

Student Discussion Worksheet

Directions: After reading the online *Science News* article "[A rope bridge restored a highway through the trees for endangered gibbons](#)," answer the first two sets of questions with your class.

Defining the problem

1. What problem were scientists trying to solve according to the article? What population was affected by this problem?
2. What are the potential short-term impacts of this problem for the affected population?
3. What are the potential long-term impacts of this problem for the affected population? What do you think is the long-term effect of habitat fragmentation around the world?

Analyzing the solution

Think about how scientists might have used the engineering design process to create a solution to the problem.

1. What three main steps do you think the scientists took to come up with a solution? Identify what important parts of the solution were likely determined at each step.
2. Was the solution successful? Did any problems remain?
3. Propose a change to the design to make it more effective. What next steps would you take?

Exploring conservation efforts

In a group, find another example of an engineered solution that has tried to reunite animal populations divided by habitat fragmentation. Use the questions in the sections above to define the problem and analyze the solution. Then, with your example in mind, discuss the following questions. Use additional resources as necessary, and make sure to cite your sources. Be prepared to present your example to the class.

1. How does the solution discussed in the *Science News* article compare with your example? Explain how the two solutions are similar and how they are different.
2. What is wildlife conservation and why is it important?
3. Apart from restoring fragmented habitats, what are other common conservation strategies? How does policy play a role in these efforts?
4. What types of organisms do people often prioritize for conservation? How should we prioritize wildlife conservation efforts?

Applying your knowledge

As an extension, research an endangered species that is affected by habitat fragmentation and design an engineering solution to help remedy the issue. Use the steps you defined in “Analyzing the solution” to draw up a plan to create and test a prototype?