will be able to get the speed up a lot quicker.

Maintenance status depletion rate: 1.25% per second of use.

PNEUMATIC DELIVERY TUBE SYSTEM

How it carries treasure: Treasure is loaded into the delivery pod. The delivery pod then travels through the tubes to another delivery point, where the treasure can now be retrieved.

How it's operated: Once treasure is loaded into the delivery pod, a button is pressed at another delivery point along the tube to make the delivery pod travel there.

How it encourages/requires teamwork: Players have to inform each other when the treasure is loaded and unloaded, so they can press their respective buttons at the right time to get the delivery pod where it needs to be as quick as possible.

Maintenance status depletion rate: 2% per second of use.

CLEANING RECEPTACLES

Before loading any collected treasure into the escape vehicle, players can take treasure to a cleaning receptacle. This is a place where players can place treasure and have water wash over it to clean it. When players place treasure into a cleaning receptacle, it will automatically begin cleaning it. It takes 10 seconds to fully clean treasure. Cleaning treasure will boost its value by up to 3 times, but players may take treasure out of the cleaning receptacle before it has been fully cleaned. The formula for determining the value of treasure once it has been places in the cleaning receptacle is as follows:

Treasure base value * (3 * [Clean percentage])

So, for example, the base value of an idol is 800. An idol that is taken out of the cleaning receptacle at 50% cleaned would be...

800 * (3 * 0.5) = 1200

An idol 100% cleaned would be...

800 * (3 * 1) = 2400

Treasure that is 100% cleaned will add an additional point bonus to the score when that treasure is loaded onto the escape vehicle. The point bonus is...

Value of 100% cleaned treasure / 4

A point bonus will not be awarded for any treasure less than 100% clean. This gives players an incentive to clean as much treasure as they can.

REPAIRING / MAINTENANCE

If transportation devices are continually used and not maintained, they will break and become inoperable. Should this happen, players will want to repair it.

To repair a device, a player must pick up a wrench, walk up to the device, and hold the use item button. A progress bar on the user interface will indicate the repair status of the device. If the player holds down the use item button to repair the device until the progress bar is filled, the device will be fixed and operable again.

Players can prevent devices from breaking by keeping them maintained. As devices are used, their 'maintenance' status depletes. If players use a wrench on the device in the same way they do to repair, they can refill the maintenance status. A progress bar will indicate the maintenance status. The progress bar will fill quicker while maintaining a device than it would if it were being repaired. This is to incentivise players to keep their devices maintained rather than always allowing them to break and then fixing them.

Maintaining a device restores its maintenance status at a rate of 16% per second.

Repairing a device fills its repair status at a rate of 10% per second.

ENEMIES

MUMMY

Mummies are the most common enemy type. When a player is within 15m of a sarcophagus, a mummy has a random chance to spawn, provided no mummy that spawned from that particular sarcophagus is still alive. In other words, once a mummy has spawned from a sarcophagus, another mummy cannot spawn from the SAME sarcophagus until the currently active mummy has been defeated. Mummies can still spawn from other sarcophaguses, provided they also do not have any active mummies in play. Once a mummy has been defeated, the sarcophagus that it spawned from begins counting the seconds since it died and adjusts the spawn chance of another mummy accordingly.

The spawn rates are…

When mummy was last alive	Spawn chance
0 - 10 seconds ago	0%
10 - 20 seconds ago	5%
20 - 40 seconds ago	10%
40 - 60 seconds ago	30%
60 - 90 seconds ago	50%
90 - 120 seconds ago	75%
120 - 150 seconds ago	90%
150+ seconds ago	100%

Movement type: Slow shuffle (Walk)

Movement speed: 0.5m / second

Attack behaviour: Moves towards the target player and grabs them when in range, preventing them from moving. Once the mummy grabs its target, the target has 5 seconds to escape its clutches, or the mummy will damage the target for 1 health segment. Once damage has been dealt, the target automatically escapes, and the mummy is knocked back and stunned for 2 seconds. The only way a target can escape the mummy's clutches is if another player whacks the mummy before it deals damage.

Other behaviours/attributes: If a player whacks a mummy, it will be knocked back and temporarily stunned for 5 seconds. If the player attempts to burn a mummy that has not been stunned, the mummy will knock the fire torch from the player's grasp.

How to overcome: The mummy must first be stunned with a whack, then burned with the fire torch.

What they drop upon defeat: 20% chance of dropping bandages. When a player collides with the bandages, it will heal 1 of their health segments.

SCARAB BEETLE

Scarab beetles are pre-placed in the tomb at chokepoints, forcing players to have to go through them to get past.

Movement type: Scurry (Walk)

Movement speed: N/A (they always keep 3m away from fire)

Attack behaviour: If player is standing on them, they eat the player, instantly killing the player.

Other behaviours/attributes: Afraid of fire. Will scatter away from fire if in range.

How to overcome: Hold a fire torch and walk through the beetles to make them clear a path.

THE POSSESSOR

The Possessor is a ghostly spirit that can 'possess' treasure items and move them from afar. When it possesses a treasure item, the treasure item will attempt to return to where it was originally found. The treasure will initially creep away at a speed of 0.25m / second, but if it detects players within 5 meters of its position, it will panic and begin running away at a speed of 1.8m / second. If a player whacks the possessed treasure item, it will remove the possession over it, and The Possessor must wait 10 seconds before it can possess a treasure item again.

If a treasure item is 10 or more meters away from its default starting position, but not yet loaded into the escape vehicle, The Possessor has a chance to spawn. The base chance for a Possessor to spawn is 25%. Every five seconds, the game will do a random roll to determine if The Possessor spawns. If not, the spawn chance increases by 5% and after another five seconds, the game will do another random roll. Once a Possessor does spawn, the spawn chance is reset to its base value (25%).

If more than one treasure item is 10 or more meters away, a maximum of two Possessors may spawn, adhering to the spawn rules outlined above. Once a Possessor is defeated, another Possessor may not spawn for at least 45 seconds. After that time has elapsed, the game will begin doing random rolls to spawn Possessors again.

Movement type: Fly

Movement speed: 1.5m / second

Attack behaviour: If a player picks up a possessed treasure item, The Possessor will fly down and hit that player to make them drop it, damaging the player for 1 health segment.

Other behaviours/attributes: None.

How to overcome: Grab the possessed treasure to lure The Possessor down and have the other player whack The Possessor to defeat it.

SKELETON GUARDIAN

Skeleton guardians defend the cursed treasure. They are a tougher enemy type, but can be defeated more easily if players work together. Four of them will spawn when a player first enters the cursed treasure room. Once they are defeated, they will not spawn back again for the rest of the level.

Movement type: Run when distance to target > 10m / Walk when distance to target < 10m.

Movement speed: *Running*: 2m / second, *Walking*: 1m / second

Attack behaviour: Moves towards target and hits them when in range, knocking the target back and damaging them for 2 health segments.

Other behaviours/attributes: Can block whack attempts when not stunned. However, if two players whack the skeleton within 0.5 seconds of one another, it will be knocked down for 4 seconds.

How to overcome: Aim a flashlight at the skeleton and press the use item button to focus the light beam. This will blind the skeleton and immobilise them for 6 seconds. While the skeleton is blinded, it can be defeated by whacking it.

CURSED GHOST

When a player picks up the cursed treasure, the Cursed Ghost will spawn 5 seconds later. The Cursed Ghost is an enemy that chases whichever player last touched the cursed treasure. If the Cursed Ghost touches a player, that player is killed instantly. If the Cursed Ghost kills a player, it will wait 3 seconds and then switch its focus to the other player and begin chasing them.

As carrying the cursed treasure slows players down, the ghost will catch up to the player and kill them if they don't swap with the other player. The ghost will continue to chase the player who drops the cursed treasure until another player picks it up. When another player touches the cursed treasure, the ghost immediately begins chasing that player.

Movement type: Fly

Movement speed: 1.2m / second

Attack behaviour: Chases the last player who touched the cursed treasure. If the Cursed Ghost touches a player, that player instantly dies.

Other behaviours/attributes: The ghost may fly through walls.

How to overcome: Place the cursed treasure in the escape vehicle to defeat the Cursed Ghost. The ghost will vanish and cannot respawn.

TOOLS

Tools remain static on the ground until they are picked up. When a player drops a tool, the tool is dropped directly at the player's location. Tools have no collision while dropped.

SHOVEL

The shovel is used for digging up treasure and removing dirt from rail tracks. If a player is standing over sandy ground, they can hold the use item button to begin digging. If any buried treasure is located where you're digging, it will rise out of the ground as you dig. It takes 4 'scoops' of the shovel to fully dig up an item.

When standing next to a dirt pile, players can hold the use item button to begin shovelling the dirt away. It takes 4 'shovels' to clear the dirt.

METAL DETECTOR

The metal detector is used to help you locate buried treasure in sandy areas. While holding the metal detector, hold the use item button to begin scanning the ground. If the player is standing within 2m of a buried treasure, the metal detector will begin beeping. As players get closer, the metal detector will beep at a quicker rate. When players are standing within 0.5m of the buried treasure, the metal detector will emit a continuous tone. At this point, players may dig at their position to find treasure.

WRENCH

The wrench is used for maintaining and repairing transportation mechanisms. To maintain or repair, walk up to the transportation mechanism while holding the wrench and hold the use item button. A progress bar on the UI will indicate the progress of the maintenance or repair you are doing.

FIRE TORCH

Fire torches are found hanging on walls around the tomb. A player can use a fire torch to get past scarab beetles, defeat mummies, and burn cobwebs that slow players down. Players must hold the use item button to burn mummies and cobwebs, but can use the fire torch passively to get through scarab beetles.

SACK

The sack is used to carry a higher capacity of gold coins. While the sack is being carried, the player can hold down the use item button to hold the sack open. While a player is holding the sack open, any coins with 2m of that player's position will be attracted towards the sack. When a coin touches the sack, it is automatically added to the sack.

FLASHLIGHT

The flashlight is used to light up dark areas, solve puzzles, and also to defeat skeleton guardians. The player can aim the flashlight by using the look/rotate facing direction controls and hold the use item button to focus the flashlight's beam.

GOLDEN CHALICE

The Golden Chalice is used to resurrect dead players. It is found in the Chamber of Immortality. If a player picks it up, they can take it over to the fountain and hold the use item button to fill it with resurrection juice. Once it is filled, the player carrying it can take it over to the dead player and hold the use item button again to pour out the resurrection juice on to the body. Pouring resurrection juice on the dead player for three seconds will revive the dead player with four segments of health.

DEATH TRAPS/LEVEL HAZARDS

SPIKE FLOORS

How it works: Spikes shoot out of the floor and retract in a consistent looping pattern. Spikes shoot up, remain for 0.75 seconds, retract, stay down for 0.75 seconds. Repeat. The dangerous/safe tiles shift each time the spikes shoot up. The pattern is illustrated below. Red indicates a dangerous tile, and white indicates a safe tile.
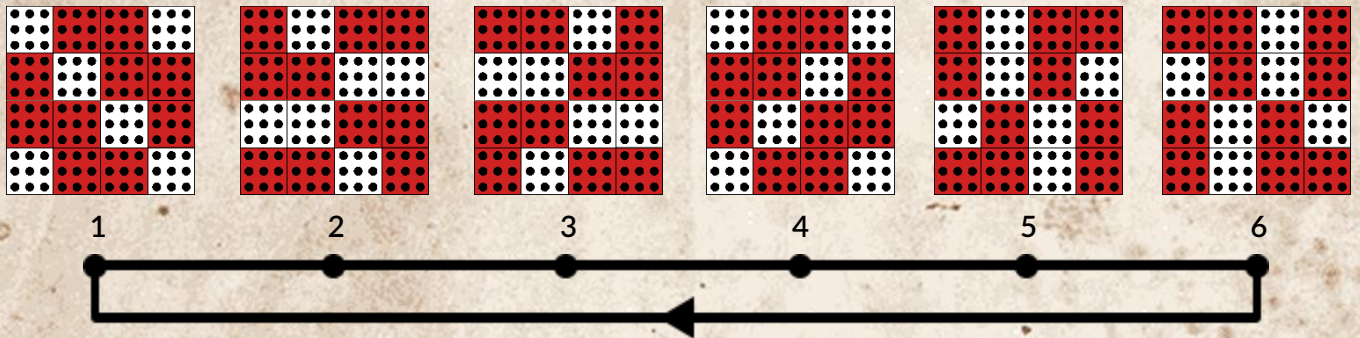
How much health it depletes: Instant death if the spike tips catch the player from below.

How to get past: Avoid getting impaled by the spikes by following the pattern and moving between safe tiles. This will allow players to cross past the spikes and get to the other side.

Danger phase changes: The movement rate speeds up, so the spikes remain up for 0.5 seconds and stay down for 0.5 seconds.

CRUSHER WALLS

How it works: Two stone slabs periodically slam together, crushing anything caught between them. They slam together, wait 1 second, then take 1 second to retreat back to their starting positions. Repeat.

How much health it depletes: Instant death if the player is caught between the crushing walls.

How to get past: Players must time their movements and slip past the stone slabs while they're retreating, before they slam together again.

Danger phase changes: When the walls slam together, they wait 0.5 seconds, then take 0.75 seconds to retreat to their starting position.

ARROW TRAP FLOOR TILES

How it works: Walls border the left and right sides of a linear stretch of flooring. The walls contain arrow launchers. Certain tiles on the floor, if stepped on, will trigger arrows to shoot out of the walls towards that position.

How much health it depletes: 1 health segment per arrow hit.

How to get past: Players must carefully navigate around the trigger floor tiles and avoid stepping on them.

Danger phase changes: Bigger arrows are fired out of the traps, taking off 2 health segments if they hit a player.

LAVA

How it works: Lava acts as non-traversable ground. If players touch it, it hurts them, so they must avoid it.

How much health it depletes: 1 health segment every 0.5 seconds spent touching the lava.

How to get past: Depends on the positioning of the lava. Sometimes, the lava may be positioned just to punish players that fail a jump across a gap. Other times, the lava may have stepping stones that players can use to get across. When a player touches a stepping stone, they will have one second before it sinks into the lava. Players should use this time to jump to another stepping stone or to safe ground. Sunken stepping stones will re-emerge after five seconds. Players should attempt to co-ordinate their jumps at the same time, so one player isn't left behind waiting for the stepping stones to re-emerge.

Danger phase changes: Stepping stones sink 0.6 seconds after being stepped on.

BOULDER

How it works: A boulder rolls along a set path, from point A to point B, every 10 seconds.

How much health it depletes: Instant death if it collides with a player in its path.

How to get past: Avoid getting squashed by the boulder by staying out of its path when it is rolling by.

Danger phase changes: A boulder rolls along the path every 5 seconds.

PUZZLE ELEMENTS

To gain access to certain treasures, get around the tomb, and unlock shortcuts, you will need to solve some puzzles. Some puzzles are linked to other elements of the tomb, which will be activated upon completion of the puzzle.

Light beacons

Light beacons come in groups of four, and they must all be lit up to complete the puzzle. To light up a beacon, a player must shine a flashlight at it and focus the beam. This will enable that light beacon. Once the remaining beacons have been lit in the same way, the puzzle will be completed.

Pressure plate doors

These doors are opened when a player stands on a pressure plate. If the player steps off the pressure plate, the door will close again. One player must stand on the pressure plate and allow the other player to pass through. Another pressure plate on the other side of the door will let the player who passed through get their co-op partner through too.

Coloured stone pillars

There are four short pillars, each with a coloured stone perched on top of it. Each pillar has a coloured marking on it. To complete the puzzle, players must swap the coloured stones so that the colour of the stone matches the coloured marking on the pillar it is sitting on. This is done by picking up the stone, walking over to an empty pillar, and placing it on the pillar.

Double whack door

This large double door can only be opened by players simultaneously whacking a mechanism on either side. When a mechanism is whacked, it will activate for a brief moment and time out after 0.5 seconds – not enough time for one player to whack both on their own. Players will have to co-ordinate their whacks to activate both mechanisms at the same time. When both mechanisms are activated simultaneously, the door will unlock and swing open.

Fire lantern tile match puzzle

This is a 6x6 grid of floor tiles. Each row of six is divided down the middle into two sides of 3 tiles. On either side of each row are two fire lanterns, totalling four fire lanterns for each row of tiles. In each row, on each side, there are tiles marked 'I', 'II', and 'III' – Roman numerals. Whenever a player steps on a tile, the corresponding number of fire lanterns for that row come alight. Players must co-ordinate which tiles they step on so that all four fire lanterns light up. So, if a player steps on the tile marked 'I', the other player must step on the tile marked 'III' on the other side of the division, in the same row.

III	I	II	II	I	III
II	III	I	I	III	II
I	II	III	III	I	II
III	I	II	I	II	III
III	II	I	II	III	I
II	I	III	I	III	II

↑ Player 1   ↑ Player 2

III	I	II	II	I	III
II	III	I	I	III	II
I	II	III	III	I	II
III	I	II	I	II	III
III	II	I	II	III	I
II	I	III	I	III	II

Colours indicate matching tiles

When stepping on a tile in a new row, it doesn't matter which tile is stepped on first, but once a tile has been stepped on, the matching tile on the other side of the row must be stepped on to avoid taking damage. If the tiles that both players are standing on in a row add up to any more or less than 4, an electric shock will hit both players, damaging them for one health segment each. If players 'fail' a row and get shocked, that row of tiles becomes inactive and players can move on to the next row. Once players reach the other side of the grid, the tiles and fire lanterns reset. This is so players must tackle the puzzle again if they wish to cross back over.

DEPENDENCY CHART

```
                                                    Escape
                                                    vehicle
                                                       ↑
                                                    Danger
                                                    Phase
                                                       ↑
                                                  Time limit
                                                       ↑
                                        Scoring          cursed
                                           ↑             Ghost
                                        cleaning         cursed
                                        machine          treasure

                    Repairing /
                    Maintenance
                         ↑
  Traps   Enemies   Puzzle    Transport    Reviving
                    elements   devices   another player

                             CO-OP              Tools/objects   Treasure

  Movement   Tombs              Health   Pick up/drop

            Players
```
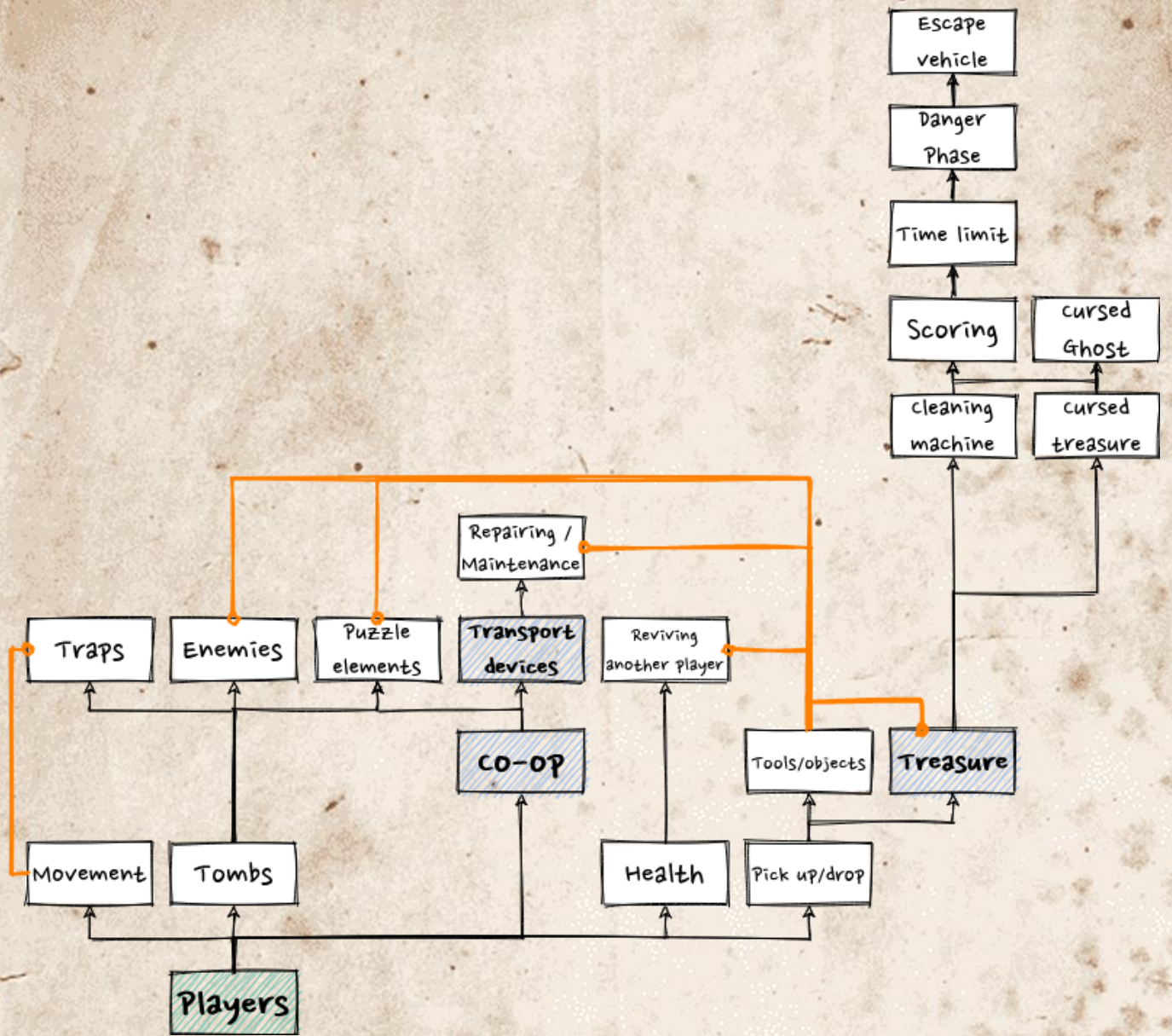
INTERFACE/CONTROLS

Keyboard/mouse controls

Interact

Pause

Pick up / Drop

Move

Sprint

Jump

Use item

Whack

(Hold) Look / Rotate

Xbox controller

Sprint LB

RB Jump

RT Use item

X Whack

Move L

B Interact

A Pick up / Drop

R Look / Rotate

Pause
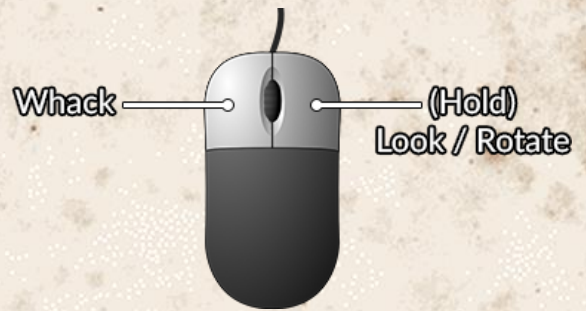
TEN MINUTES OF PLAY

FIRST

When player's first play *Fool's Gold*, it'll take them some time to get used to co-operating effectively, and as such, will find it challenging to defeat enemies and transport treasure quickly. They'll likely get caught out by traps and other hazards, and may find that they struggle to complete the tomb. If they do manage to complete the tomb, it will be unlikely that they achieve a very high score, so players may have to replay tombs in order to get a high enough score to unlock the next one.

LATER

Players have now improved their co-operation and are more proficient at transporting treasure and combatting enemies. Though players are now a lot more capable, they will still feel sufficiently challenged by the dangers that the tomb poses. Players are more likely to complete tombs now, and even get good scores at the end, meaning they'll unlock more tombs to play.

LATEST

Players are now highly adept at the game and can co-operate efficiently. They are able to quickly transport treasure to where it needs to go, and know how to handle any threats that they encounter. Players are much more likely to complete a tomb on any given attempt, and when they do, will achieve a great score. Players will return to *Fool's Gold* to attempt to beat their own personal high scores.

SAMPLE LEVEL

LEGEND / KEY

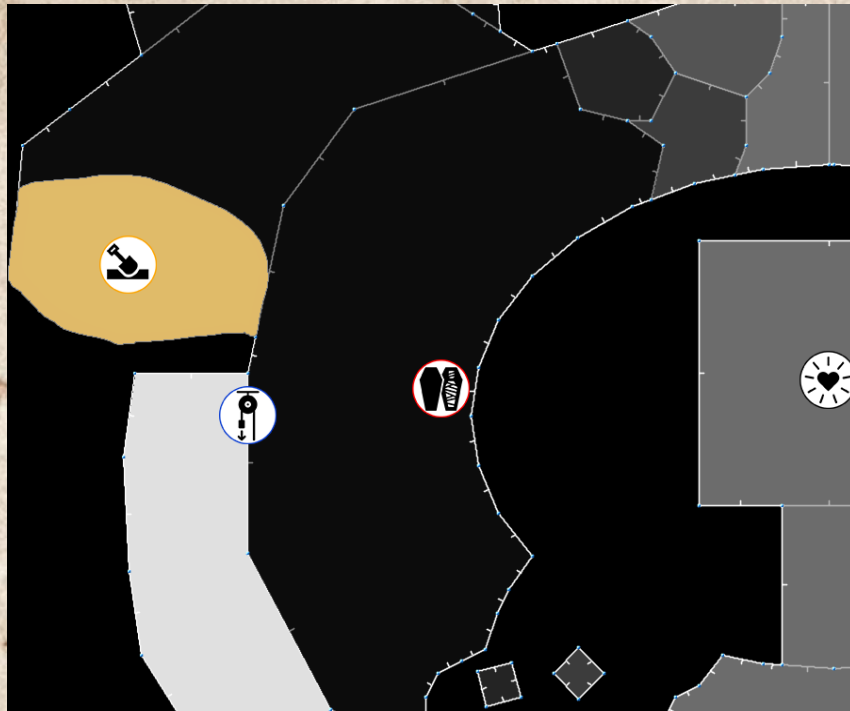|	
Start point	Vase (with gold coins inside)
Escape vehicle	Digging area (treasure chests)
Escape point	Idol
One-way travel	Cursed treasure
Chamber of Immortality	Pressure plate door
Dirt pile	Double-whack door
Pulley	Locked door (opened via puzzle)
Horizontal cart	Light beacon puzzle
Rail cart	Coloured stone pillars puzzle
Cleaning mechanism	Fire lantern tile matching puzzle
Mummy sarcophagus	
Scarab beetles	
Skeleton Guardians	
Spike trap	
Arrow trap	
Lava stepping stones	
Boulder	

Higher

Height map

Lower

The brightness of areas on the level map indicate height. Lighter areas are higher up, while darker areas are lower.
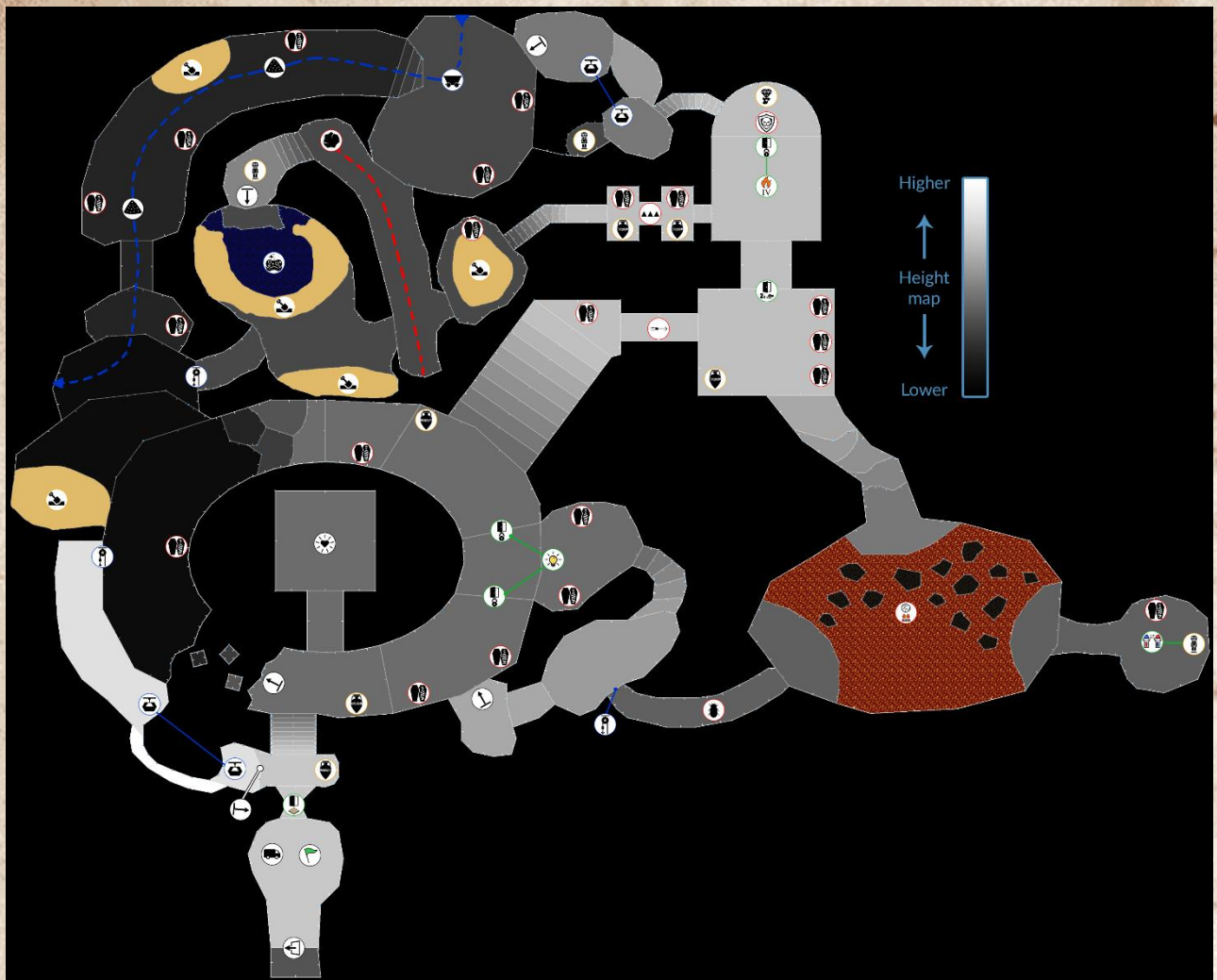
Before I breakdown the level piece-by-piece and explain it, here's a look at the overall level to give you an idea of how areas of the level are positioned in relation to each other.

After the breakdown, we will revisit this whole level overview and it should make sense in context.

LEVEL BREAKDOWN

Players start next to the escape vehicle. The escape point is nearby. The first obstacle players have to overcome is the pressure plate door to access the tomb.

Once players are past the pressure plate door, they're in the tomb. There's a ledge on the left, but it's too high for players to jump up to. Heading down the stairs, the Chamber of Immortality is straight ahead. Following the path round to the right leads to a locked door with seemingly no way to open it. There's an opening in the rocks, but again, it's too high to jump up to. There are some mummy sarcophaguses around to pose a danger to players, and some vases that can be smashed for some coins.

At this point, the only way to go is to the left and jump across the broken pillars to reach the lower level across the chasm.

Across the chasm, players find themselves on a lower level. They can circle round and climb up the rocks to access the other side of the walkway they jumped across from, or they can head straight up into the mines.

A sandy area on the left indicates that players may dig there to search for buried treasure chests.
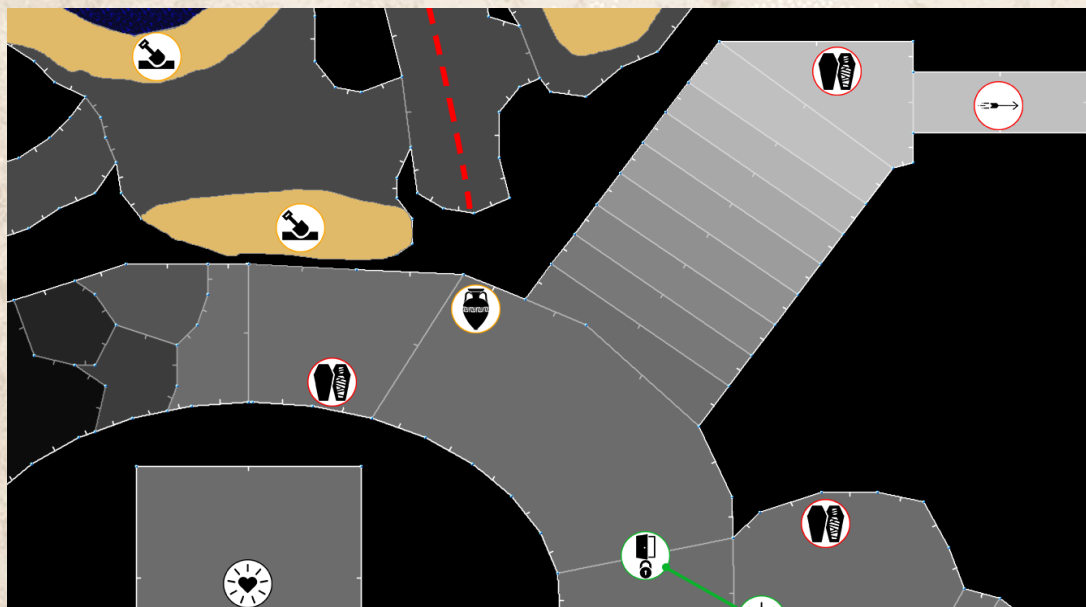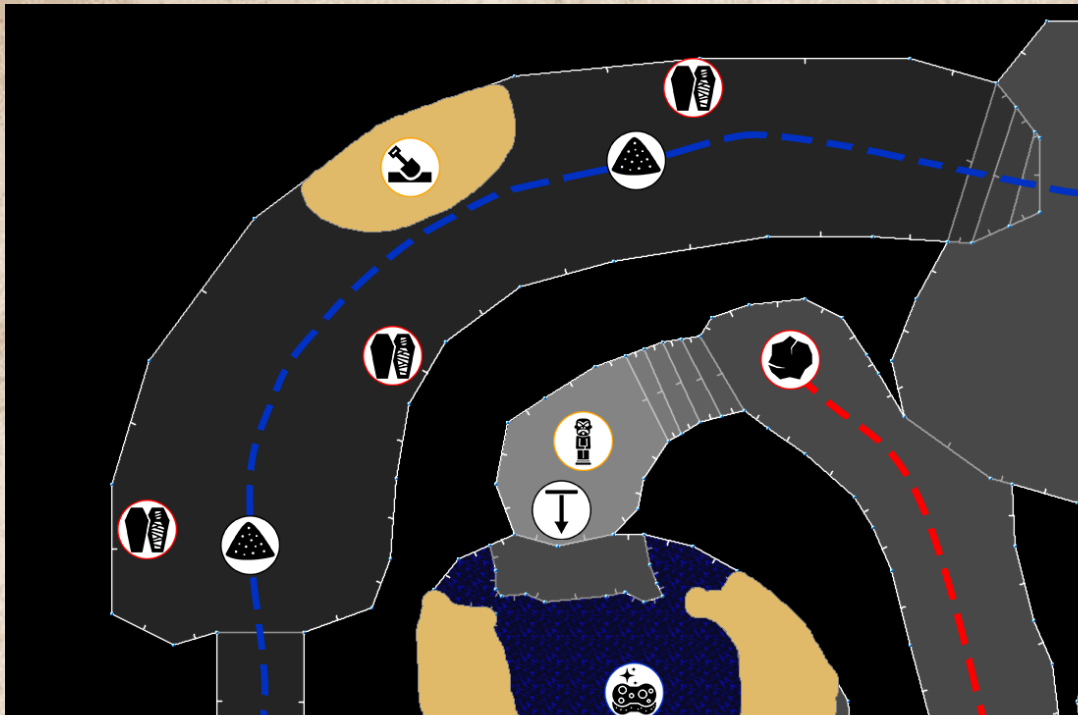

Climbing up the rocks, players find themselves on the other side of the locked door encountered previously. Heading up the stairs into the burial chamber, players fight mummies and contend with an arrow trap.
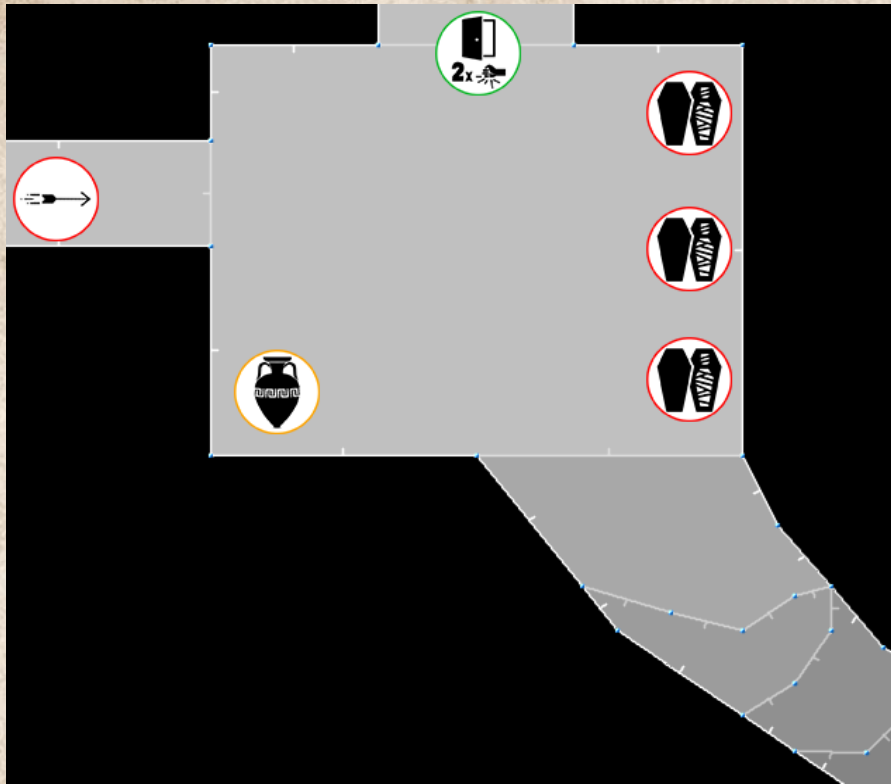
Past the arrow trap, players are in a room where they'll have to face a wave of mummies. A door at the top of the room requires players to simultaneously whack a mechanism to unlock it. At the other end of the room is a passageway to a lower cave area...
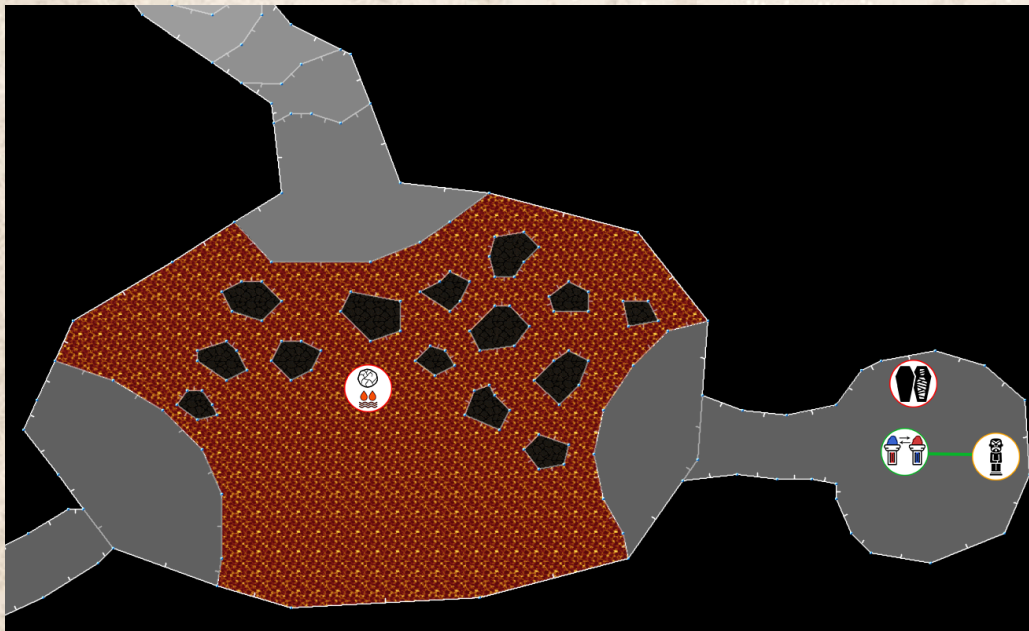

In the lower cave area, there's a lava lake and stepping stones to get across. On the right is a hidden area. Inside is a coloured stone pillars puzzle. Completing the puzzle will shift a rock to reveal a hidden idol.

Taking the opposite passage way across the lava lake, players will encounter a tunnel of scarab beetles, and will require a fire torch to get through. On the other side is a pulley and ladder to get up to a high ledge and bring along any treasure.

Up the ledge, players can head left and drop down back into the walkway towards the beginning of the tomb, or they can head right down the steps, and solve a light beacon puzzle to unlock the two locked doors on the walkway. Unlocking the doors opens a shortcut for players, allowing them quicker access to previously visited areas.

After unlocking the doors, players head back around the walkway and enter the mines area they previously passed. There are some dirt piles along the rail track. If these are not cleared, they will stop the rail cart if it collides with them. There is also another area where players can dig for treasure, and some mummies to keep players on their toes.
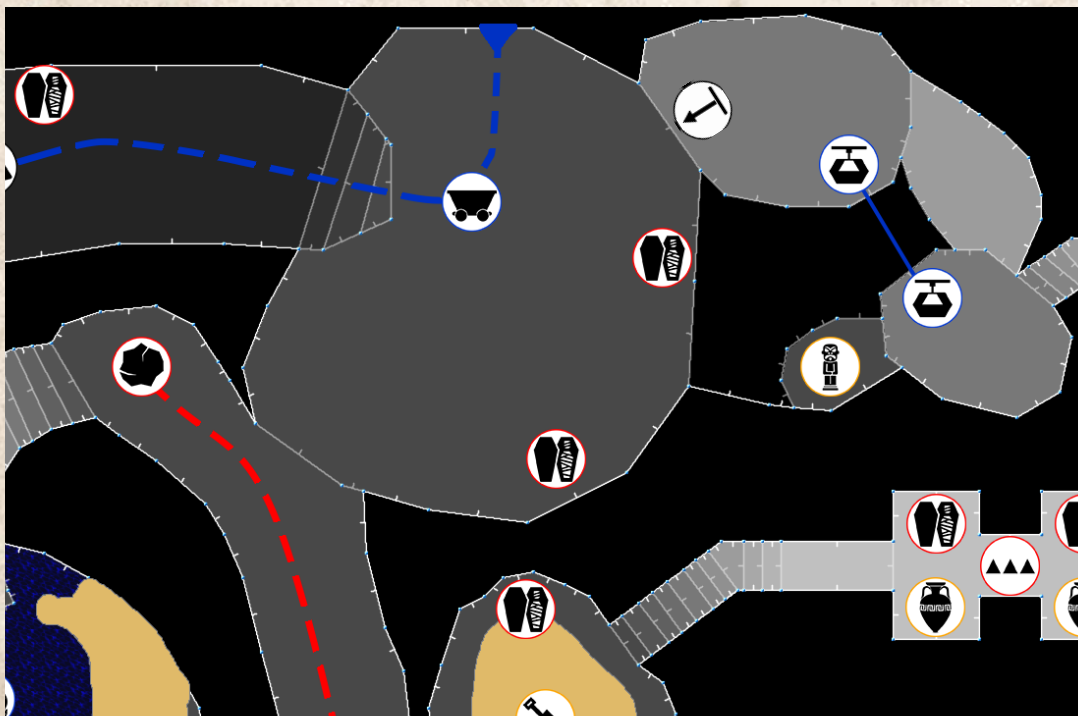
Following the rail track, players enter this area where they find the rail cart. There's a ledge over on the right, but it's too high to climb. The only way to go is through the passageway at the bottom.
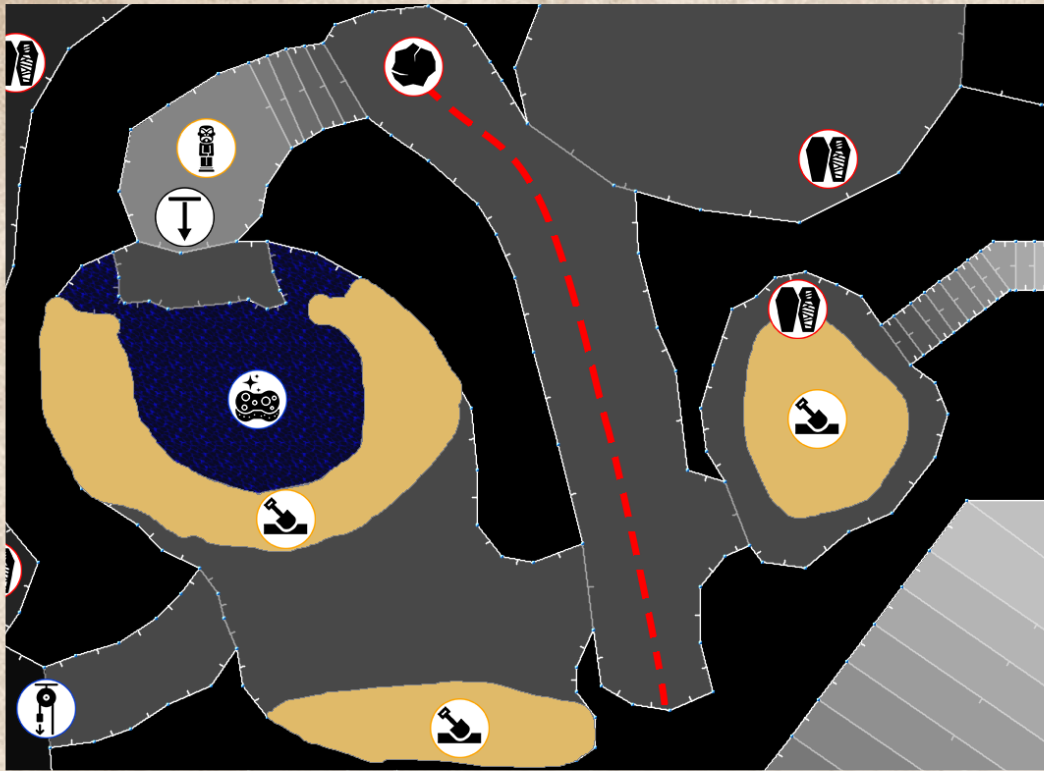
In the passageway, a boulder periodically rolls through. If players avoid the boulder and head up, they can find a hidden area with an idol, which drops down into the cleaning zone. If players head down the passageway, and take the turning on the right, they can head back towards the burial chamber.
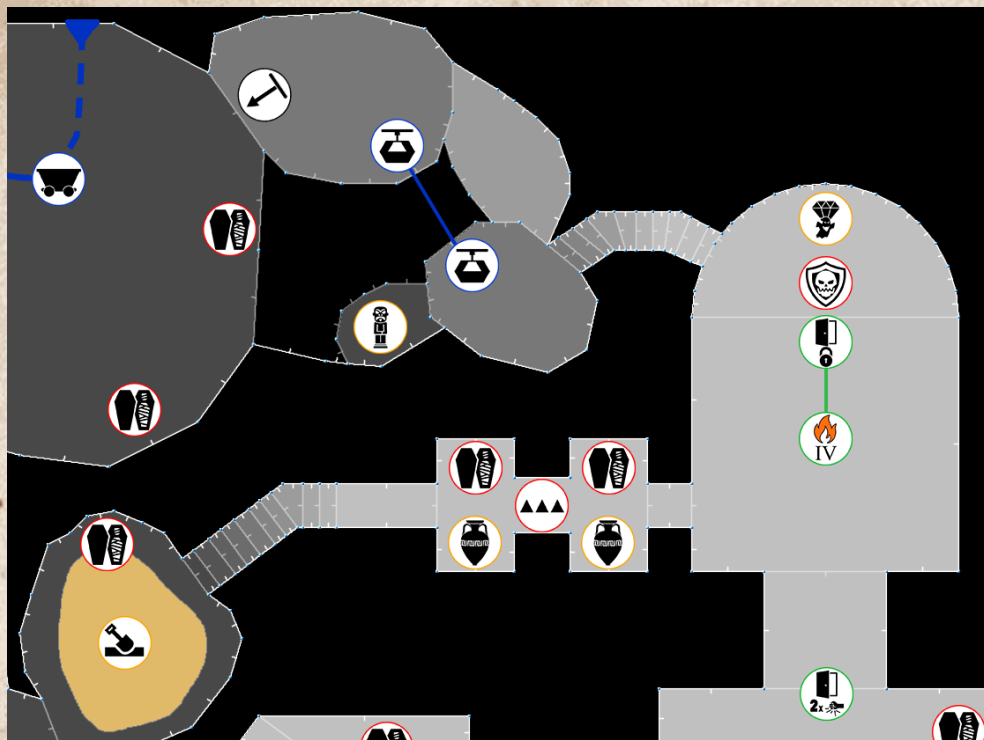
Players will have to pass a spike trap to get back into the burial chamber. Inside, there's a fire lantern/roman numeral tile puzzle. Completing it will unlock a door at the top of the room, allowing players access to the cursed treasure, if they can defeat the Skeleton Guardians.

Once they have the treasure, there's steps on the left leading out to a rocky area. There's a horizontal cart to get treasure across the gap, and an idol on a lower ledge. A ledge at the top, running parallel to the horizontal carts, is too high for a player carrying treasure to jump up to, but an empty-handed player can use the ledge to cross over to the other side and bring treasure across in the horizontal cart.

Once across, players can drop down the ledge and find themselves back at the rail cart.
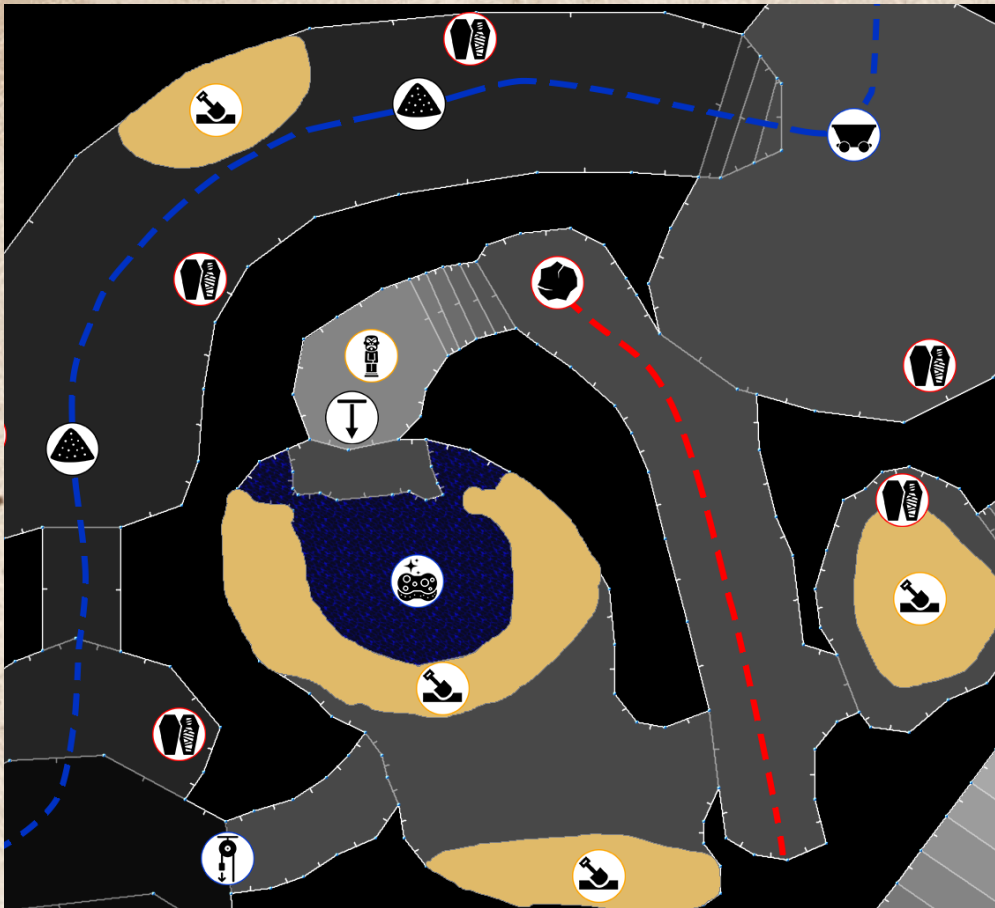
From here, players can use the rail cart to transport treasure, or take it to the waters of the cleaning zone to increase its value. Either way, players will likely end up at the entrance to the mines, as there is a pulley that leads from the cleaning zone down to the mines entrance.
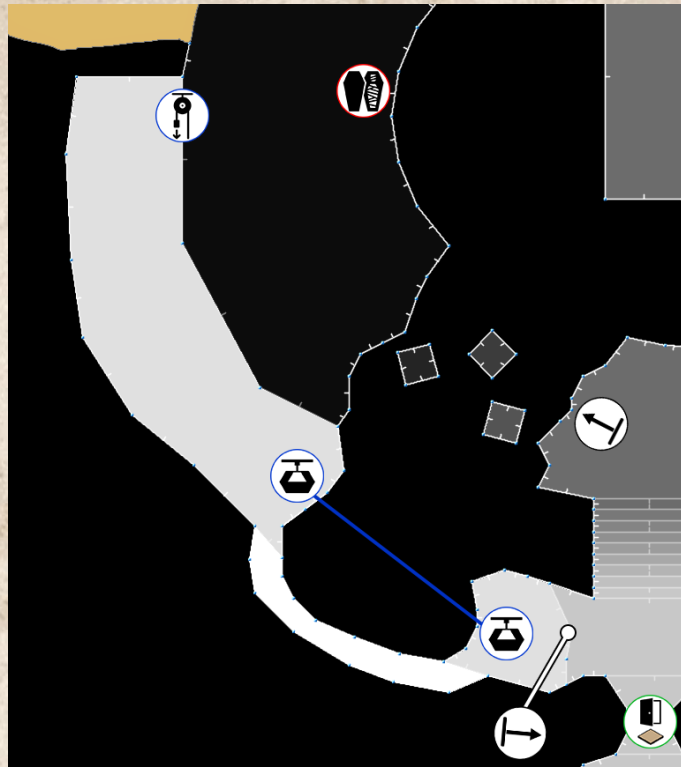
Outside the mines entrance, players could use the walkway to circle around back to the tomb entrance and the escape vehicle, but it would be quicker for them to use the pulley and ladder here to get up to the high ledge. Up here, there's a horizontal cart and parallel ledge to get treasure and players across a gap. On the other side of the gap is a ledge that drops down to the tomb entrance.
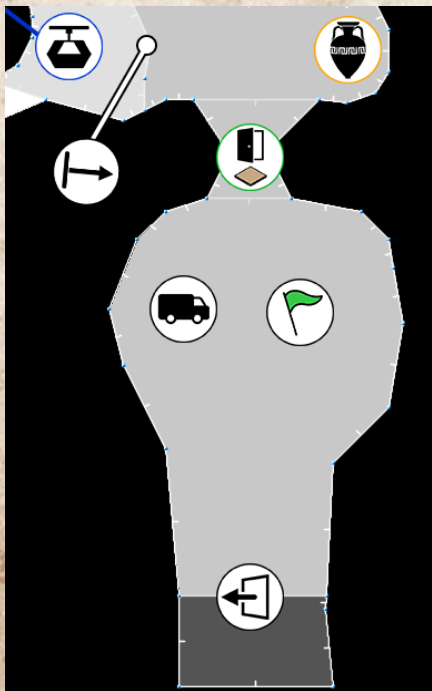
Players can walk treasure to the escape vehicle from here.

Once the treasure is loaded, players can then decide whether to take what they've got and escape, or head back into the tomb for more treasure.

WHOLE LEVEL OVERVIEW
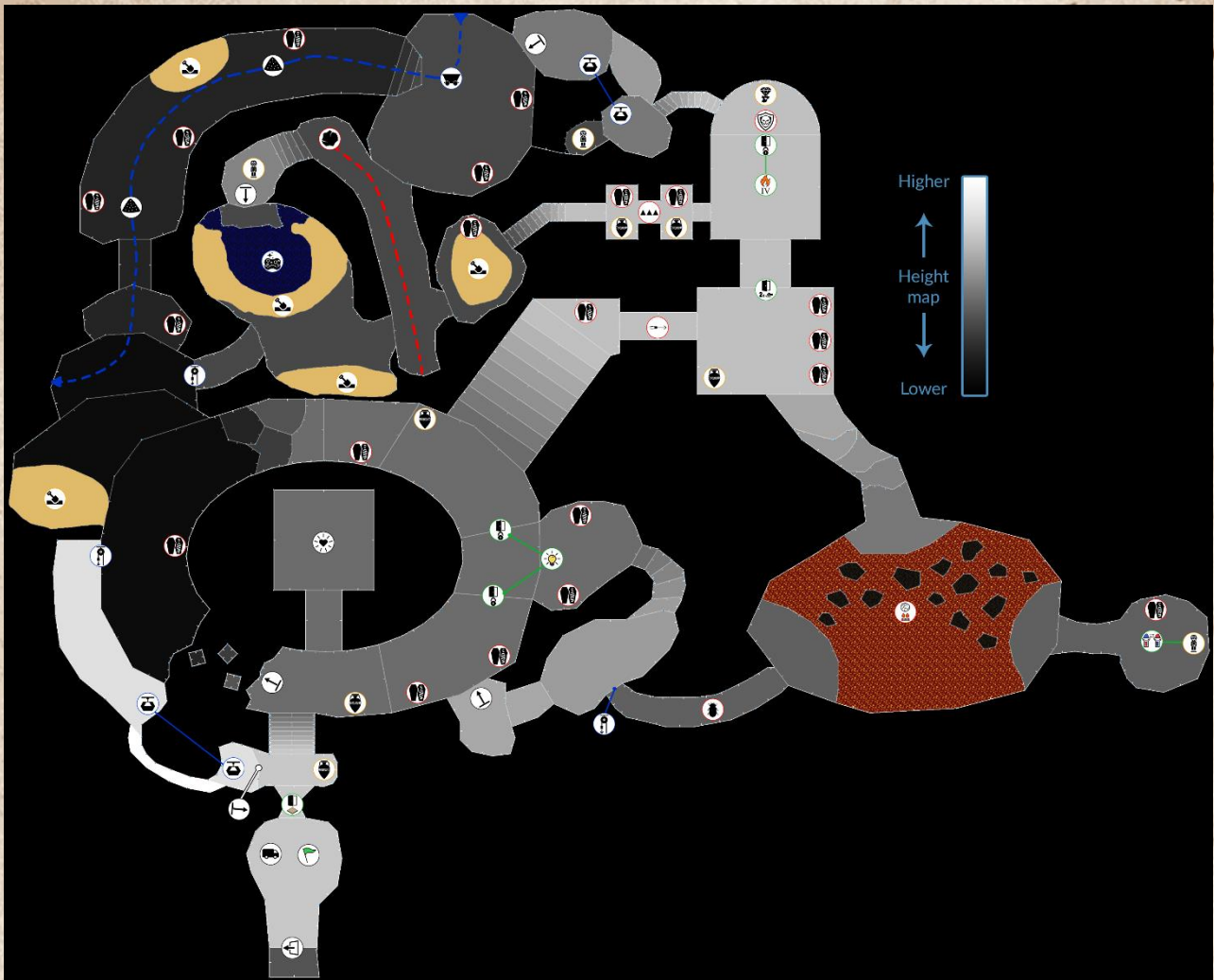
And here's the whole level overview again. After the breakdown, it should be clear how players navigate around the level, as well as what traps, treasures, puzzles, and dangers they'll encounter.

COMMERCIAL PLACEMENT

Fool's Gold will be released at a price point of £14.99. This is in-line with similar commercial products such as *Overcooked! 2*, *Moving Out*, and *Tools Up!*, and the platforms we are targeting should provide the greatest earnings potential.

We intend to develop this game with a relatively small team size over an estimated period of 18 months. This should keep the budget somewhere in the £600,000 – £1,000,000 range, depending on team size and salaries. A breakdown of estimated costs for the development team is below...

Role	Salary / year	How many we'll need	How many years they'll be employed	Total cost
Director	£45,000	1	1.5	£67,500
Programmer	£32,000	2	1.5	£96,000
Artist	£31,000	2	1.5	£93,000
Animator	£31,000	2	1.5	£93,000
Lead designer	£34,000	1	1.5	£51,000
Designer	£30,000	1	1.5	£45,000
Producer	£34,000	1	1.5	£51,000
Sound design/Music	£31,000	2	1.25	£77,500
QA	£24,000	2	1	£48,000
Marketing/PR/Sales	£40,000	1	0.5	£20,000

TOTAL: £642,000

We are building the game in Unity. As such, we'll have to pay licensing costs for Unity, too. A Pro license for Unity costs $1,800 per year, per seat. From the speculative development team above, I estimate approximately 11 members of the team will need access to Unity. That would work out to about $19,800 per year, then. For an 18 month development cycle, that would total $29,700 in Unity licensing costs. In GBP, that converts to around £21,425. This now brings the total development costs to £663,425.

If we factor in the 30% cut that most stores and platform holders take, each copy we sell at the £14.99 price point would return around £10.49. In order to recoup a development budget in the range of £600,000 – £1,000,000, we would have to sell approximately 62,000 – 96,000 units at the £14.99 price point.

For console platforms, we estimate we can complete the porting process in around 6 months, for cost in the range of £150,000 – £250,000. A breakdown of costs for a speculative port team is below...

Role	Salary / year	How many we'll need	How many years they'll be employed	Total cost
Programmer	£32,000	2	0.5	£32,000
Artist	£31,000	1	0.5	£15,500
Designer	£30,000	1	0.5	£15,000
Producer	£34,000	1	0.5	£17,000
QA	£24,000	2	0.5	£24,000
Marketing/PR/Sales	£40,000	1	0.25	£10,000

TOTAL: £113,500

While all the main art and design will have already been completed with the initial PC build, we will have an artist and designer on the port team in order to facilitate any UI and design changes that will better fit the console platforms. Aside from development team wages, we anticipate costs associated with publishing on console platforms and the acquisition of dev kits will make up the remainder of the estimated porting costs.

SteamSpy data indicates that *Overcooked!* has 1 – 2 million owners on Steam, while its sequel has somewhere between 500,000 – 1 million owners on Steam. According to data from steamcharts.com, *Overcooked! 2* has maintained an average of 1635 concurrent players each month on the platform throughout the year of 2020. This is up from the average number of concurrent players throughout 2019, which demonstrates that the game has only gotten more popular over time. Sales figures for console platforms are difficult to obtain, but Nintendo's full year financial report for 2018 revealed that *Overcooked!* sold over 500,000 copies on Switch. Overall, these figures suggest that there is a healthy market for a game of this kind, and we are confident we will meet our sales targets.

REFERENCES

COVER / INSIDE PAGE GRAPHICS DESIGN

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ICONS

Fire by Bohdan Burmich from the Noun Project

Arrow by Oksana Latysheva from the Noun Project

Arrow by Lee Mette from the Noun Project

Light by Luis Jose Doria Correa from the Noun Project

Slab plate by Bindiya Mutum from the Noun Project

Door by yanti anis from the Noun Project

Fist Pounding by Luis Prado from the Noun Project

effect hit by Maxicons from the Noun Project

Pillar by johartcamp from the Noun Project

rock by Sean Maldjian from the Noun Project

spikes by James Cottell from the Noun Project

spikes by Lance B from the Noun Project

rock by RIZCA from the Noun Project

Arrow by ProSymbols from the Noun Project

Beetle by Darrin Higgins from the Noun Project