

Tips on preparing and playing the game

Common pool resources

Preparing and introducing the 'Fishpond' game

Organise materials for the game:

- [Teacher evaluation \(Excel\)](#)
- [Fishpond group game \(slide set\)](#)
- Score sheet for players ([Excel](#) or [PDF](#))
- Computer
- Masks ([order form](#) or [PDF download](#))
- Possibly prizes

Explain the idea behind the game using the slide set

Use slides 1, 2, 4 and 5 of the '[Fishpond group game](#)' slide set to explain the idea behind the game and how it is played.

Important:

- Emphasise the game objective (namely for the individual to catch as many fish [= points] as possible over 10 rounds).
- Communication (do not allow conversations or agreements in advance of the game).
- Create incentives: Show the class the scale for converting points into marks, if necessary increasing the incentive by offering prizes for marks of 5 to 6.

Playing the game

Playing game (rounds) without penalties

- Enter the number of players in the 'Teacher evaluation' Excel file ('Without penalties' tab).
- Each round, ask the players if they want to catch a first, second and third fish. After each round, enter the number of fish caught in the Excel file. At the end of each round, tell the players how many fish are still in the pond. In addition, the players record their individual points at the end of each round.

Tips:

- Play a trial round (without masks).
- Keep the rhythm constant so that players are unable to guess how many fish have been removed from the pond.

Introducing the penalty option

- The penalty option can be introduced after several rounds ('Short version' tab in the Excel file; timing of introduction will be shown) or at the beginning of a new game ('With penalties' tab in the Excel file).
- For the rules, use slide 3 of the 'Fishpond group game' slide set.

Comments:

- The reason why a point is deducted for people giving penalties could be as follows: In the real world too, penalties and fines involve considerable monitoring and enforcement costs.
- The calculation of the penalty can be justified as follows: Since it entails a certain amount of work, the penalty only becomes effective once at least two people

participate ('two-person patrol').

- Small groups (under 10 players) can dispense with the 'minus 1' rule.

Playing game (rounds) with penalties

- Go through the three fishing casts as previously. In this round also ask whether players who have caught three fish should be penalised.
- At the end of each round, tell the players the number of penalty points. After that they will again record their own score (deducting points for their part in imposing the penalty or deducting the number of penalty points received).

Holding conferences/a conference

- Another option is for the teacher to call for a conference after several rounds. Players can discuss and vote on how to proceed. Agreements can be made that change the behaviour of the players but not the laws of nature.
- If possible, depending on the level of the class, players should conduct their conference themselves. The teacher intervenes if inadmissible resolutions are made or resolutions that would result in the game going out of control.
- After 2 or 3 minutes, the teacher ends the conference and continues with the next round. The teacher does not help the players implement any resolutions or reveal to them anyone who is not abiding by resolutions. If necessary, the teacher can call for another conference in the course of the game.

Comments:

- Any agreements on (ultimately non-binding) rules such as 'everyone catches a maximum of 2 fish' are permitted. Agreements that would improve the parameters (increasing stocks of fish or lowering the cost of being involved in imposing a penalty, etc.) are not permitted. In cases of doubt, it is the teacher who decides whether a resolution is permitted.
- Agreeing on resolutions is difficult and implementing them often raises diffuse questions – both of which also apply to real-life international conferences.

End of the game

- The game ends after 10 rounds or when all the fish in the pond have been caught (i.e. the resource has been depleted).
- If all the fish in the pond have been caught (which is normally the case), all those who have taken a first fish receive their fish first. If there are still fish left, those who took a second fish receive their fish, and so on, until there are no more fish to distribute.

Example:

- 15 fish in the pond, 12/5/2 players have caught 1/2/3 fish each. First, 12 players are given their first fish. 3 fish remain. All 5 participants who have caught a second fish receive their second fish (rounding up). After that the pond is empty and there is no third fish.

Working out individual results and marks

- In the 'Teacher evaluation' Excel file, reveal the scale for converting points into marks (or show the class the 'Scoring system' slide).
- Players note their marks.
- Possibly give prizes as announced previously, for example for players who have got marks of 5, 5½ or 6.

Two options:

- Reveal identities and announce marks. Discuss the different tactics ('Why did some people catch three fish?').
- Maintain anonymity also at this stage; the marks remain a secret. If awarding a prize, only ask if the score required to win the prize was attained.

Working out an overall score for the class

- The number of fish caught and the averages (per player, and per player and round) are automatically calculated in Excel.
- Compare the actual average per player and round with the sustainable solution: All players together could have taken a total of $10 \times 2 = 20$ fish.
- To calculate the average per player and round, the points are divided by 10 rounds, even if the pond is empty beforehand. This is because 10 rounds are possible (if players do not take more than 2 fish).