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|  | **Activity Guide - Using the Problem Solving Process** |  |

# Maze

## Overview

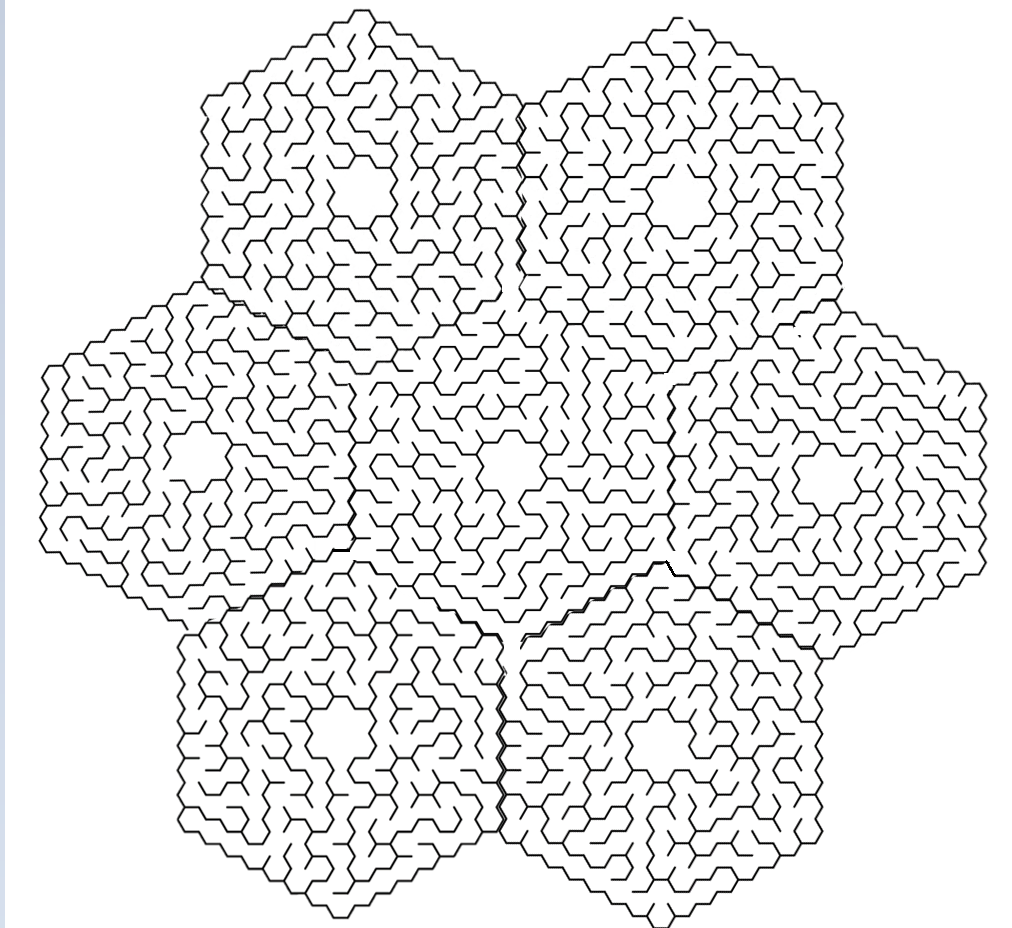
You’ve lost all your softball gear! Starting from home base in the middle, collect all your gear located in other mazes!

## Objective

Working with a team, start at the base in the middle of the maze and get to all of the other softball gear.

Use the **Snipping Tool** to take a screenshot of the maze and then use the pen tool to draw your route.

When you have completed the maze, or got as far as you can, copy the screenshot here to replace the empty one.



## 

## Once You’re Done

Head to **the last page** of the activity guide and fill in the row there for the “Maze” in the table.

# Partner Race Relay

## Overview

Aysha, Ben, Carla, Damien, Eric, Fan, and Genaro are a team in a partner race relay. For each round of the relay, two people run to the finish line holding a baton. Then one person runs back to return the baton to the starting line. The race ends when everyone is at the finish line.

## Rules

Each player can run the race in a different amount of time, but when they run together, they can only go as fast as the slowest person. For example, in Round 1, Aysha and Ben take three minutes to get to the finish line, but Aysha only takes two minutes to return the baton to the starting line, for a total round time of five minutes.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Aysha** | **Ben** | **Carla** | **Damien** | **Eric** | **Fan** | **Genaro** |
| 2 minutes | 3 minutes | 4 minutes | 6 minutes | 7 minutes | 9 minutes | 11 minutes |

## Objective

Decide what order the players should go in so that everyone gets to the finish line as fast as possible. Can they cross in an hour or less? 50 minutes? 45 minutes?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Round** | Who races? | Racing Time | Who returns? | Return Time | Round Time | Who is at the finish line? |
| **1** | Aysha, Ben | 3 minutes | Aysha | 2 minutes | 5 minutes | Ben |
| **2** |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |

Total Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Once You’re Done

Head to the last page of the activity guide and fill in the row there for the “Partner Race Relay” in the table.

# Make a Game

## Overview

Sports day is coming up and you and your friends will be making a new, special game for it. Plan the most fun and exciting game that you can!

## Explore Ideas

Brainstorm games you already know or look online for different ideas. Look at the different aspects of each game. Don’t worry about making a plan yet, but make sure you notice what you like and don’t like about the games.

## Develop Goals

Talk with your group for a few minutes. What are the most important things about the game? How many people can play? What kind of game will it be? Write down the goals you’ll use to decide what makes a good plan. Don’t worry about filling in the right-column yet.

|  |  |
| --- | --- |
| **Goals** | **How My Plan Helps Reach this Goal** |
| Can be played at school. |  |
| Must take about \_\_\_\_\_\_\_\_ minutes. |  |
|  |  |
|  |  |
|  |  |

## Make a Game Plan

Every member of your group should separately start designing a game. You should describe how the materials the game requires, how to get started, what playing it might look like, and what it takes to win. For each goal your group chose, list how your game plan helps to reach it in the right column. In the space below describe the setup and materials needed for the game and how to play the game.

**Setup/Materials**

**How to Play**

## 

## Share Your Game Plan and Get Feedback

Share the game you developed with your teammates and explain why you think it is the best possible game given the goals you chose. Afterwards, record their feedback and reactions to your game in the space below. Is there anything that needs to change? How could your game improve?

## 

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## Improve and Finalize

Using the feedback from your teammates update your game. In the space below write down the new design that you and your group agreed on.

**Setup**

**How to Play**

## 

## 

## 

## Once You’re Done

Head to the last page of the activity guide and fill in the row there for the “Make a Game” in the table.

# 

# Problem Solving Process Notes

## Reflecting on Using the Process

How did you use each step of the problem solving process to solve this problem? Give examples of what each step looked like as you were solving that problem.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Define** | **Prepare** | **Try** | **Reflect** |
| **Maze** |  |  |  |  |
| **Partner Race Relay** |  |  |  |  |
| **Make a Game** |  |  |  |  |

## The Purpose of Each Step

For each step in the problem solving process, write one sentence explaining its purpose. Why is it included in the problem solving process?

**Define:**

**Prepare:**

**Try:**

**Reflect:**

## Defining Problems with Questions

Before starting to solve a problem it’s important that you have defined it well. What questions or strategies can you use to better define or understand a problem? Record them in the space below.