APPENDIX E. TEACHERS MANUAL

From: DEVELOPMENT AND IMPLEMENTATION OF THE WOLF WORKBOOK AS A SCIENCE EDUCATION TOOL FOR STUDENTS AND TEACHERS

A Professional Paper
by
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Submitted to the Department of Wildlife and Fisheries of Texas A&M University in partial fulfillment of the requirements for the degree of

MASTER OF WILDLIFE SCIENCE

August, 2009
In learning to navigate through the wolf workbook, follow figures 1 through 5 below which shows a sample of the pages for reference. The front sheet is the map of the workbook and is arranged around the central scientific process. You can move between sheets by clicking on a tab at the bottom of the document and each individual spreadsheet can be printed for hard copy use. The process follows four steps including observations, asking questions, measurements, and answering questions. Each step is assigned a color and depending on learning goals you can either work within one color at a time or one number at a time. For example if you want to work specifically on observations then you can do all of the green worksheets. The inquiry worksheets (asking questions) are all blue and focus on asking questions about structure and function from a scientific perspective as well as differentiating between folk psychology and science. Measurement pages are in yellow and these pages find the answers to questions about structure and function. These answers found are then applied on the orange pages of the answering questions section. On the other hand if you want to experience the entire inquiry cycle you can do O1 (Observation worksheet #1), Q1 (Question worksheet #1), M1 (Measurement worksheet #1), and A1 (Answer worksheet #1).

There are three numbered cycles within this workbook which are graded from simple to a more complex level. The first cycle (worksheets O1, Q1, M1, A1) focuses on dog packs and will be most relevant to elementary students or as an introduction. The second cycle (worksheets O2, Q2, M2, A2) focuses on captive wolf packs and is geared toward middle school students or as an intermediate level experience. Lastly, the third cycle (worksheets O3, Q3, M3, A3) is wolf families, or wild wolf packs. This cycle will be most appropriate for high school students or as a more advanced study of wolves and the scientific process.

Once on a study page there is a space for your name, the date and duration at the top. The duration time is a useful tool for teachers to not only check on the progress of their students but also to use as a planning guide to allow proper time for competition. Next you will see a series of steps to guide the students through each page. Having each step defined really builds the confidence of the students at every level. Since this is a method of teaching the scientific process, the students can be overwhelmed until they learn to navigate their way around. The steps include various activities such as watching video clips, group discussion of experiences, connecting to outside links for additional reading and developing hypothesis among others. Page A1 guides the
writing process with directions for how to express observations, inferences and questions along with definitions and examples of each. Each subsequent page is also just as user-friendly with examples in each text box. A history of wolf conservation and an introduction to wolf behavior is included as Appendix B as a resource for teachers. This section can be used to further educate those using the workbook in the behaviors that they will see in the video clips and assist them in leading relevant discussions in the classroom.

Figure 1 – Workbook Map