

# Preface

We believe teaching leadership through games is an effective way to get the message of leadership across. But this book is not just a collection of leadership games. It is a work of love to integrate the elements of Math and Science in teaching the leadership principles.

Each game exercise includes a game activity and a review question component comprising “Process” and “Practical Application”—offered as the last two sections of each game exercise—which will stimulate discussion and reflection on the key leadership concepts.

The Matrixes in Figure 1 and Figure 2 will provide you with a quick glance of the leadership concepts and the games that will elicit the key leadership understanding emphasised in this book. Figure 1 comprises the first 24 game exercises highlighting mathematical concepts or principles, while Figure 2 comprises the last 26 games highlighting scientific concepts or principles.

## How each leadership game is organised

Each of the 50 games has the following ten components, except for “Possible Variation(s)” which is provided additionally in some of the games.

*Key Leadership Understanding* Highlights the key purpose of the activity. It identifies the learning outcomes in terms of what the players should be able to articulate at the end of the activity

*Math/Science Concepts Applicable* Identifies the key Math or Science concepts or principles that are tested, so players who are more familiar with such concepts or principles might do better in the relevant games.

*Equipment/Logistics* Lists the equipment and resources required for conducting the game

*Time Required* Indicates an estimated amount of time needed to carry out the game activity, excluding the review question component comprising “Process” and “Practical Application”

*Game Objective* Refers to the objective or requirement of the game—what each group of players has to do to be the winner from the game activity *per se*, excluding the review question component

*Group Size* Indicates the minimum, maximum or an estimated ideal number of players for each team

*Procedure* Explains the step-by-step instructions and actions to be carried out by the facilitator with the players when conducting the game

*Possible variations (where applicable)* Suggests various ways to modify a particular game

*Process* Lists questions for players to reflect on what went on during the game activity itself (first part of review question component)

*Practical Application* Lists questions for players to relate what they have reflected from the game activity to what is happening or could happen in their own team or organisation outside of the game activity (second part of review question component)

### **What is the best way to use this book?**

Decide on the focus of your leadership lesson. What values and traits do you wish to highlight to your group of trainees? At the same time, decide on whether you would prefer a game with a tilt towards mathematics or science.

At the right-hand top of each Game, you will see an oval-shaped header indicating the level of difficulty of the game—“Elementary”, “Intermediate” or “Advanced”. This refers to the game activity *per se*, and not necessarily the whole game exercise itself which would include the review question component. How “elementary” or “difficult” the review question component is depends on how you conduct the discussion, the length of time given to participants to share and articulate their feedback and reflections, the sensitivity experienced by the participants, the camaraderie or comfort level among the participants, and so on and so forth.

## **In conclusion**

Similar to many resource guides, the game exercises in this collection are meant as an aid. Each exercise can be modified to suit the user's needs. Game 18, for example, requiring players to know multiples of 7, can be modified to require players to know multiples of numbers smaller or bigger than 7. The review question component in each game exercise can also be omitted, if you are keen on just the game activity without a leadership training agenda in mind for your players.

Suffice to say, every game activity takes on a shape or shade of its own, when played.

Be prepared.

Be surprised.

Have fun!

Fig. 1. Leadership Game Matrix (for Math).

| Leadership Understandings/<br>Games | Ask Questions | Create & See Things Differently | Develop Resources | Be Disciplined | Active Listening | Make Priorities | Setting a Good Example for Others to Follow | Multiply Leaders | Problem Solve | Sacrifice | Search and Explore | Strategize | Support Diversity | Team work & Collaborate |
|-------------------------------------|---------------|---------------------------------|-------------------|----------------|------------------|-----------------|---|------------------|---------------|-----------|--------------------|------------|-------------------|-------------------------|
| <b>Addition</b>                     |               |                                 |                   |                |                  |                 |   |                  | X             |           |                    | X          |                   |                         |
| <b>Guess The Number</b>             | X             |                                 |                   | X              | X                |                 |   |                  | X             |           |                    |            | X                 | X                       |
| <b>“Beengo!”</b>                    |               |                                 |                   |                | X                |                 |   |                  | X             |           |                    | X          | X                 | X                       |
| <b>Symmetry</b>                     |               | X                               |                   |                |                  |                 | X   |                  |               |           | X                  |            |                   | X                       |
| <b>Multi-Division</b>               |               |                                 |                   | X              | X                |                 |   | X                |               | X         |                    | X          |                   | X                       |
| <b>Another PIE Jam</b>              |               |                                 |                   |                | X                |                 |   |                  | X             |           |                    | X          | X                 | X                       |
| <b>Blindfold Polygons</b>           | X             | X                               |                   |                | X                |                 |   |                  | X             |           |                    | X          | X                 | X                       |
| <b>Money Mind</b>                   |               |                                 | X                 |                |                  | X               |   |                  | X             | X         |                    | X          |                   | X                       |
| <b>7 up with a Twist!</b>           |               |                                 |                   | X              | X                |                 |   |                  |               |           |                    |            | X                 |                         |
| <b>Shape Me!</b>                    |               | X                               |                   |                |                  |                 |   |                  | X             |           |                    | X          | X                 | X                       |
| <b>Momentum</b>                     |               |                                 |                   | X              | X                |                 | X   |                  |               |           |                    |            |                   | X                       |
| <b>Graphs</b>                       | X             |                                 | X                 |                | X                |                 |   |                  |               |           |                    | X          | X                 | X                       |
| <b>Aladdin’s Magic Carpet</b>       |               | X                               | X                 | X              | X                |                 |   |                  | X             |           |                    | X          | X                 | X                       |
| <b>Line Up!</b>                     |               |                                 |                   | X              | X                |                 |   |                  |               |           |                    | X          |                   | X                       |
| <b>Fishing</b>                      |               |                                 | X                 |                |                  |                 |   |                  | X             |           |                    | X          |                   | X                       |

Fig. 1. (Continued)

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|---|---------------|---------------------------------|-------------------|----------------|------------------|-----------------|---|------------------|---------------|-----------|--------------------|------------|-------------------|-------------------------|
| <b>The Olympics of Science and Math</b> |               |                                 |                   |                |                  |                 | X   |                  |               |           |                    | X          |                   |                         |
| <b>Angle of Elevation</b>               |               |                                 |                   |                |                  |                 |   |                  |               |           |                    | X          | X                 | X                       |
| <b>In Step with the Times!</b>          |               |                                 |                   |                |                  |                 |   |                  | X             |           |                    | X          |                   | X                       |
| <b>Whose Bubble Is It?</b>              |               |                                 | X                 |                |                  |                 |   |                  |               |           |                    |            | X                 |                         |
| <b>Number Game</b>                      |               | X                               |                   | X              | X                |                 |   |                  | X             |           |                    | X          |                   | X                       |
| <b>Vector Pull</b>                      |               | X                               | X                 | X              | X                |                 |   |                  | X             |           |                    | X          | X                 | X                       |
| <b>Danger Zone!</b>                     |               |                                 |                   |                | X                |                 |   |                  |               |           | X                  | X          |                   | X                       |
| <b>All on a Square</b>                  |               |                                 |                   |                |                  |                 | X   |                  |               | X         |                    |            |                   | X                       |
| <b>Station Omega</b>                    |               | X                               |                   | X              | X                |                 |   |                  | X             |           |                    | X          |                   | X                       |

Fig. 2. Leadership Game Matrix (for Science).

| Leadership Understandings/ Games | Ask Questions | Create & See Things Differently | Develop Resources | Be Disciplined | Active Listening | Make Priorities | Setting a Good Example for Others to Follow | Multiply Leaders | Problem Solve | Sacrifices | Search and Explore | Strategize | Support Diversity | Team work & Collaborate |
|----------------------------------|---------------|---------------------------------|-------------------|----------------|------------------|-----------------|---|------------------|---------------|------------|--------------------|------------|-------------------|-------------------------|
| <b>Rubber Banding</b>            |               |                                 |                   |                |                  |                 |   |                  |               |            |                    |            |                   | X                       |
| <b>The World's Your Oyster</b>   |               |                                 | X                 |                |                  |                 |   | X                |               |            | X                  |            |                   | X                       |
| <b>Once upon a Time</b>          |               | X                               | X                 |                | X                |                 |   |                  |               |            | X                  |            |                   | X                       |
| <b>Drinks for Life</b>           |               | X                               |                   |                |                  |                 |   |                  |               |            | X                  |            |                   | X                       |
| <b>Biodiversity</b>              |               |                                 |                   |                | X                |                 |   |                  |               |            |                    |            | X                 |                         |
| <b>Charades</b>                  | X             | X                               |                   |                |                  |                 |   |                  | X             |            |                    |            |                   | X                       |
| <b>Table of Elements</b>         |               | X                               |                   |                |                  | X               |   |                  |               |            |                    |            |                   |                         |
| <b>Nervous Pulses</b>            |               |                                 |                   |                |                  |                 |   |                  |               |            |                    |            | X                 | X                       |
| <b>Group Obstacle Race</b>       |               | X                               | X                 | X              |                  | X               |   | X                | X             |            | X                  | X          | X                 | X                       |
| <b>Primordial Soup</b>           |               |                                 |                   |                | X                |                 |   | X                | X             | X          |                    | X          | X                 | X                       |
| <b>Height Equilibrium</b>        | X             | X                               | X                 |                |                  |                 | X   | X                | X             |            | X                  | X          | X                 | X                       |
| <b>Treasure Hunt</b>             | X             |                                 | X                 | X              | X                | X               |   | X                | X             | X          | X                  | X          | X                 | X                       |
| <b>Scientific Scrabble!</b>      |               | X                               |                   |                |                  |                 |   |                  | X             |            | X                  |            |                   | X                       |

Fig. 2. (Continued)

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|--|---------------|---------------------------------|-------------------|----------------|------------------|-----------------|---|------------------|---------------|------------|--------------------|------------|-------------------|-------------------------|
| <b>Murder Mystery</b>                    | X             |                                 |                   |                | X                |                 |   | X                | X             |            | X                  |            |                   | X                       |
| <b>Pull It Up!</b>                       |               | X                               | X                 |                | X                |                 |   | X                | X             |            | X                  | X          |                   | X                       |
| <b>Food Web</b>                          |               |                                 |                   |                |                  |                 |   |                  | X             | X          |                    |            |                   |                         |
| <b>Cam the Chemicals!</b>                |               | X                               |                   |                |                  | X               |   | X                |               |            | X                  |            |                   | X                       |
| <b>Taboo!</b>                            | X             |                                 |                   |                | X                |                 |   |                  | X             |            |                    |            |                   | X                       |
| <b>Circle of Influence</b>               |               |                                 |                   | X              |                  |                 |   |                  |               |            |                    |            | X                 |                         |
| <b>Boeing or Airbus?</b>                 |               | X                               | X                 |                |                  |                 |   |                  | X             |            | X                  | X          |                   | X                       |
| <b>Bob the Builder</b>                   |               | X                               | X                 | X              | X                |                 |   | X                | X             | X          |                    | X          | X                 | X                       |
| <b>Water Bomb Volleyball</b>             |               |                                 |                   | X              |                  |                 |   |                  |               |            |                    | X          | X                 | X                       |
| <b>Swoosh!</b>                           |               |                                 |                   | X              |                  |                 |   |                  |               | X          |                    | X          |                   | X                       |
| <b>Mahjong Dominoes!</b>                 |               | X                               | X                 |                | X                |                 |   |                  |               |            | X                  |            |                   | X                       |
| <b>Leucocytes</b>                        | X             |                                 |                   | X              | X                |                 |   |                  |               |            |                    |            |                   | X                       |
| <b>Broken Telephone Line/Fax Machine</b> |               |                                 |                   |                | X                |                 | X   |                  |               |            |                    |            |                   |                         |