



# MONKEY ADVENTURES

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A ZOO SCIENCE GAME



## Introduction

### Object of the activity:

To acquaint the players with golden-headed lion tamarins (GHLT) and their needs in the increasingly fragmented and climate-change affected coastal rainforests of Brazil. Also the importance of (intra-specific) genetic diversity is incorporated into the game.

Number of players: 3 to 9 players

### Supervision:

- by 2 people
- GM1: Game Master 1 focuses on the questions, presentation and explanation
- GM2: Game Master 2 focuses on put obstacles on the board when events occur

Game board: Tiles 50x50cm (carpet tiles) - 17 x 11 tiles = 187 tiles - surface area: 8.5m x 5.5 m

#### • Accessible tiles:

Yellow = sand

Light green = disturbed forest

Dark green = virgin forest

#### • Inaccessible tiles:

Grey = town (grey tile + house)

Brown with tractor = industrial agriculture

### Aim of the game:

Before starting, each player is given a red, green or blue cape. The genetic diversity of the GHLT population is represented simply by 3 colours: blue, green and red.

The players start on the beach and have to get to the other side as quickly as possible. There they will find bromeliads i.e. food.

There are ten rounds. Each round, the game master asks a question (using a slide + slide with answer): if a player answers correctly, they can go forward one space (may also go left, right or backwards if there is an obstacle in the way).

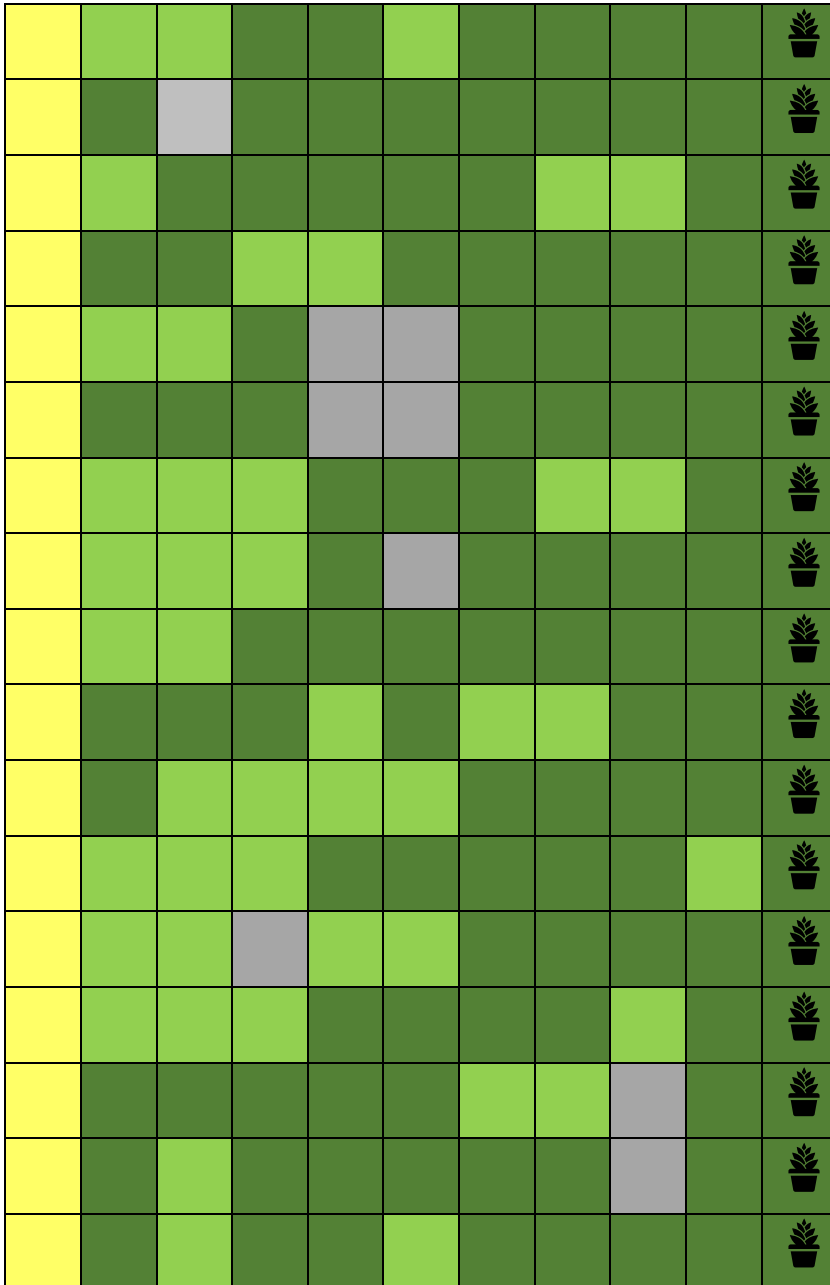
- If the player is on a yellow or light green tile, they can go forward 1 tile.
- If the player is on a dark green tile, they can go forward 2 tiles.

Some questions are followed by an 'event'. The game master explains this event, which also impacts the playing field. There are positive and negative events.

## Rules of play

### STEP 1

Before the players enter, set up the board game in the starting position: a collage of yellow, grey, light green and dark green tiles.



## STEP 2

Welcome the players. Give each player a cape and ask them to stand on a yellow tile.

## STEP 3

Introduction given by GM1.

Welcome!

We're going to take you to the habitat of gold-headed lion tamarins. On the ground in front of you is a landscape. Your aim is to get to the other side as quickly as you can because there, where bromeliads grow, is where you'll find food.

We will ask you some questions and if you answer them correctly, you can go forward. If you are standing on a yellow or light green tile, you can go forward one space. If you are standing on a dark green tile, you can go forward two spaces (virgin forest is better). You are not allowed to step on grey tiles. Those are towns, and the monkeys cannot go across/through towns.

Finally, explain the different colours of the monkeys. referring to individual differences between individual people.

GM2, meanwhile, erects buildings on the towns.

## STEP 4: QUESTIONS AND EVENTS

Now the game really starts! The questions are asked and the answers given in a presentation. Players who answer a question correctly go forward 1 or 2 spaces.

**Question 1:** Are gold-headed lion tamarins: A) marsupials; B) mammals; C) birds?

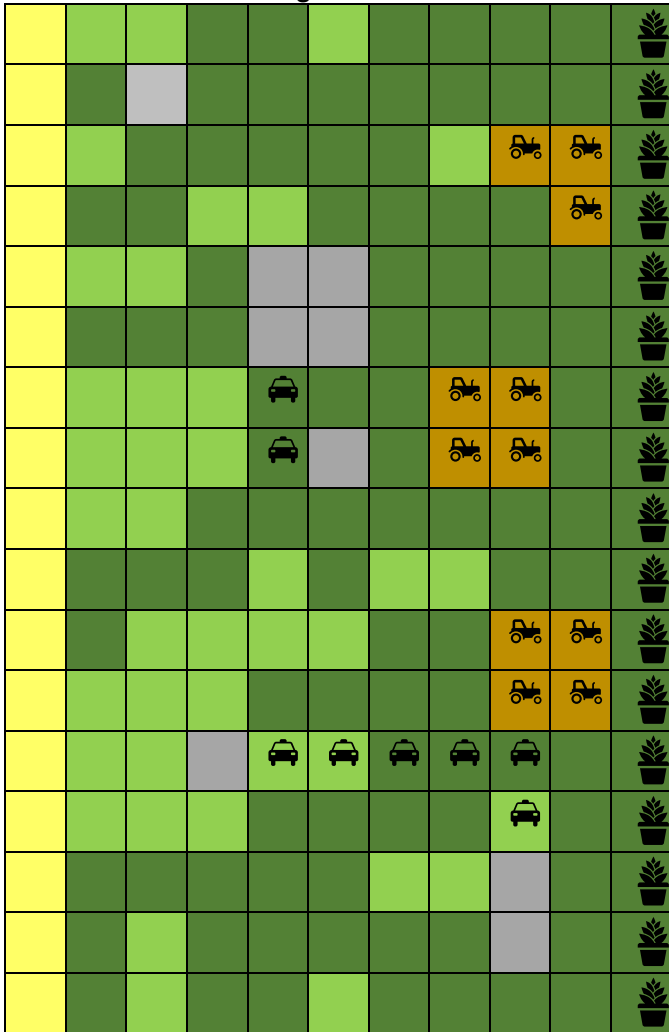
**Question 2:** Where do gold-headed lion tamarins live? In A) North America; B) Central America; C) South America.

**Event 1:** A motorway is built through the forest, connecting the towns. The gold-headed lion tamarins cannot cross this. (GM2 lays the motorway on the game board, GM1 explains what is happening.)

**Question 3:** What do gold-headed lion tamarins eat? A) fruit and insects; B) insects only; C) fruit only.

**Event 2:** Industrial farms appear on the board. First of all the forest is cut down, so the monkeys can no longer step onto those tiles. (GM2 swaps the tiles on the game board, GM1 explains what is happening.)

Addition of roads + agriculture



**Question 4:** Gold-headed lion tamarins prefer to move around A) through the trees; B) over the ground; C) by swimming.

**Event 3:** Hunters have been spotted in the forest; all the monkeys on dark green tiles must go back one space.

**Question 5:** Who looks after the baby monkeys? A) mother and father; B) mother only; C) mother, father and the older brothers/sisters.

**Event 4:** Government has decided to build wildlife crossings over the motorway. (GM2 puts the wildlife crossings on the board.)

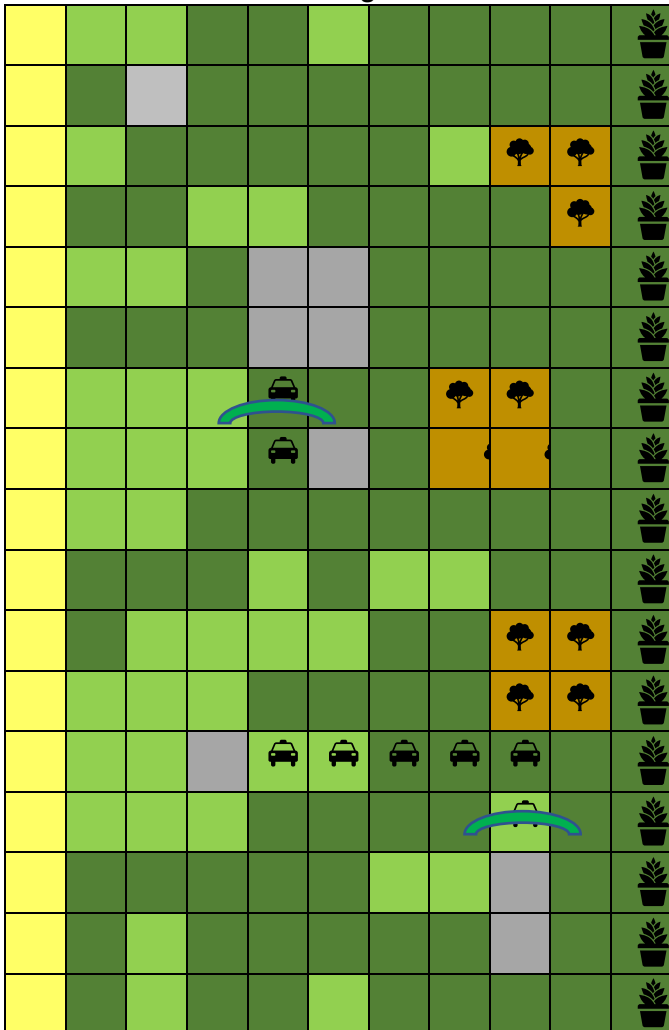
**Question 6:** How many gold-headed lion tamarins are there left in the wild? A) 50,000; B) 15,000; C) 2,000.

**Event 5:** There has been an outbreak of a disease; the blue and the red monkeys are all infected and have to go back one space (not the green ones; the importance of genetic (bio)diversity).

**Question 7:** How can farmers make their fields more suitable for gold-headed lion tamarins? A) by creating watering holes; B) by hanging ropes above the fields; C) by leaving tall trees standing.

**Event 6:** the industrial farms are converted into cocoa plantations (cabruças). (GM2 places the symbols on the game board, GM1 explains what this means.)

Addition of wildlife crossings and cabruças



**Question 8:** The European breeding programme for these monkeys is led by A) Antwerp ZOO; B) Rio de Janeiro Zoo; C) Zoo Berlin.

**Event 7:** The climate is warming and this also affects the gold-headed lion tamarins: everyone has to go back one space.

**Question 9:** How can the gold-headed lion tamarins help preserve the rainforest? A) They can't, unfortunately; B) by dispersing tree seeds; C) they protect the trees against insects; D) they clear the forest floor.

**Question 10:** And finally... BioBrasil is a project Antwerp ZOO has set up in Brazil. We want to help protect the gold-headed lion tamarins. But how do we do that? A) by studying the monkeys; B) by supporting different kinds of agriculture; C) by telling people how important nature is; D) A, B and C.

For a more difficult version, we also add the following questions:

- Planting forests can contribute to A) a reduction of CO<sub>2</sub>; B) cleaner air; C) more biodiversity; D) A, B and C.
- When we talk about biodiversity we actually mean the diversity A) of individuals within 1 species; B) of species; C) of ecosystems; D) A, B and C.
- In zoos genetic diversity is preserved, to a certain extent, by A) introducing animals from the wild and, if necessary, cross-breeding them; B) causing and sustaining a specific mutation; C) targeted breeding and exchange.