

SEARCH FOR THE SURFACE



HOW TO PLAY

Search for the Surface

In your exploration of the surface of Terra Nova, the chief engineering officer, Bill Ding, believes that he has found the remains of an alien civilisation buried underground. As part of the excavations, you have been asked to scout the area.

After a long day searching, you find no evidence of any buildings and decide to turn back to camp. As you do, the ground below your feet gives way and a chasm opens up. Before your team can react they lose their footing and fall into this new hole.

After falling through the dark, you land on a cold stone floor. You look up from the flat of your back and watch as the hole you had just fallen through becomes clogged with rubble and soil – there is no way to return that way. As the debris settles, all light from the surface is blocked out and you are cast into complete darkness.

You reach for a lumin globe from your belt and shake it. You feel reassured as it glows with soft light that lets you take stock of your situation: you see your team scattered around a room that appears to be constructed from carved stone. This must be part of the alien ruins that Bill Ding has been searching for. You pick your aching body up and then help your team get on their feet again – there are a few injuries but nothing serious.

The room that you have, rather ungracefully, entered has four doorways leading into darkness. You have evidently fallen into an abandoned complex of corridors and rooms that was constructed by some past civilisation.

As the leader of the team, you realise that your most important job is to find the surface and get everyone out safely – these corridors must lead to some sort of exit!

You tap the Personal Device attached to your arm. This interactive device will help you survey the environment. You also know that you can use it to map where you have travelled which may stop you getting lost.

Introduction

'Search for the Surface' is a 'choose your own adventure' maths game in which players are stranded maze-like underground structure of rooms and passages that was built by a past alien civilisation.

This is a cooperative game in that players are work in groups to try and find their way out of the subterranean maze.

The educational level

This game can be used in maths. It does not map onto any national curriculum objectives however it presents the opportunity to develop certain skills:

- Visualisation of shapes: players need to visualise what they read to draw a map of the rooms they have visited
- Compass orientation: navigation of the maze helps to develop children's confidence in the four points of the compass.
- Problems: the maze provides children with mathematical problems that range in skills sets from scling, scale-reading and shape visualisation skills.

The game also presents opportunities for the children to engage in further thinking skills and collaborative skills:

- Decision-making thinking
- Evaluative thinking

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A Primary Rules game
www.primaryrules.wordpress.com

Time

The game can take between 45minutes to 2 hours depending on how much time the children take to orientate themselves.

The game objectives

1. To find the exit of the maze.
2. To collect the most *treasure tokens*

Winning the game? If you wish to play the game competitively between groups of children, then the winning team is those that find the exit to the maze. If more than one team find the exit, then base the winning team on which team found the most *treasure tokens* which can be collected through the maze.

What will you need to play?

- An adventure book for each group
- Square paper (having various sized square paper is useful)
- Pencils, rules and rubbers
- Counters to use as *treasure token*

How to play the game.

This is game that can be played with a whole class or in groups of different sizes.

1. Firstly place children in groups of the size of your choice. Ideally this would be group of 2 or 3.
2. Explain that the objective of the game is to try and find the exit of the maze.
3. To find the exit, players must use the 'adventure book' to move through the maze.
4. To do this players start in Room 1 on Page 2 of the adventure books.
5. To continue to explore the underground maze, player firstly read the description of the room or passageway that they are currently in. There may be some useful information about the room in this description so players need to pay close attention.

2

1

You stand in a room that is covered in carvings. The Personal Device tells you that the room is 10 metres wide and 10 metres long. There are four doorways, one in the middle of each wall that lead off into dark passages. The room is oriented on the compass positions: the four doors are at the four points of the compass.

Description

Which door will you choose?

- North door: Page 3 (5)
- East Door: Page 16 (17)
- West Door: Page 7 (7)
- South door: Page 13 (9)

6. Player then need to choose how they will continue with their journey. They do this be choosing one of the door options which will be listed at the bottom of the room entry.

2

1.

You stand in a room that is covered in carvings. The Personal Device tells you that the room is 10 metres wide and 10 metres long. There are four doorways, one in the middle of each wall that lead off into dark passages. The room is oriented on the compass positions: the four doors are at the four points of the compass.

Which door will you choose?

- North door: Page 3 (5)
- East Door: Page 16 (17)
- West Door: Page 7 (7)
- South door: Page 13 (9)

Door options

7. Once the players have decided which option to choose, they need to look at the numbers after each option. The first number will tell the players which page to turn to in the adventure book. The second number, in brackets, tells the player the entry number of the option they are choosing.

1.

You stand in a room that is covered in carvings. The Personal Device tells you that the room is 10 metres wide and 10 metres long. There are four doorways, one in the middle of each wall that lead off into dark passages. The room is oriented on the compass positions: the four doors are at the four points of the compass.

Which door will you choose?

- North door: Page 3 (5)
- East Door: Page 16 (17)
- West Door: Page 7 (7)
- South door: Page 13 (9)

Page number

Entry number

8. Players continue to explore the maze using this system until they find the exit.

An example of playing the game

1. A group of players start in room 1. They read the description and the options available.

2

1.
You stand in a room that is covered in carvings. The Personal Device tells you that the room is 10 metres wide and 10 metres long. There are four doorways, one in the middle of each wall that lead off into dark passages. The room is oriented on the compass positions: the four doors are at the four points of the compass.

Which door will you choose?

- North door: Page 3 (5)
- East Door: Page 16 (17)
- West Door: Page 7 (7)
- South door: Page 13 (9)

2. They decide to take the 'North Door' so they turn to page 3 and read entry 5

3

5.
You enter a dark, straight passage. Your Illumine globes light the way, revealing more of the carved images. The passage is 10 metres long and ends in another room.

If you are heading north turn to : Page 3 (2)

If you are heading south turn to : Page 2 (1)

3. The entry they read is a passageway entry. They read the two options at the bottom of the entry. Because they are heading north they then turn to page 3 and read entry 2

2.

This room is almost identical to the original room: four walls of carved stone. The stone is a dark greyish colour and the carvings appear to be of four-armed creatures. In the centre of the room is shallow, circular pit surrounded by roughly cut stones. In the centre of the pit lies a dust covered artefact. It appears to be made of a dull-gold material. As you brush off the dust you can see more of the features of the object. It appears to be a face, well some sort of face. It has large eyes and twisting horns.

Do you take the artefact?

1. Yes – turn to page 4 (63)
2. No – continue with your journey

The room has three exits in the middle of the South, East and West walls

Which do you pick to continue your journey

- South doorway: Page 3 (5)
- East doorway: Page 4 (18)
- West doorway: Page 5 (6)

4. This room is different to the first because it provides an additional option – the players have found a gold artefact. So firstly the players must choose whether they are going to pick it up or not. If they choose to take the artefact they would turn to page 4 and read entry 63. If they choose not to take the artefact, they continue their journey by choosing a doorway.
5. Players continue in this way, trying to find the exit to the maze.

Recording the journey.

As players journey through the maze of rooms and passages, they should record where they have been by creating a map of the rooms and passages they have visited

Although this is not essential for players to do, it will make the experience much easier. Furthermore, from a teaching point of view, this is one of the key learning experiences of the game.

To create maps, children will need to, firstly visualise the text as a map, and secondly decide how they will represent the map.

In following description, a way of recording the map is presented; however, the decision-making that is needed to choose a scale is a good opportunity for pupils to discuss and evaluate the options they have available to them. In short, initially telling children how to record their map may not be the most effective way to use this game.

An example of recording the map...

1. Starting in room 1 again...

1.
You stand in a room that is covered in carvings. The Personal Device tells you that the room is 10 metres wide and 10 metres long. There are four doorways, one in the middle of each wall that lead off into dark passages. The room is oriented on the compass positions: the four doors are at the four points of the compass.

Which door will you choose?

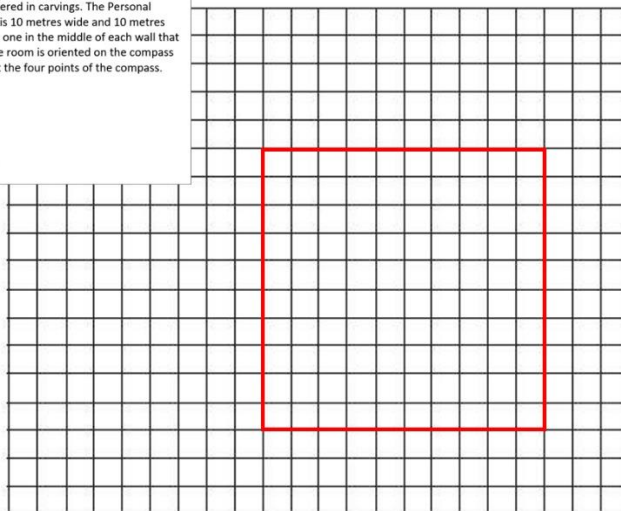
- North door: Page 3 (5)
- East Door: Page 16 (17)
- West Door: Page 7 (7)
- South door: Page 13 (9)

2. The first job is to draw an outline of the first room. The room is 10 metres by 10 metres – it's a square. There are several options here, firstly the players could draw an approximation on any paper; however square paper would be better. Then the scale needs to be decided: it could be 1 square = 1 metre...

1.
You stand in a room that is covered in carvings. The Personal Device tells you that the room is 10 metres wide and 10 metres long. There are four doorways, one in the middle of each wall that lead off into dark passages. The room is oriented on the compass positions: the four doors are at the four points of the compass.

Which door will you choose?

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- East Door: Page 16 (17)
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- South door: Page 13 (9)

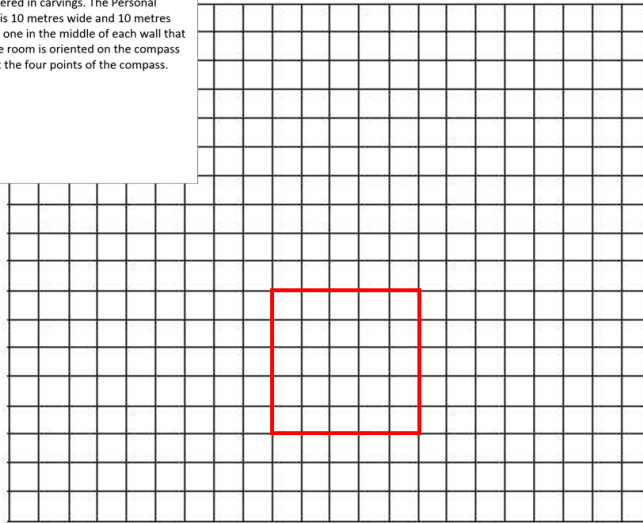


3. ... However, depending on the size of the squares, this may not be appropriate. A good scale is 1square = 2 metres. This is a good opportunity for some mathematical reasoning...

1.
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Which door will you choose?

- North door: Page 3 (5)
- East Door: Page 16 (17)
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- South door: Page 13 (9)

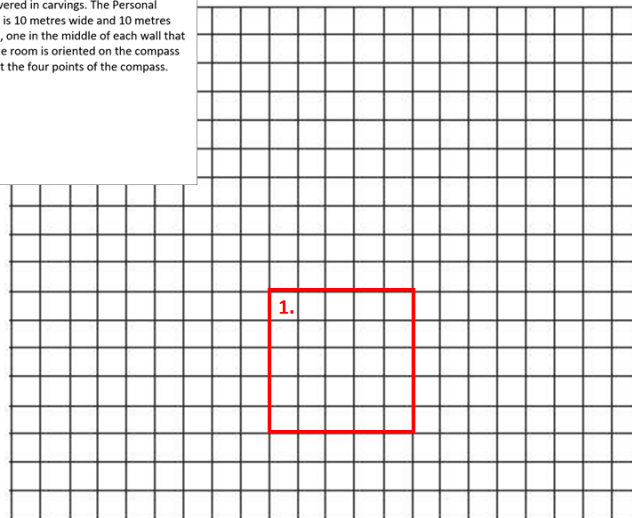


4. It may be a good idea to write in the room number on the map (this will help players realise if they return to this room that they have visited it before).

1.
You stand in a room that is covered in carvings. The Personal Device tells you that the room is 10 metres wide and 10 metres long. There are four doorways, one in the middle of each wall that lead off into dark passages. The room is oriented on the compass positions: the four doors are at the four points of the compass.

Which door will you choose?

- North door: Page 3 (5)
- East Door: Page 16 (17)
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- South door: Page 13 (9)

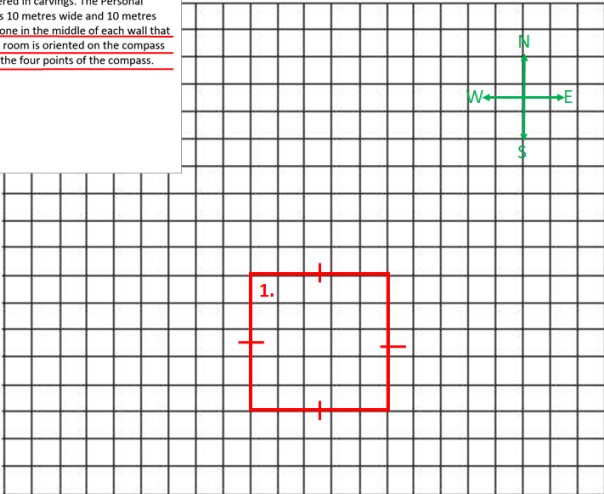


5. Then making in the door ways is useful. This is also a good opportunity to draw in a compass...

1. You stand in a room that is covered in carvings. The Personal Device tells you that the room is 10 metres wide and 10 metres long. There are four doorways, one in the middle of each wall that lead off into dark passages. The room is oriented on the compass positions: the four doors are at the four points of the compass.

Which door will you choose?

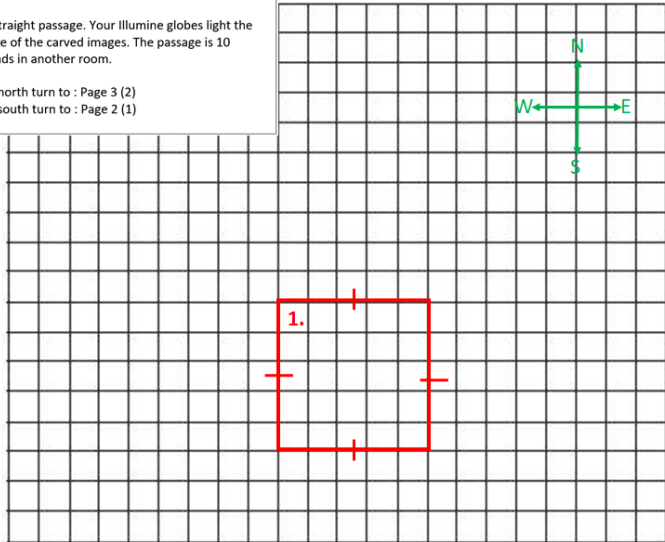
- North door: Page 3 (5)
- East Door: Page 16 (17)
- West Door: Page 7 (7)
- South door: Page 13 (9)



6. Once player have chosen a doorway to use , let's imagine this group has chosen the north doorway. The team turns to the appropriate page.

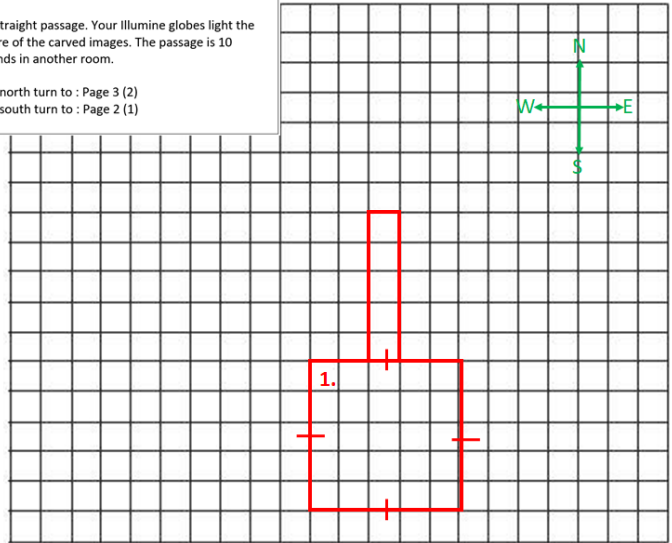
5. You enter a dark, straight passage. Your Illumine globes light the way, revealing more of the carved images. The passage is 10 metres long and ends in another room.

If you are heading north turn to : Page 3 (2)
 If you are heading south turn to : Page 2 (1)



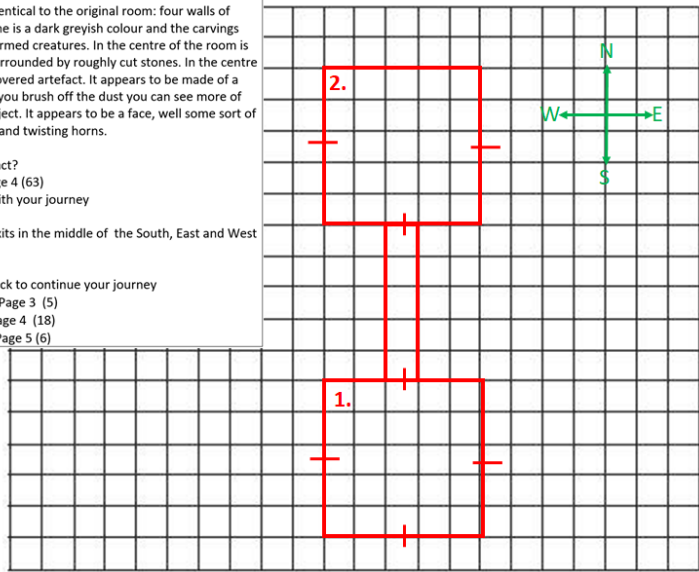
7. The players can then draw in the passageway. The passage way is 10 metres long, so in our scale it will occupy 5 squares (for reference, if it ever comes up, the passageways are all 2 metres wide)

5.
 You enter a dark, straight passage. Your illumine globes light the way, revealing more of the carved images. The passage is 10 metres long and ends in another room.
 If you are heading north turn to : Page 3 (2)
 If you are heading south turn to : Page 2 (1)



8. The player are heading north so they need to turn to page 3 and read entry 2. When the children have resolved anything that happens in the room, they can repeat the process of drawing the room, labelling it and noting the doors...

2.
 This room is almost identical to the original room: four walls of carved stone. The stone is a dark greyish colour and the carvings appear to be of four-armed creatures. In the centre of the room is shallow, circular pit surrounded by roughly cut stones. In the centre of the pit lies a dust covered artefact. It appears to be made of a dull-gold material. As you brush off the dust you can see more of the features of the object. It appears to be a face, well some sort of face. It has large eyes and twisting horns.
 Do you take the artefact?
 1. Yes – turn to page 4 (63)
 2. No – continue with your journey
 The room has three exits in the middle of the South, East and West walls
 Which route do you pick to continue your journey
 • South doorway: Page 3 (5)
 • East doorway: Page 4 (18)
 • West doorway: Page 5 (6)

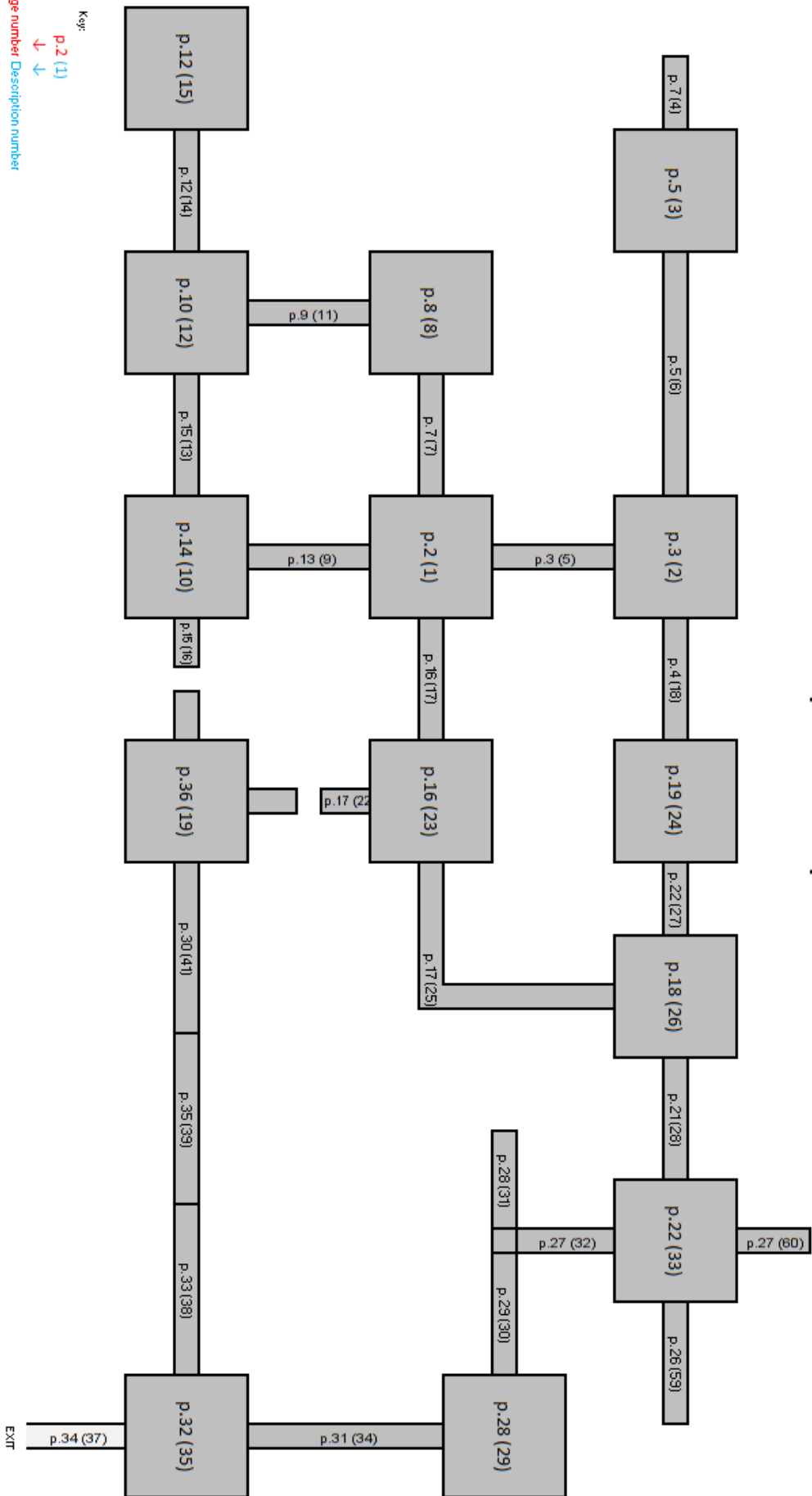


As the players travel around the maze, the map will grow in this way.

NOTE: if you have the time, giving the children opportunities to explore their how they will record can be powerful.

The complete map, for the teacher, is attached below:

Complete Map



Additional scoring option.

If this game is played with a whole class (with children split into groups), it can take quite a long time for all groups of student to find the exit.

As an option, the game can be brought to end whenever it appears appropriate and determining how successful teams have been can be determined by the number of *treasure tokens* that they have.

In addition to the treasure tokens that have been found in the maze, the teacher can award additional treasure tokens for the following things:

Escape

If a team found the exit, award an additional 10 treasure tokens

Returning with a map

This is at the teacher's discretion. The teacher can judge how accurate each team's map is and then award an additional 6 or 4 or 2 or 0 treasure tokens to the team.

Returning with information

The teacher can ask the teams the questions on the following sheet. For each correct answer, award the team 1 additional treasure tokens.

+ After all these conditions, teams can then calculate their total score for the adventure.

Returning with Information

You have safely returned from the underground maze and now it is time to share the information that you have found, that is, if you have been paying attention.

1. In the room with a circle of seats, there was a mural on the wall, what did this mural show?

2. In the room with four statues, what is each statue clutching in their hands?

3. In the room with the sarcophagus, what was the sarcophagus made of?

4. In the room with the weapons hanging on the walls, what colour was the handle of the only complete sword?

5. In the armour with the stone throne and the armour, what was painted across the whole ceiling?

6. In the second treasure room there were five objects sitting on plinths. Name two of those objects.

7. What was in the centre of the room that lead to the exit?

Returning with Information

You have safely returned from the underground maze and now it is time to share the information that you have found, that is, if you have been paying attention.

1. In the room with a circle of seats, there was a mural on the wall, what did this mural show?

A war between four-armed creatures and dark being that descended from the sky.

2. In the room with four statues, what is each statue clutching in their hands?

Staff

3. In the room with the sarcophagus, what was the sarcophagus made of?

Green stone and gold gilt

4. In the room with the weapons hanging on the walls, what colour was the handle of the only complete sword?

Blue

5. In the armour with the stone throne and the armour, what was painted across the whole ceiling?

A dragon

6. In the second treasure room there were five objects sitting on plinths. Name two of those objects.

Necklace, mask, or staff

7. What was in the centre of the room that lead to the exit?

A horse-shoe shaped stone slab that appeared to be a desk

