

Flooding

This game is part of a series of games created by the Games for Goals project.

AQUA HEROES



Find the other mini-games on chemical pollution, drought, water misuse, plastic pollution and more on:

www.gamesforgoals.eu



Co-funded by the Erasmus+ Programme of the European Union



Please share feedback on the game and help measure its impact!



<https://tinyurl.com/GFG-impact-EN>



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Add this presentation card to the game materials!



Printing instructions

Print all pages double-sided (flip on the short side).

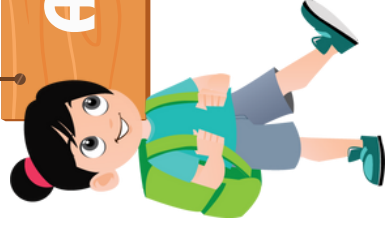
- Pages 5 and 7 form the main board so attach them together.
- Fold pages 13, 19, 21, 25, 27, 31, 33 and 39 in two, along the dotted lines, and staple only those where indicated (on the reverse side).
- Cut the cards (or tiles) on pages 9, 11, 15, 17, 23, 29, 37 and 41. Follow the instructions carefully throughout the document.
- Place the cards in the corresponding envelope you have just made.
- Place the 'Enigmas' solutions cards and the 'Be logical' solution on the solution sheet.

Be careful not to cut across the boards!

Follow the instructions carefully to know where to cut around each tile or square.

When you're ready, fold this sheet so that these instructions are on the inner side and add this presentation card to the game materials.

Activity Sheet



30MN



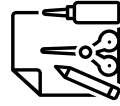
LEARNING OBJECTIVES

- The pupils share their reflections about the causes of flooding.
- The pupils think about how to reduce flooding.



MATERIALS

- A board
- A weather die
- 35 water tiles
- The items for each task
- A start card



PREPARATION

- Put the board in the middle of the table.
- Distribute 30 water tiles across the squares on the board.
- Keep 5 tiles aside.
- Put the item for the tasks next to the board
- Put the start card face up next to the board



On the 'Be logical' task you can have some tiles already in place if it seems too difficult for the children.



Activity Sheet



ACTIVITY DESCRIPTION

During the game, pupils will try to help to reduce the amount of flooding.

The objective is to remove water tiles from the board so that the areas around the river are no longer flooded.

For each successful task, they can remove water tiles.

They must try to complete as many tasks as possible to reduce the flooding.



KEYS TO LEAD THE DISCUSSION

- What is the main problem in the village?
- What are the causes behind this problem?
- What solutions did you find?
- What daily activities cause flooding?
- What can you do to help to reduce flooding?
- Why is this important?

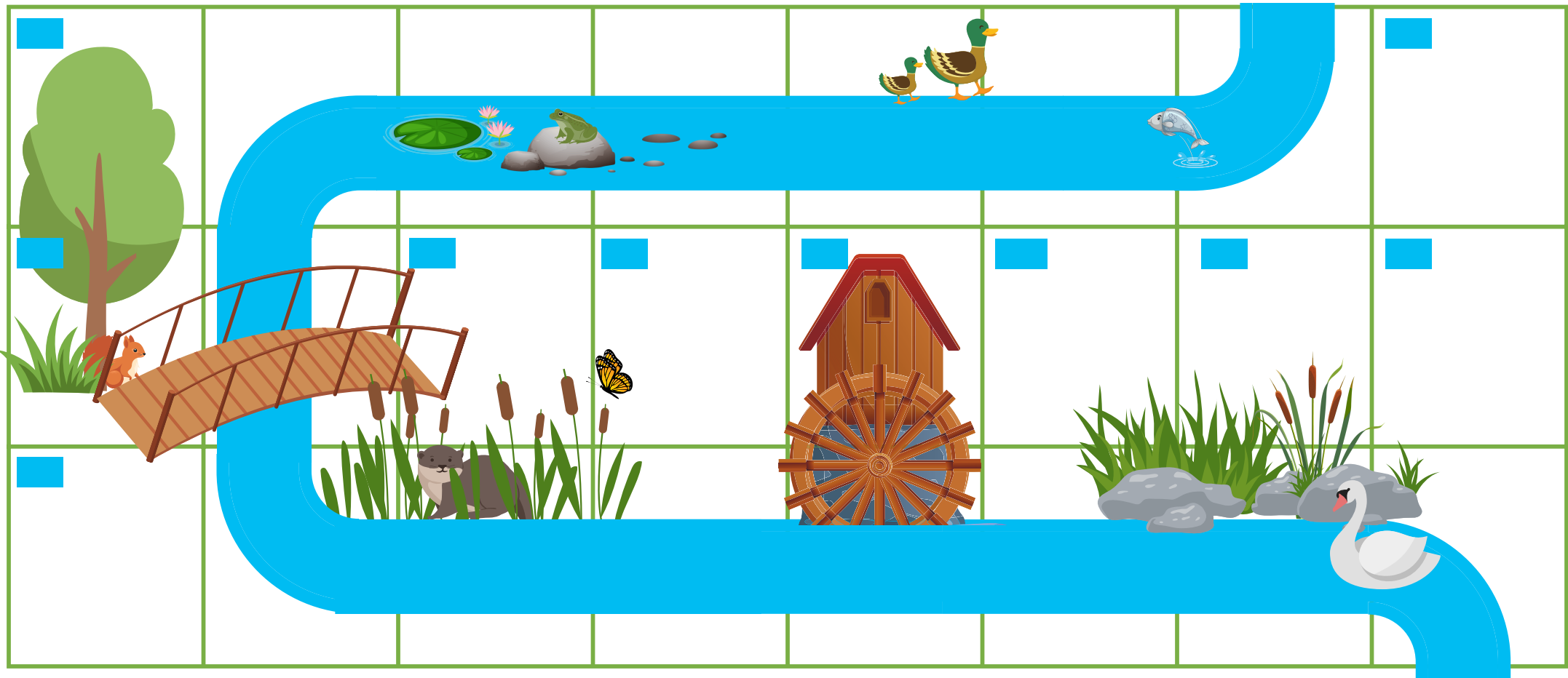


AQUA HEROES

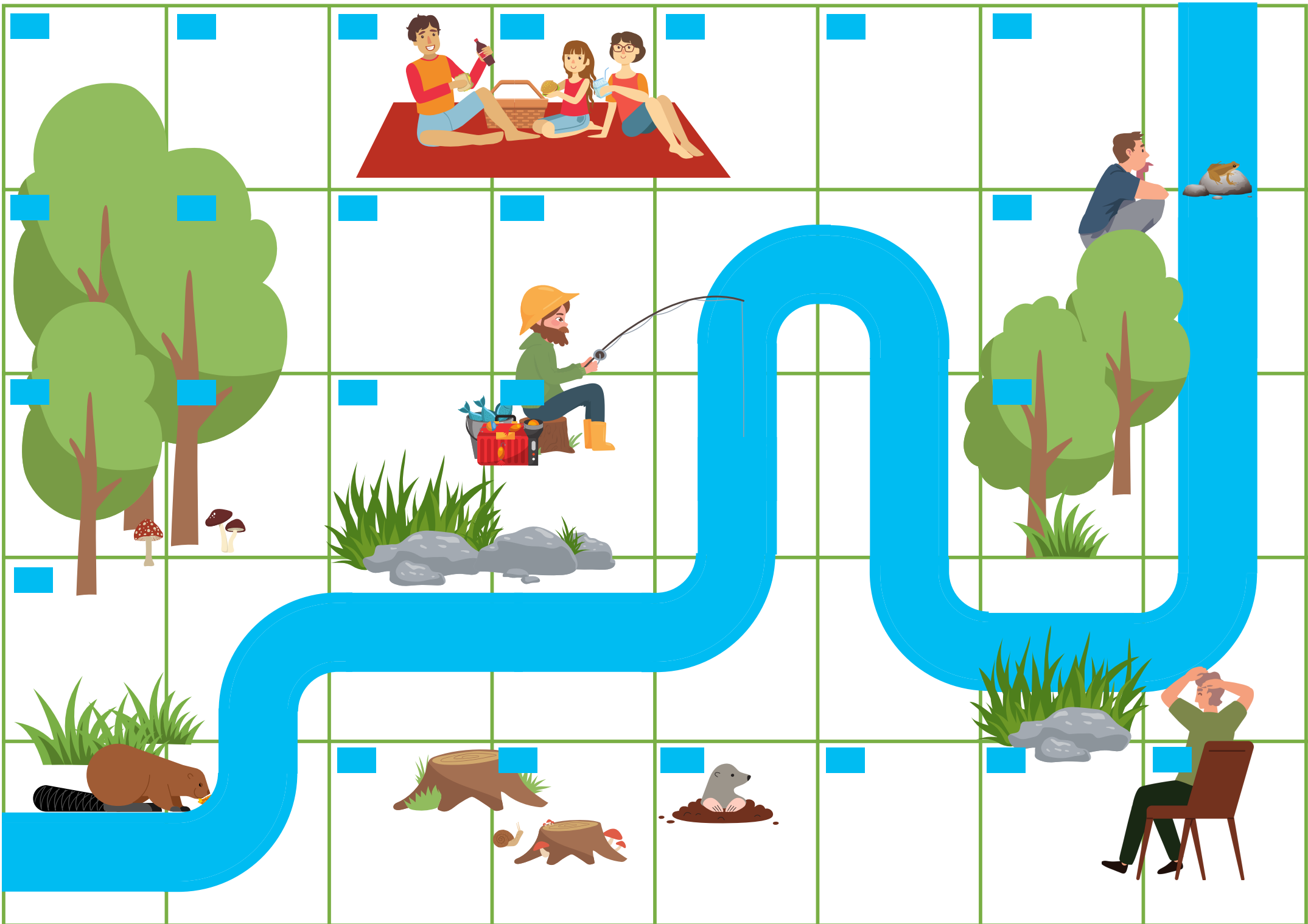
Flooding

Water tiles

At the beginning of the game, place the water tiles on the board. Place them on the squares that have this symbol:



CUT ALONG THIS LINE TO JOIN WITH THE SECOND PART OF THE BOARD



CUT ALONG THIS LINE TO JOIN WITH THE SECOND PART OF THE BOARD

START

You are friends with Alex, whose way to school is regularly flooded by the river. Alex doesn't really know why this is happening. You decide to help to reduce the flooding.



Your objective is to remove water tiles from the main board so that the area around the river is dry and Alex can walk to school safely.

Instructions

The team will be faced with different challenges to reduce flooding. Each challenge is represented by an envelope. Every time you solve a challenge, you will be able to remove water from the river. The number of water tiles to remove will be indicated with this symbol:



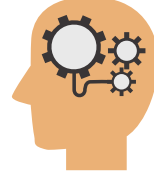
If you don't solve a challenge, you can move on to the next envelope. It is ok if you don't finish everything, you will already have helped a lot! Now, follow your road map!



ROAD MAP

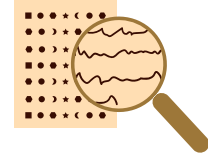
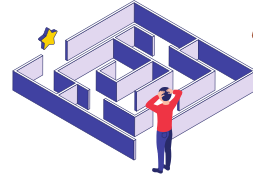
To reduce as much flooding as possible, Alex suggests that you follow the order below. Remember to place everything back in the right envelope before opening the next one!

MEMORY



ENIGMA 1

LABYRINTH



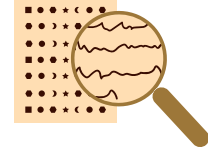
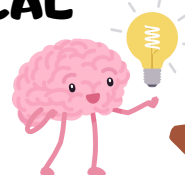
ENIGMA 2

PRESS YOUR LUCK



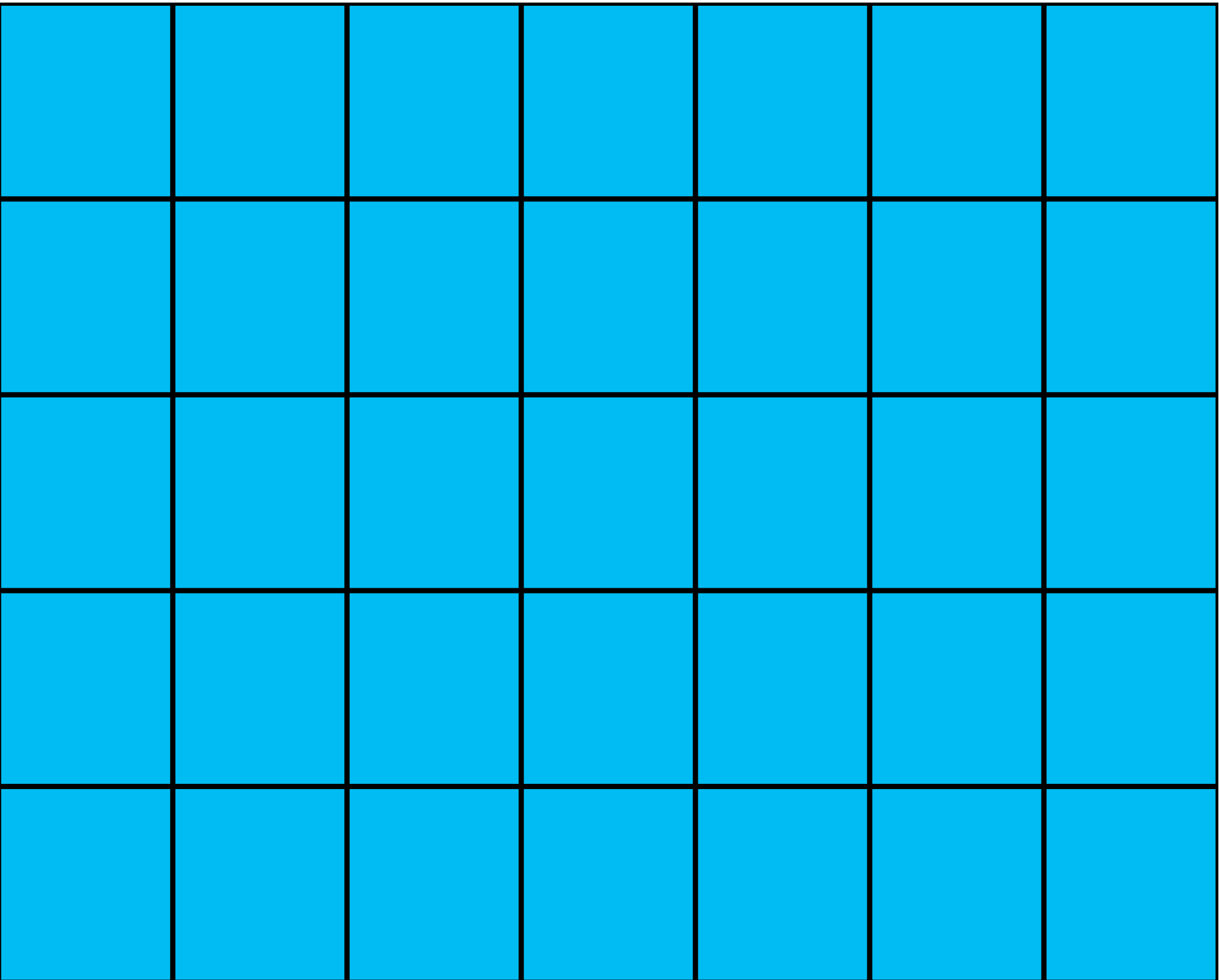
ENIGMA 3

BE LOGICAL



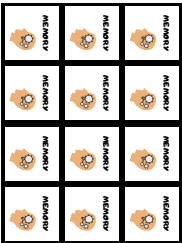
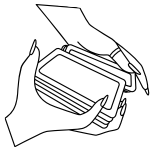
This page is here so that you can print the whole document double-sided.

Water tiles: cut around each tile, and place them on the main board



This page is here so that you can print the whole document double-sided.

Shuffle the cards and place them as shown below. The youngest person starts, then turn clockwise.



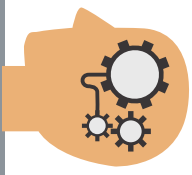
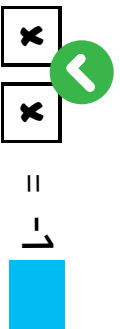
In turns, flip over two cards so that the whole team can see them. **Look carefully at the cards to find the common symbol, because the two cards in a pair are not exactly the same!**



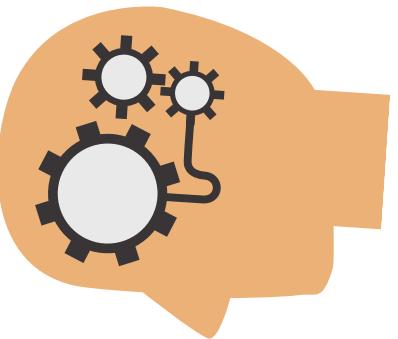
If the two cards form a pair, explain the difference between the two cards!

Once everyone understands the relation to flooding, remove the cards from the game and remove a water tile from the river. Well done, you have reduced the flooding!

If the two cards do not match, turn them face down again and the next player can try.



Feet in the water: will you be able to memorize the maps and find what makes flooding worse or how to limit it?



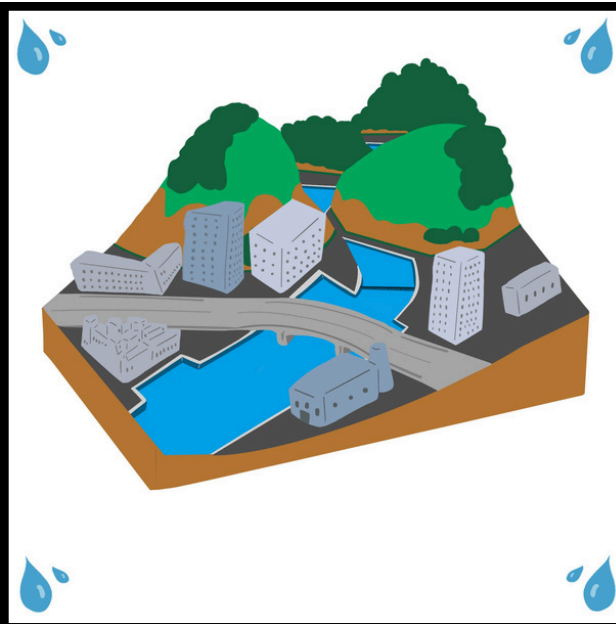
MEMORY

STAPLE HERE

STAPLE HERE

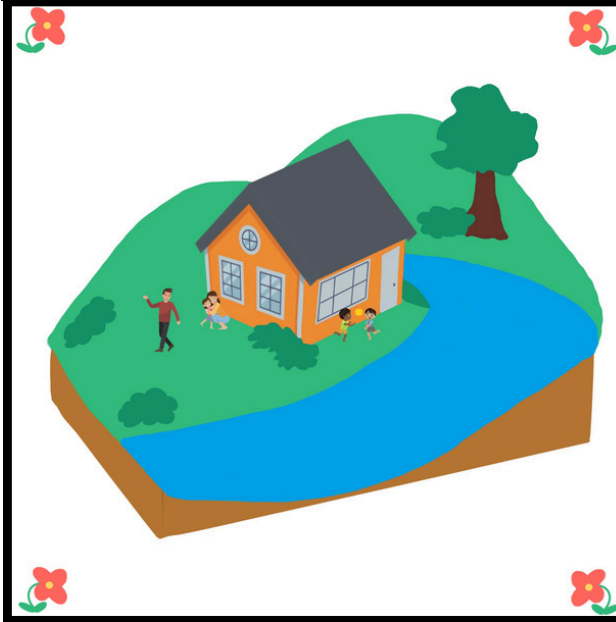
STAPLE HERE

STAPLE HERE



Mon. Tue. Wed. Thu. Fri. Sat. Sun.

Mon. Tue. Wed. Thu. Fri. Sat. Sun.

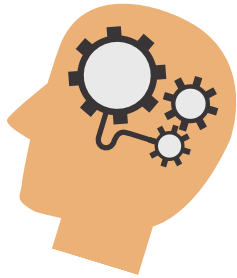
 A weather forecast panel with a blue background. The top row shows weather icons for Monday (sun), Tuesday (sun behind cloud), Wednesday (rain), Thursday (cloud), Friday (sun), Saturday (rain), and Sunday (sun behind cloud). The bottom row shows icons for Monday (sun behind cloud), Tuesday (sun), Wednesday (sun), Thursday (cloud), Friday (sun), Saturday (rain), and Sunday (sun). Below the icons is a television icon displaying a weather forecast symbol (cloud with rain) and a power button.


Mon. Tue. Wed. Thu. Fri. Sat. Sun.

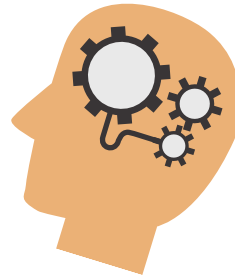
Mon. Tue. Wed. Thu. Fri. Sat. Sun.

 A weather forecast panel with a blue background. The top row shows weather icons for Monday (sun), Tuesday (sun behind cloud), Wednesday (sun), Thursday (cloud), Friday (sun), Saturday (sun), and Sunday (sun behind cloud). The bottom row shows icons for Monday (sun behind cloud), Tuesday (sun), Wednesday (sun), Thursday (sun), Friday (dark cloud with rain), Saturday (dark cloud with rain), and Sunday (sun). Below the icons are three yellow diamond-shaped warning signs, each showing a house with a diagonal line through it, indicating a flood hazard. Below the icons is a television icon displaying a weather forecast symbol (cloud with rain) and a power button.

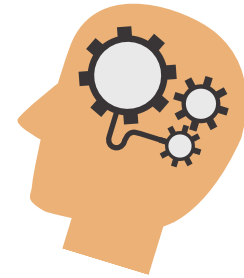
MEMORY



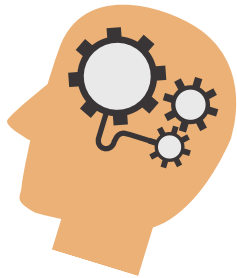
MEMORY



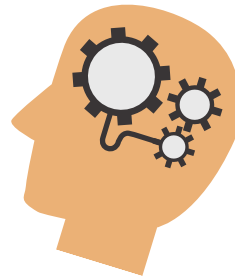
MEMORY



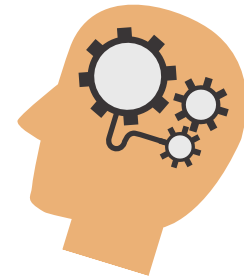
MEMORY

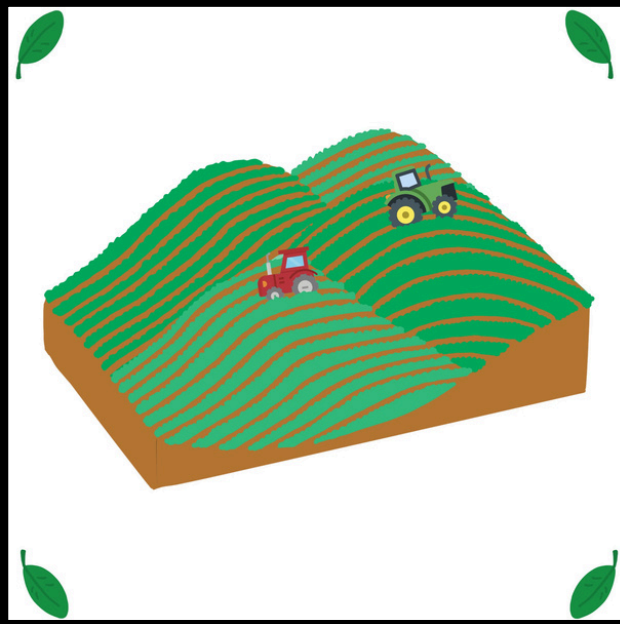
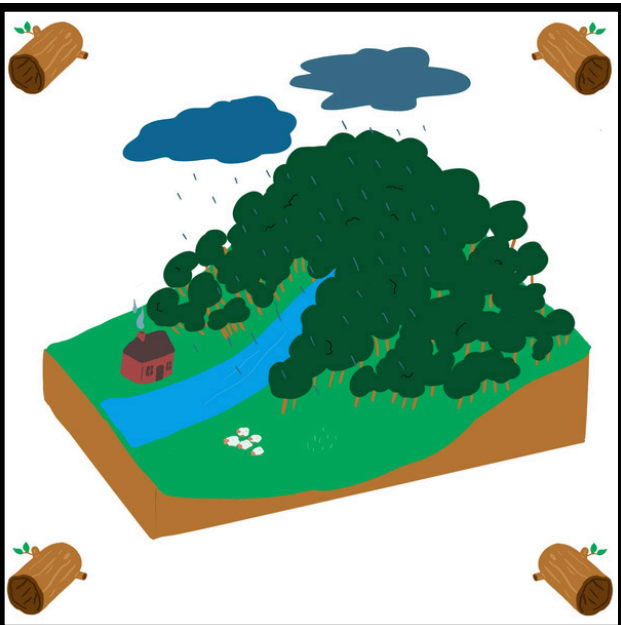
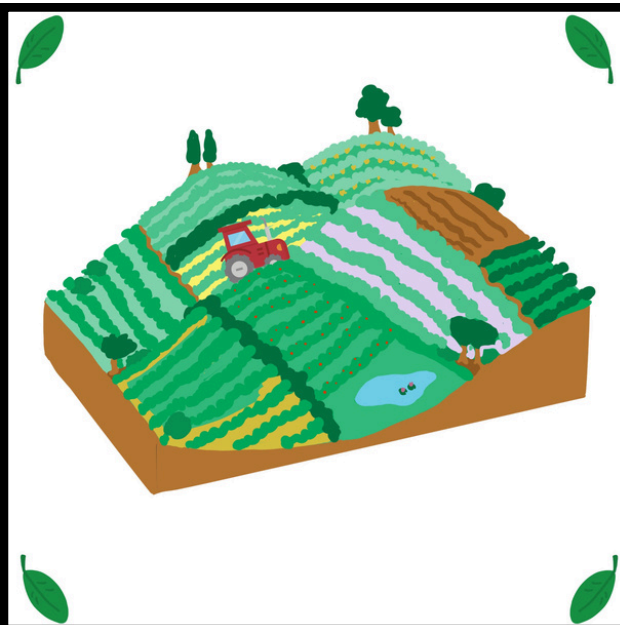


MEMORY

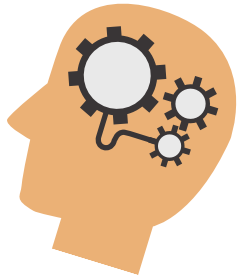


MEMORY

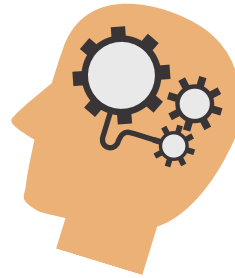




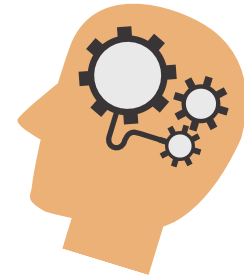
MEMORY



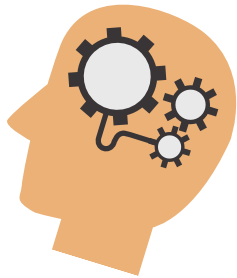
MEMORY



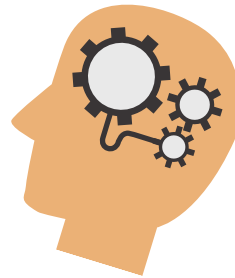
MEMORY



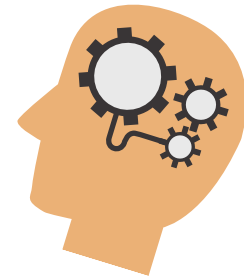
MEMORY



MEMORY



MEMORY



Your goal is to decipher the coded message and find out how to reduce the flooding.

When you think you are ready, or if you are blocked, check the solution!

For every correct word, remove one water tile from the board.

✓ = -1

WORD 1:

✓ = -1

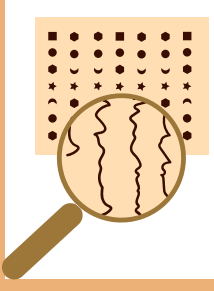
WORD 2:

✓ = -1

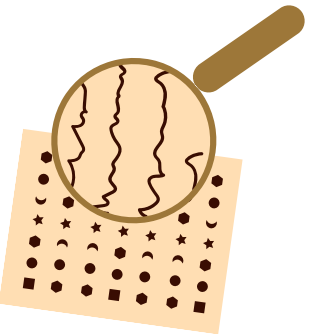
WORD 3:

If the whole message is correct, remove two extra bonus tiles!

✓✓✓ = -2 bonus



You have a new message: crack the secret code to understand where the floods are coming from!



ENIGMA I

Your goal is to avoid the flooding and reach a safe point. Choose ONE of the characters to play with:

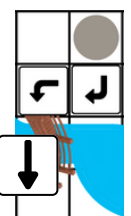
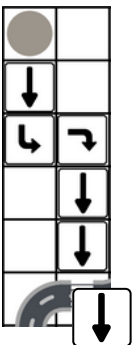


Take the pawn of your choice and place it on the corresponding starting square.

Spread the arrow cards randomly around the players. The youngest starts, then turn clockwise.

When it's your turn, **place the arrow of your choice on the board to create a path for your pawn.** There can't be any gap in between arrow cards! You need to use a bridge to cross the river, and a pedestrian crossing to cross the road.

Examples:



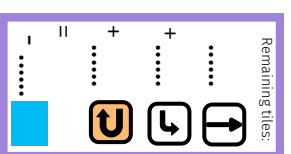
If you make the detour to the bonus space, remove two water tiles from the main board.

After reaching your arrival point, **count the arrow cards that you haven't used. Remove as many water tiles from the main board.** The scoring card can help you.

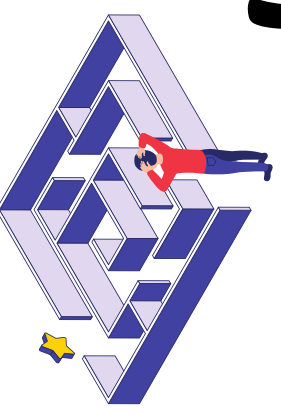
Now, reflect on are the differences between the different situations.

Discuss if it would have been easier if you had played with a different character.

By the way, did you see the green car and the purple boat?



LABYRINTH



residents from the river which risks overflowing.

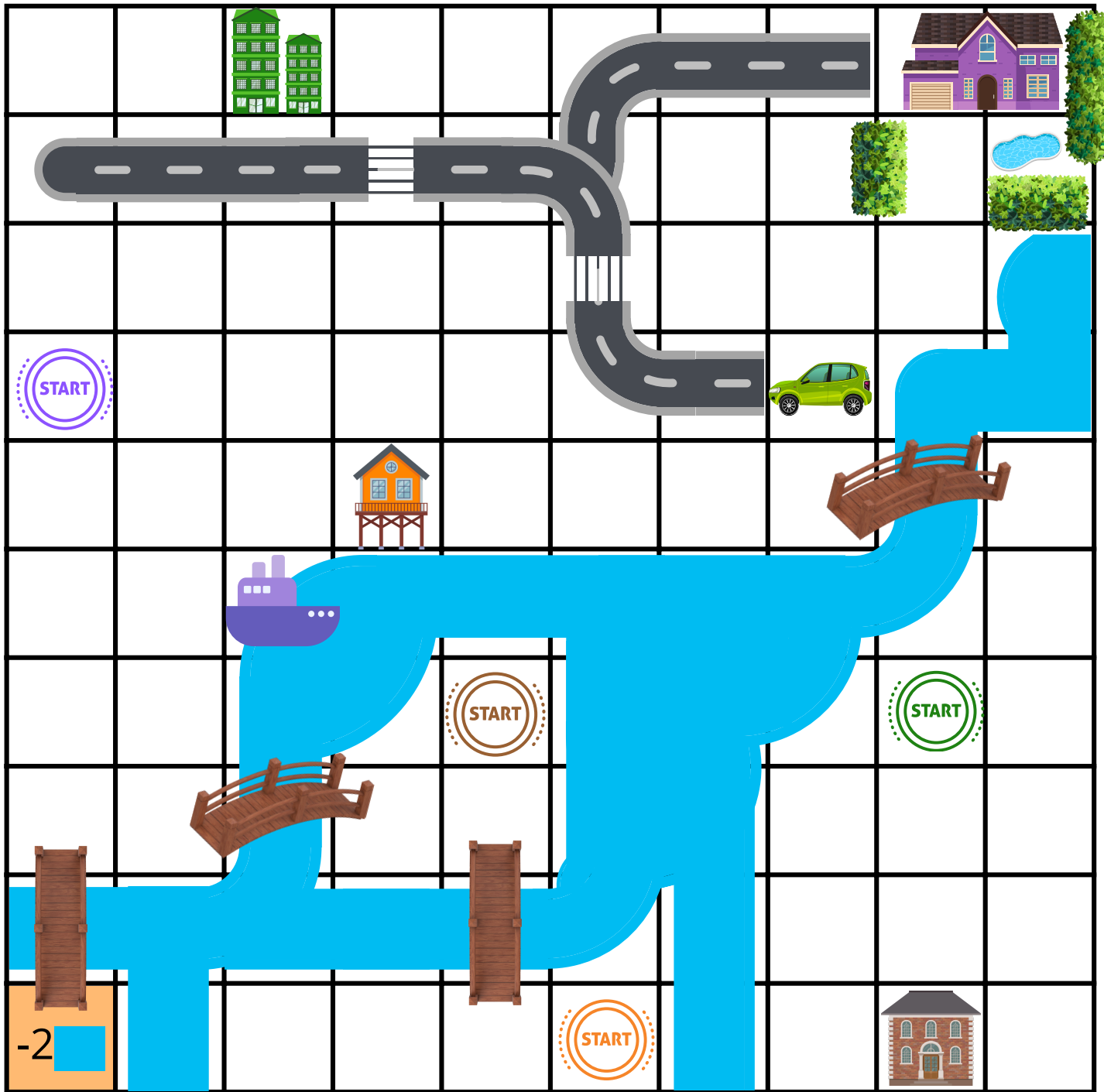
Everyone takes shelter, cooperates quietly, and protects the

STAPLE HERE

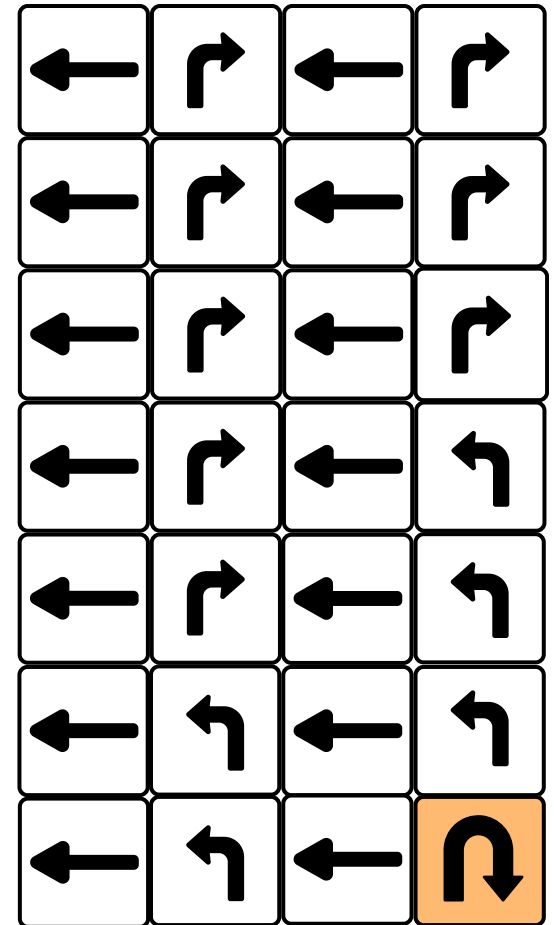
STAPLE HERE

STAPLE HERE

STAPLE HERE



Cut around each arrow tile.



Remaining tiles:

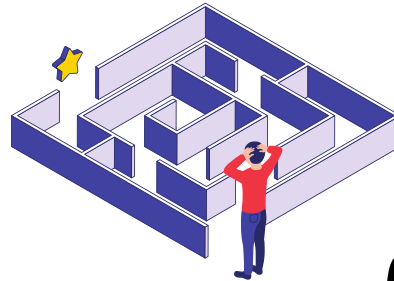
↑	↷	↻	■
⋮	⋮	⋮	⋮
+	+	=	-



Cut around the four pawns.

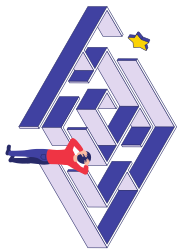
CUT AROUND THE RED LINE

**FLIP OVER WHEN
STARTING THE
FOLLOWING TASK:**



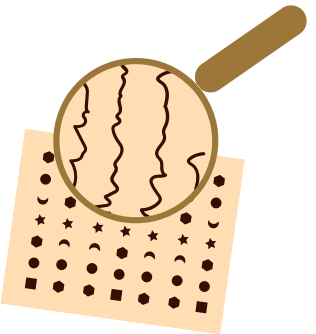
LABYRINTH

Cut around this card



**SCORING
CARD**

ENIGMA 2



You have a new message: crack the secret code to understand where the floods are coming from.

Your goal is to decipher the coded message and find out how to reduce the flooding.

When you think you are ready, or if you are blocked, check the solution!

For every correct word, remove one water tile from the board.

ENIGMA 2

WORD 1:

✓ = -1

WORD 2:

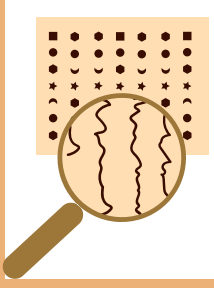
✓ = -1

WORD 3:

✓ = -1

If the whole message is correct, remove two extra bonus tiles!

✓✓✓ = -2 bonus



4
GHI

5
JKL

6
MNO

6
WXYZ

8
TUV

7
PQRS

E-X-A-M-P-L-E
3²-9²-2¹-6¹-7¹-5³-3²

3
DEF

**USE THE ANSWER SHEET
TO WRITE THE WORDS
YOU FIND!**



Climate 2³-4²-2¹-6²-4¹-3² is causing
sea 5³-3²-8³-3²-5³-7⁴ to rise, flooding
2³-6³-2¹-7⁴-8¹-2¹-5³ areas.

Did you know that forests can reduce flooding? **Your goal is to plant as many trees as possible!**

Take the deck of tree & water cards, shuffle it and place the pile face down.
Draw a card and place it next to the pile.



You are allowed to remove a water tile for each set of 3 face-up trees.

To help you, there are also 'forest' cards which allow you to immediately remove a bonus water tile from the main board, and continue playing. The trees on the forest card do not count for the rest of the game.



= -1



= -1



But, be careful! If you don't stop in time, you will face storms that will increase the flooding!
If you reveal the following cards, add the corresponding number of tiles to the main board.



= +1



= +2



It's up to you to decide when you want to stop.



you risk being flooded!

Operation Plantation! It's up to you to replant as many trees as possible, but be careful, if you take too many risks,



LUCK ?

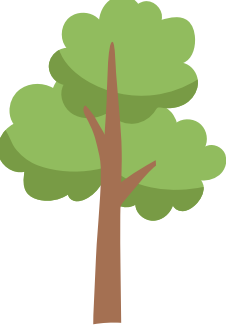
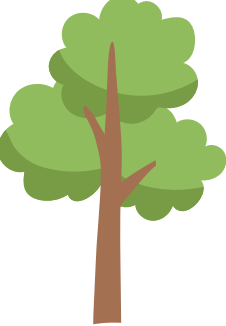
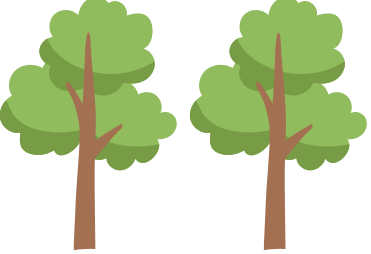
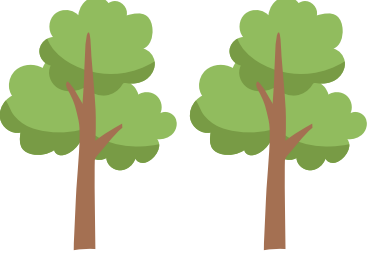


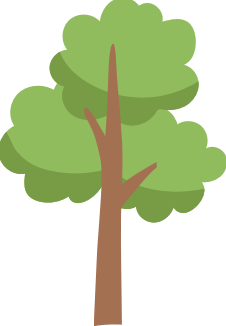
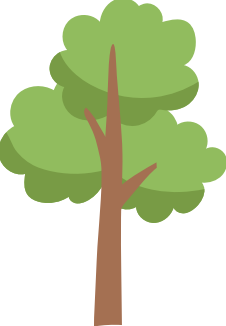
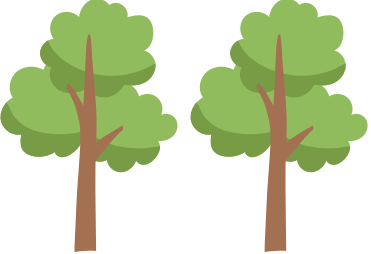
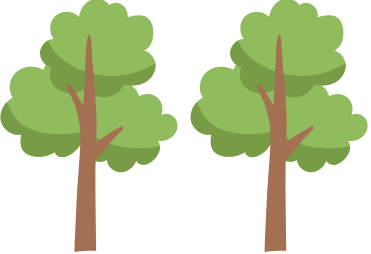


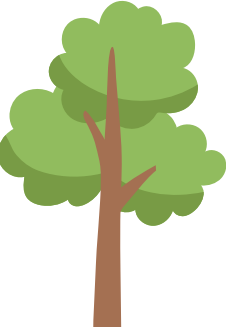








PRESS YOUR

STAPLE HERE

STAPLE HERE

STAPLE HERE

STAPLE HERE


				 <p>FOREST BONUS :</p> <p>-1 </p>
				 <p>FOREST BONUS :</p> <p>-1 </p>
	 <p>+1 </p>	 <p>+1 </p>	 <p>+1 </p>	 <p>+2 </p>

ENIGMA 3


WORD 1:

✓ = -1 


WORD 2:

✓ = -1 

WORD 3:

✓ = -1 

WORD 4:


✓ = -1 

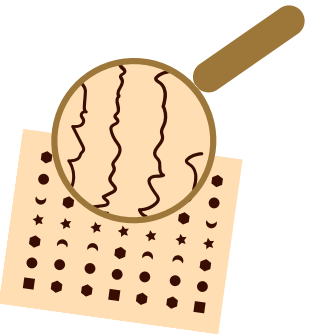
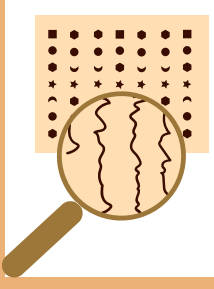
Your goal is to decipher the coded message and find out how to reduce the flooding.

When you think you are ready, or if you are blocked, check the solution!

For every correct word, remove one water tile from the board.

If the whole message is correct, remove two extra bonus tiles!

✓✓✓✓ = -2  bonus



ENIGMA 3

You have a new message: Crack the secret code to understand where the floods are coming from

L	O	R
K	N	Q
J	M	P

	W	
X	:	Y
	Z	

E X A M P L E

G	D	A
H	E	B
I	F	C

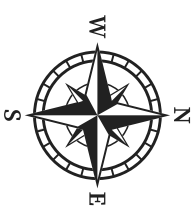
	S	
T	:	U
	V	

**USE THE ANSWER SHEET TO
WRITE THE WORDS YOU FIND!**



Due to the **FOUL** in
areas, **VEGETATION** can no longer
into the ground.



Your objective is to construct the city in a flood-proof way!



Follow the instructions to work out the correct location of each item!



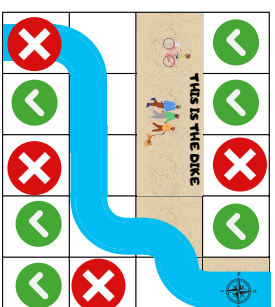
When you think you have found the right answer, or if you are stuck, you can check the solution. Then **count the number of items placed in the right place and remove water tiles as indicated on the following scale:**

1, 2 or 3 correct tiles  = -2 

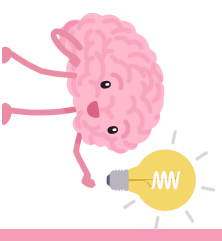
4, 5 or 6 correct tiles  = -4 

7 or more correct tiles  = -6 

Example:



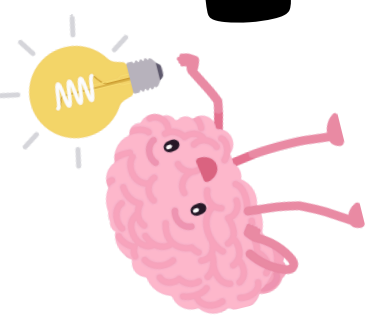
= -4 



use your logic to build a city and avoid flooding.

The mystery of the river:

BE LOGICAL!

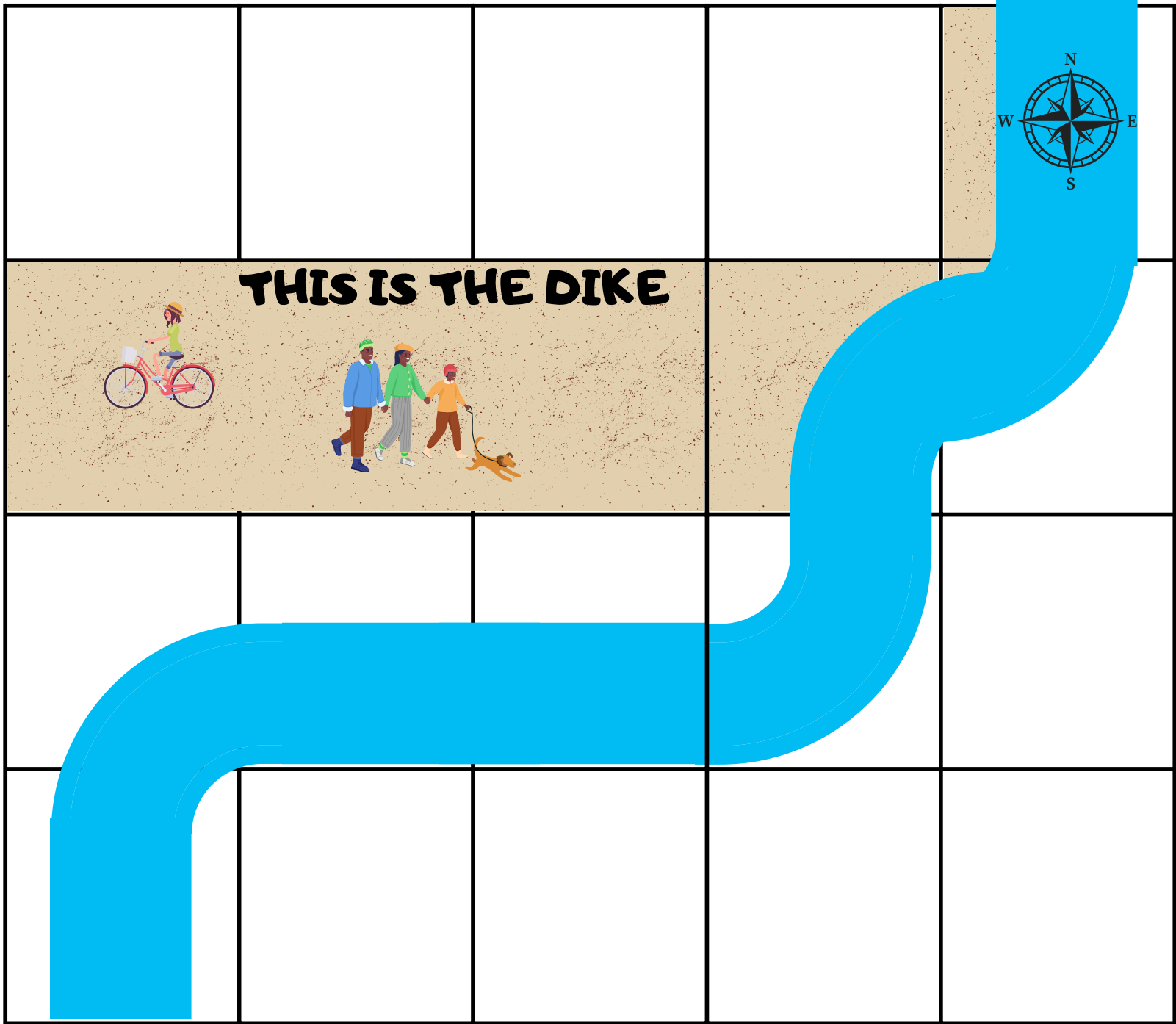


STAPLE HERE

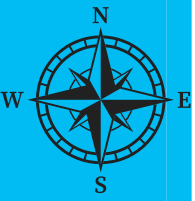
STAPLE HERE

STAPLE HERE

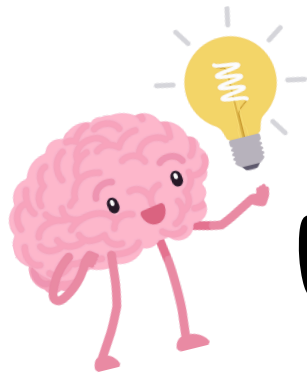
STAPLE HERE



THIS IS THE DIKE



**FLIP OVER WHEN
STARTING THE
FOLLOWING TASK:**

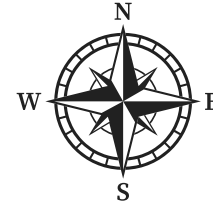


BE LOGICAL!

CUT AROUND THE RED LINE

Instructions :

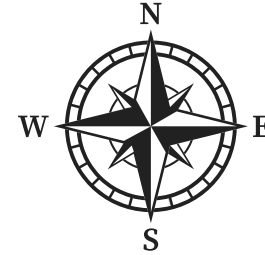
- the park is to the south and west of the city
- the hospital is located further east than the park
- the hospital touches the river only at an angle
- the carpark is between the harbour and the hospital
- the museum is opposite the carpark from the river
- the bridge connects the harbour and the dike
- the market is opposite the bridge
- the houses are not next to the market but on the same river bank as the museum
- the school is to the east of the houses
- nothing is built east of the bridge



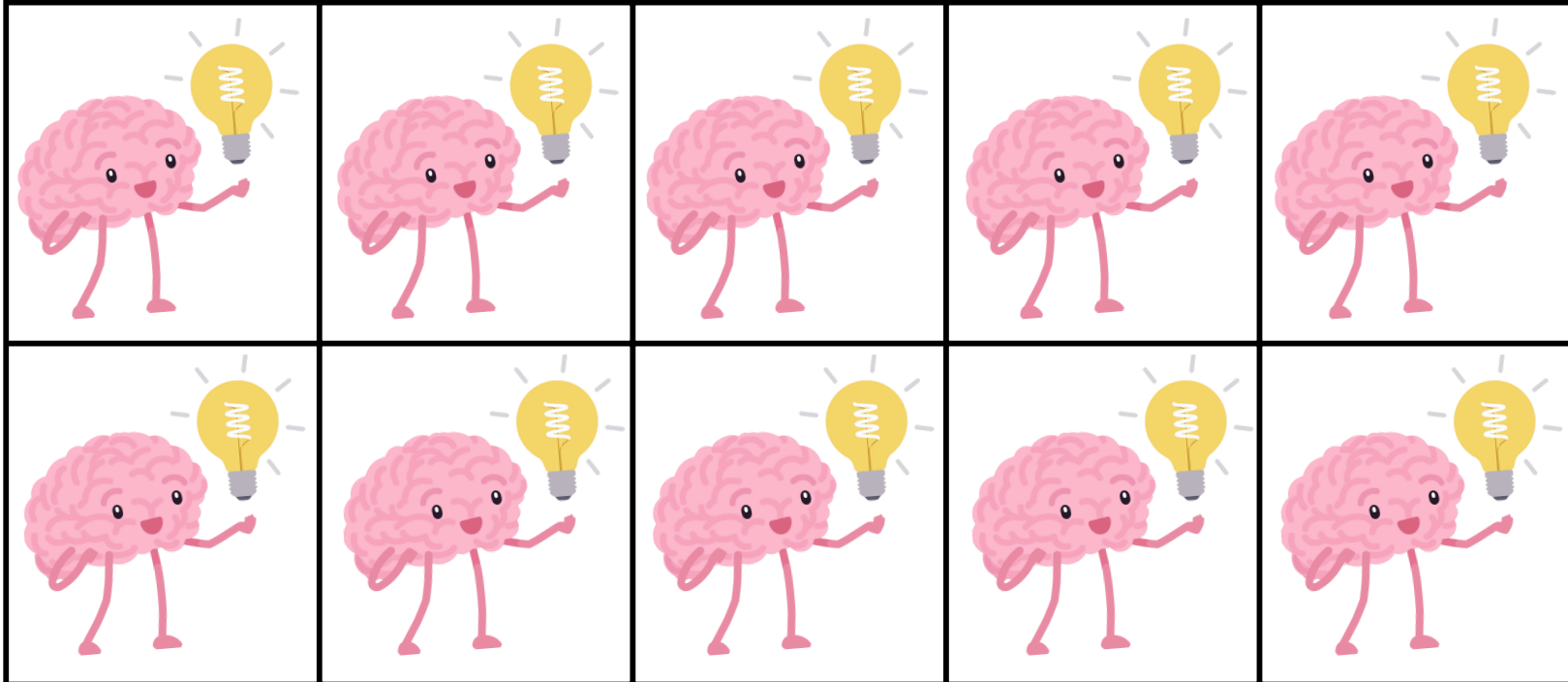


Be logical!

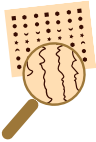
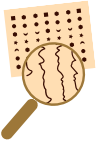
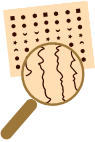
INSTRUCTIONS

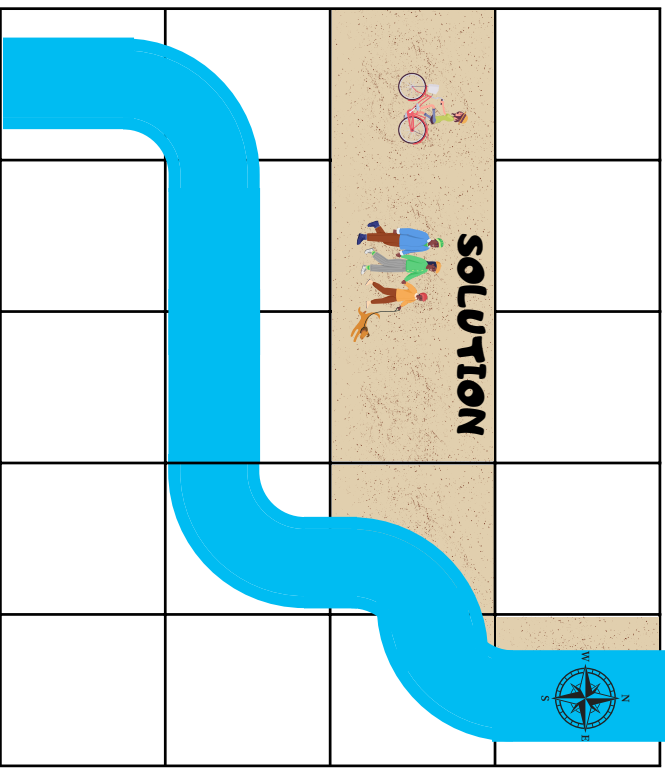


CUT AROUND EACH TILE



Content :

 SOLUTION ENIGMA 1	 SOLUTION ENIGMA 2	 SOLUTION ENIGMA 3
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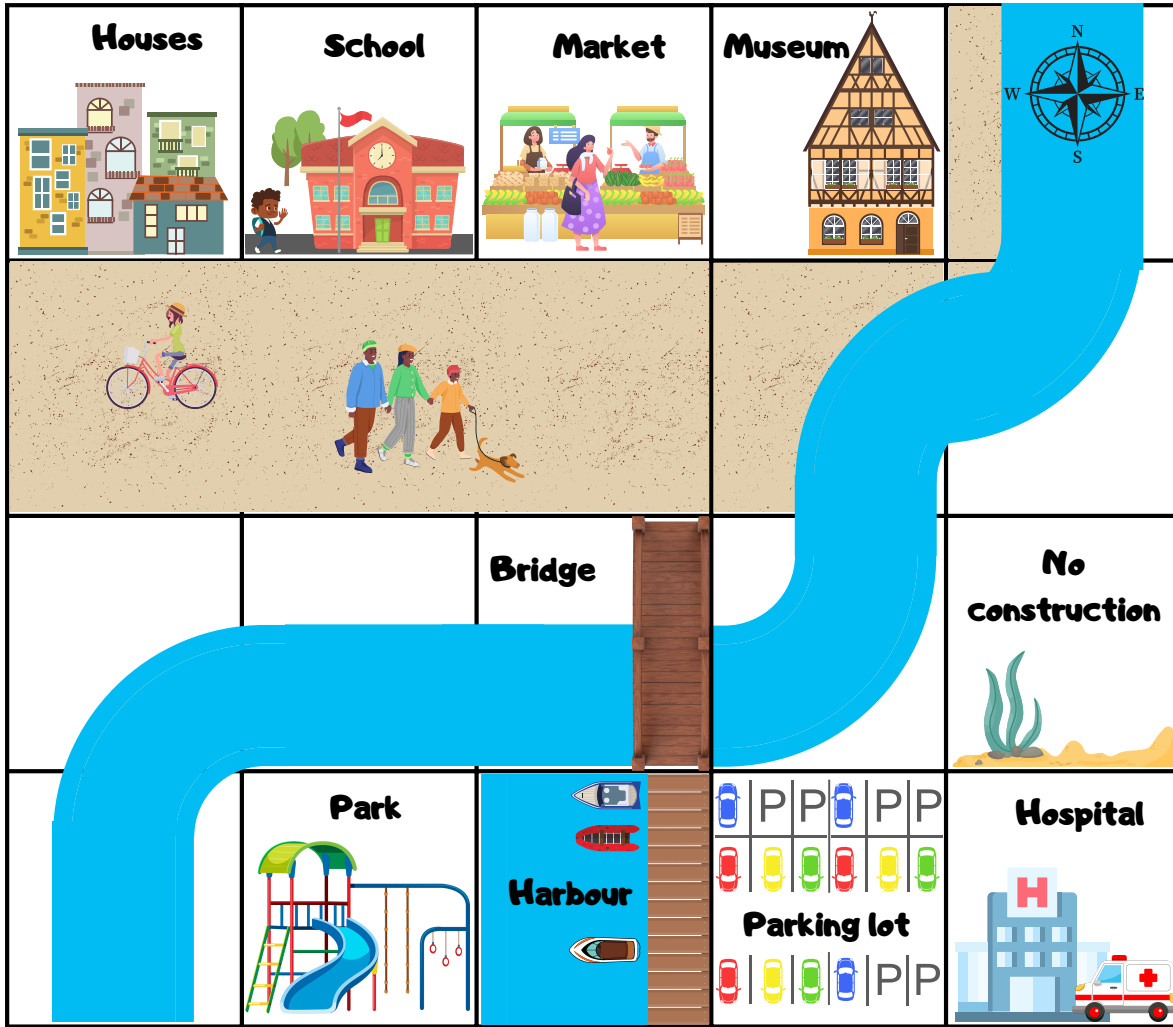
SOLUTIONS

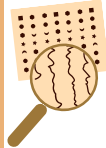
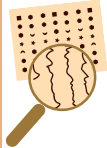
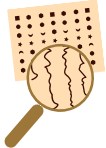
STAPLE HERE

STAPLE HERE

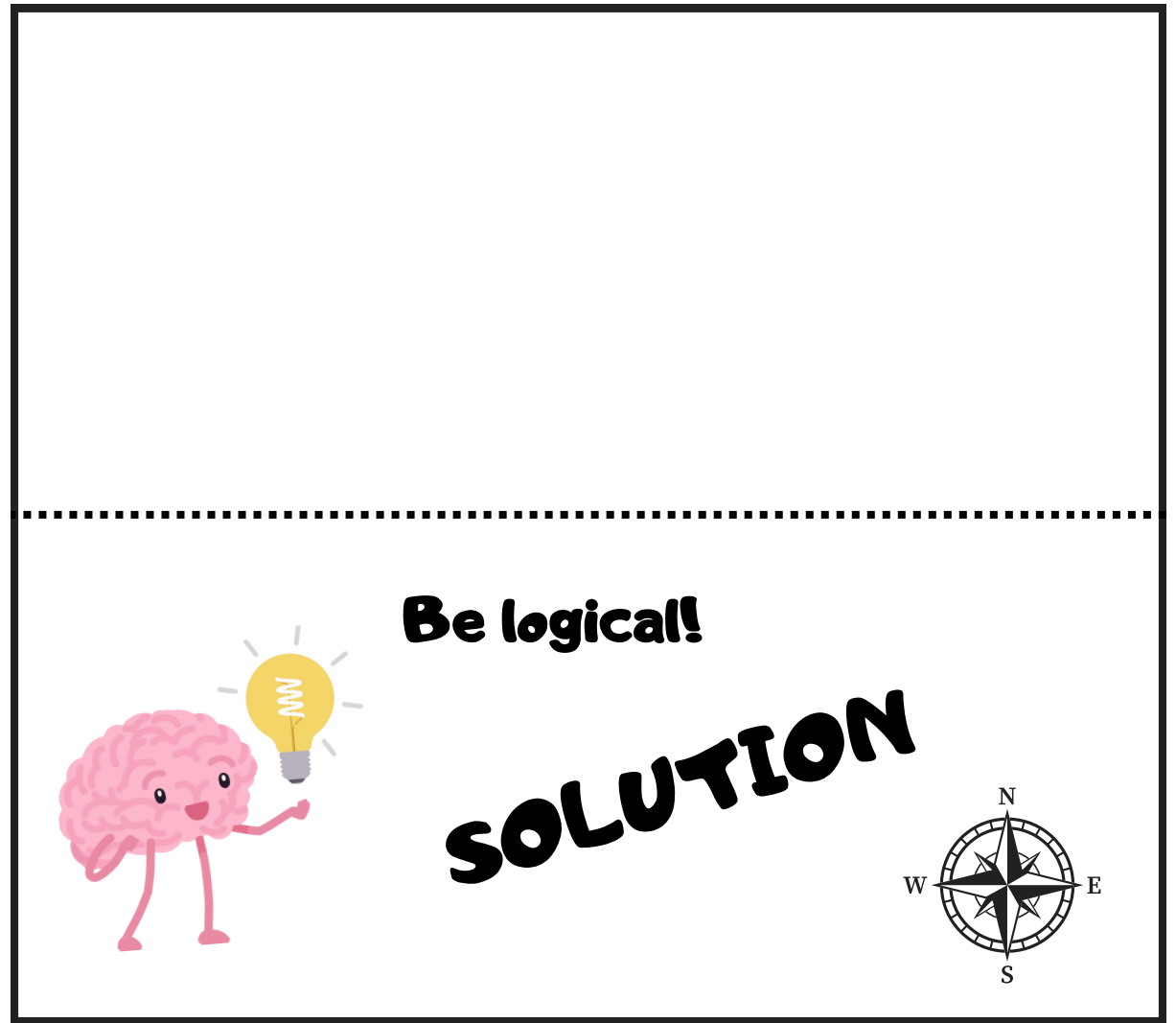
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<p>SOLUTION – ENIGMA 3</p> <p>Due to the increase in urban areas, water can no longer soak into the ground.</p>	<p>SOLUTION – ENIGMA 2</p> <p>Climate change is causing sea levels to rise and flooding coastal areas.</p>	<p>SOLUTION – ENIGMA 1</p> <p>Climate change is causing heavier rains which are making flooding worse.</p>
<p>SOLUTION ENIGMA 3</p> 	<p>SOLUTION ENIGMA 2</p> 	<p>SOLUTION ENIGMA 1</p> 

Do NOT cut around every tile.



Fold the solution board so that it fits in the solution envelope!

ENIGMA 1

WORD 1:

.....

WORD 2:

.....

WORD 3:

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ENIGMA 2

WORD 1:

.....

WORD 2:

.....

WORD 3:

.....

ENIGMA 3

WORD 1:

.....

WORD 2:

.....

WORD 3:

.....

WORD 4:

.....

ANSWER SHEET

