

## **The Teachers' Corner**



Jeff Danielian, NAGC Teacher Resource Specialist and editor,

Teaching for High Potential

### **Take A Hike: Part II**

#### **The Encyclopedia of Life**

Welcome back to the Teacher's Corner! I hope you had fun on some virtual hikes in our National Parks. Due to the positive feedback received for March's installment, Take A Hike, I have decided to continue the thoughts presented with a focus on one of the associated programs I mentioned, The Encyclopedia of Life (EOL). It has changed the way students can access information about and research conducted within the natural world.

The Encyclopedia of Life <http://eol.org/>, an online database of over one million species and counting, provides a platform for the scientist and citizen-scientist alike to collaborate on scientific information for every living thing on Earth. This "open-science" website aggregates information from over 180 scientific organizations and scientists and as a result, provides rich and detailed text descriptions, photos and video clips, sound files and links to research and associated research.

What sets EOL off on its own trajectory is the ability for students to search (either by common or scientific name), archive, collect, research, and add to the ongoing collaboration. Rather than guide you through the process as a set of instructions, I thought I would share a series of lessons I use with my students. I assure you that you will be able to navigate the specifics of the site for after only a few minutes of introduction, use is quite easy. Registration and usage is free.

The lessons involve:

- creating themed collections
- conducting basic research about species
- peer sharing and commenting in a social-network-like environment
- producing on-line field guides
- developing an original research hypothesis to complete a research project

The initial lesson begins with students conducting on-line and print research into native species of their home state. Once a list of common or scientific names has been generated, they are instructed on the basic features of EOL. Students then use the “collection tool” to generate a personal collection of native species (at least 10) in their chosen discipline area or areas (botany, entomology, zoology, herpetology, ornithology, etc.)

Lesson two involves utilizing the collection to complete a series of tasks. All student collections are connected to a class “Community” where the students are able to view each other’s collections. Students are then asked to comment on or annotate their collection and at least 3 other student’s collections. Annotations take the form of short reflections on “what they have uncovered.” Teachers can even add their own notes to individual collections or communities.

Lesson three offers the opportunity for each student to create a personalized online and pdf field guide which can be saved or printed.

At this point, and in most curricular settings, the students have done a substantial amount of work and have learned a lot. If time permits, or if used during an after-school activity or summer program, educators can take it a step further.

Lesson four has the students using their field guides to conduct outdoor or indoor/displayed field observations, which can be made in a field book or on a digital tablet. They are asked to document at least 3 common species by providing a sketch and written observations for each. Most importantly, they are asked to list any questions that occur to them during their field work.

Students then return to “class” and enter their field data into iNaturalist, [www.inaturalist.org](http://www.inaturalist.org), an online observation recording site, and online partner with EOL, which magically feeds the information entered into the site to the student’s connected EOL site and field guide. It is really amazing to see! The field guide editor and photo submission site, via flicker [www.flicker.com](http://www.flicker.com), pave the way for individuality and creative productivity. Don’t worry, everything that is verified, is marked as “trusted.” This adds a whole new layer to the overall lesson, relating to internet validity.

The finale of the series of lessons culminates in a research and essay project, The Young Naturalist Awards program, supported by the American Museum of Natural History. (<http://www.amnh.org/nationalcenter/youngnaturalistawards/>) This annual competition covers the same investigative and testing methods as the traditional science fair, but with an environmental and Natural History perspective. Their website is chock full of information about the contest and supporting materials geared to bring natural investigation into your classroom. It is worth a once over.

So, after you have rested from your adventures out on the trails, take a hike out on the web, collect some things along the way, and learn something new! If you want to read more about EOL, check out the recent CNN Schools of Thought article, Website Aims to Describe Every Living Creature.

<http://schoolsofthought.blogs.cnn.com/2012/01/10/website-aims-to-describe-every-living-creature/>