

Name: _____

Mississippi River Study



Crow Wing State Park

C. Concepts Layer 4 Points Each Maximum 60 Points

Objective: To identify landscape and land use features in the area surrounding the river at Crow Wing State Park.

___ *Use Google Earth to look up Crow Wing State Park, or view the print maps. Write a list of observations of what you have learned about the river site from the resources that you used. Share these with the class.

Objective: To consider the benefits and consequences of land use on a river site.

___ Actively participate in the "Sum of the Parts" simulation

Objective: To be able to identify and explain basic characteristics of rivers

*Listen and take notes or look up brief information on the following concepts and take notes. Be able to do an oral or written quiz on each concept and identify these river features. (4 points for each concept):

___ Low Grade/High Grade

___ Point Bar

___ Cut Bank

___ Delta

Objective: Be able to use technology to test and interpret water quality parameters and determine factors that influence those parameters.

*With your group, show that you can measure and/or conduct tests on the following water quality parameters. Be able to interpret the results (Ok? Not Ok? Why?) AND tell what factors influences each one (4 points each)

___ Nitrates

___ Phosphates

___ Dissolved Oxygen (DO)

___ pH

___ Carbon Dioxide (CO₂)

___ Temperature

___ Conductivity

___ Turbidity

___ Flow rate

___ Discharge

B. Investigations Layer 4 Points Each Maximum 32 Points

Objective: Compare and contrast two different sites on the Mississippi River by designing an investigation and interpreting the results.

*Design an investigation to test at least two parameters at the Mississippi River site. Record the following in your notebook and present your information to the class in a format of your choice.

___ Observations of overall river site, including a sketch with test sites marked

___ Question

___ Procedure

___ Data

___ Conclusion

___ 2 Further Questions

*Test the water quality at both of your river sites. Be able to discuss the quality and things that influence it (both good and bad)

___ Accurate water quality tests

___ Interpretation of test results

A. Critical Thinking Choose 1 Maximum 8 Points

Objective: To analyze a real-world topic related to the Mississippi River.

Select a question below and read one of the articles available in the classroom on that topic. Get together with others that read the same article (limit 4 in a group) and use the whiteboard to report out the main points of the article and your opinion on the topic question below.

***Choose 1:**

How are scientists using the locks and dams on the Mississippi to help Minnesota wildlife?

What's the connection between Minnesota and Louisiana's "Dead Zone"?

What is the connection between sediment and flood destruction? What's the solution?

How is the Mississippi important ecologically and for human activities? Why are there conflicts?

___ Whiteboard report out

___ Opinion, backed up with reasons