MN State Envirothon Wildlife Study Guide 2025

Understand the purpose of climate modeling and review the relationship between climate change and wildlife populations (resource availability). Specifically, understand the impact of climate change on wildlife (such as the impacts of increased fire risk, altered seasonal patterns, etc.). https://www.dnr.state.mn.us/climate/climate_change_info/impacts-climate-change.html, https://climate.state.mn.us/fish-and-wildlife-struggle-under-new-conditions, https://www.mprnews.org/story/2024/01/31/warm-winter-could-mean-ecological-ripple-effects-on-mn-forests-wildlife

Be familiar with the increased wildfire risk in boreal ecosystems and the multiple impacts of that risk. Briefly read through this study - https://www.pnas.org/doi/10.1073/pnas.2404391121

Understand the role of wildlife in indigenous cultures, review the concept of Traditional Ecological Knowledge (TEK) & be familiar with the role of storytelling in passing down knowledge as well as the concept of reciprocity. https://tek.forestry.oregonstate.edu/what-tek

Read about the Seventh Generation Principle and what it means for decision making.

Consider the role of natural disturbances, such as fire, in shaping ecosystems and how their suppression can impact biodiversity.

Know some of the species that rely on old growth forest in Minnesota, be able to identify some of the species that nest in cavity trees. Know some of the keystone species that create cavities.

Be familiar with the species that exist in Minnesota where Minnesota is on the southern edge of their range + the impacts that climate change can have on those species. Also, be familiar with some of the species that are projected to see an increase, or have already, what is the common theme of those species that are expected to increase or expand their range due to climate change? (Hint: are they habitat specialists? Or are they something else)?

Be familiar with the species in Minnesota that experience seasonal color changes as well as how climate change might affect this adaptation. https://cascprojects.org/#/project/5050cb0ee4b0be20bb30eac0/4f833b94e4b0e84f608680bc

Be familiar with the proposed elk reintroduction in Eastern MN & the cultural significance of that reintroduction. Read the proposal & (optional) feasibility study. https://www.fdlband.org/services/resource_management/wildlife/index.php#outer-796 particularly focus on Justification # 1,4, 5 for purposes of this test . Be able to identify elk antlers from white-tailed deer antlers.

Species to know: Gray wolf, short-tailed weasel, long tailed weasel, snowshoe hare, bobcat, lynx, pine marten, elk, white tailed deer

Bird calls to be familiar with - common loon & boreal chickadee https://www.fs.usda.gov/nrs/atlas/ use the climate change bird atlas to explore the projected habitat of common loon & other MN bird species. https://mn.audubon.org/sites/default/files/climate-endangered-mn_web_1.pdf Use Audubon's MN climate sensitive bird report to explore species as well. https://climate2014.audubon.org/birds/comloo/common-loon & https://climate2014.audubon.org/birds/borchi2/boreal-chickadee