

# Design Thinking in Health Education

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# Design Thinking in Health Education



This study addresses the contribution of design thinking in health education.

A partnership between the RNHealthTeach Project and the Polytechnic Institute of Viana do Castelo targeted the dissemination of information concerning the dangers of radon gas.

A board game was the tangible result of the design process, intended to engage young audiences through playful communication.



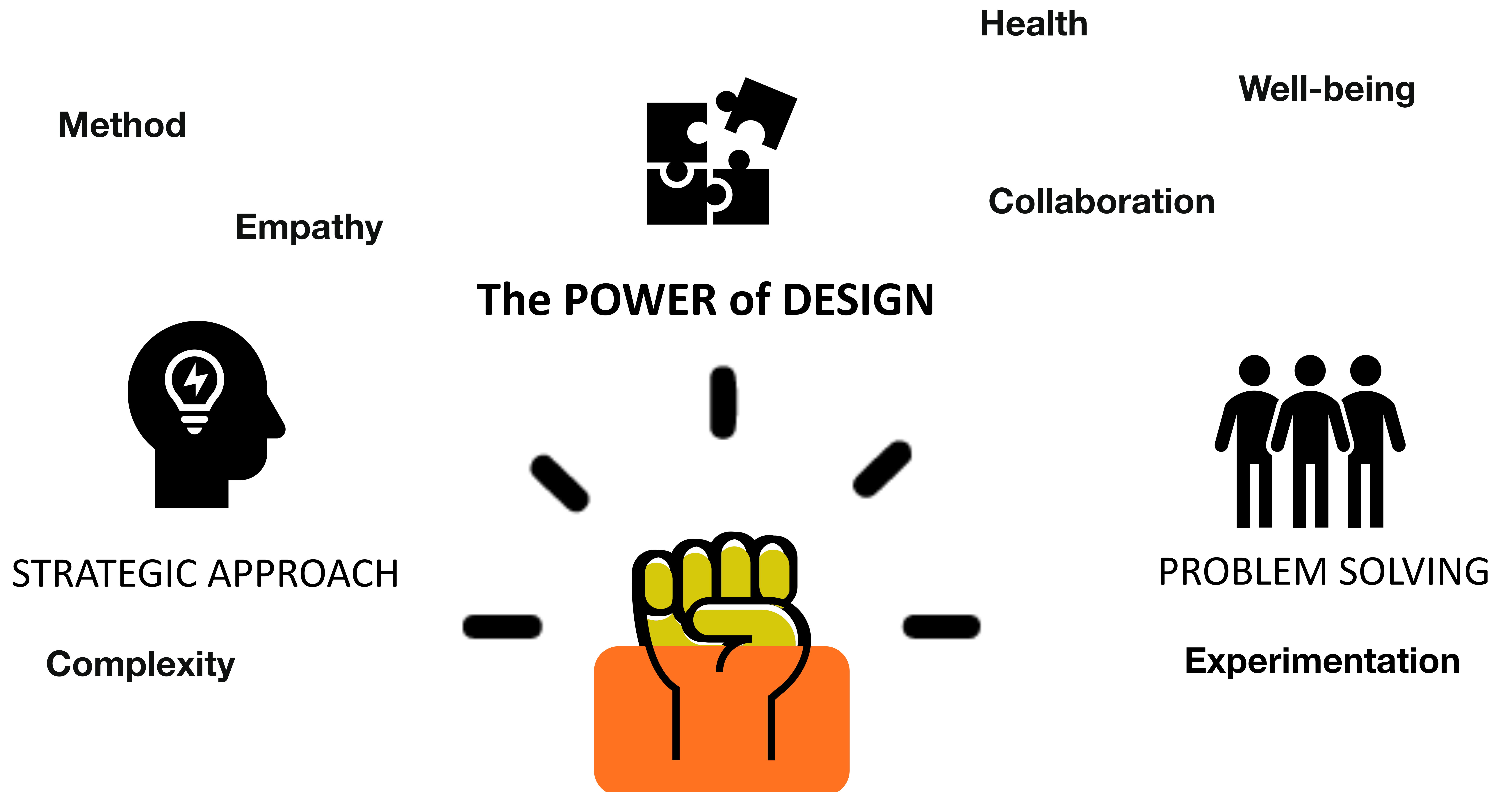


## The Radon Gas issue

WHAT is the problem?	Radon Gas in Portugal
WHO is living the problem?	People living in the Alto Minho region.
WHERE is the problem?	In areas with Granite-based soils.
WHEN is the problem?	During long periods indoors with concentrations above 300bq/m <sup>3</sup> .
WHY does the problem happen?	<ul style="list-style-type: none"><li>- Insufficient ventilation of interior environments;</li><li>- Houses built on granite soil;</li><li>- Granite houses.</li></ul> <p>Radon is a radioactive gas naturally released from rocks.</p> <p>The interiors must be ventilated to prevent the accumulation of Radon gas.</p>

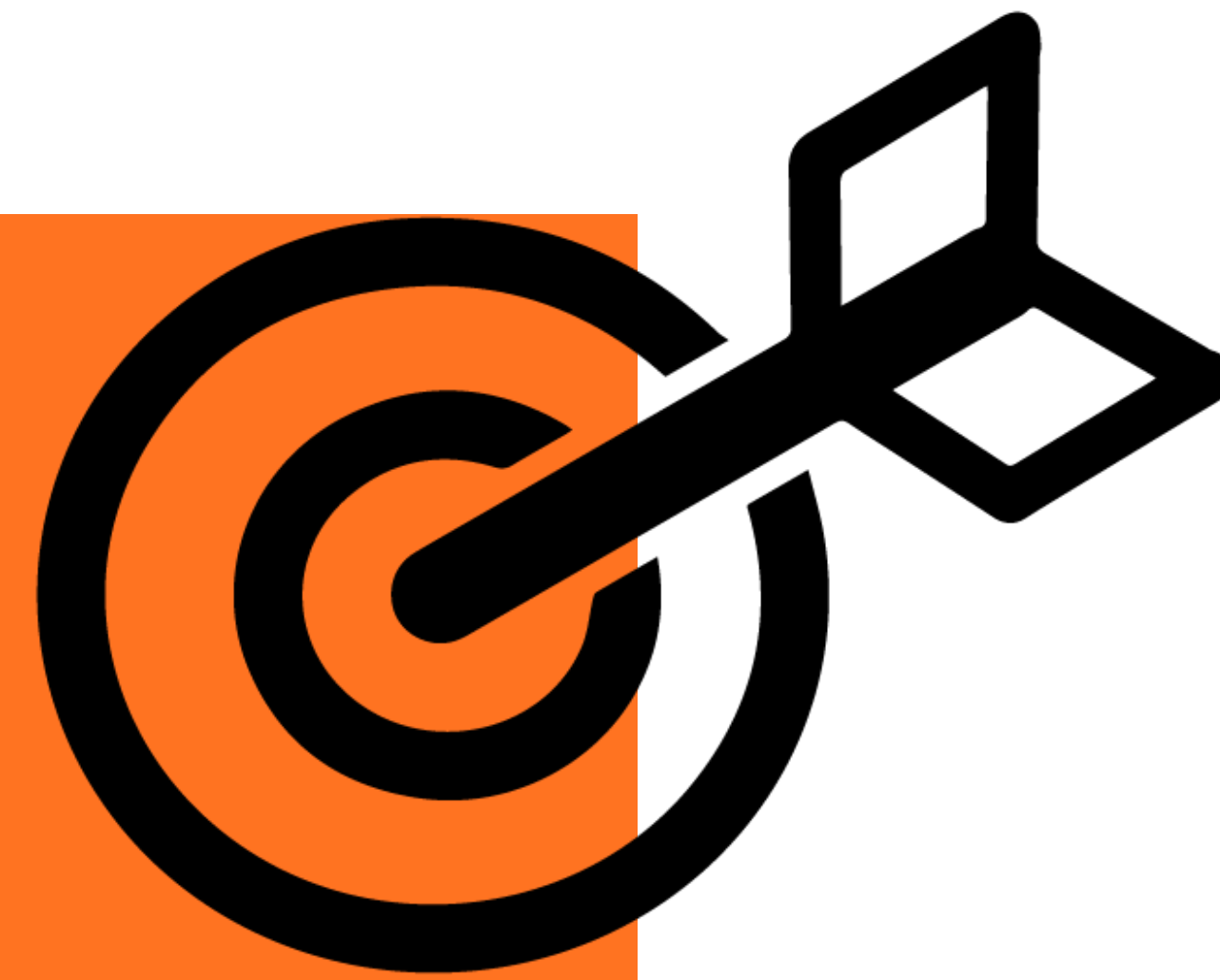


## RELEVANCY





# OBJECTIVES



01  
i

To convey basic information about radon gas

04  
Family icon

To involve the family in the learning process

02  
Ventilation icon

To encourage good ventilation habits

05  
Communication icon

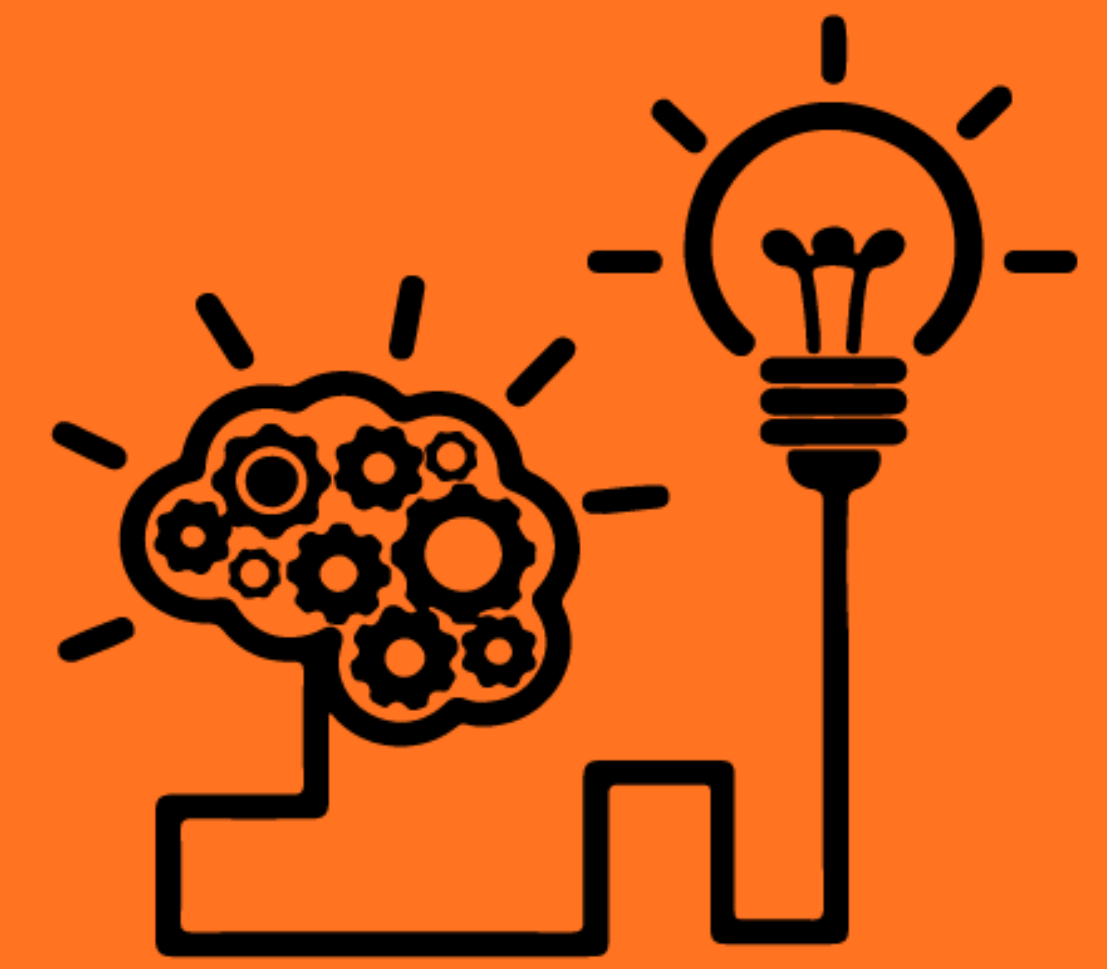
Design thinking and communication methodologies towards health education

03  
Chess icon

To maximize the learning success through game playing;

06  
Evaluation icon

To evaluate the clarity of the information and the effectiveness of the communication



## THE PROBLEM

**COMMUNICATION** concerning the **PROBLEM** to the population

For children under 10 - who will take home new attitudes and knowledge

through game playing

The board game was the favorite in the survey with children and youth.

WHY?



HEALTH

HOW?



DESIGN &  
COMMUNICATION

FOR WHOM?

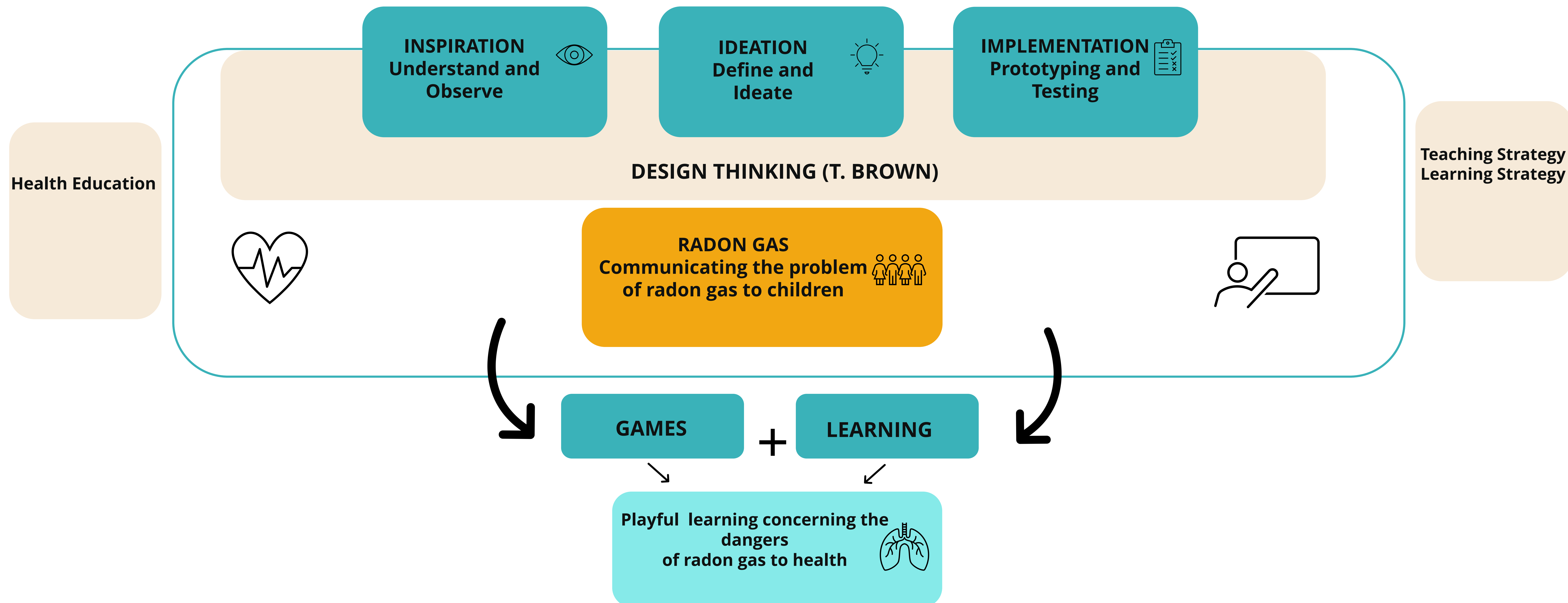
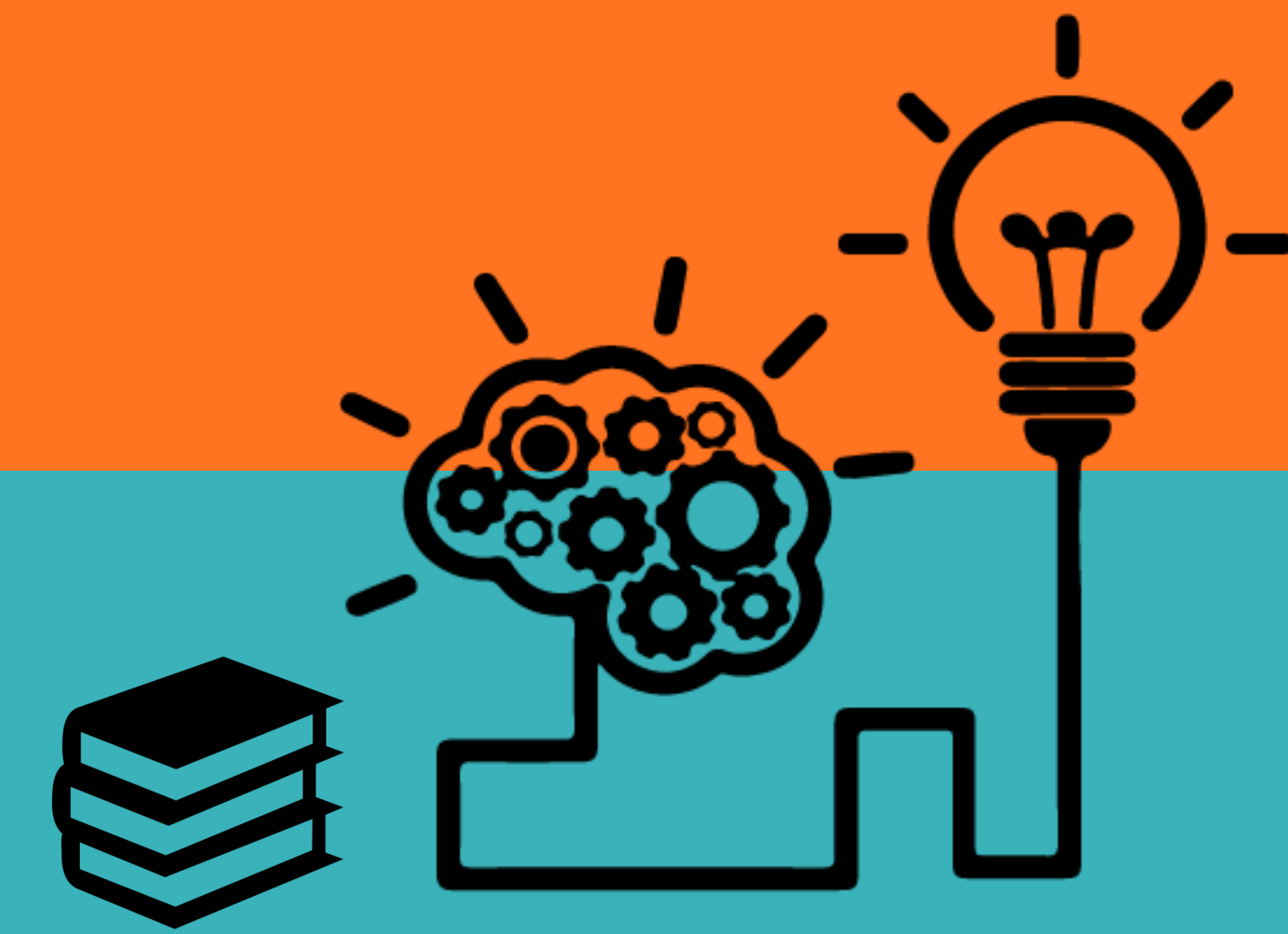


6-10 YEARS-OLD



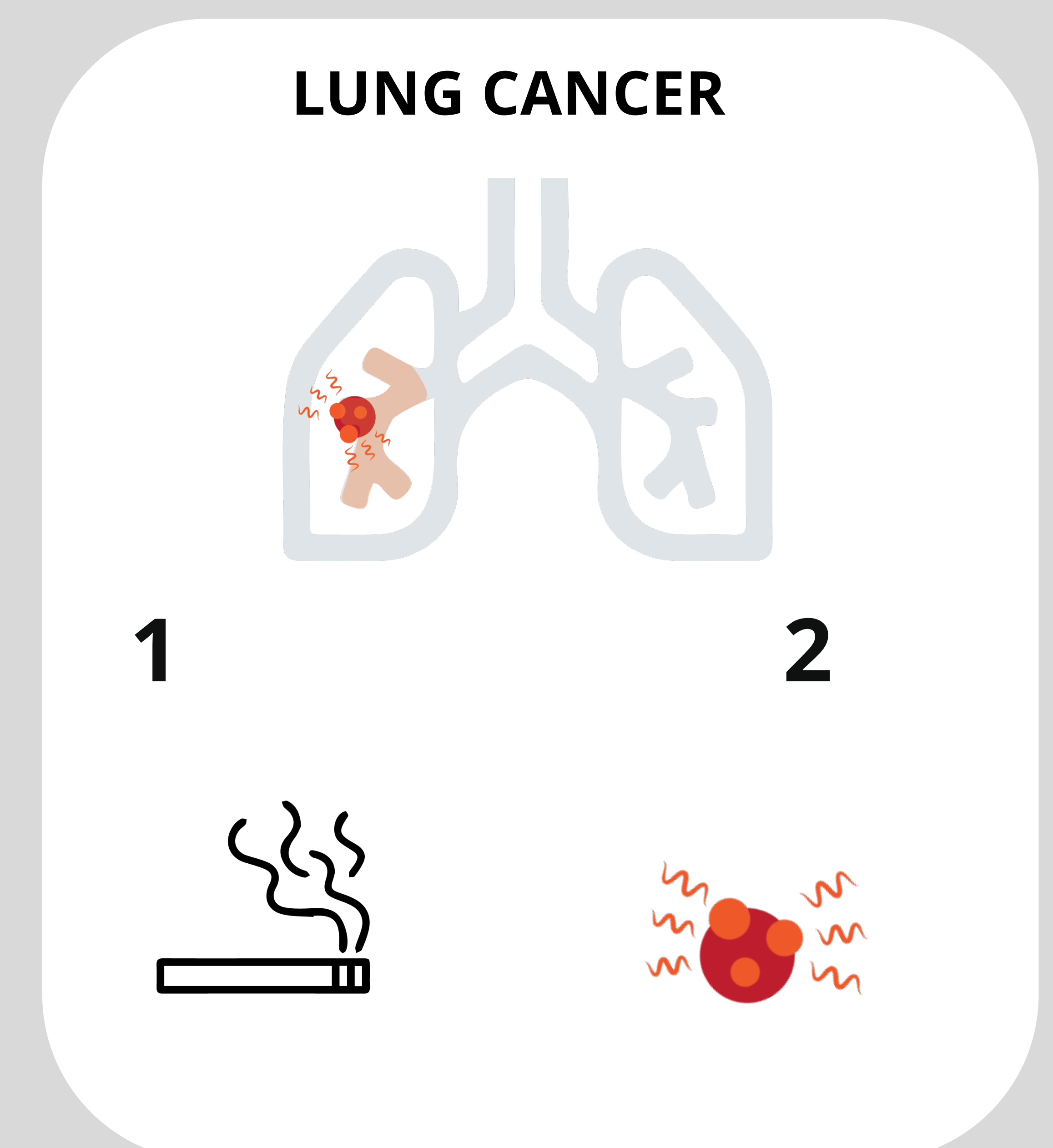
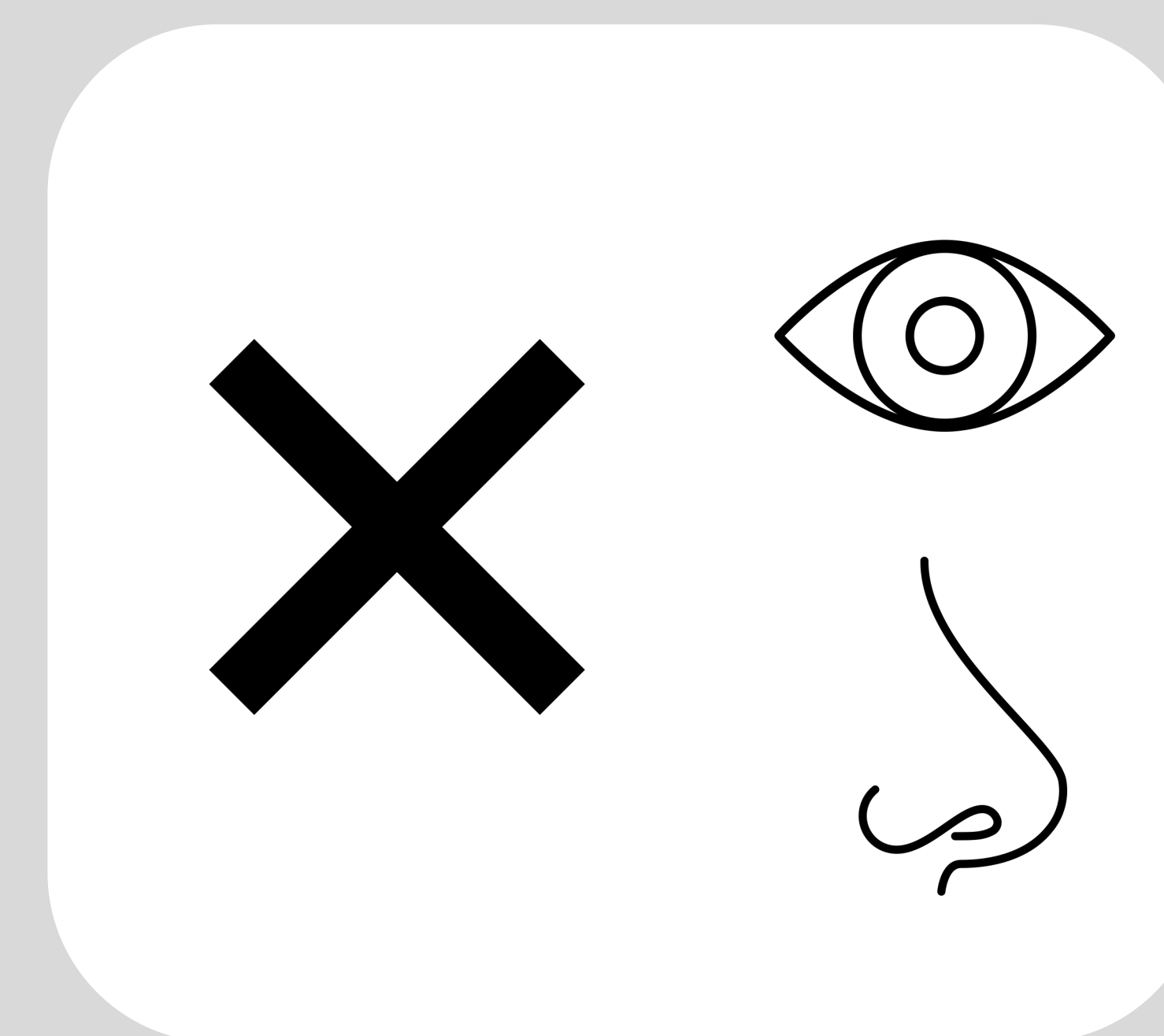


# METHODOLOGY



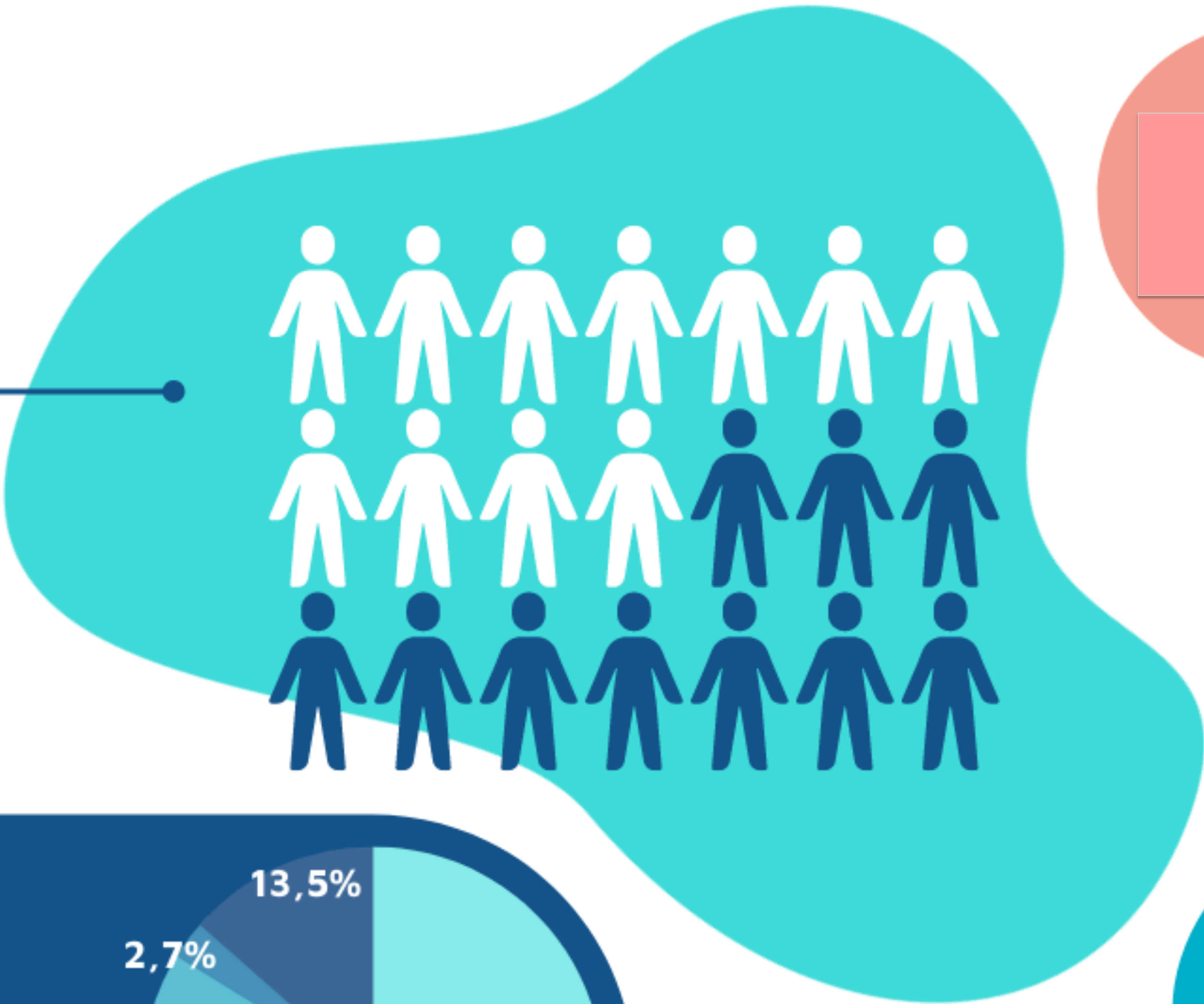
# THEORETICAL BACKGROUND

## RADON GAS

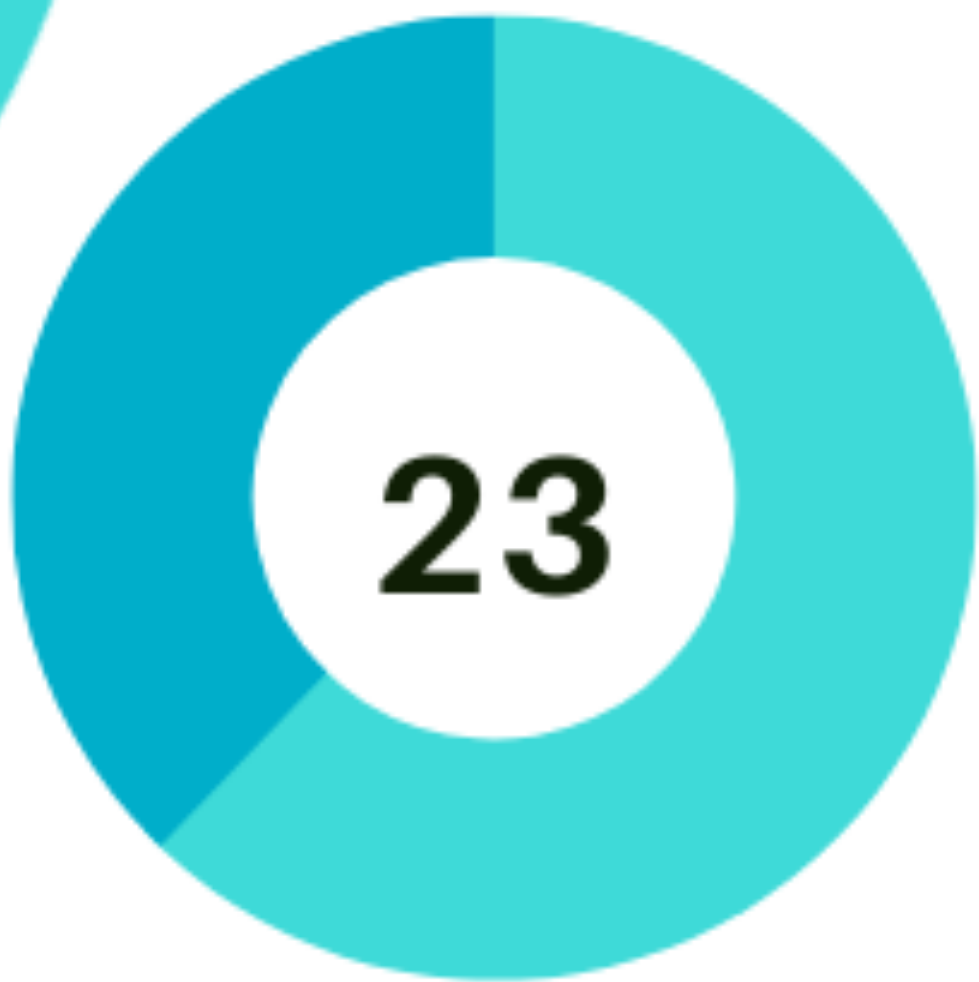
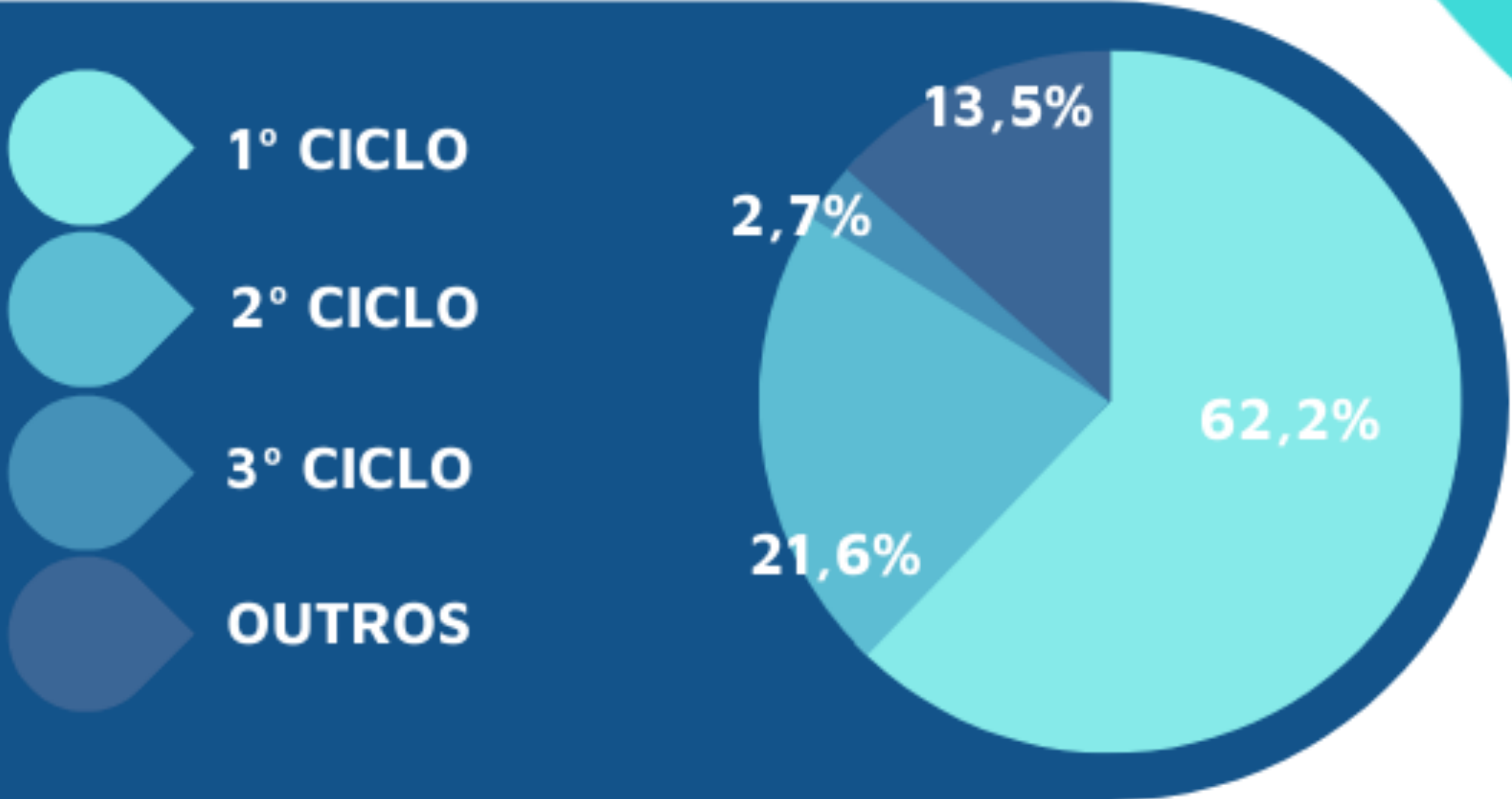




# INITIAL ENQUIRIES



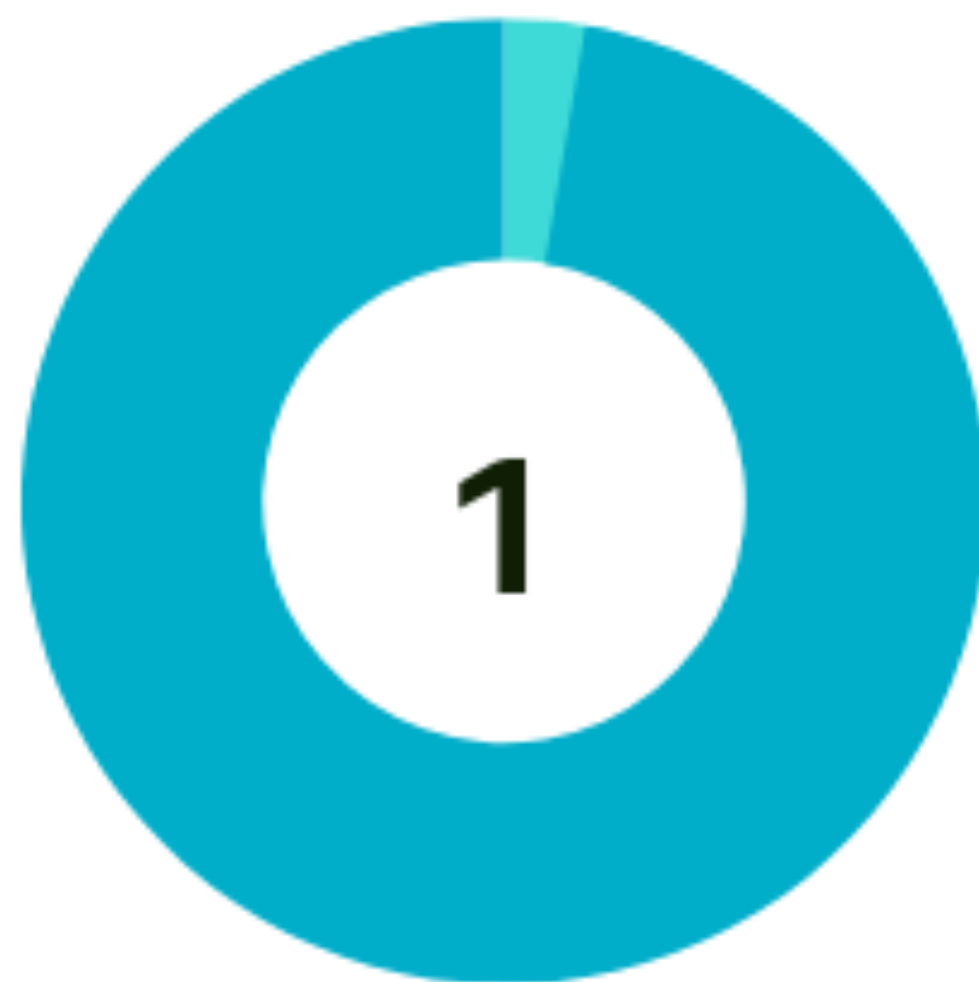
Portuguese Children



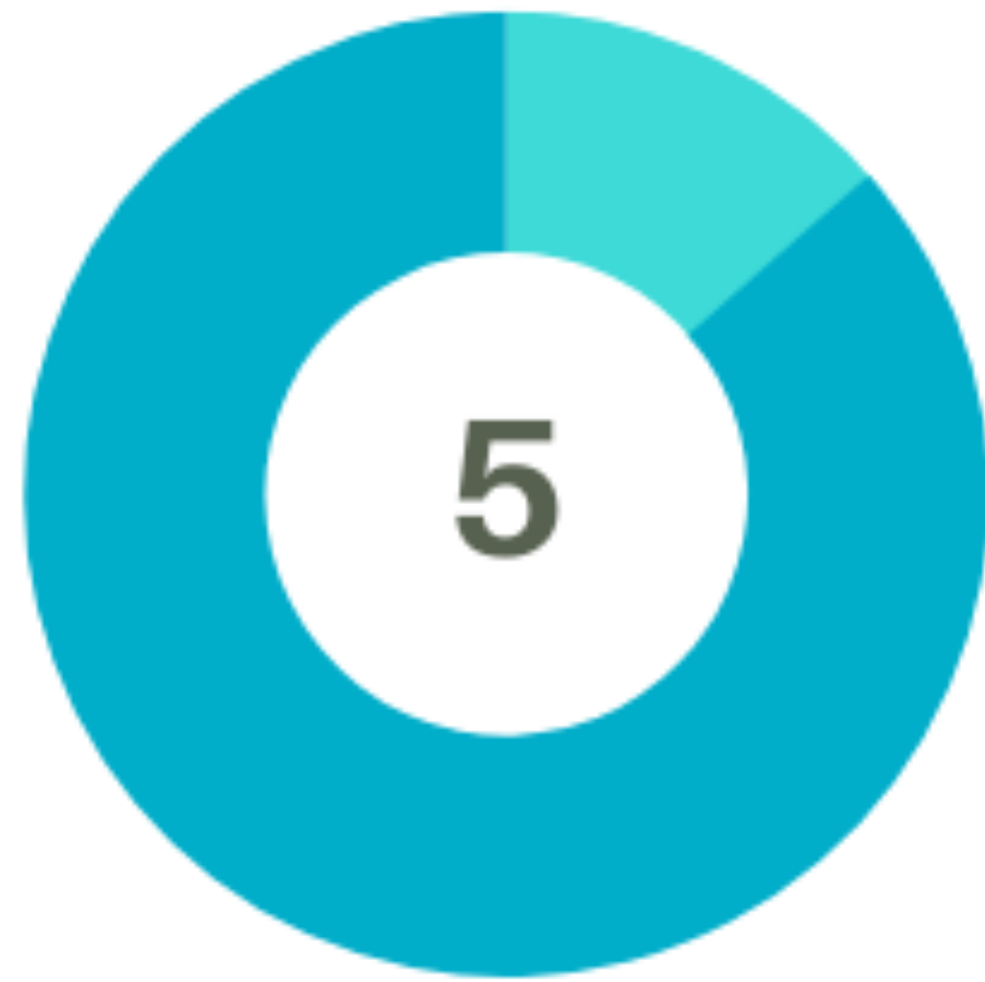
Elementary school



5<sup>th</sup> and 6<sup>th</sup> graders



7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> graders

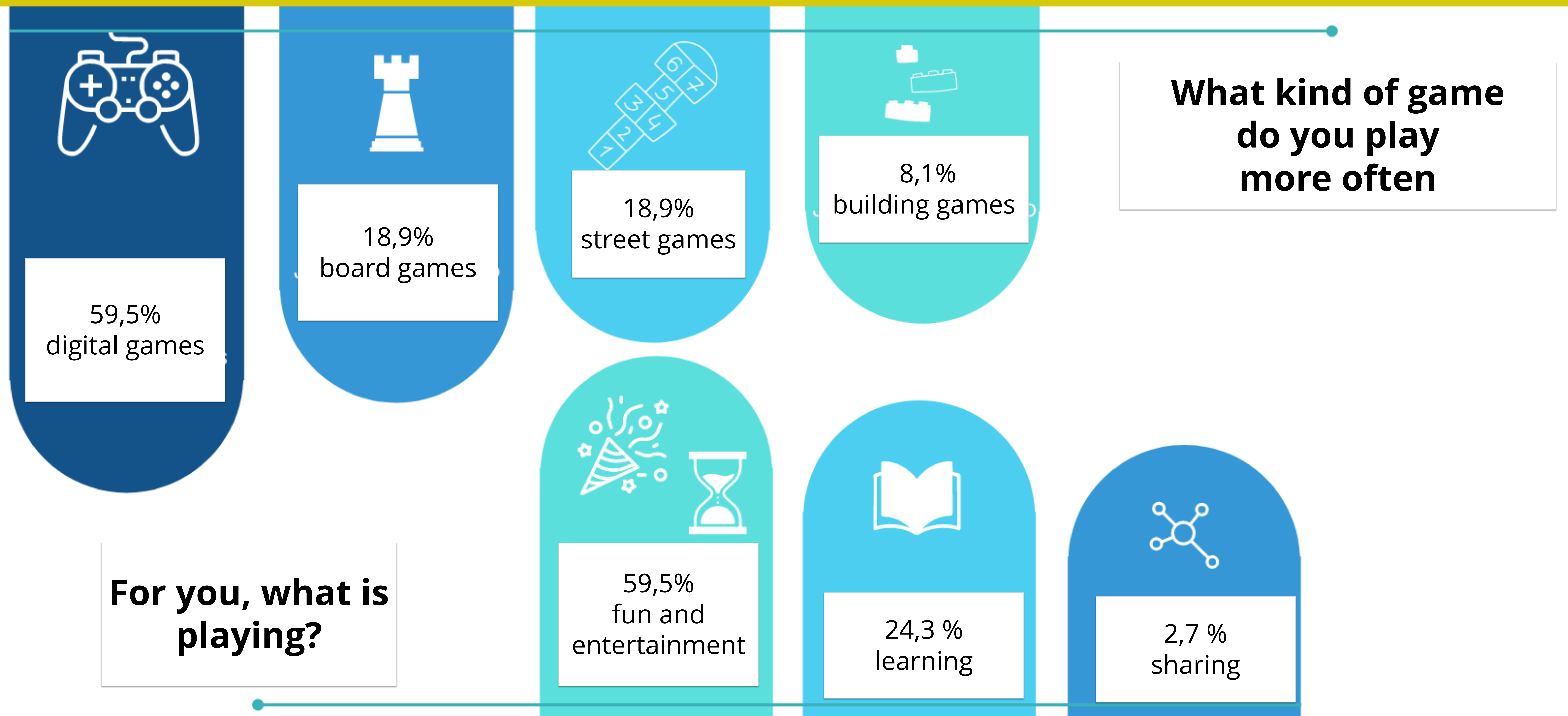


other





# INITIAL ENQUIRIES





# IDEAS



From the generation of IDEAS to the creation of the PROTOTYPE





# IDEAS

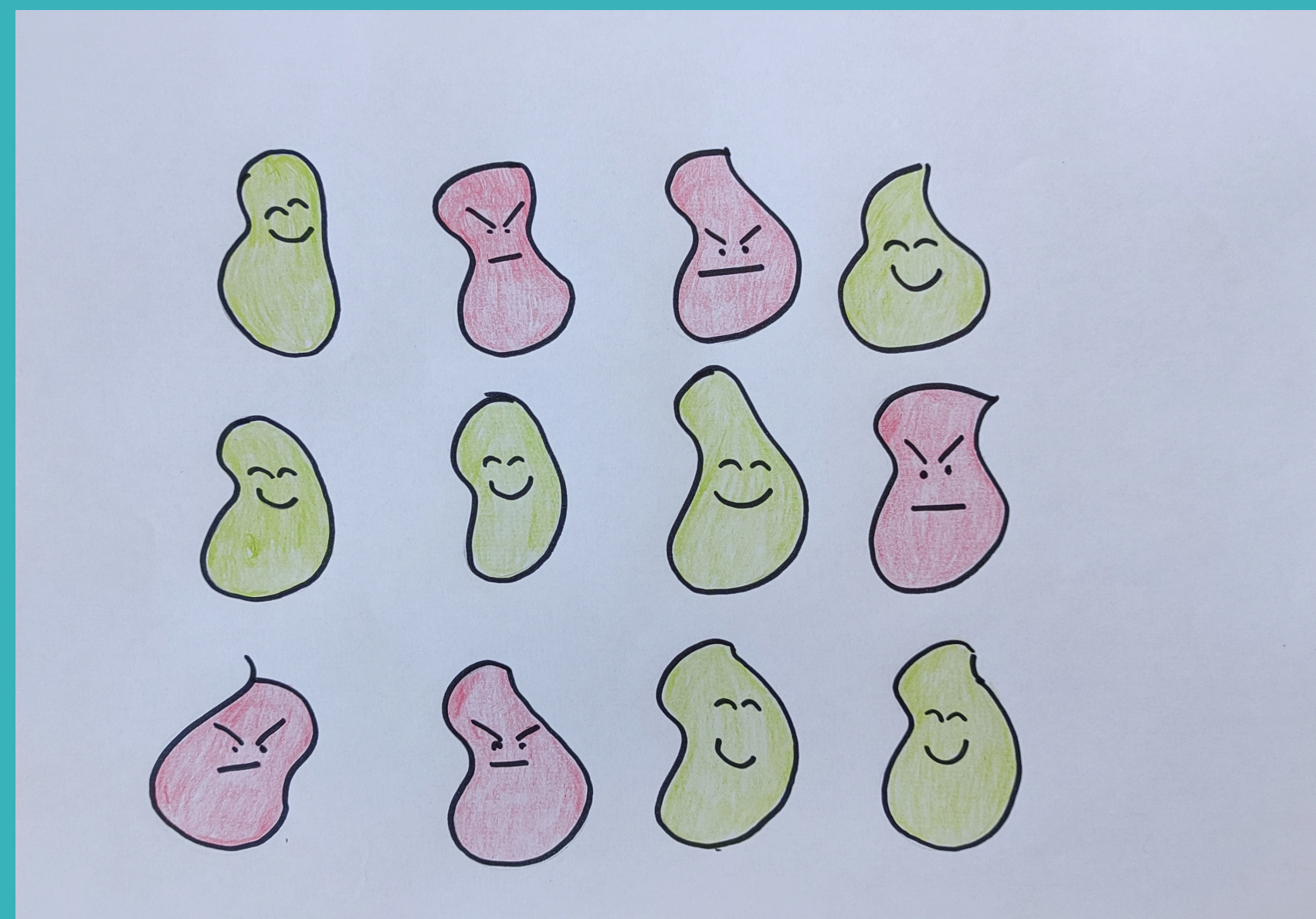
01

Rail and dice set



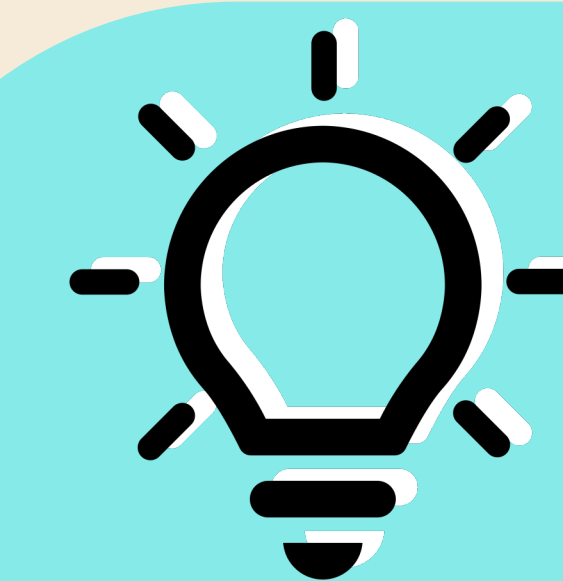
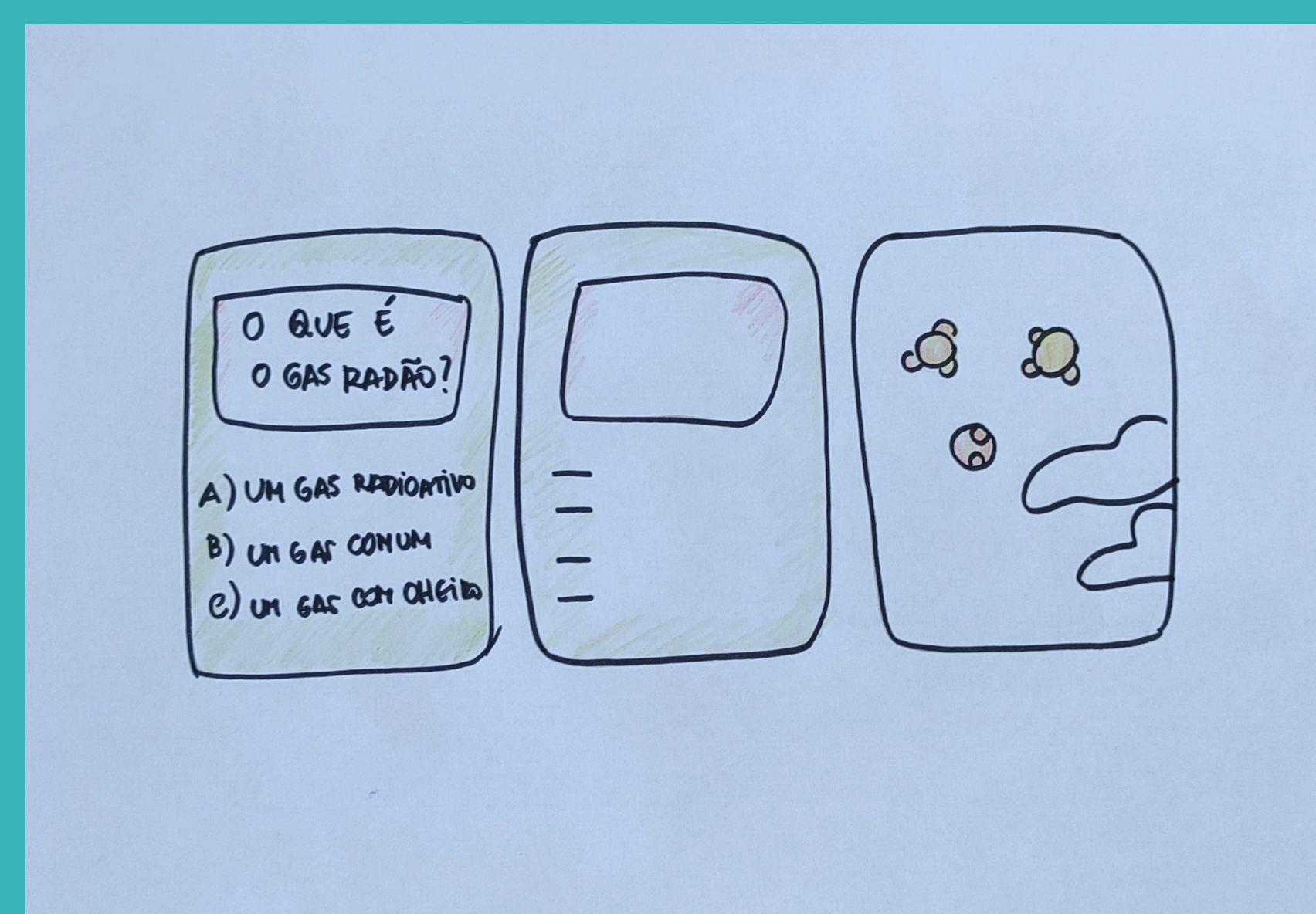
02

Carpet Board



03

Cards and questions



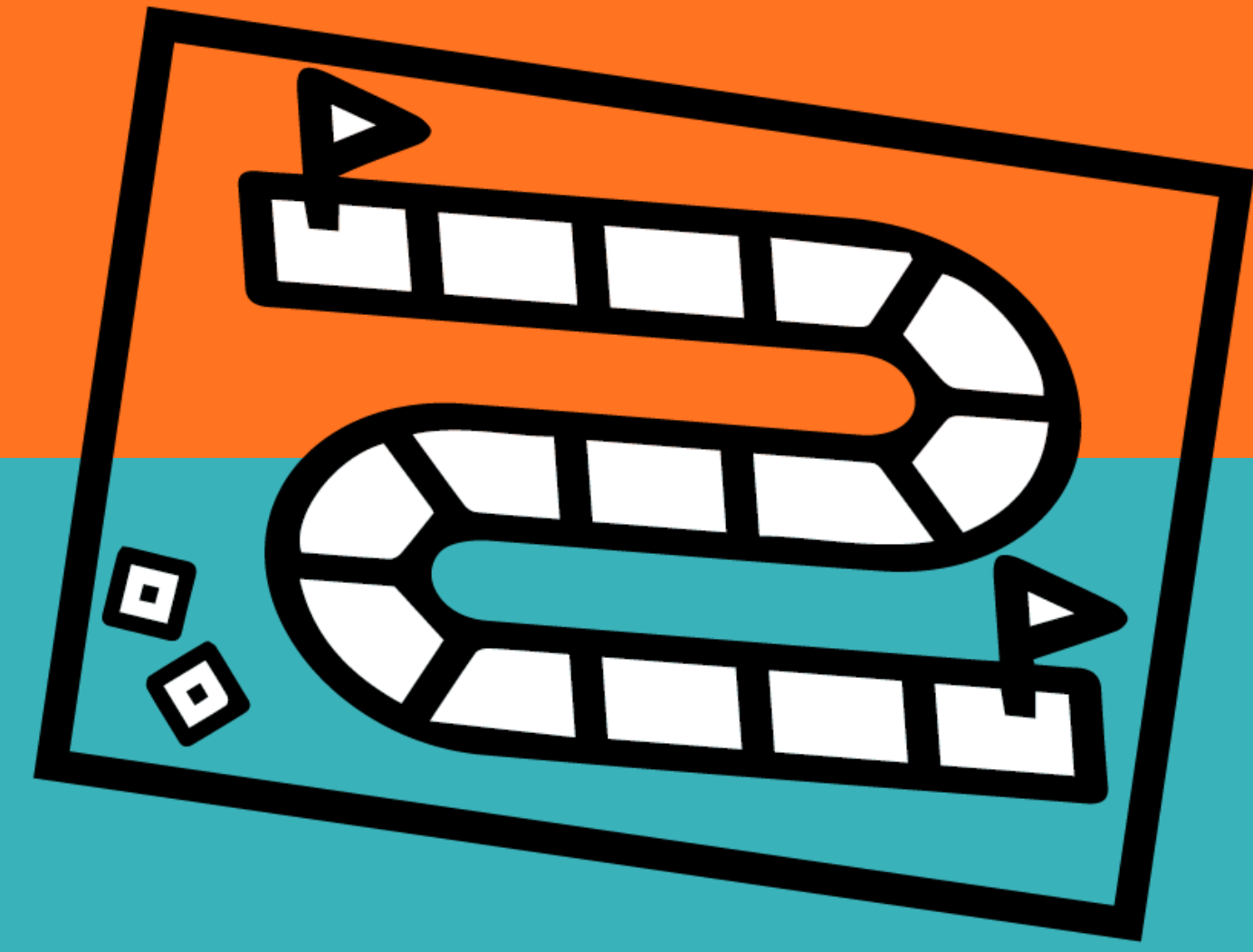
Final Idea





# IMPLEMENTATION - CONCEPT

## DO-IT-YOURSELF



To prepare and set up the board game.  
To enjoy socialising in a playful, fun way with friends and family.

### Strengths

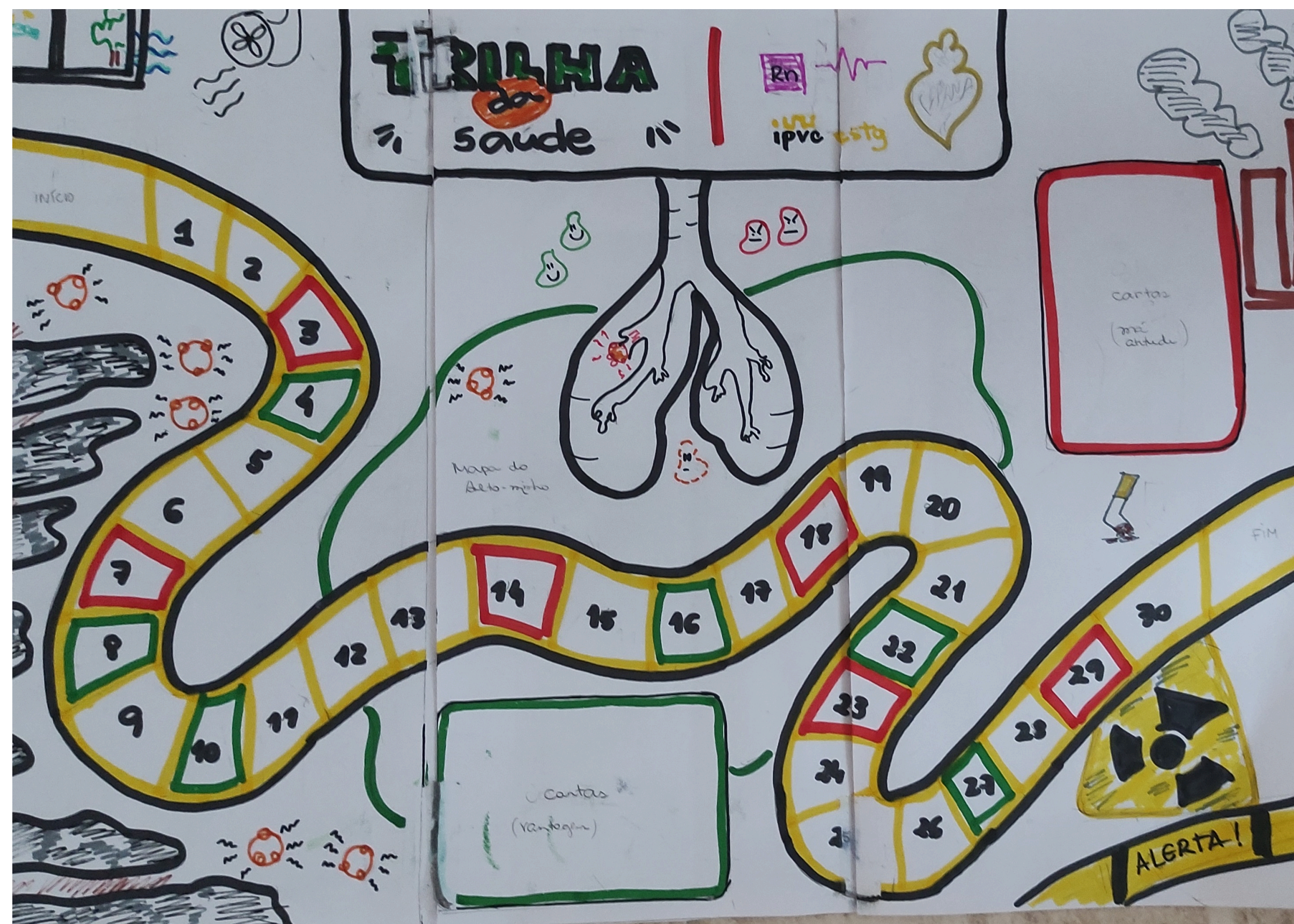
- Low cost;
- Fostering family interaction
- Quality time with family and friends.
- Opportunity to learn.



# PROTOTYPE

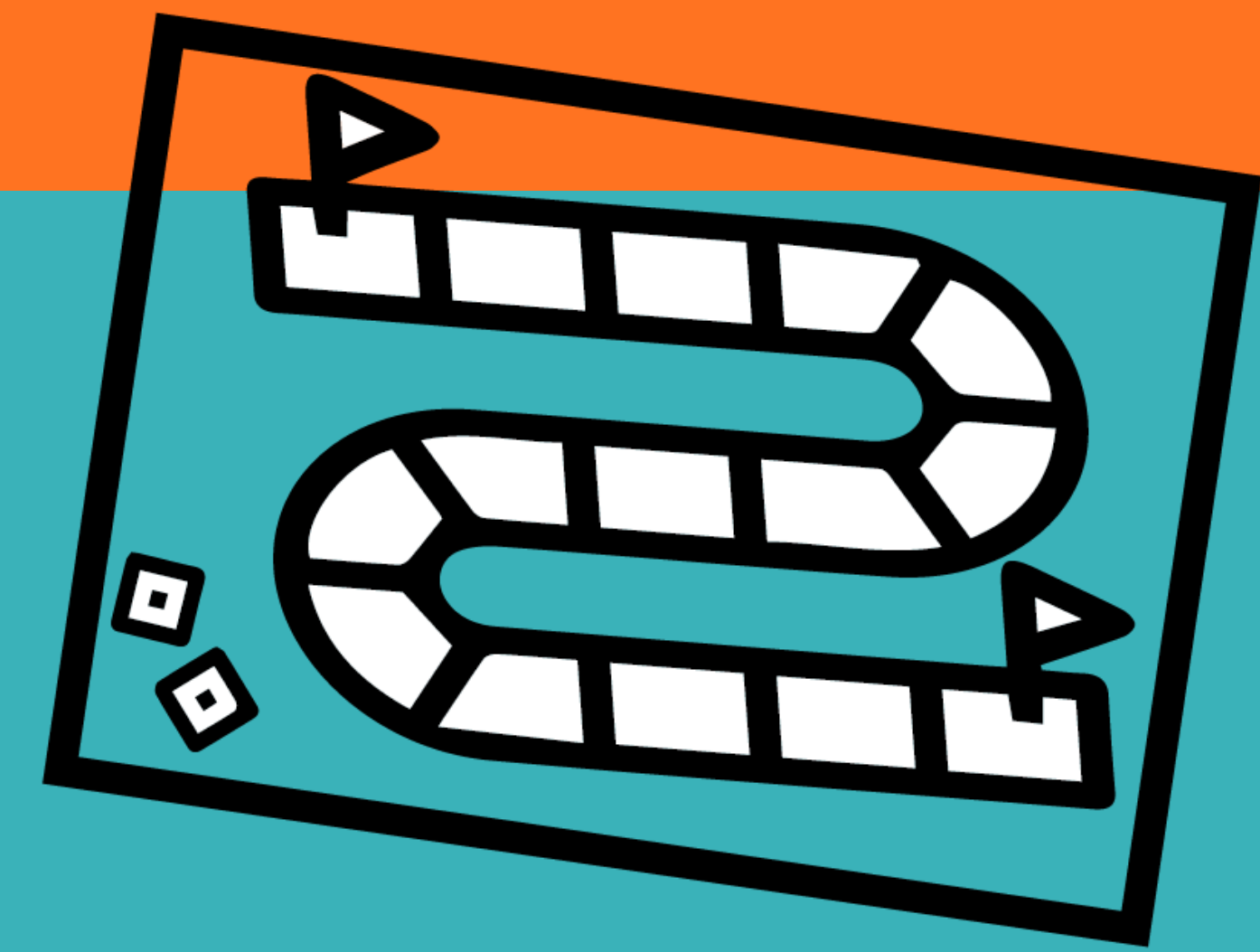


Generated interest in the target audience:



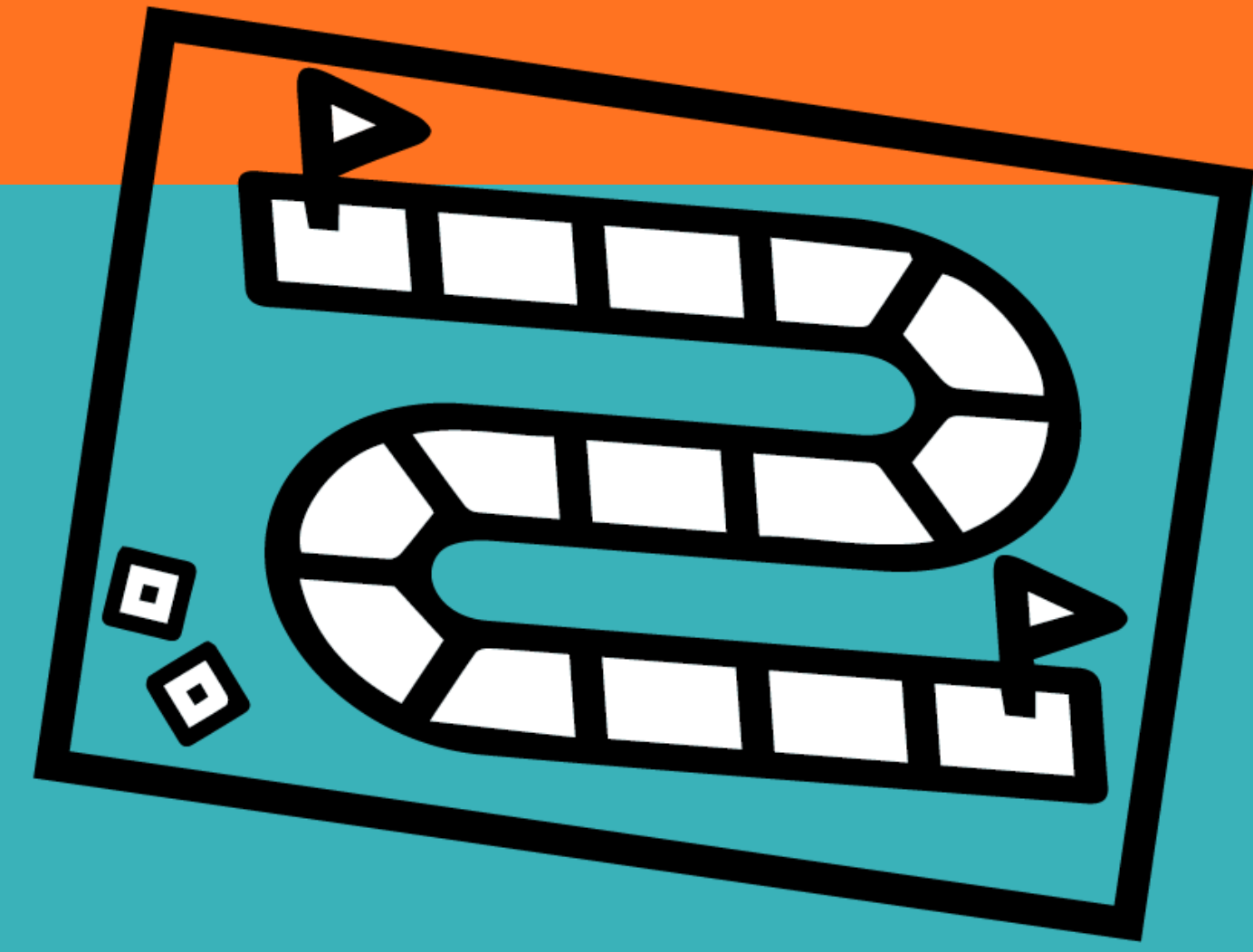


# THE "RADON TRAIL"



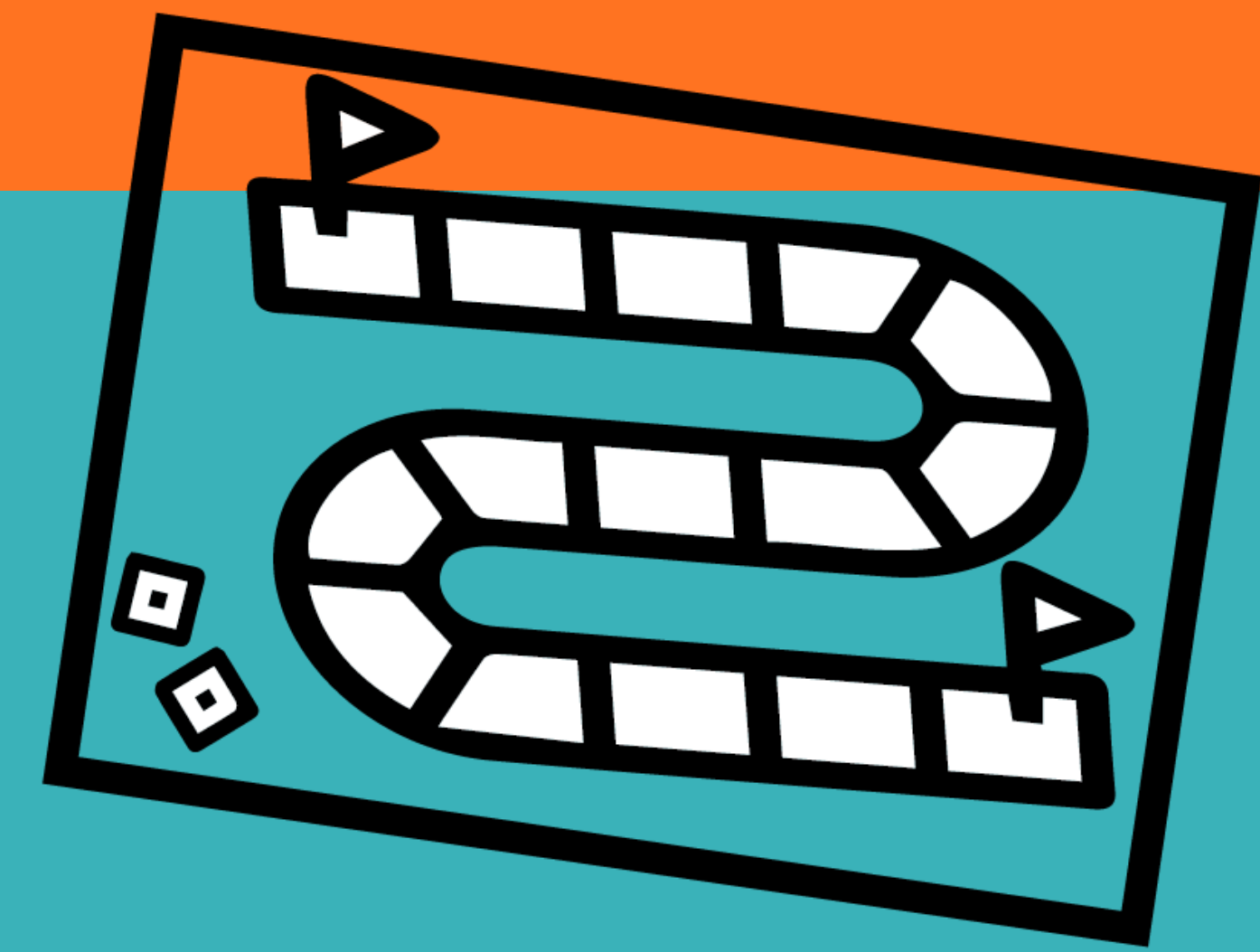


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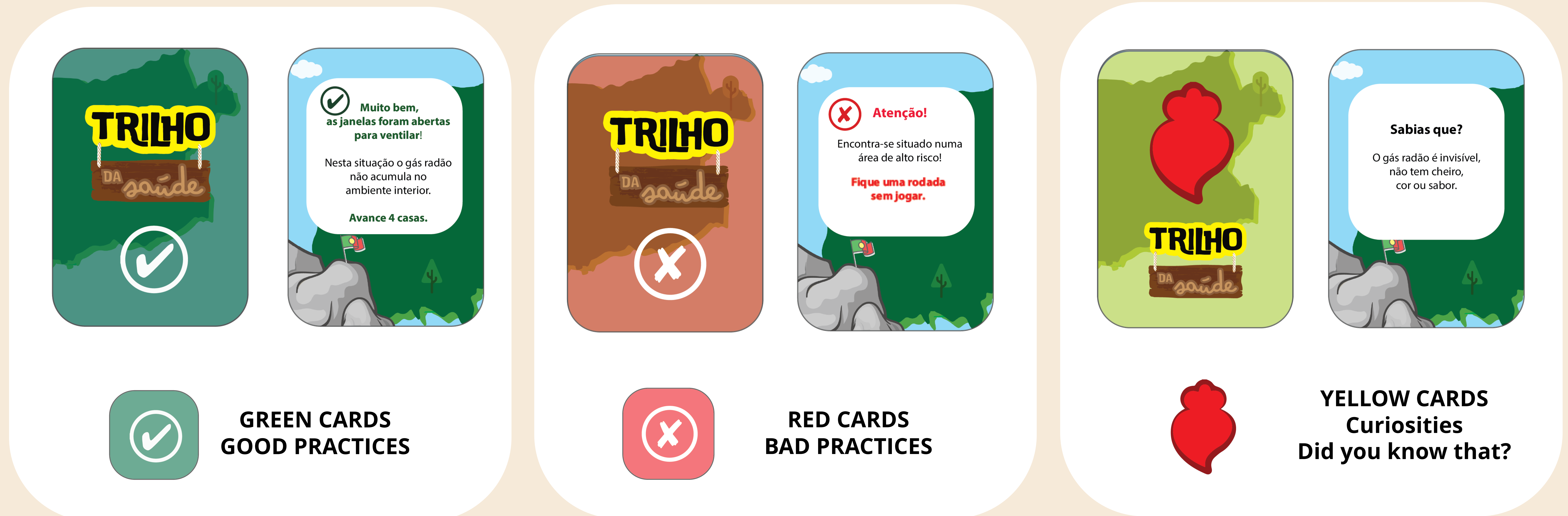


# THE "RADON TRAIL"





# THE CARDS



Make the user think about the theme and its consequences in everyday life



# PROTOTYPE



Pictures of the assembled game





# SURVEYS - GAME EVALUATION



21 female

33  
total

12 male



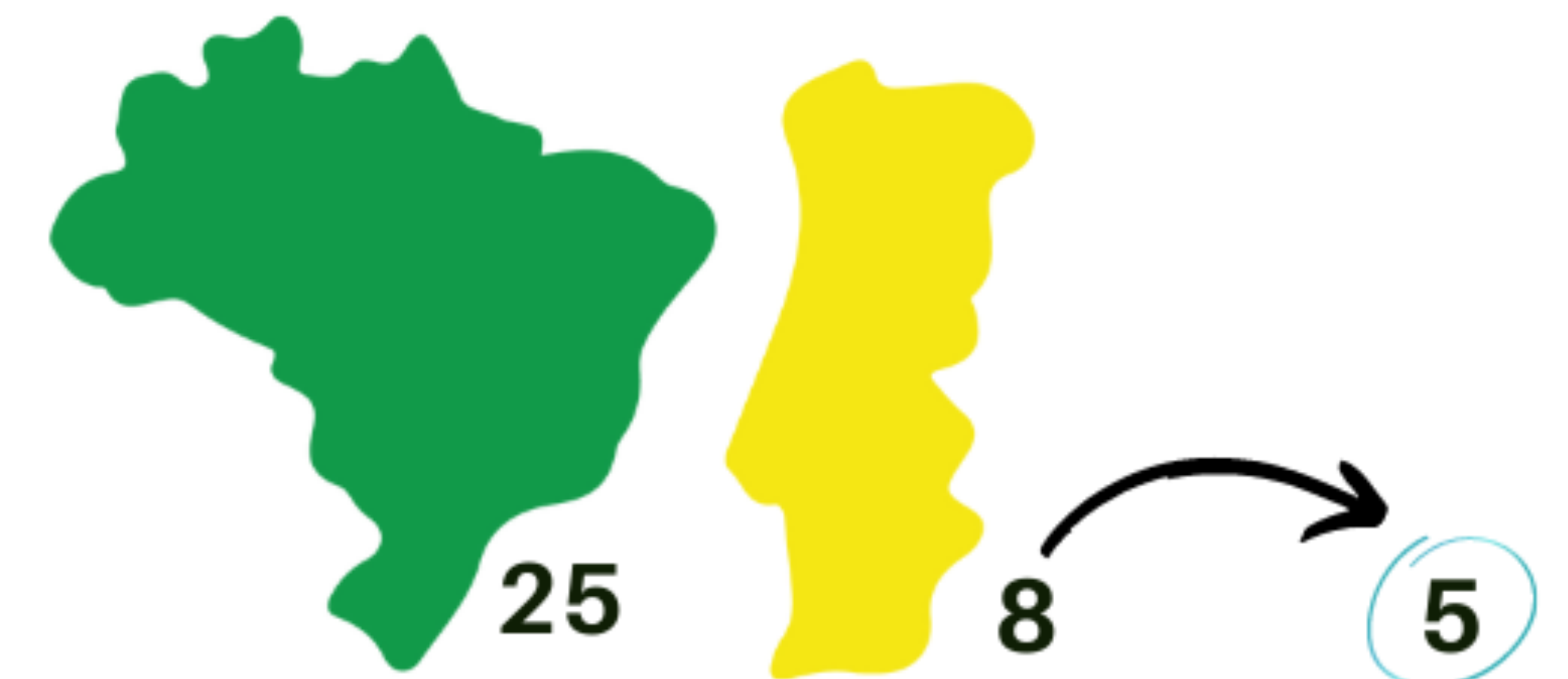
26



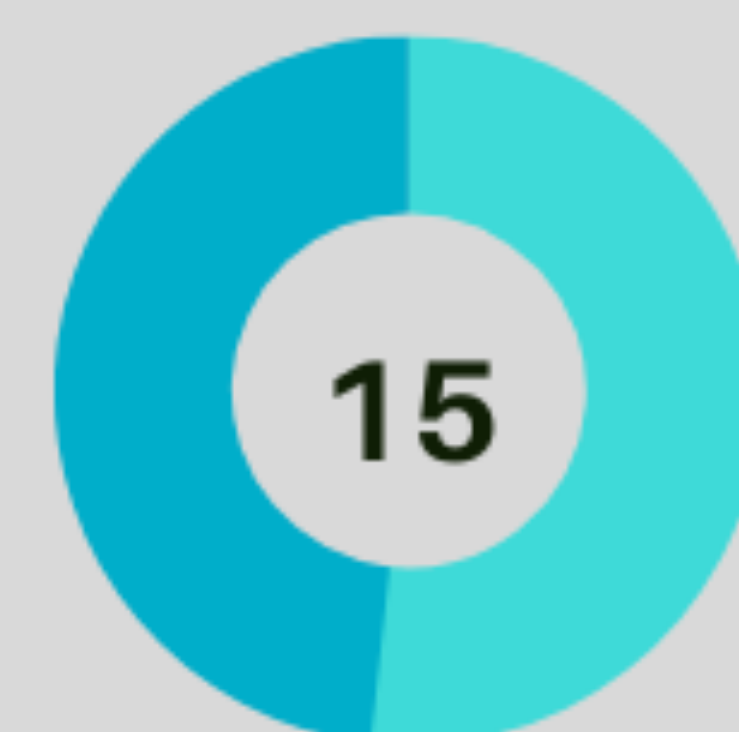
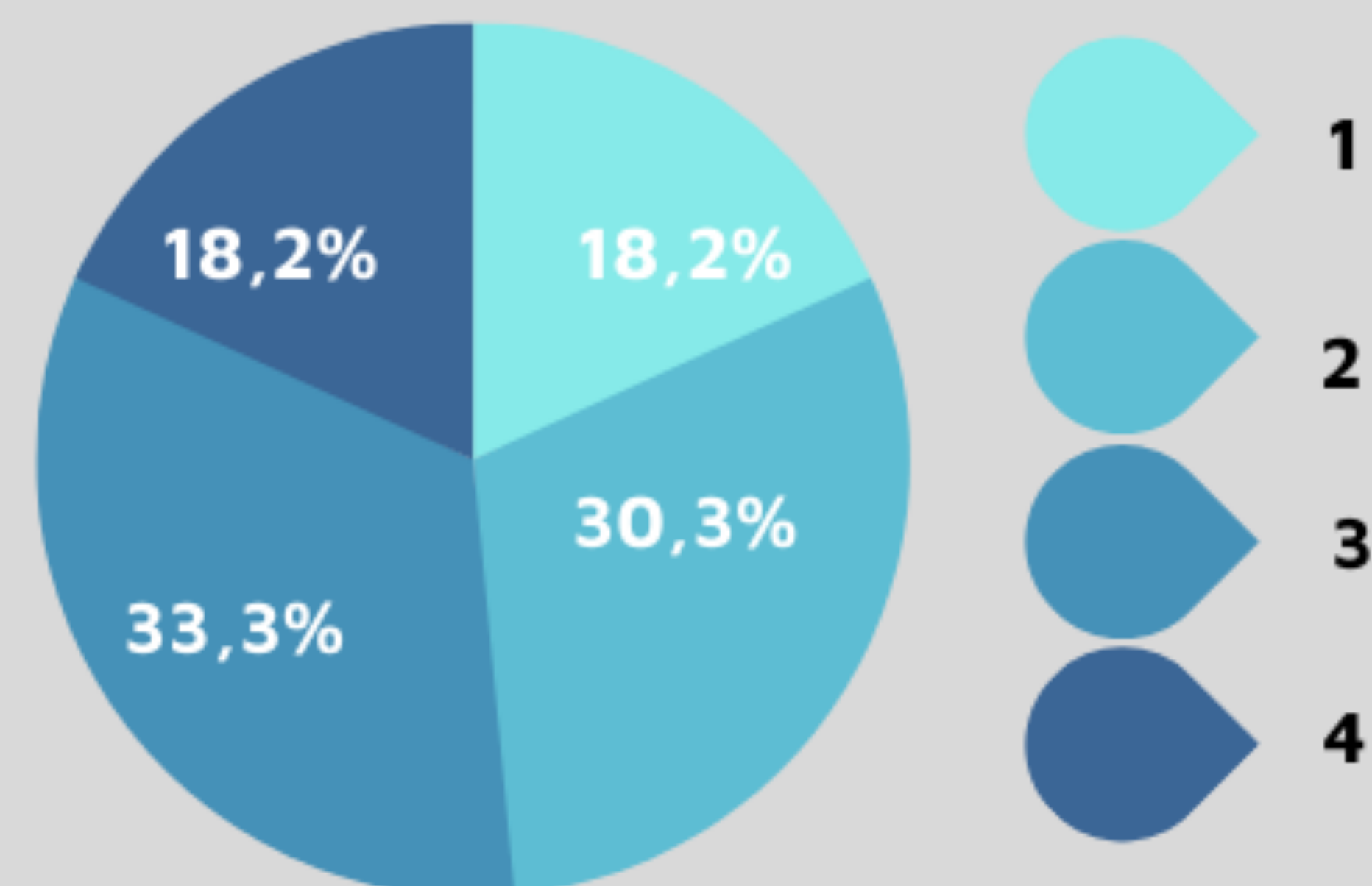
6



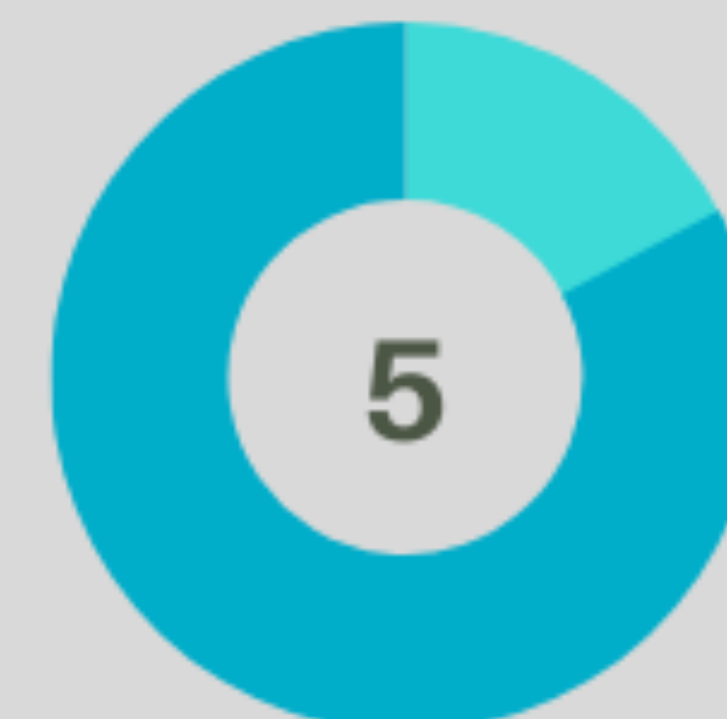
1



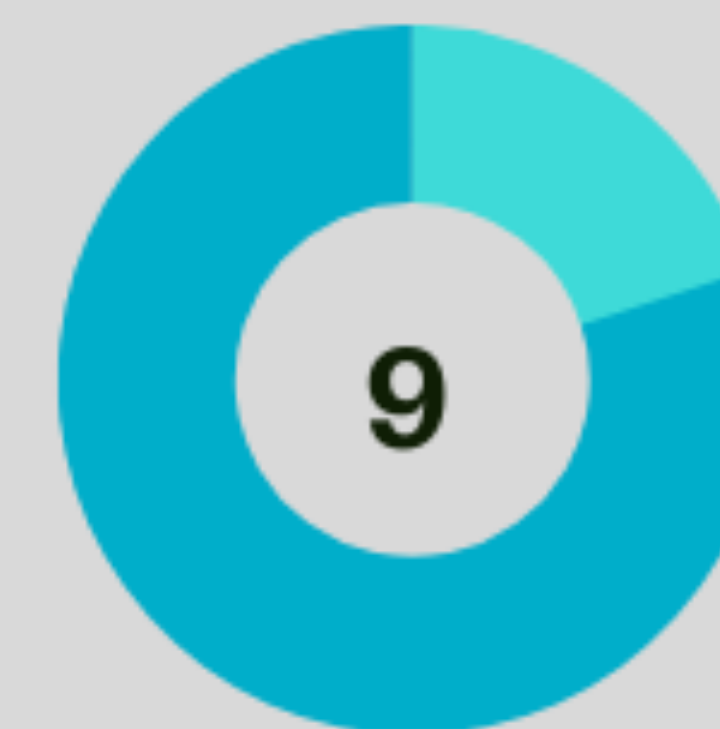
## How many players



5 to 10 years-old

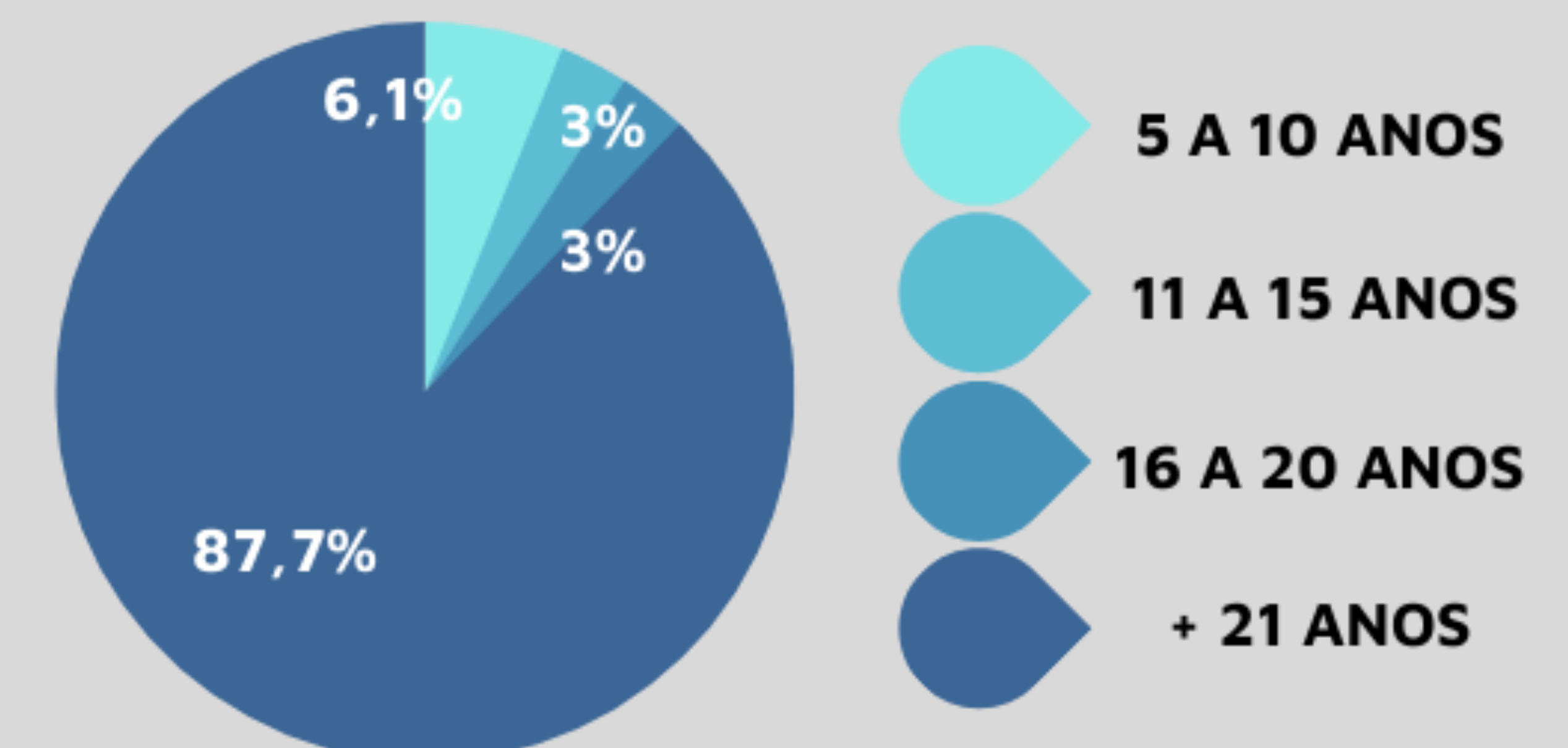


11 to 15 years-old

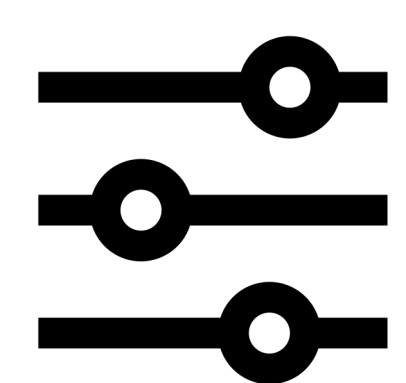


16 to 20 years-old

## Ages



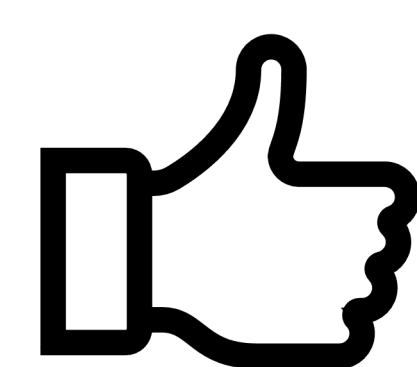




## VISUAL PREFERENCES

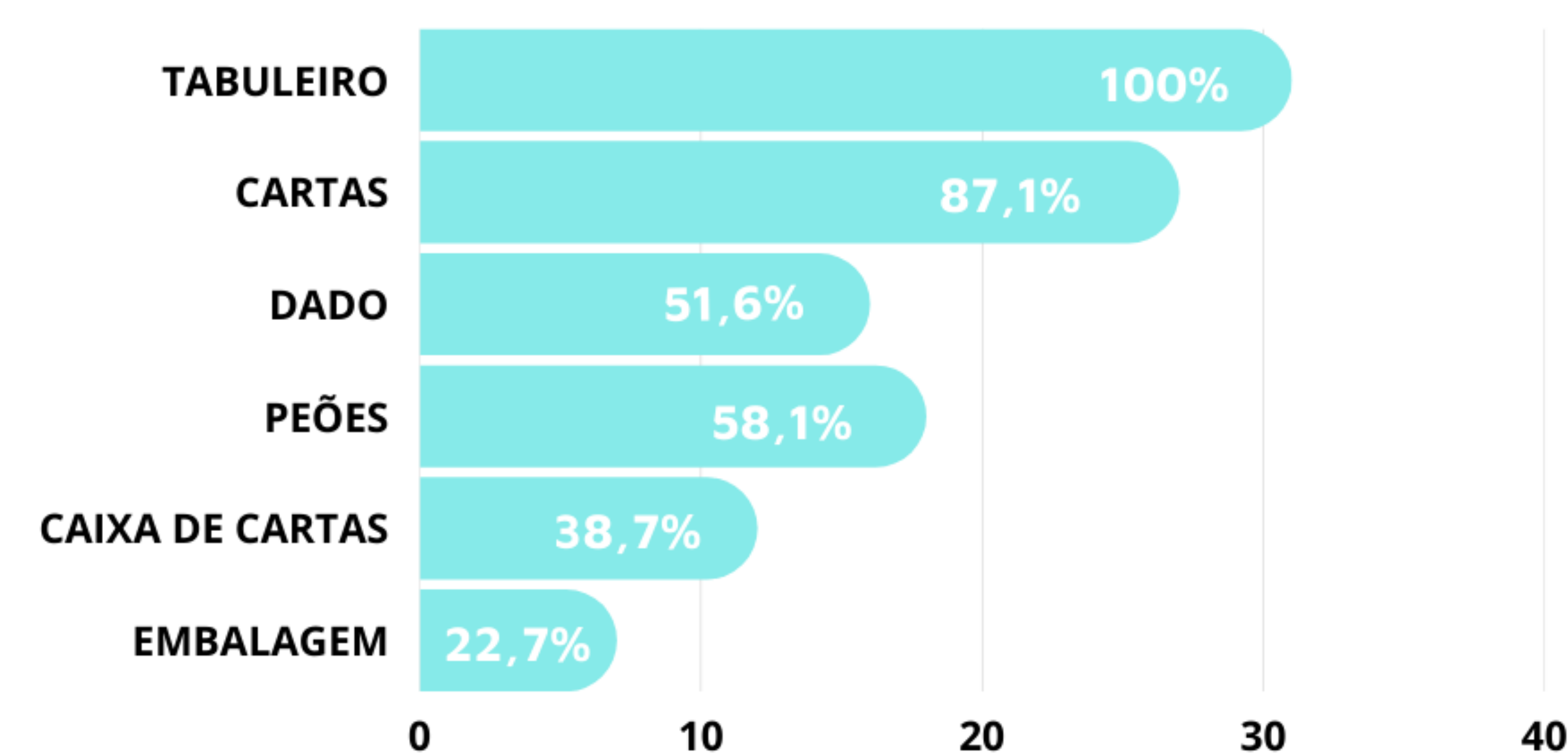


1. DID THE GAME HOLD YOUR ATTENTION?
2. DID THE SHAPES AND DYNAMICS OF THE GAME KEEP YOU MOTIVATED?
3. DID YOU LIKE THE COLOURS?
4. DID ANYTHING BOTHER YOU VISUALLY?
5. COULD YOU READ THE INSTRUCTIONS?

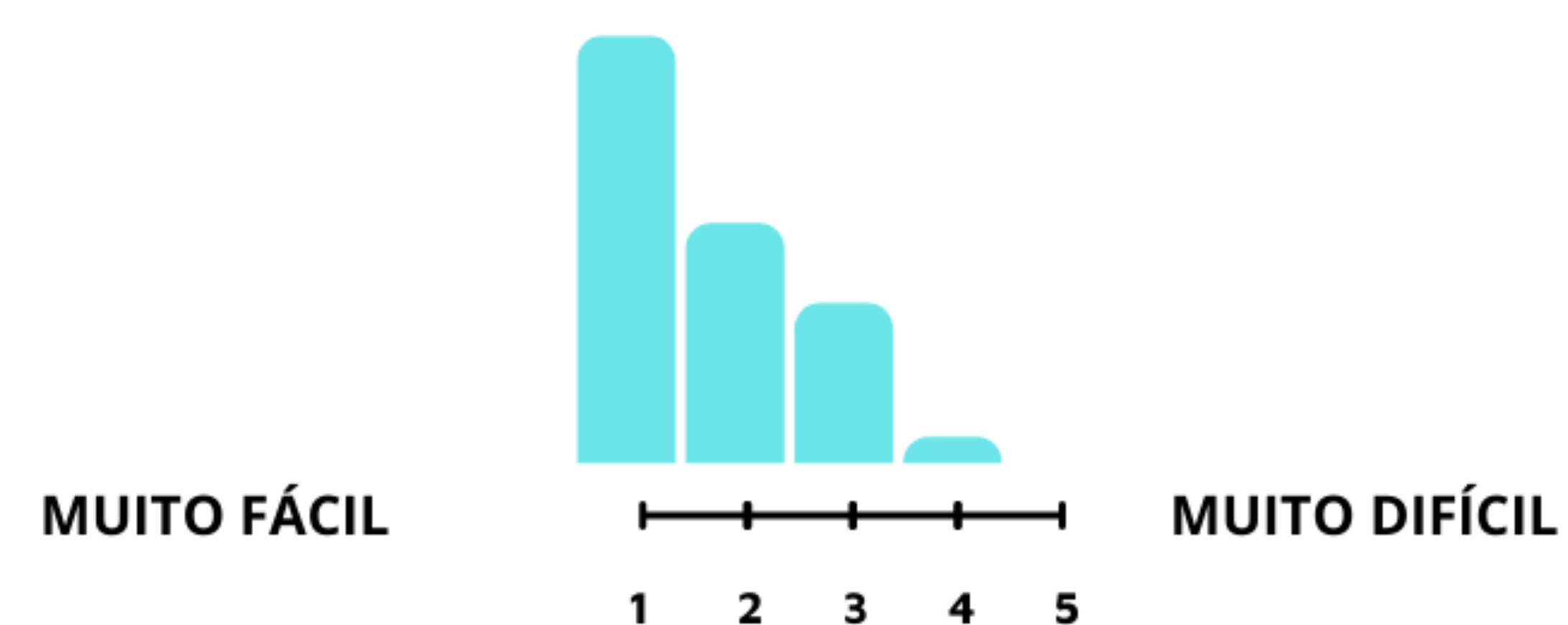


## USABILITY

WHICH ELEMENTS DID YOU PRINT?

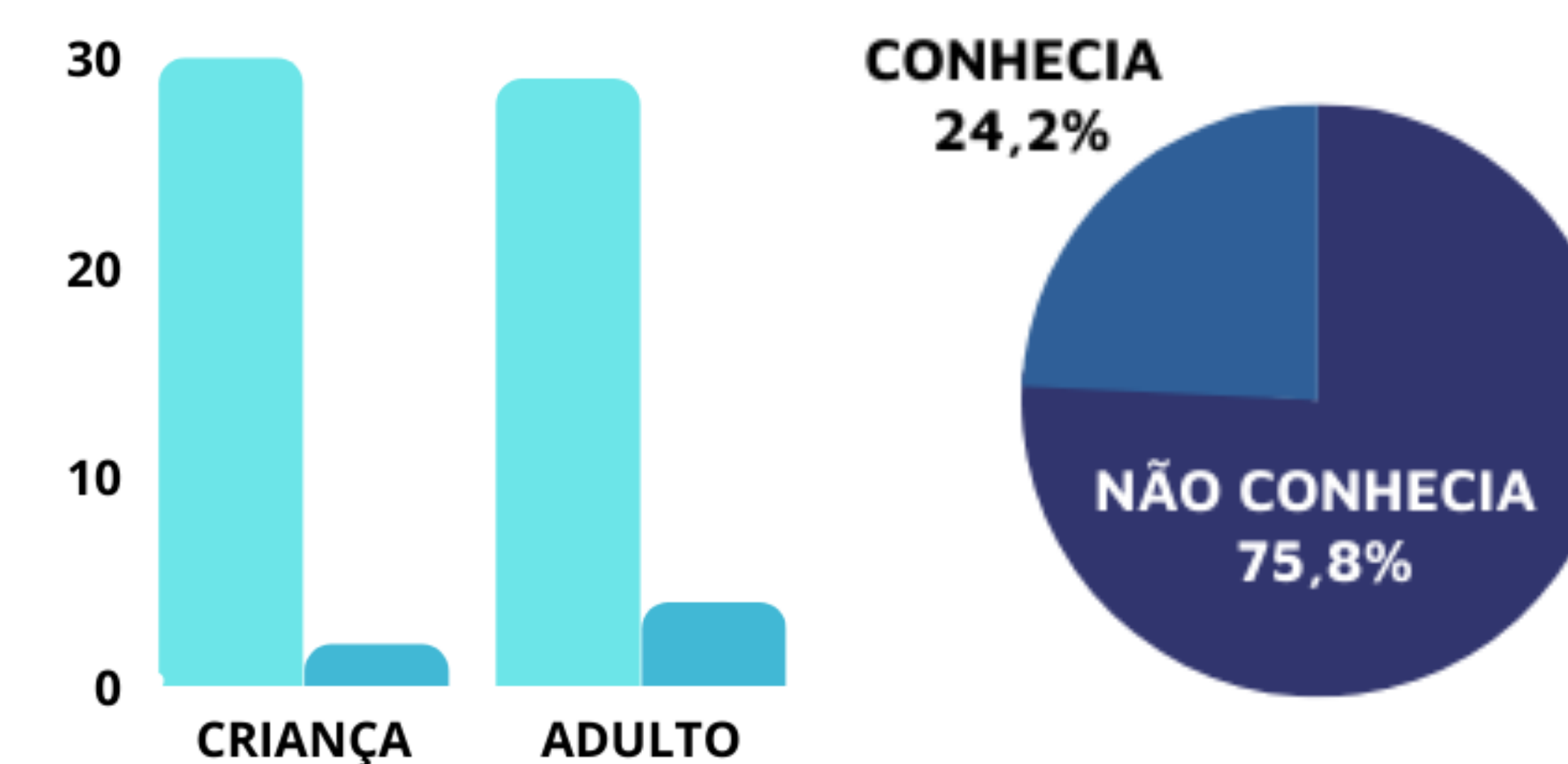


HOW DIFFICULT IS IT TO ASSEMBLE?

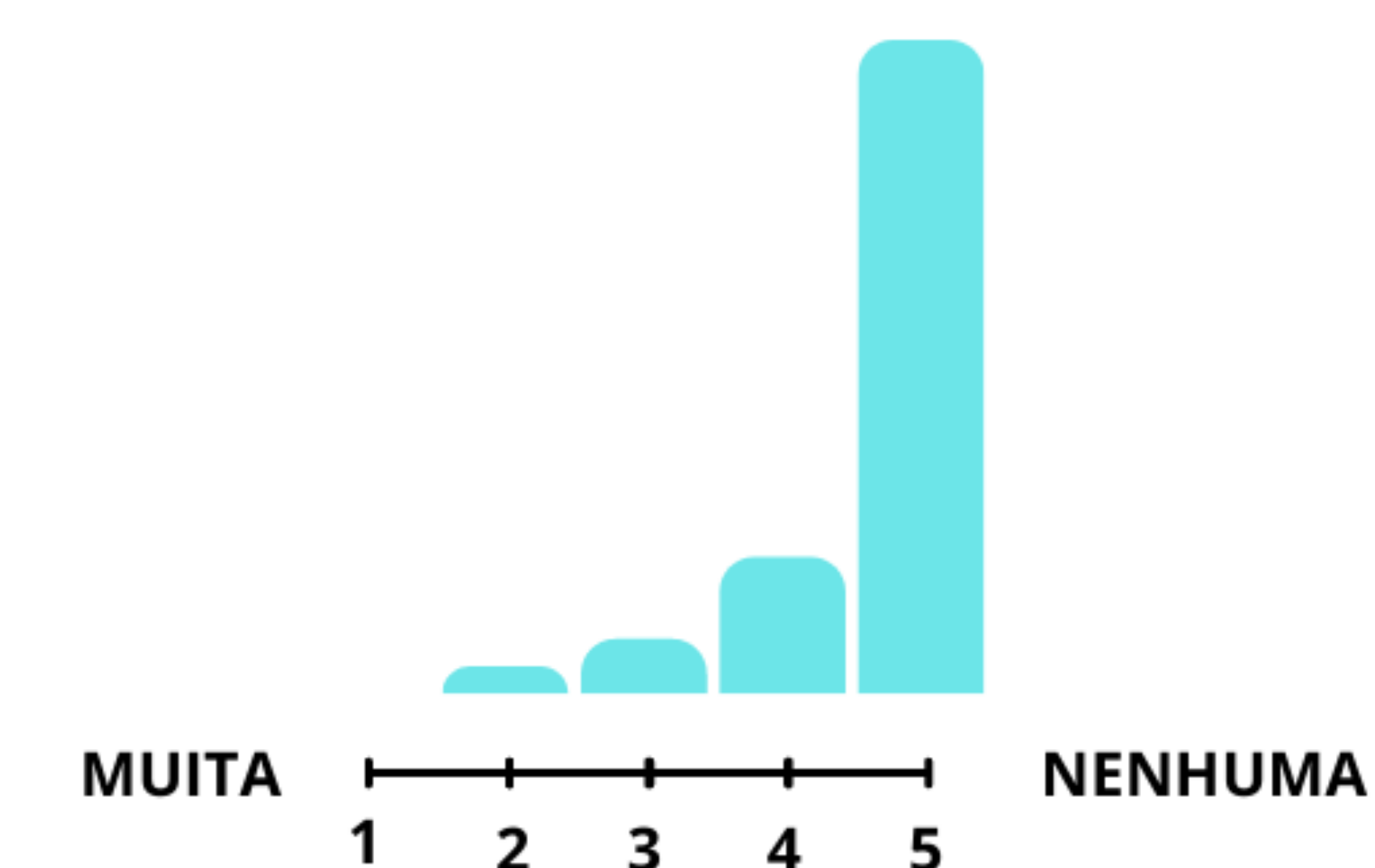


## CONTENTS

ADDED KNOWLEDGE?



FOUND IT DIFFICULT TO UNDERSTAND THE CONTENT?



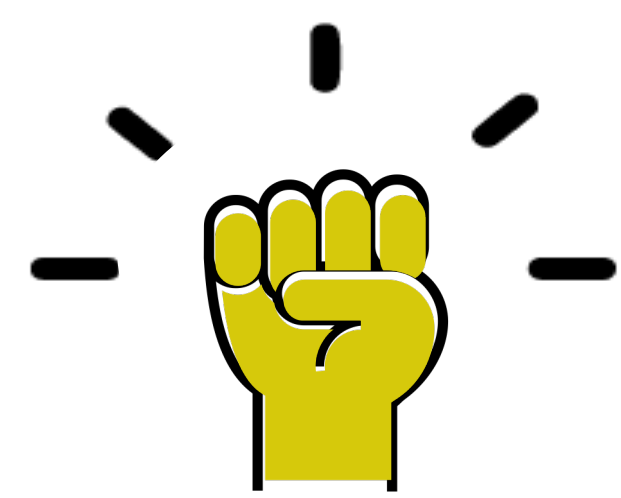


# FINAL CONSIDERATION

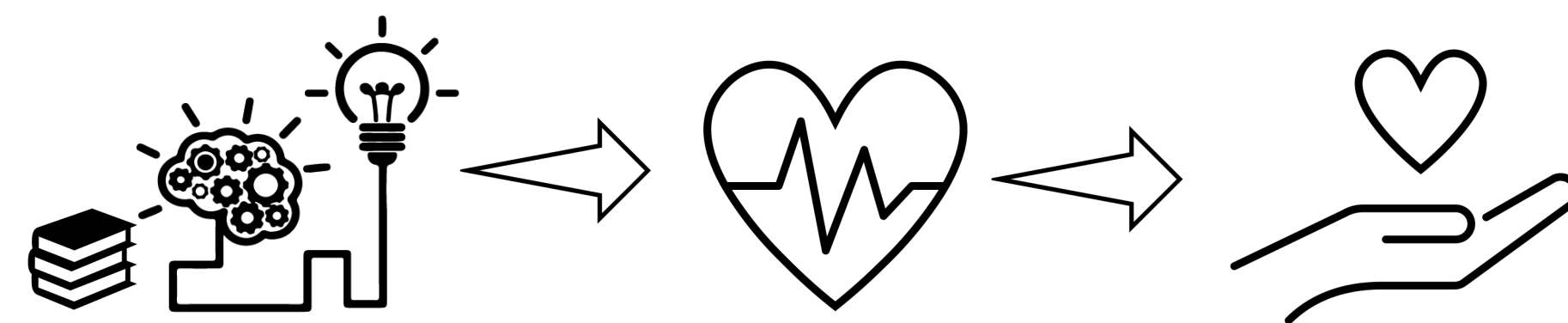


THIS PROJECT CONFIRMS  
THE IMPORTANCE OF...

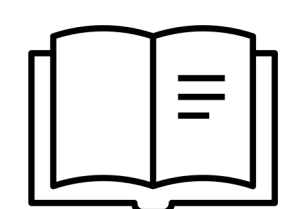
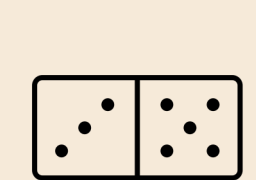
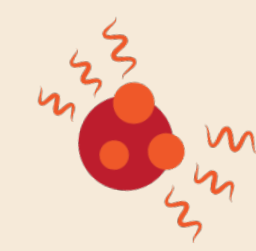
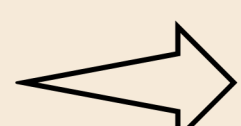
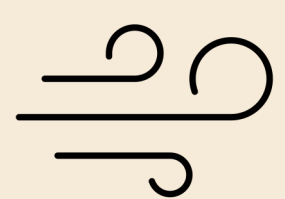
## DESIGN THINKING



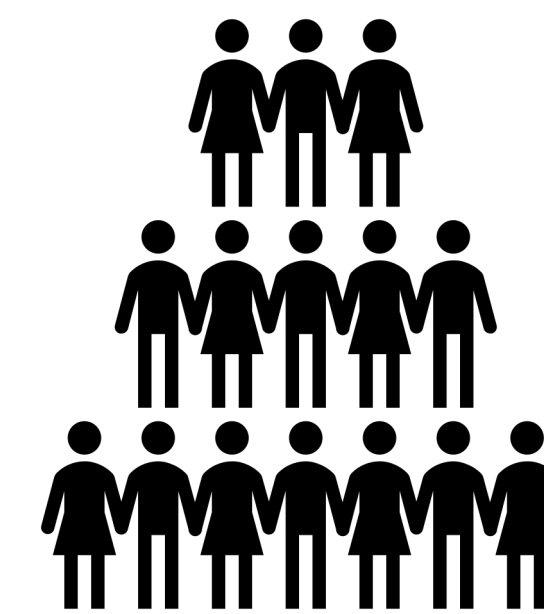
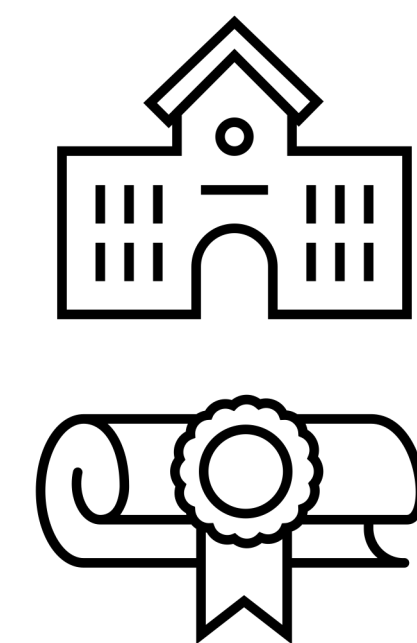
Design Methodologies



Can be applied in multiple areas

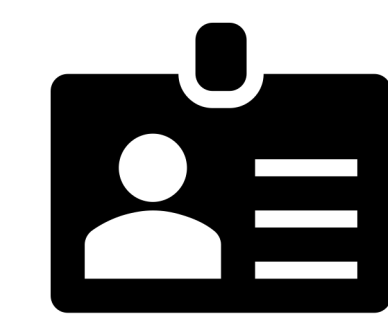


## ACADEMIA AND SOCIETY



The Board Game case study is expected to stimulate further research on the diversified applications and contribution of design thinking.

## DESIGNERS



This work work is intended to foster professional growth by developing problem solving skills and hands-on approaches to create innovative solutions.





**THANK YOU**