

Habitat Management

Name: _____ Hour _____ Date: _____

Date Packet is due: _____ Why late? _____ Score: _____
Day of Week Date If your project was late, describe why

Overview: in this unit, you will be applying what you have learned about biodiversity and extinctions to improve a local habitat near your school. You will work in teams to develop a presentation about your recommendations for what can be done by your class to most improve the biodiversity, ecosystem services, and carrying capacity of your local habitat. Note: you will need access to a computer or digital device for this project.

Main Questions

- What is currently limiting the biodiversity, ecosystem services, and carrying capacity of our local habitat?
- What actions could our class undertake to improve our local habitat's biodiversity, ecosystem services, and carrying capacity?

Weekly Schedule

Monday:

- Introduction of the activity.
- Group work time.

Tuesday:

- Group presentation prep time.
- Team presentations.
- Class discussion.

Wednesday:

- Presentations by local professionals.

Thursday:

- Habitat improvement work time.

Friday:

- Weekly Reflection.
- Career Connections OR additional work time.

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Semester Schedule

Week 1: Introduction & Lab Safety

Atoms to Ecosystems

Week 2: Matter & Energy

Week 3: Cell Biology

Week 4: Biodiversity, Ecosystem Services

Week 5: Biodiversity & Habitats

Week 6: Midterm Assessments

Causes of Extinction

Week 7: Extinction

Week 8: Habitat Loss

Week 9: Invasive Species

Week 10: Land & Water Pollution

Week 11: Atmospheric Pollution

Week 12: Overharvesting

Week 13: Midterm Assessments

Sustainable Societies

Week 14: Natural Resources Management

Week 15: Societies & Sustainability

Week 16: Individual Sustainability

Week 17: Personal Campaigns

Week 18: Personal Campaigns





Day 1: Presentation Development

Directions: In this project, you will work in teams of 3-4 and use materials from this course as well as credible and reliable¹ print and/or internet sources to develop a presentation for how to best improve the biodiversity, ecosystem services, and carrying capacity of a local habitat. You should develop your findings into a presentation (such as PowerPoint). Each team will provide an oral presentation on these topics on the second day. Because time is very limited, it is ok to copy and paste as long as you cite your source (for this assignment, it is ok to limit your citation to just author/agency and website; include the date of publishing if you can find it). Use your time wisely!

Your presentation should address *all* the following questions:

1. What are some threats that affect the quality of our local habitat? (e.g. fragmentation, invasives, etc.)
2. How do these threats affect the biodiversity, ecosystem services, and carrying capacity of this habitat?
3. What are some actions or changes that could be enacted by our class within a class period (or maybe two) that would result in the greatest improvements to its the biodiversity, ecosystem services, and carrying capacity?
4. If enacted, how would these changes improve our habitat.

Hints and tips before you begin:

- Your presentation should be reflective of what you have learned about biodiversity, ecosystem services, causes of extinction, and other topics that have been covered in this course. Your ability to explain these concepts accurately and in detail will be a primary consideration for your grade on this project.
- Time is very limited for this project – every group member will need to be involved and you will need to keep an eye on the clock. If a website doesn't seem useful after a few glances, move on to a new one.
- Your instructor is available to help you, but you need to ask for help if you need it.
- Your recommendations need to be both practical and useful. Focus on what actions will be most helpful for your habitat within the constraints at hand. For example, you can't get rid of all air pollution or stop the global extinction rate, but there are things you can do at the local level within a day that would help this particular habitat.
- The grading rubric for this project is provided on the next page. Frequently check this rubric.

Getting Started

1. Begin by making sure everyone on your team understands the objectives of this assignment. Ask for clarification if needed.
2. Next, brainstorm as a team. Using what you have already learned in this class, what are some things that could be done in a single class period by all of your classmates that would most improve this habitat?
3. Once you have a plan in mind, decide who will in your group be answering each question above.
4. Use the course materials, printed references in your classroom, and credible internet sources to prepare your presentation.
5. Make sure everyone is clear on their responsibilities prior to delivering the presentation.

¹ If you are unsure what is considered a credible and reliable source of information, you should speak with your instructor for clarification.





Grading: Your grade will be determined using the following considerations:

Item	Plus (100%)	Check (70-90%)	Redo (0%)
Accuracy	No errors were detected in this presentation	This presentation contained a few errors, but overall was very accurate.	This presentation contained considerable errors.
Thoroughness	No important information was omitted. All questions were thoroughly answered.	A few more details would have enhance this work OR a question was not thoroughly answered.	Major topics were omitted that should have been included.
Professionalism	This presentation could be effectively delivered to a group outside of the school.	This is acceptable work for high school students but room exists for improvement.	The professionalism of this group needs significant improvement.
Group Involvement	Every member was involved with the development of the presentation as well as its delivery.	At least one more group member could have been more involved than they were.	Multiple group members clearly could have been more involved.
Effort	Effort exceeds what would be expected of a high school student.	Effort is acceptable for a high school student but room exists for improvement.	Level of effort could have been much greater than what was presented.

Remember – your instructor will keep in mind that there is a limit to what you can accomplish in one class period (particularly if your group is smaller or if a group member was absent). Do the best you can within the constraints that exist.





Day 2: Presentation Delivery and Planning

Directions: After a brief amount of time for team preparation, each team will be delivering their presentation to the class. After presentations, a decision will need to be made about what to do later in the week in order to improve the quality of this local habitat. This decision could be made by the instructor, it could be a decision made by the whole class through discussion or voting, it could be a decision that is left to a school administrator or school board member, or it could be any combination of the above. Your instructor will ultimately decide on the best path for making a decision².

During the presentations, briefly record the recommendations that each team makes in the space below so that it will be easier to keep track of each set of ideas. You can also rank how feasible and effective you think these recommendations would be for improving the quality of this local habitat (1 = poor; 5 = exceptional).

Presentation 1

Recommendation(s): _____

Feasibility Score: 1 2 3 4 5 Effectiveness Score: 1 2 3 4 5 Overall Score: 1 2 3 4 5

Presentation 2

Recommendation(s): _____

Feasibility Score: 1 2 3 4 5 Effectiveness Score: 1 2 3 4 5 Overall Score: 1 2 3 4 5

Presentation 3

Recommendation(s): _____

Feasibility Score: 1 2 3 4 5 Effectiveness Score: 1 2 3 4 5 Overall Score: 1 2 3 4 5

Presentation 4

Recommendation(s): _____

Feasibility Score: 1 2 3 4 5 Effectiveness Score: 1 2 3 4 5 Overall Score: 1 2 3 4 5

Presentation 5

Recommendation(s): _____

Feasibility Score: 1 2 3 4 5 Effectiveness Score: 1 2 3 4 5 Overall Score: 1 2 3 4 5

Presentation 6

Recommendation(s): _____

Feasibility Score: 1 2 3 4 5 Effectiveness Score: 1 2 3 4 5 Overall Score: 1 2 3 4 5

Presentation 7

Recommendation(s): _____

Feasibility Score: 1 2 3 4 5 Effectiveness Score: 1 2 3 4 5 Overall Score: 1 2 3 4 5

If your class had fewer than 7 presentations, skip some of the blanks.

² It might be a good idea to include all relevant stakeholders in this process if possible. For example, school administrators, other teachers who use this area, and even the general public may be affected by the actions taken in this habitat.





Day 2: Self-Evaluations

Directions: Use this sheet to evaluate your work. Be honest about your individual and team performance. This will help to provide feedback to your instructor for determining your final grade for this project.

Team Member Names: _____

Circle the box with the description for each item that you feel most applies to your team’s performance on this project.

Item	Plus (100%)	Check (70-90%)	Redo (0%)
Accuracy	No errors were detected in this presentation	This presentation contained a few errors, but overall was very accurate.	This presentation contained considerable errors.
Thoroughness	No important information was omitted. All questions were thoroughly answered.	A few more details would have enhance this work OR a question was not thoroughly answered.	Major topics were omitted that should have been included.
Professionalism	This presentation could be effectively delivered to a group outside of the school.	This is acceptable work for high school students but room exists for improvement.	The professionalism of this group needs significant improvement.
Group Involvement	Every member was involved with the development of the presentation as well as its delivery.	At least one more group member could have been more involved than they were.	Multiple group members clearly could have been more involved.
Effort	Effort exceeds what would be expected of a high school student.	Effort is acceptable for a high school student but room exists for improvement.	Level of effort could have been much greater than what was presented.

Explanation or further justification (*optional*) – use this space to provide any additional information that might be helpful for determining your grade. E.g. if someone was absent or if some other obstacle affected your work, you might want to explain that here.





Directions: Use this page to evaluate the work of your team members as well as yourself. Keep in mind a 5/5 would be a 100% (exceptional effort and contribution), a 4/5 would be an 80% (acceptable effort and contribution), and a 3/5 would be a 60% (bare minimum effort and contribution).

You can place a circle between two numbers as a score; e.g. a circle between a 4 and a 5 would be a 4.5/5, or a 90%. Please also provide a brief justification for your score that summarizes why you gave them the score that you did. If you gave someone a score of 100%, you do not need to provide written justification.

1. Group Member's Name: _____ **Score:** 1 2 3 4 5

Reason: _____

2. Group Member's Name: _____ **Score:** 1 2 3 4 5

Reason: _____

3. Group Member's Name: _____ **Score:** 1 2 3 4 5

Reason: _____

4. Group Member's Name: _____ **Score:** 1 2 3 4 5

Reason: _____

5. Your Name: _____ **Score:** 1 2 3 4 5

Reason: _____

If your group had fewer than 5 members, skip one of the blanks.

Please remove this sheet and turn it into your instructor after you have delivered your presentation.

