Name: _____ Hour_____ Date: _____ Unit **6.6**

6.6 Unit Challenge Organizer - Student (L9)

Decision Matrix: Assign an Importance Value to the four criteria below. You have a total of 10 importance value points that can be split between the four criteria based on how important each criteria is to you. You may NOT assign equal importance values to all criteria, instead you must assign different values to each criteria. Use the Fact/Rating Sheet to give a rating to each of the ecosystems. Multiply the Importance Value by the Rating to determine the number that goes in the Score column. For a total ecosystem score, add the numbers in the Score column.

Criteria	Importance value	Wetland Ecosystem		Urban Forest Ecosystem		Pine Forest Ecosystem		Dune Ecosystem		River Ecosystem		Lake Ecosystem	
		Rating	Score	Rating	Score	Rating	Score	Rating	Score	Rating	Score	Rating	Score
1. Can the invasive be prevented from coming to Michigan?													
2.Can an invasive be removed from the ecosystem?													
3.Is the invasive likely to cause the disappearance of any native species?													
4.Does the invasive directly affect humans?													
Totals	**10**												

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Part I - Construct your argument for which ecosystem should be a priority for management

Based on your decision matrix, recommend one ecosystem for the state of Michigan's Invasive Species Management Plan. Use your decision matrix scores as evidence to support your argument.

A. **My Claim and Evidence:** The _____ ecosystem should be selected for an invasive species management plan by the state of Michigan because

_____

_____

_____

B. **Reasoning:** Your reasoning should explain *how* your evidence supports your claim. Explain why the evidence that you provided is a reason to select the ecosystem that you chose.

_____

_____

_____

Part II - Using the decision matrix

1. What two factors are used to determine the total score on which your recommendation was based?

_____

_____

2. Why is including both of these factors in a decision matrix an advantage, compared to only using one factor?

_____

_____

_____

_____

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6.6_UnitChallenge_Student_InvasiveRatingSheet

Criteria	**Lowest Rating** **0**	**1**	**2**	**Highest Rating** **3**
Invasion Risk: Can the invasive be prevented from coming to Michigan?	Already in Michigan - no ability to prevent it from invading	Not in the US or unlikely to invade Michigan - low risk of invasion	Not in US, but easily spread to Michigan - medium risk of invasion	Not in MI, but in US, and easily spread to Michigan - high risk of invasion
Management: Ability to remove the invasive from the ecosystem.	No known ways to remove from the ecosystem - currently impossible to remove the invasive	Removal methods exist but do not work or are impossibly expensive or difficult - possible to remove, but extremely unlikely	Removal methods exist but have not been tested in Michigan- removal method might not work	Removal methods exist and have been shown to work - we know how to deal with invasions successfully
Ecosystem Impacts: Is the invasive likely to cause the disappearance of any native species?	No	Only a few species are likely to disappear	Many species may disappear, but most native populations ok	The whole ecosystem changes and most native populations decline
Human Impacts: Does the invasive directly affect humans?	No	Some minor economic damage	Economic impacts in the millions of dollars	Economic impacts in the billions of dollars or affects human health

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