

Task 1) What rules should individual predators and prey follow to give the observed oscillation result?

Task 2) Experiment with this model: why do we tend to see the disappearance of both populations or the disproportionate growth of sheep?



Task 3) Experiment with the same model as above in the second variation and note the main phenomena observed.



Task 4) What do we expect to happen in a system in which each agent can have opinion 0 or 1 and follows the following rule: "Each agent will take the same opinion as the majority of his neighbors. If his neighbors are equal, he will not change his opinion"?

Task 5) Experiment with simulation trying to explain why the behaviors you observe at the macroscopic level.





Task 6) What do we expect from a system in which there are only these two types of agents (greedy and cooperative) who behave as follows: "greedy people eat as much as they can, regardless of resource abundance; cooperative people eat only if resources are above a certain threshold (below that threshold, resources take longer to regenerate)"?

Task 7) Try some configurations as a group, changing one parameter at a time: what do you get? Reason about why you observe those results.

