Writing Goes Wild

Using Technology to Bring Together Science and Writing

Rationale:

Project Noah was created to encourage people to reconnect with the natural world by describing and sharing their experiences with wildlife. The process of turning observations into a written description of a an organism and its habitat is a great opportunity to practice descriptive writing skills. Using plants and animals as the subject of their writing not only builds connections between literacy and science, it excites the students' imaginations and builds a deeper appreciation for nature.

Objectives:

To improve student observation skills.
To expand and enrich student vocabulary and encourage the use of a variety of adjectives.
To improve basic sentence-building skills.
To bridge the gap between writing and science.
To utilize technology as a motivating tool for writing.
To encourage an appreciation of nature.

Standards:

Common Core State Standards initiative - English Language Arts - Writing - Grade 4

W.4.2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.

Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.

Link ideas within categories of information using words and phrases (e.g., another, for example, also, because).

Use precise language and domain-specific vocabulary to inform about or explain the topic.

W.4.4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)

W.4.5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

W.4.6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

Research to Build and Present Knowledge

W.4.7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.

W.4.8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

W.4.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Materials:

paper
pencils
computers with access to www.projectnoah.org
digital cameras

Motivation/Preparation:

The instructor should create a Project Noah account at www.projectnoah.org and submit some photo observations to learn about the sharing process and other features. The instructor should then create student accounts on Project Noah through the educational portal at www.projectnoah.org/education. The instructor should also consider creating a local mission specifically for students to contribute to that could be be used in future class activities.

Introduction:

Review the definition and function of adjectives: words that describe a noun. Ask students why they are important. Use examples of thoughtfully selected adjectives that make a sentence clearer and more interesting. Explain that they will be using adjectives to describe animals and plants that are being used in research projects around the world, and that they will be sharing descriptive writing about their own experiences with nature as citizen scientists.

Procedure:

In the classroom:

The instructor should open the Project Noah website for display to the classroom. Start by explaining how the wildlife spottings posted on the site are shared with people around the world. Explain how the spottings can be added to missions that help scientists and others learn more about wildlife and how best to protect plants, animals and habitats.

The instructor should open a spotting from his/her own spotting collection or select one from the local area using the map tools. (Be sure to select a spotting ahead of time that provides a good example of the type of descriptive writing students will be asked to do.)

Show students the various parts of a spotting page on Project Noah, emphasizing the adjectives used in the description and habitat sections.

Have the students think of a wild animal or plant that they find particularly interesting. Have them open their Project Noah accounts and do a search for their organism by opening the organisms tab and entering the common name in the search bar. They should keep their organism and the image private from other students.

Once they select a photo that they like, students should click on the magnifying glass in the corner of the photo so that the window shows the image only. (This prevents students borrowing adjectives from the author of the spotting.)

Students should take a few moments to carefully observe the photo. Have them list the adjectives that they would use to describe the organism.

Have students open a new window for their writing program. Using their list of adjectives, students should describe the organism in the photo by writing at least three complete sentences. Have them imagine that their description will be read by someone who has never seen such an organism before, and their words should do a good job of painting a picture in the reader's mind without naming the organism. Have them expand the writing program window to full screen, covering the window that shows their photo.

Have students quietly and carefully switch seats (for example, have students move to their right-hand neighbor's seat) and read the description written by their classmate. Give them a few minutes to read and then ask them to picture the organism in their mind.

Have them minimize the window with the description to reveal the image below it. Were they picturing the correct organism?

Have students return to their seats and add a comment about their experience reading their classmate's description to the bottom of their own description page. Encourage an organized

discussion of the experience, focusing on the importance of using the right adjectives to create an accurate, detailed description.

Have the students email their description to the instructor.

In the field:

(This can also be assigned as homework by having students bring in or email a digital image taken in their neighborhood or on the school grounds for posting on Project Noah.)

Organize a mini-field trip. Identify an area near the school that has a selection of plants and other organisms that students could photograph. Ask students to dress appropriately for a walk outside. Review safety rules and field photography techniques.

Assign digital cameras (or mobile devices equipped with the Project Noah app) to each group of 2 to 4 students and have them bring notebooks or clipboards and pencils with them. Each groups should also be assigned an identifying number to include in photos.

Once at the field site, have each group work together to locate at least one organism per group member. Each student should make sure to take detailed notes describing the organism and the environment it was found in, using as many adjectives as possible. Be sure to include descriptive terms from all of the senses whenever possible.

Students should photograph their chosen organism(s) and include the group number, the date and the student's initials for reference purposes. After an organism is photographed, the next photo in the sequence should include the photo ID information.

When all students have collected at least on image and their work has been reviewed by the instructor, students should collect all equipment and make sure that the habitat is left as close to its natural state as possible (pick up trash, gently replace disturbed rocks and logs, etc.)

Back in the classroom:

Based on the organisms encountered and the classroom objectives, the instructor should select a mission or multiple missions that students can contribute their completed spottings to. The instructor may also choose to create a new mission for the project. For example, multiple classes could contribute to a biodiversity survey of the animals and plants found on the school campus by creating a local mission for that purpose.

Digital photos can be transferred directly to student computers upon return to the classroom. Depending on the equipment available and other classroom considerations, the instructor may wish to download all photos or groups of photos to a shared file that students can access through the network to select photos for posting.

Digital photos that were not posted in the field should be posted to Project Noah as individual spottings with the associated data recorded in the field. Students should take a moment to

examine their photos and brainstorm meaningful adjectives that they may not have thought of in the field. Using their field descriptions and any new adjectives drawn from the photo examination, they should write a thorough description of the organism and its habitat on paper, using at least three complete sentences to describe each.

Once their descriptions are approved by the instructor, students should post their spottings on Project Noah, adding their descriptions of the organism and habitat.

Unknown species can be examined further and identified using field guides or other means, or posted on the site as unidentified. Links to sites used to help identify the organism should be included in the spotting.

Students should make sure to assign each spotting to the appropriate mission.

Discussion Points:

What did you learn about wildlife during this writing exercise?

Why do you think it is important to use adjectives in your writing?

Why is effective descriptive writing important in scientific research?

Extensions:

Turn the students' photos and descriptions into a printable field guide that they can share with their parents and other classes.

Have the students write a story about one of the animals they encountered during the project.

Imagine that the area the students surveyed was scheduled to be paved for parking. Have the students describe the area as it is now and write a letter trying to convince others not to destroy it.