

Snowshoe Hare & Lynx Game

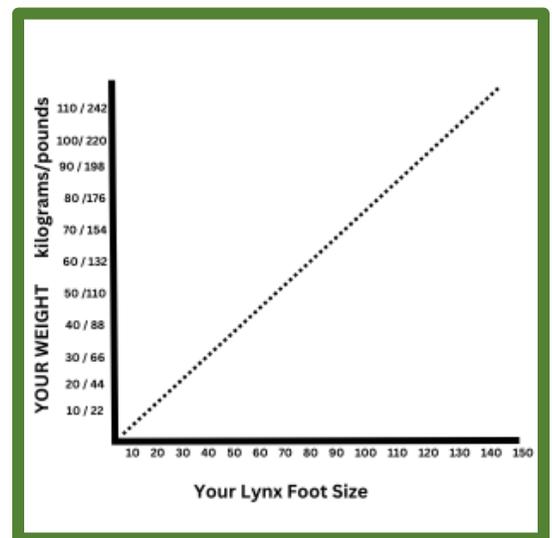
The predator-prey relationship of the Snowshoe Hare and Lynx comes alive in this active outdoor game. Students will gain an understanding of population dynamics in a playful, energizing way. Snowshoes recommended but not necessary.

Instructions

1. Take students outside to an open, snowy location.
2. If you have access to snowshoes, demo how to put them on.
3. In this game students will mimic two iconic animals, the Snowshoe Hare and the Lynx. Challenge students to identify one adaptation both animals have to survive winter - large feet! An average high school student weighing 60 kilograms would have the equivalent of a size 80 shoe size...if they were a Lynx! Animals with large feet in relationship to their body weight provides more surface area to weight allowing them to travel on top of the snow as opposed to sinking. This saves both animals energy and the opportunity to move quickly in deep snow.

Materials:

- Snowshoes (optional)



4. A playing field must be created by the tracks of your group prior to playing. Instruct students to follow you in a single file, as you walk creating a large circle in the snow. Continue to create a track that intersects the circle twice. If desired, you can create a further inner circle. In this game, students can only travel on the tracks you have created.
5. Identify two students who will be a predator, the Lynx. Students will recognize them as Lynx as they will run with their hands held up in the air.
6. The rest of the students are Snowshoe Hares, the Lynx's favourite food source.
7. In this version of tag, the Lynx will try to tag a Snowshoe Hare. If tagged, the Snowshoe hare is "consumed" and reborn as a Lynx and continues play attempting to tag further Hares.
8. Play the game a few times; stopping the game when only, a few Snowshoe Hares remain living.

Discussion

The relationship between Snowshoe Hare and Lynx is a well-documented predator-prey relationship. Show students a copy of the attached graph (Appendix A, p.3). Similar to the game, as Lynx numbers

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increase, Snowshoe Hare numbers eventually crash. In the wild, this boom and bust cycle continues repeatedly approximately every 10 years.

Why does the Lynx population closely follow the hare population? The relationship is complex and has many variables affecting both Lynx and Hare populations including disease, food supply and other predators. As herbivores, Hares consume vegetation and increase in numbers. As more Snowshoe Hares are born, Lynx population numbers also begin to rise in response to higher availability of food. As Snowshoe Hares consume vegetation, eventually the availability of abundant nutritious plants decreases resulting in them being more susceptible to malnutrition and disease. This coupled with other predators who opportunistically take advantage of higher Snowshoe Hare numbers results in Snowshoe Hare populations crashing, followed by a decline in Lynx population numbers. While both the Snowshoe Hares and Lynx are low and they have fewer offspring, the vegetation is able to rebound setting the stage for the cycle to continue.

