

HANDBOOK

2022

ESCAPE
ROOM
WORKFLOWS of
INNOVATION

AGRICULTURE

Escape Room Story - The Interview (Agriculture)

*Information on the Escape Room dedicated to
agriculture*

*Polytechnic Institute of Santarém, School of
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INDEX

INTRODUCTION	1
Framework	1
Objectives	1
MATERIALS IN THE ROOMS	2
STORYTELLING	2
ENTRANCE HALL	3
Objects	3
Sequence of play	3
ROOM 1	4
Objects	4
Sequence of play	5
ROOM 2	9
Objects	9
Sequence of play	9
ROOM 3	11
Objects	11
Sequence of play	11
RULES	12
DATA PROTECTION	13
IMPACTS	14

INTRODUCTION

Framework

The construction of an *Escape Room* at the Escola Superior de Educação (ESE) of the Instituto Politécnico de Santarém (IPSantarém) had its origin and framework in a non-degree course in "Digital Literacy for the Labour Market" for young people with Intellectual and Developmental Disabilities (IDD) with a degree of 60% or more in 2020.

This was the first inclusive training and education model in higher education for intellectual disabilities. Its objective is to promote and facilitate the social and labour inclusion and employability of these young people, through their empowerment and the development of specific skills in digital literacy adjusted to the needs of the labour market, with a view to building an adjusted professional profile.

In 2022 a new proposal appears based on the existing history but relating it to activities in the field of **Agriculture, Health** and **Sport**.

Objectives

The creation of the new stories is intended to provide a learning methodology, practical and playful, that can serve as a basis for the practical development of the competencies that are the object of work in the respective domains.

MATERIALS IN THE ROOMS

- Arduinos
- NFCS
- Cameras
- Chairs
- Tables
- Boxes
- Safes
- Columns
- Panic buttons

STORYTELLING

This *Escape Room* consists of the entrance hall, 4 rooms and a control room, as shown below.



ENTRANCE HALL

Objects

- Safe with a keypad that opens with the code "**3124**" containing 2 objects: key to room 1, torch.

Sequence of play

Players receive an activity on their tablet.

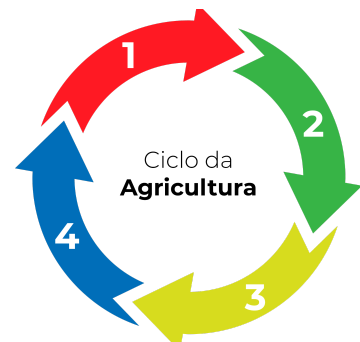
THE BEGINNING: *"The aim of this story is to prepare you for a job interview. To do so, you need to decipher the riddles and carry out the proposed activities in the field of health. At the end of each activity you need to validate it to go on to the next one. Click on the button to continue.*

Players need to confirm the activity to continue.

Once this is done, players receive a clue on their tablet:

Clue: *"The agricultural practice is a cycle composed of 4 stages, as represented in the figure. Associate each stage and open the box with the code below to access the first room.*

Code: *Supervision, Soil preparation, Planting, Harvesting".*



Players need to decipher the cycle that is represented in the picture. Each stage is identified by a number.

If players match the order of the stages with the code represented on the clue, they will have access to the code **3124** to open safe 1.

Vault 1 will give access to the **key to** room 1, a **torch** that players will have to keep during the game and a **document**.

Document: [Competencies.pdf](#)

ROOM 1

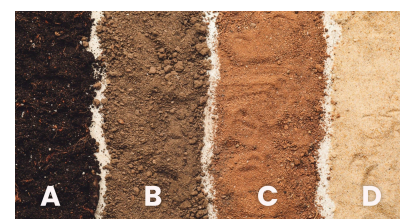
Objects

- 4 vases labelled with the letters A,B,C and D. In vase A is buried a **mini key with an NFC keyring** that opens a lock in room 2;
- Garden spade;
- Large safe with keypad that opens with the code "**41523**" which has 3 objects: **watering can, egg plate**, which opens the lock of a box;
- Wooden box locked by a padlock containing 1 object: **grape plate**.
- Bed with humidity sensor and 3 plastic plants;
- Safe with code that opens with the code "**1407**" **that** has 2 objects: **Diamond plate** and **mini key 2**;
- Box with padlock that opens with the code **925** that has 2 objects inside: **notebook** and **pen**;
- Green marker with a number 3 hidden in the cap;
- Card reader/NFCS;
- Safe with a keypad that opens with the code "**0412**" which has an object: **Key to room 2**.

Sequence of play

Players enter the room and receive a clue on their tablet.

Activity: "Soil preparation is responsible for improving soil physical properties."



The soil should be light and rich in nutrients and can be distinguished by its colour.

What will be buried in the pot with the type of soil with the best properties?"

In the picture there are 4 types of soil identified with the letters "A,B,C and D" that can be distinguished by colour. The players have to identify the best soil for planting. *Considering the flowerbed in the room, the players must identify which is the pot with the darkest soil.*

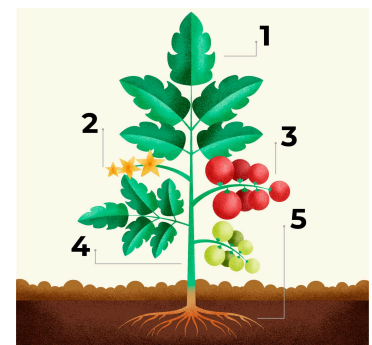
In the room there are 4 pots represented with their letters. Players need to find a **key with an NFC tag (mini-key 1)** that is buried in **pot A**, using the **garden spade** in the room.

Next, players need to swipe the tag on the NFCS reader in the room to progress to the next activity. *Players will need to keep the key as it will be useful in room 2.*

After completing the previous task, they receive a clue on their tablet.

Activity: "It is important to know that like humans and animals, plants also have organised cells, tissues and structures.

*Find out the code: **Stem, Leaf, Root, Flower and Fruit.***



Players have to decipher the structure of the plant that is represented in the picture. Each element is identified by a number.

If players identify each element according to the order of the **bold** words on the clue and if they in turn order the numbers, players will have access to the code **41523**. Players open the large safe with the code.

By opening the large safe, players will have access to the **watering can to the egg plate with the number 2** and a **hint: "A CV should be short, simple and to the point"**.

Activity: "Plants need water."

With the **watering can**, players will have to water the **flowerbed** in the room to progress to the next activity.

After watering the flowerbed, players receive another clue on the tablet.

Activity: "Find out the code taking into account the different stages of ripeness of the banana. Code: underripe, green, overripe, ripe, overripe".

If this task is successful, players will have access to the code **21435**

Once this is done, players open the safe with the code and receive a clue. Inside the safe is the **diamond plate with the number 5, key (mini-key 2)** and a **hint**:

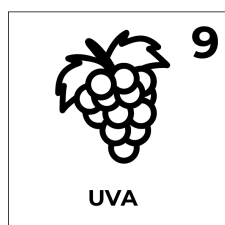
Values academic and professional experience.

*Activity: "Raw materials are the resources used to produce a particular commodity. They can be divided into three types: **vegetable**, **animal** and **mineral**."*

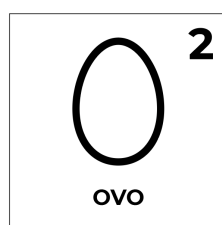
(With **mini-key 2**, players can open the box locked by a padlock in the room.

The box will have a **plate of a grape with the number 9** and **notepad**.

Players have to arrange the plates (**grape - 9, egg - 2, diamond - 5**) in the respective type of raw materials. Each object is defined with a number. If the players arrange the objects correctly with the **bold** words from the clue, they will get the code **925**.



Vegetable



Animal



Mineral

With the code, players must open a box with the lock that opens with the code. Inside the box will be a **green marker**, a **hint**: Focus on achievements and not on responsibilities.

Behind the track is a code **0412** for players to open the safe 3

Players open safe 3 with code **0412** and will have access to the **key to** room 2 and a

hint: It shows evidence and certificates.

Activity: "In addition to the tips you have received, on your CV it is important to mention your skills. Write on a piece of paper and put the paper in the mailbox. Move on to the next room!"

ROOM 2

Objects

- Mail with distance sensor;
- Safe with light sensor that has an object inside: **20-piece puzzle**;
- Dice with tilt sensor.
- Locked box with key padlock that holds 2 objects inside: **yellow marker** and a **pink marker**;
- Box locked by a key padlock that has 1 object inside: **yellow marker**.
- NFCS Reader;
- Safe box with keypad that opens with the code **578** that has 1 object: Shirt with NFC tag;
- Box locked by a code padlock that opens with the code **749** containing 1 object: **key** to room 3;

Sequence of play

The players look at the objects in the second room. They need to hand in their skills sheet to the **mailbox** in room 2.

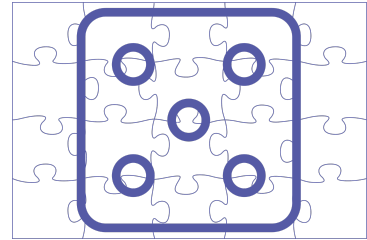
Activity: "In addition to water, plants need LIGHT for their growth."

The players have to light up the safe which is in the room with the torch. Inside the safe is a **pink marker** and a **puzzle**.

Activity: "Solve the puzzle and move on to the next activity. "

By solving the puzzle another clue is unveiled.

Given the picture shown in the puzzle, players need to turn the face of the die in the room with the number 5 upwards (*as indicated in the puzzle*).



On completion of the activity, players receive a clue.

Activity: "Pay attention to the work proposals on the table and find out the code. "

With the **mini-key 1**, players open the box which is locked with a padlock.

Inside the box will be a **yellow marker**.

There are 3 sheets that have numbers highlighted with yellow, green and pink markers: (Gardener with **8** highlighted in **Yellow**), (Tractor driver with **5** highlighted in **green**), (Farmer in the Fruit Mill with **4** highlighted in **pink**). The markers have numbers hidden in the caps (**Green - 1, Pink - 2, Yellow - 3**), representing the order of the code that the players should get with the numbers on the sheets, i.e. code **548**.

Once the code is identified, the players are able to open the safe with the code **548**. Inside the safe will be a **shirt** and the players move on to a new activity.

Activity: "Watch your presentation! Go through the reader the clothing items suitable for a job interview. "

FILE:

https://docs.google.com/document/d/1twBLQsszYrKjzOc_S1rjAQO57USID-x0XlzbpxEkBlk/edit?usp=sharing

Players need to place the NFCS of the clothes in their wardrobe - **shirt, jacket and shoes** - against the NFCS reader, as depicted in the image.

Once the previous task has been completed, players are given a clue.

*Activity: "Open the padlock with code **749**"*

Players need to open the box on the table with the code **749**.

Once this is done, they will have access to the **key to** advance to room 3 and receive a new clue.

Activity: "Move to the next room and sit on the chair corresponding to the correct answer to move to the next activity."

In view of the image, there is a criticism of the production process related to the:

- a) habit of acquiring industrial by-products;*
- b) high trade prices of goods;*
- (c) use of agro-chemicals on crops."*



ROOM 3

Objects

- 3 x chairs with light sensors;
- Safe with keypad that opens with the code **2413** that has an object inside: Guide: Frequently asked questions during a job interview.
- Camera.

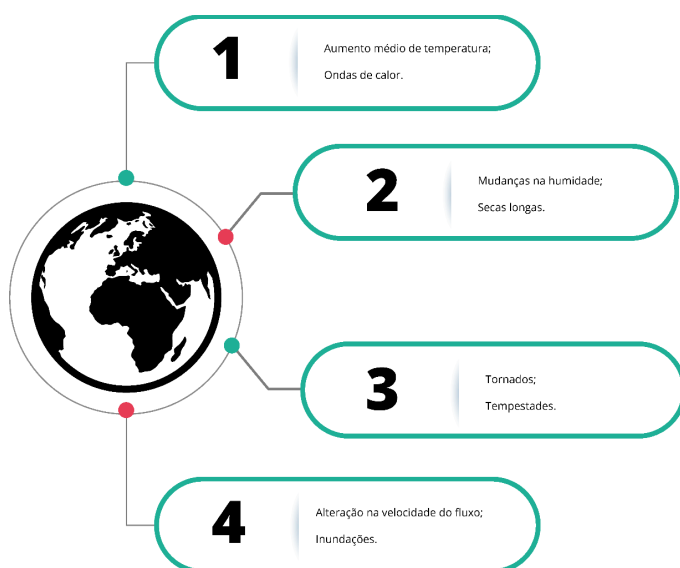
Sequence of play

The players look at the objects in the room. To progress to the next activity, players need to sit on chair A, given the correct answer.

Once this is done, players can proceed to the following activity.

Activity: "Open the box with the code, taking into account the impacts that climate change has on agriculture. "

Code: Precipitation, Sea level, Temperature, Wind.



IMPACTOS

Água disponível;
Energia;
Mudança de zonas de risco;
Custos económicos;
Doenças e insetos;
Destruição de plantações.

Players must identify the effects of each weather condition to access code **2413** which opens the vault, where a **script can be** found.

Activity: "Watch the video ([Video interview](#)) and move on to the next activity"

GUIDELINES:

https://docs.google.com/document/d/14_ZNm0-wPgH-01FXVQCnuh5UDaoTV-9p-Qwl6yfkWFg/edit?usp=sharing

Players need to watch the video to progress to the next activity.

*Activity: "Sit in front of the camera and simulate an interview by answering the questions in the **script**."*

One of the players must answer the questions in front of the camera. Once finished, the player can confirm the activity by receiving a clue.

*Activity: "Good! Open the padlock with the code **140**"*

Players open the lock on the wooden box with the code and get the **key to the exit door** and a hint.

The players **ESCAPED!**