



Project Based and Problem Based Learning Examples from Defined STEM

Project Based Learning Example

Performance Task: Zoologist

Middle School

Goal

You have been hired by an international conservation group to provide scientific and ecological expertise to a marketing campaign targeting the citizens of the United States. This campaign is meant to highlight the impact humans have on endangered species.

Role

As a zoologist, you have an important understanding of animals and their habitat. This knowledge will be critical as you design a marketing campaign based upon the influence humans have on animals and where they live.

Audience

Your audience will be the leaders of this international conservation group, and they will be interested to see how you educate the public regarding the connections between humans and endangered animals.

Situation

Human population growth continues on the planet Earth. The planet has limited resources and the areas of the Earth that humans choose to populate are having natural resources continually used. As these resources are used up, humans continue to move further and further from their community borders to find new resources. As this happens, animals are losing habitat to humans. Additionally, humans are killing animals for a variety of reasons, many which do not involve providing food.

Your task is to choose one endangered species and create a marketing campaign based upon the interaction between humans and this animal. Public Service Announcements have the ability to positively impact situations.

Products

Flyer

Create a one-page summary of the situation that the animal currently faces. This abstract should include numerous facts to help educate the public. This abstract will be distributed at zoos and aquariums across the country. It will be important for people to understand how changes in habitat can impact a food web. Please use images and charts and graphs as necessary to help get your point across to the public.

Photostory

Create a visual product that shows the animal in its habitat and how the habitat has been influenced by human interaction. Demonstrate the various aspects of the habitat that are critical to the animal's survival and how these aspects



have been disrupted by human involvement in the habitat. Be sure to include pictures, diagrams, and captions to demonstrate how the animal's habitat has changed over the years due to human influences.

Podcast

Create a one to one-and-a-half minute podcast that addresses the situation with the endangered animal you have selected. This audio should engage the listener and help the listener understand the animal's situation and how human influence has caused the animal to become endangered.

Electronic Billboard

Create an electronic billboard that may change images up to three times per minute. This means that you can create three images that will rotate each minute. You must create an eye-catching image(s) and create a very brief narrative that can be read while someone is driving by the billboard. The imagery and message must catch the attention of the viewer and should provide an emotional connection. Be sure that your message explains the endangered animal's situation through images based upon facts you discovered in your research.

Editorial

Write an editorial based upon your research that should be between 250 and 300 words. This editorial should describe the connection between the American people and the situation that exists for the endangered animal. Please be sure to share what is happening and how people can help save this animal. The editorial should be written using informative and persuasive methods for writing.

Problem Based Learning Example

Performance Task: Zoologist

Middle School

Goal

You have been hired by an international conservation group to provide scientific and ecological expertise to a marketing campaign targeting the citizens of the United States. This campaign is meant to help people understand why these animals are endangered.

Role

As a zoologist, you have an important understanding of animals and their habitat. This knowledge will be critical as you design a marketing campaign based upon the influence humans have on animals and where they live.

Audience

Your audience will be the leaders of this international conservation group, and they will be interested to see how you educate the public and what you believe the problem is that has led to these animals becoming endangered.

Situation

Your task is to choose one endangered species and create a marketing campaign. You will first need to determine the problem that has created this situation and the potential solutions you have developed. Then you will use the marketing campaign to educate the public.