

# Area Dice Challenge



A strategic and educational game that combines maths skills with physical exercise. Two players compete to cover the most area on a game grid by rolling dice and calculating rectangular areas, followed by performing exercises based on the area covered.



## Learning Intentions

### Enhancing Math Skills Through Area Calculation

Students will practise and improve their maths skills by calculating the area of rectangles formed by dice rolls, reinforcing their understanding of multiplication and spatial reasoning.

### Promoting Physical Fitness and Exercise

Students will engage in physical activity by performing exercises based on the area they cover on the grid, promoting a healthy balance between cognitive and physical development.

### Developing Strategic Thinking and Spatial Awareness

Students will develop strategic thinking as they plan their moves to maximise their area on the grid while potentially blocking their opponent, enhancing their spatial awareness and decision-making skills.



## Success Criteria

### Accurate Area Calculation

Students accurately calculate the area of the rectangles formed by their dice rolls and correctly mark this area on the game grid, demonstrating a strong understanding of multiplication and spatial reasoning.

### Active Participation in Physical Challenges

Students actively engage in the physical exercises assigned based on the area they cover, showing effort and enthusiasm in completing the activities.

### Strategic Gameplay and Maximising Area

Students effectively strategise to maximise their total area on the grid, demonstrating an ability to think ahead and plan their moves to achieve the highest score.



# Area Dice Challenge



## Objective:

A strategic and educational game that combines maths skills with physical exercise. Two players compete to cover the most area on a game grid by rolling dice and calculating rectangular areas, followed by performing exercises based on the area covered.

## Players:

Two participants per game card.

## Materials:

- Two six-sided dice for each participant.
- A printed game grid (PDF).
- Two different coloured markers.

## Setup:

Each player starts at opposite ends of the game grid with their dice and markers.

## Gameplay:

- **Rolling for Area:** Players roll their dice to determine the dimensions of a rectangle they'll colour on the grid.
- **Calculating Area:** The numbers rolled represent the length and width of the rectangle. Players calculate the area and colour it on the grid.
- **Exercise Challenge:** After colouring, players roll one dice to determine an exercise, performing reps equal to the area they covered.
- **Game Progression:** Players continue rolling, colouring, and exercising, filling up the grid.
- **Game Duration:** Set a time limit or play until the grid is full.

## Winning the Game:

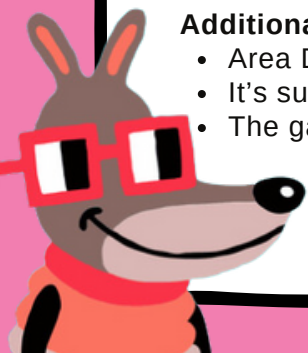
The winner is the player who colours the largest total area on the grid.

## Variations for Different Settings:

- **Educational Edition:** Focus on enhancing maths skills through area calculation.
- **Fitness Edition:** Include various exercises for a full-body workout.
- **Competitive Edition:** Introduce strategic elements, like blocking the opponent's moves.

## Additional Notes:

- Area Dice Challenge is an engaging way to combine learning with physical activity.
- It's suitable for various ages, promoting both cognitive and physical skills.
- The game can be adapted for different skill levels and educational focuses.



Dice rolls	Exercise too complete
One	Squats
Two	Lunges
Three	Push ups
Four	Squat thrusters
Five	Sit ups
Six	Plank jacks

## A full-page sheet of white graph paper featuring a uniform grid of thin black lines. The grid consists of 20 columns and 20 rows, creating a total of 400 small squares. There are no margins, text, or other markings on the page.

# PLAYER TWO

## 4

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# PLAYER ONE

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# PLAYER TWO