# Modeling Marine Ecosystems With Virtual Reality: Predators and Prey Module Worksheet #1

## Lynx and Hare Populations Vary Together

Complete each of the following statements based on your observations of lynx and hare populations in a predator-prey model. Fill in each blank with "increases", "stays the same" or "decreases".

When the hare population is **large**, the lynx population _____ (increases, stays the same, decreases).
When the hare population is **small**, the lynx population _____ (increases, stays the same, decreases).

When the lynx population is **large**, the hare population _____ (increases, stays the same, decreases).
When the lynx population is **small**, the hare population _____ (increases, stays the same, decreases).

# Modeling Marine Ecosystems With Virtual Reality:
# Predators and Prey Module Worksheet #2

## Cod and Mackerel Biomass Trends

Fill in the blank cells in the "Biomass Trend" column of each of the two tables below. Describe the trend over time as "increasing", "decreasing" or "staying the same". The first table is for the model-based scenario called NEFSCassessment. The second table is for the observational data scenario called NEFSCsurveytrawlandMammalBird.

For each table, first fill in the trend for cod. Next, add your prediction for mackerel. Finally, look at the mackerel graph and add the actual trend for mackerel.

Data from Model: **NEFSCassessment**

| **Species** | **Biomass Trend** |
|---|---|
| Atlantic Cod | |
| Atlantic Mackerel (hypothesis) | |
| Atlantic Mackerel (observed) | |

Data from Observations: **NEFSCsurveytrawlandMammalBird**

| **Species** | **Biomass Trend** |
|---|---|
| Atlantic Cod | |
| Atlantic Mackerel (hypothesis) | |
| Atlantic Mackerel (observed) | |

Virtual "Dive" Location: These scenarios use different datasets, but both are in the Northeast region, in the sand flats habitat in the Gulf of Maine.
To switch to the NEFSCassessment or NEFSCsurveytrawlandMammalBird scenario from the Baseline senario (which loads by default), click the green SCN" (scenario) folder icon in the upper left in VES-V.