APPENDIX C

Game Materials for both Game Kit and Online Versions of Fish Banks

Steps of Play for both Game Kit and Online Versions of Fish Banks

Table of Contents

Game Kit

MIT Learning Edge Online Simulation

Creative Learning Exchange – 5th-12th Grade Summary

Fish Banks Resource Credits:


FishBanks, Ltd. game originally developed by Dennis Meadows, Emeritus Professor of Systems Management, University of New Hampshire.

Web version developed by Professor John Sterman (MIT Sloan School of Management), with help from Prof. Andrew King (Tuck School of Business), Dennis Meadows, Keith Eubanks, and Forio.com. Available from https://mitsloan.mit.edu/LearningEdge/simulations/fishbanks/Pages/fish-banks.aspx

Game Kit screen shots from System Dynamics Society.

Simulation screen shots from web version of FishBanks.
# Game Materials for both Game Kit and Online Versions of Fish Banks

## Materials

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<th>Materials</th>
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## Material Source


Register online at MIT LearningEdge [https://mitsloan.mit.edu/LearningEdge/simulations/fishbanks/Pages/fish-banks.aspx](https://mitsloan.mit.edu/LearningEdge/simulations/fishbanks/Pages/fish-banks.aspx)

## Game Materials

- **A computer is required for the instructor.**
- **Fish Banks Game Board** (Great Bay, New Hampshire)
- **85 Wooden Boats**
- **FishBanks Version 8.0 CD – Game Software and Electronic Files**
  - Introductory Video by Dennis Meadows (Mac or Windows format, ~10:00 min)
  - various data files
  - (2) PowerPoint slide sets – one for introducing the game (an alternative to the above video) and one for debriefing the game
  - 48 page e-manual for download. The e-manual contains extensive information on setting up, introducing, conducting, and debriefing the game plus detailed instructions for operating the computer program.

**Optional: Create your own Chesapeake Bay Game Board**

*Change the fishing locations from Deep Sea and Coastal areas to Coastal and, and use Delaware Bay as your Harbor. On the Decision Sheet, you will have to change the*

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Teacher Note: Once you are registered, you can access all of the Fish Banks Materials listed below, starting with the Student Instructional Video:

- **Computers** for each team of 2-4 students; **computer** for instructor
- **Student Instructional Video** *(36:10 min.)*
- **Fish Banks Simulation Teaching Video** *(1 hr. 13:25 min.)*

**Introductory presentation** – Slide Presentation format (19 slides) with audio by Dr. John Sterman, who developed the simulation for online play. The presentation includes information about the following:

- Team Roles
- Team Goals
- Financial Information, including income and costs
- Fishing Fleet
- Catch and Ship Effectiveness; effects of weather
- Fishing Areas
- Fish
- Regeneration
Game Materials

Deep Sea to Chesapeake Bay/ Tributaries; just be careful transcribing the numbers. Or you could create a new Decision Sheet that reflects the changes.

Introductory Presentation – Video format (13:22 min.) with audio by Dr. Dennis Meadows, who is the original Fish Banks, Ltd simulation developer. The presentation includes information about the following:
- Team Roles
- Team Goals
- Financial Information, including income and costs
- Fishing Fleet
- Catch and Ship Effectiveness; effects of weather
- Fishing Areas
- Fish
- Regeneration

Debriefing Presentation – video format; Dr. Dennis Meadows

Teacher Note: There will be specific Chesapeake Bay-related fisheries slides that you can incorporate into the debriefing to use for student discussion and evaluation. These are included in APPENDIX D.

NOTE: There are debriefing presentations for both versions of the game.

Fish Banks Simulation Guide – 5th-12th Grades (20) pages
- One computer for every 2-4 students
- Simulation online at http://bit.ly/FishBanks
- Handouts (Pages 8-15) Excel spreadsheet to create Users/Fishing Teams
- Introduction and Debrief slideshows
- Technical Guide (starting on page 17)

Debriefing Slides
42 slides – Within the Instructors’ Debriefing Guide, each slide is presented with key points to describe the slide.

Debriefing Presentation – video format; Dr. John Sterman

Teacher Note: There will be specific Chesapeake Bay-related fisheries slides that you can incorporate into the debriefing to use for student discussion and evaluation. These are included in APPENDIX D.
## Steps of Play for both Game Kit and Online Versions of Fish Banks

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<td><strong>Register online at, Online Resources – MIT LearningEdge</strong> <a href="https://mitsloan.mit.edu/LearningEdge/simulations/fishbanks/Pages/fish-banks.aspx">https://mitsloan.mit.edu/LearningEdge/simulations/fishbanks/Pages/fish-banks.aspx</a></td>
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### Introductory Briefing Presentation
- Record data from computer printout
- Collect ships and money
- Bid for auctioned ships
- Buy or sell ships in trading session
- Place orders for new ship construction
- Calculate and record fleet size
- Allocate ships among fishing areas and harbor, and record on the decision sheet
- Place ships on the game board
- Give decision sheet to the computer operator
- Develop your strategy for ending the game with the maximum possible assets. (This will be performed every (3) years or fishing rounds).

**Debriefing Presentation** – video format; Professor Emeritus. Dennis Meadows

### Debriefing Presentation
- Initial fishing company data is available online in the game simulation; students enter their decisions into the computer, rather than on a paper decision sheet
- Bid for auctioned ships
- Buy or sell ships in trading session
- Place orders for new ship construction
- Allocate ships among fishing areas and harbor

**Debriefing Presentation** – video format; Dr. John Sterman
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7. References
CC2015 – Fishbanks Simulation Guide, Grades 5th-12th

Complete Lesson at MIT Learning Edge
https://mitsloan.mit.edu/LearningEdge/simulations/fishbanks/Pages/fish-banks.aspx

(Also see the Creative Learning Exchange)
http://static.clexchange.org/ftp/newsletter/CLEx24.2.pdf

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