FOOD CHAIN

TEAMS

1. Government
2. Citizens
3. Industry
4. Livestock
5. Horticulture
6. Rice Growers
7. Cotton Growers

START OF THE GAME

- Randomly assign teams
- Give out a copy of the rules to each team
- Role 1d6 (six-sided dice) to decide who goes first. Then it goes in order of the 1-7 above
- Every team gets asked 10 questions
    - $100,000 for each correct answer. This is the money you start the game with
- Divide up water allocations evenly

AIM OF THE GAME

- Secure the most 'victory points' by the end of the game
- Victory points
    - $1,000,000 = 1 victory point
    - 1 water allocation = 1 victory point
    - 1 improvement = 1 victory point
    - 1 challenge solved = 1 victory point

PLAYING THE GAME

- One person from each team must be present at the board at all times
- On your turn
    - Flip a coin
        - Heads – you can steal a water allocation from another team
        - Tails - nothing
    - Roll a dice and get asked that many questions
        - $100,000 for every correct answer
    - Solve challenge if you can (submit form), or take negative consequence if you can't
    - Will you be making any improvements? If so, submit form.
- At the end of your turn
    - Rotate which team member is at the board

CONTENT KNOWLEDGE QUESTIONS

Question	Answer
Before European settlement the Murray-Darling…	Dried up into a chain of saline waterholes during severe droughts
Discuss the three reasons for improved crop production.	Improved crop production was due to increased use of fertilisers, use of irrigation and use of pesticides that have all contributed to improved crop yields
Explain the impact of an increasing population on world environments.	pose enormous strains on land, water, energy and other natural resources of world environments
Explain the significance of trade in food production.	less likelihood of developing countries suffering from famine.
Explain why agricultural innovations can change food production	changed and increased global food production by boosting crop yield through advanced seed genetics (new and improved seed types), agronomic practices (studying the soils and the plants) and product innovations (new crop types) that help farmers maximise environmental productivity and quality
Explain why extensive, large-scale cattle and sheep farms are typically located in remote and arid regions of Australia.	Extensive farms are found in the arid and remote interior because vast areas of land are needed for herds due to sparse animal feed.
How could crop production be increased in places such as Eastern Europe or Western Africa?	were improvements in seeds, irrigation, fertiliser and markets.
How does the environment in the centre of Australia affect farming types?	Dry or desert conditions means that only sheep for wool and cattle for meat are found in the centre of Australia.
How many major dams does the MDB have?	4
How much of mainland Australia does the MDB cover?	14%
In the past, what were the two reasons for the increase in food production?	Increased fertiliser application and more water usage through irrigation
List three different strategies, other than closing the yield gap, for improving food production.	increasing and improving irrigation infrastructure, making the best use of existing food resources by reducing food waste, and examining new regions for growing food and increasing aquaculture catch.
Name 3 towns along the Murray	Mildura, Swan Hill, Robinvale, Yarrawonga, Wodonga, Albury, Walwa, Corryong

Name a First Nations people that traditionally lived along the Murray River	Bangerang or Ngarrindjeri
Over the next 60 years, climate change is most likely to result in parts of the Murray-Darling Basin experiencing…	Higher rainfall, lower rainfall and higher temperatures (i.e., more extreme rainfall at both ends)
Roughly how long have First Nations people lived in the MDB?	40,000 years
Roughly how much of the world's freshwater resources are used by agriculture?	60-80%
The agricultural practice that gives the greatest financial return on the water used is…	Grapes
The algal blooms that kill large numbers of fish and other river life are caused by…	Run-off from farms
Most of the water drawn from the Murray-Darling for irrigation is used for…	Cotton
To the nearest billion, what is the Earth's population?	8 billion
What % of Adelaide's drinking water comes from the Murray?	40%
What are the four levels of industry?	primary, secondary, tertiary, quaternary
What are the main types of agriculture that can be practised in desert environments?	Extensive grazing of cattle for meat and sheep for wool
What did First Nations people use to catch fish on the Murray?	Nets and dams
What do First Nations people call the Murray River?	Millewa or Tongala
What does arable mean?	land that can be used to grow crops
What does per capita mean?	per person
What does sustainable mean?	able to be maintained at a certain level into the future
What has been one result of the 'Green Revolution'?	reduction in the chances of famine in developing countries
What is a biome?	a large ecosystem
What is a hybrid plant?	a plant bred from two or more different species
What is a negative effect of tourism?	the possibility of exploiting local people
What is a primary industry?	industry involved in gathering natural resources
What is Australia's biggest export?	iron ore
What is GDP?	gross domestic product
What is infrastructure?	facilities and equipment needed for the functioning of a country or area
What is meant by the term genetically modified (GM)?	designed and scientifically altered in such a way as to allow the crop to yield more output. GM foods may be more robust,

	hardier, require less pesticide or be more suited to a climate. GM crops are more successful in plantations.
What is meant by the term yield gap and why is it important that this gap be narrowed to increase future crop yields?	the difference between how much per unit area of a crop is produced in one place compared to another. Reducing the yield gap means that the poorest farmers will produce yields closer to the better or more effective farmer, thus reducing food shortage.
What is precipitation?	any form of moisture falling to Earth from the sky
What is the difference between extensive and intensive farming?	extensive farming is farming over a large area, intensive farming is farming that uses a lot of inputs like labour, capital, fertiliser and pesticide
What is the most common purpose for people's travel?	leisure
What is tundra?	the area beyond the tree line in polar or alpine regions
What kind of infrastructure would best help poor farmers get their produce to market more easily?	roads in rural areas
What type of farming is done in Australia's remote, dry interior?	open-range cattle and sheep farming
What type of farming is most common close to cities?	intensive farming
When did the Murray Darling Basin Authority take over management of the MDB?	2008
When did the Murray Darling Basin Plan become law?	2012
When was Australia's longest recorded drought?	1997-2010
When was the first Murray River agreements signed?	1914
Which of these has helped to increase food production recently?	greater cropping intensity
Which of these was part of the 'Green Revolution'?	increase in fertiliser and pesticide use
Which three states border the Murray River?	New South Wales, Victoria, South Australia
Which type of agricultural land use is closest to urban centres, and which is the furthest away?	Fruit and vegetables are closest to the market and pastoral forms of agriculture such as cattle are furthest.
Who is Australia's biggest trading partner?	China