ZOOM OUT

'ZOOM OUT' ACTIVITIES

MAKE A KINDER SYSTEM

COMMISSIONER'S DIGITAL CHALLENGE SCHOOLS

An unplugged interactive systems thinking activity for students in all year levels.

Your students are challenged to come up with a better system to win the game.

Aim

To encourage students to get thinking about how to make an existing system work in a better way.

Age range

Open to all ages – but most well suited to late primary and secondary school learners.

You will require

- A group of students, preferably around 20 or so.
- A jar of marbles or tokens or any items you like to use as 'prizes'.
- You may even wish to use small lollies, early minutes, stickers or anything you think your students will like. Make sure it's small though because you'll be giving out multiple prizes.

Lesson Plan

Ask the class to close their eyes, and for anyone who wants a 'prize' to put up their hand. However if too many put up their hands, only those who did not put up their hands get a prize. Then allow the group to discuss ways to create their own improved system.

Activity Overview

Tell the group:

'The aim of this game is to win a prize.

I am going to give a prize to anyone that puts up their hand.

But if more than two thirds of the class put up their hand then only the people without their hands up will get a prize.

Your eyes will be closed and you cannot talk to each other before deciding to put up your hand.'

After explaining the activity, ask everyone to close their eyes and decide whether to put up their hand.

Record the number with their hands up.

Ask everyone to open their eyes.

Reveal the winners.

Ask the class if they would like to play again and repeat the above steps two more times.

Now survey the class.

Who got one prize? Two? Three?

Did anyone get zero?

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This activity is a simple game with complex cooperation and competition strategies.

Students can act as individuals and fail or learn to think systemically and succeed!

It serves as an introduction to ‘seeing the whole’ system and its effects on individuals, societies, economies and environments.

Discussion (and suggested answers)

How can you make sure you get a prize?

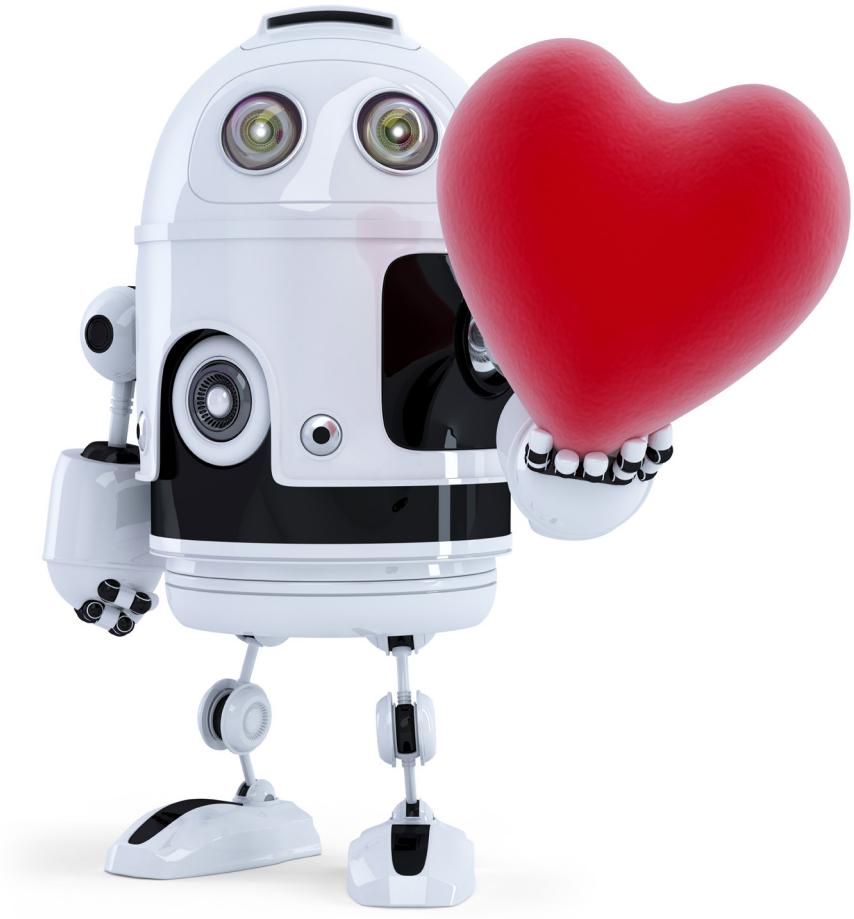
Can you make sure your classmates get a prize?

How can you make sure the maximum number of students in your class get a prize?

Was this a fair game?

If not, how can you make it fair?

If we have limited resources to share, what are some alternative systems we can use to distribute them?



Content Descriptions from ACARA Digital Technologies Curriculum

‘Develop knowledge, understanding and skills to ensure that, individually and collaboratively, students apply **systems thinking** to monitor, analyse, predict and shape the interactions within and between information systems and the impact of these systems on individuals, societies, economies and envirionments.’

Source: Overall aims — Australian Digital Technologies Curriculum

‘Start to develop a holistic approach to the identifications and solving of problems where the focal points are treated as components of a system, and their interactions and interrelationships are analysed individually to see how they influence the functioning of the entire system.’

‘Understand systems work with complexity, uncertainty and risk.’

‘Students recognise the connectedness of and interactions between people, places and events in local and wider world contexts and consider the impact their designs and actions have in a connected world.’

‘Participating in and shaping the future of information and digital systems is an integral part of learning in Digital Technologies. Understanding the complexity of systems and the interdependence of components is necessary to create timely solutions to technical, economic and social problems. Implementation of digital solutions often has consequences for the people who use and engage with the system, and may introduce unintended costs or benefits that impact the present or future society.’

Source: ‘Thinking in Technologies’ — Australian Curriculum