The Vermont Virtual Zoo

Grade Cluster - 3-5

NETS-S- 3 - Research and Information Fluency

Quick Look:

Everyone loves to visit a zoo to see the animals up close and personal and to learn all about them. BUT, what do you do if your state doesn't have a zoo to visit? These students create the first zoo in Vermont, a virtual zoo!

Scenario:

"Can we take a field trip to the zoo and see the kinds of animals that live in Vermont," asked the students in the class. We are starting a research project on Vermont animals as part of our Vermont studies unit and the students are really excited about visiting a Vermont zoo to see the kinds of animals that live in the Green Mountain State. Two students quickly search the Internet to locate a zoo in Vermont. Guess what! Vermont is one of three states that don't have a zoo. The students were concerned that kids around our state, country and world had no way to learn about Vermont animals. The students knew they couldn't solve the problem about building a real zoo, so they discussed the tasks that needed to be addressed to start a virtual zoo (researching virtual zoos, finding resources and experts to talk to, and planning how to organize our zoo). Thus, the beginning of Vermont's first Virtual Zoo was started. (3a, 3d)

Students, each using his/her *netbook*, take several Internet field trips to visit virtual zoos (see list below). Students use *email* to contact several of the virtual zoos to request an online conversation with zoo personnel about developing a virtual zoo. *Skype* is used for conversing with the zookeepers. They put together a *multimedia presentation* that highlights interesting areas of the different virtual zoos. They create a *web page* of links to virtual zoo sites and this is added to the class *web page*. (3b, 6b)

Students send an invitation, via *email,* to the VT Fish and Wildlife department (http://www.vtfishandwildlife.com), inviting an agency member to visit our classroom to talk about their program. (6a, 6b) They request a classroom set of the state's field identification guide called "Today's Wildlife", videos from the VT Fish & Game video library, a set of nature posters and other literature related to Vermont animals. The group creates a web page that links to animal sites and to the VT Fish and Game Wildlife site. The VT Fish and Game department agrees to mentor the class and provides help as needed by the students.

Using the "Vermont Critters Curriculum" site students develop a short *multimedia presentation* on the kinds of information that is found on this site. (6a, 6b) The students generate a list of information they would include about the animals. (physical characteristics, habitat, food, life cycle and photographs) They classify the animals by groups (birds, fish, mammals, reptiles and amphibians) and indicate if the animal is endangered or a threatened species. If the animal is an endangered or threatened species

they will include information on the population sizes and how these species are being protected. They include the location of the animal on the food chain.

Students meet in groups based on the animals of their interest and discuss how they are going to work together to complete the project. They chose four to six animals they are going to research and start searching the *Internet* for information. They use *graphic organizers* to help them organize the information, *Google Docs* to write collaboratively about their animals, and enter animal facts into a shared data base. Students share their written work with graduate students from the University of Vermont's Environment and Natural Resources program, who read and critique their work. (3 b, 3d) The final documents are read by VT Fish and Wildlife personnel for accuracy of information. Students save their files in shared folders.

After the research is completed the students use *PhotoStory* to create a one minute movie on each of their animals. If possible, they include a recording of the sounds the animal makes. (3b, 3d)

The final part of the project is to share the work. A web page is designed where all the information is located, and is linked to the class's main web page. The class *blog* is updated notifying the parents on the progress of the virtual zoo. The copyright free pictures the students have gathered are uploaded to the class *Picasa* album. Punch Bowl is used to send invitations to the VT Fish and Wildlife agency, UVM students, school administrators and parents inviting them to join the class for a virtual zoo opening celebration ceremony. (6a, 6b)

The class presents their project to the students in the school and explains to them how they can add animals to the zoo. They use the teacher's *Twitter* account to let others know about this project and invite students around the state to join them in contributing to their virtual zoo. (6b)

Resources:
List of United States Zoos
http://www.touristinformationdirectory.com/zoo/list_of_zoos.htm
Virtual Zoos list http://www.zooschool.ecsd.net/virtual%20zoos.htm
World Association of Zoos and Aquariums
http://www.waza.org/home/index.php?main=home
Lincoln Park Zoo- http://www.lpzoo.org/index.php
List of well known zoos http://www.ed.sc.edu/caw/toolboxzoo.html
Vermont Fish & Wildlife Department http://www.vtfishandwildlife.com
Vermont Critter and Curriculum http://www.vtfishandwildlife.com/vtcritters/index.cfm

Student Standards – The following NETS-S are noted in the Scenario:
      3. Research and Information Fluency- A, B, D
      6. Technology Operations and Concepts- A, B, D

Teacher Standards –Teachers who teach this unit address the following NETS-T:
    1. Facilitate and Inspire Student Learning and Creativity- A, B, C, D
    2. Design and Develop Digital-Age Learning Experiences and Assessments- A
    3. Model Digital-Age Work and Learning- A, C
    4. Promote and Model Digital Citizenship and Responsibility- A
    5. Engage in Professional Growth and Leadership- A

Content Grade Expectations

The scenario writer has identified the following content grade expectations that s/he felt might be assessed in this scenario. In most of these scenarios, there may well be opportunities to assess other or additional content grade expectations across a variety of disciplines. If you are interested in developing a unit or lessons based on the following scenario, and you don't see any grade expectations in your content area, we encourage you to capture the ideas presented in the scenario and make it your own by adding components that address the grade expectations you are most interested in assessing.

S3-4:38 Students demonstrate their understanding of Classification of Organisms by…
  • Describing and sorting plants and animals into groups based on structural similarities and differences.

Informational Writing: Reports, Grades 3, 4, 5
W4: 10 In reports, students demonstrate use of a range of elaboration strategies by…
  • Including facts and details relevant to focus/controlling idea
  • Including sufficient details or facts for appropriate depth of information: naming, describing, explaining, comparing, or use of visual images

H&SS 3-4:14 Civics, Government and Society - Students act as citizens by…
  • Demonstrating positive interaction with group.
  • Identifying problems, planning and implementing solutions in the classroom, school or community.