Paper Presentation Example:

An increase in the *Aplectrum hyemale* population in Hougham Woods Biological Field Station in Johnson County, Indiana

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Puttyroot, *Aplectrum hyemale*, is a perennial orchid that produces a basal leaf in the fall, overwinters, and flowers in spring as the leaf dies. It is found throughout the Midwest in relatively, undisturbed mesic woods,including Hougham Woods Biological Field Station in Johnson County, Indiana. The plant population biology of these orchids has been studied for three years. The population remained stable for two years but increased in size in 2014, from 305 in 2012 to 363 in 2014. Additionally, only one plant flowered in 2012 and none flowered in 2013, but in 2014, 42 plants bloomed with an average of 13.3 flowers/plant. It has been determined that plants that produced flowering stalks or flowered had larger leaves than vegetative plants. For unknown reasons, some plants that produce flowering stalks fail to flower. In 2012, only one plant produced capsules, 13, but in 2014, 12 orchids fruited with an average of 7.6 capsules/plant. Weather data is being analyzed to determine the impact of precipitation and temperature on sexual reproduction. The presence of a large population of puttyroot, with a coefficient of conservatism of 7, that undergoes sexual reproduction is one indication that Hougham Woods is a relatively high quality mesic forest.

Hot Topics Example:

The Neutron Star Merger GW170817

Patrick M Motl, Indiana University Kokomo

On August 17, 2017 gravitational waves were observed through the combination of the LIGO and VIRGO gravitational wave observatories for only the second time. Previous gravitational wave signals were seen only by LIGO. Shortly afterwards, a brief pulse of gamma rays – a gamma ray burst - was seen by the Fermi and INTEGRAL observatories. These coincident detections were quickly analyzed, and their importance became manifest. Unlike previous gravitational wave transients, this was a merger involving neutron stars not just black holes; with matter to radiate electromagnetic signals a hunt began by astronomers from around the world to locate the source on the sky. Within hours, a transient source was found in the relatively nearby galaxy NGC 4993 and astronomical observatories from around the world and several facilities in orbit focused in on the post-merger remnant. GW170817 has helped to answer many questions including firmly connecting neutron star mergers with gamma ray bursts, the origin of kilonovae from these mergers and the role of such mergers in the rapid neutron capture process (r process) that fills in the periodic table of elements. As is often the case in science, this discovery has raised at least as many questions as it has answered, and I will conclude by highlighting some of these outstanding questions.

Workshop Example:

Becoming a Professional Scientist: How to Get Started!

Jessi Ghezzi, Ball State University

In this workshop, students will learn how to introduce themselves as a candidate within a one-minute time frame, what exactly constitutes professional dress in various environments, interview styles and common questions, small steps they can take at conferences to get noticed, small steps they can take at the start of a new position to get noticed in the right way, one-on-one resume and cover letter help and the importance of professional mentorship, as well as networking tips for introverts. By the end of this workshop, students will have an arsenal of tools to work towards becoming a successful, professional scientist. It is never too soon to start moving up the ladder, let us help you jump-start your career while you are still in college! Students will get advice and one-on-one tips/edits on the different resume/CV styles for the wide-array of job opportunities from each sector (academia, industry and consulting).What to bring with you to the workshop: A notepad and current resume and/or cover letter for a position in which you would like to apply!