

Quick-Start Guide: Tragedy of the Commons Experiment

This guide covers the basics of the Tragedy of the Commons experiment. For detailed information on running experiments, see the Experiment Guide in the Professor Resources section or the Help section.

Brief description

Students are all members of a community who live on fish and game. Students must fish and hunt as much as possible to feed their families.

Objective

To illustrate what happens to essential limited resources when property rights are defined in different ways and the constructive role government regulation can play in this case

Estimated completion time

17 minutes

Roles

There is one role in this experiment: All students are food providers.

Food Providers:

- Food providers must obtain as much protein as possible to their families.
- Fishing yields 4 lbs. of protein and hunting yields 1 lb. of protein.
- The fish population is limited; a critical level of fish must be present at the end of the year for reproduction.

Variations

There is only one variation in this experiment, but that variation consists of 6 rounds. Each round represents one year (12 months). Students must fish or hunt each month of the year.

Rounds 1 and 2—Free Access:

- Everyone has free access to fish as long as the fish population is sustained

Round 3—Annual Lottery:

- The government awards annual fishing licenses in a lottery at the beginning of the year
- Only families with fishing licenses can fish

Round 4—Monthly Lottery:

- The government awards monthly fishing licenses in a lottery at the beginning of each month
- Only families with fishing licenses can fish

Quick-Start Guide: Tragedy of the Commons Experiment

Rounds 5 and 6—Monthly Auction:

- The government conducts an auction for fishing licenses at the beginning of each month
- Fishing licenses are awarded to the highest bidders (participants bid protein rather than money)
- Only families with fishing licenses can fish
- The government redistributes the protein collected from the auction winners equally among all community members

Results

Results screens are available for each variation. Below are examples of Results screens for this experiment.

Summary:



Tragedy of the Commons - Auction

EXPERIMENT COMPLETE

Admin Your Role Timeline Chat Summary Distribution Bid Range Next Steps

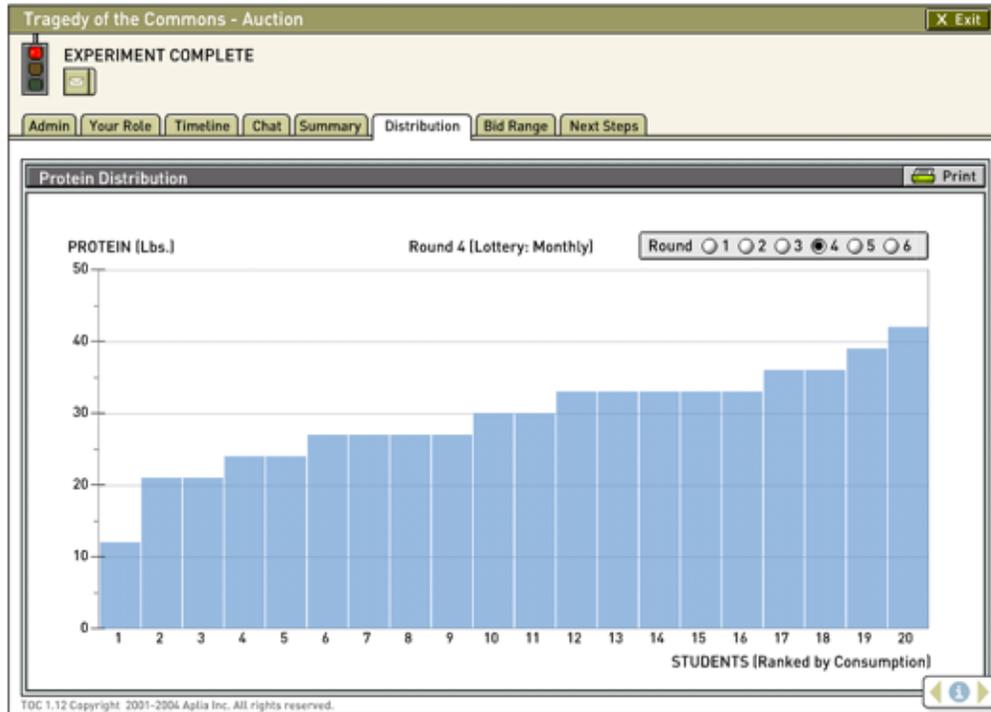
Protein Summary

| Round | Rules | Protein You Caught | License Fee [Auction] | Govt. Protein Rebates [Auction] | Your Total Consumption | Economy's Total Consumption | Final Fish Stock | Sustainable? |
|-------|------------------|--------------------|-----------------------|---------------------------------|------------------------|-----------------------------|------------------|--------------|
| 1 | Free Access | + 12 | | | 12.00 | 510 | 0 | No |
| 2 | Free Access | + 12 | | | 12.00 | 510 | 0 | No |
| 3 | Lottery: Annual | + 12 | | | 12.00 | 564 | 92 | Yes |
| 4 | Lottery: Monthly | + 12 | | | 12.00 | 588 | 84 | Yes |
| 5 | Auction | + 12 | 0.00 | + 17.70 | 29.70 | 600 | 80 | Yes |
| 6 | Auction | + 12 | 0.00 | + 17.70 | 29.70 | 600 | 80 | Yes |

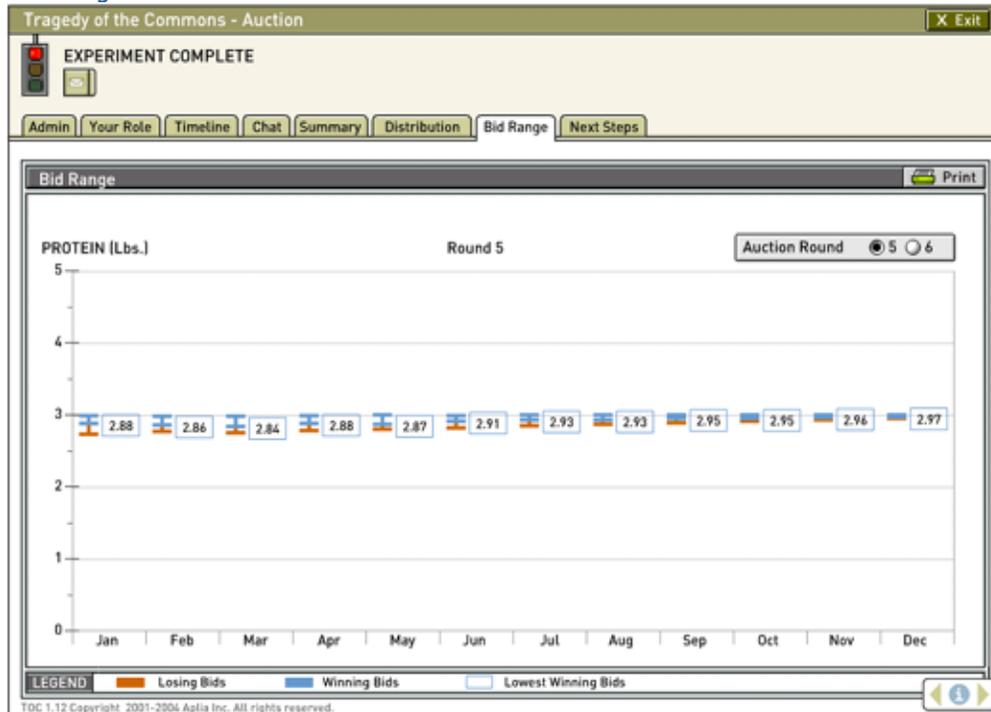
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Quick-Start Guide: Tragedy of the Commons Experiment

Distribution:



Bid Range:



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Next Steps:



The screenshot shows a web application window titled "Tragedy of the Commons - Auction". At the top left, there is a traffic light icon and the text "EXPERIMENT COMPLETE". Below this is a navigation bar with buttons for "Admin", "Your Role", "Timeline", "Chat", "Summary", "Distribution", "Bid Range", and "Next Steps". The "Next Steps" button is highlighted. The main content area has a heading "Next Steps" in orange. Below the heading, there is a paragraph: "Now that you have participated in the Tragedy of the Commons experiment and looked at the data you and your classmates created, it's time to analyze what happened in each round." This is followed by a section "Questions to consider:" with a bulleted list of five questions. Below that is a section "What to do next:" with a single bullet point. At the bottom left of the window, there is a small copyright notice: "TOC 1.12 Copyright 2001-2004 Aplia Inc. All rights reserved." At the bottom right, there is a navigation icon with left and right arrows.

Tragedy of the Commons - Auction

EXPERIMENT COMPLETE

Admin Your Role Timeline Chat Summary Distribution Bid Range Next Steps

Next Steps

Now that you have participated in the Tragedy of the Commons experiment and looked at the data you and your classmates created, it's time to analyze what happened in each round.

Questions to consider:

- How would you measure the efficiency of rules that allow free access compared to ones that require fishing licenses?
- Do more efficient rules make all families better off?
- Why is it voters often resist policy changes that can improve efficiency?
- Why haven't the various nations of the world agreed on limits on catches in ocean fisheries?
- For other resources that have poorly defined property rights and are used inefficiently, can you think of interventions that could be both efficiency enhancing and broadly supported?

What to do next:

- Do the follow-up analysis assignment.

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More information

For detailed information on running Aplia's experiments, see the **Experiment Guide** in the Professor Resources section or the Help section.

If you have questions or want to sign up for an experiments training session, call **(888) 858-2820** or send an e-mail to **support@aplia.com**.