What Happened?

- Were you able to achieve both financial and conservation success in the single-player game?
- How was this challenging?
- What strategies did you use?
- What happened to the values of pelts over time? Why?
The Loops

- Look at the main loops in the system.
- Can you explain how they work and also how hunting affects Foxes and Rabbits?
A Tragedy of the Commons can happen when different people find themselves sharing and managing a common, limited resource.

The “Commons” is the shared resource (e.g., Foxes or Rabbits).
The "Tragedy" is having that resource deplete beyond repair (e.g., extinction of Foxes or Rabbits).

Common management can lead to sharing and sustainability, or cut-throat competition and total depletion of the resource.
Tragedy vs. Sustainability

Even if only one person is selfish, the animals may all die, meaning less success and money earned by everyone.
If your town found a balance between the needs of nature and human wants, you can all succeed, earning even more money collectively. The whole town can prosper.
Did your town experience the tragedy?

Graph 1: If people don’t hunt the animals at all, they won’t make money, but the animals will thrive.
Graph 2: If people over-hunt the Foxes, the Foxes will die off, and the system will fail.
Multiplayer Game – Did your town experience the tragedy?

Graph 3: If the town hunts sustainably, people can make money and also maintain a high level of animals for future generations.

However, if people limit their hunting, earnings can be higher and more stable.

Average player earnings by 1910: $10,000 each
**Multiplayer Game – Did your town experience the tragedy?**

Which graph is closest to what happened in your town? Why?

- **Graph 1**
  - This is how predator-prey might interact normally, without hunting.
  - Average player earnings by 1910: n/a

- **Graph 2**
  - If you race to hunt, you risk killing one or both species.
  - Average player earnings by 1910: <$1,000 each

- **Graph 3**
  - However, if people limit their hunting, earnings can be higher and more stable.
  - Average player earnings by 1910: $10,000 each
Multiplayer – Conflicting Goals

• Individuals who focus on their own goals only can drive people to deplete a common, limited resource. That can be in direct “conflict” with saving a resource for long-term, sustainable success for all.

• Many solutions exist in order to settle conflicting goals, so that a shared resource is managed for the good of all.

What might be some ways of doing this? Are some better or fairer than others?
How could people in your town improve everyone’s financial situation and, at the same time, sustain the resources (Foxes and Rabbits)?
Multiplayer – Communication?

Did you use the chat function? If not, did you find another way to communicate?

If yes, how did that affect the results for you individually, for your competitors, and for the town?
Real World Connections

How is the multiplayer game similar to other real-world systems? Give examples and possible ways to prevent a tragedy.
Real World Connections

How can we make sure solutions are fair for all, including the people and the resource?

How might communication among real-world “players” happen compared to how it worked in the game?
Real World Connections

- Is it even possible for people in the real world to successfully manage limited resources without regulation? How likely is this?
- What form should such an authority take?
- Does the free market (pricing of goods) provide this role? Or does it make things worse? Why?