Evaluation Rubric for Written Summaries of Journal Articles

Criteria	Outstanding	Very Good	Good	Satisfactory	Unacceptable
Appropriate details	Judicious choice of details maximizes interest and understanding	All relevant details presented, but details not critical to understanding omitted	Enough critical details presented for understanding, unneccesary details generally omitted	Most important details included but may include too much or too little detail for easy understanding	Some critical details missing, unnecessary details may be present
Statement of context, relevance in field of animal behavior	Place of study in field clearly described, illuminating links to other studies or topics made	Place of study in field clearly described, some reference to relationship to other studies or topics	General relevance of study in field described	Attempt made to place in context, possibly not quite appropriately	No attempt made to describe context of study
Writer's evaluation of the study	Clearly articulated, well supported statements of value and/or shortcomings of study	Evaluation includes positive value of study as well as clearly supported explanation of shortcomings	Good attempt at evaluation with some support for conclusions; possibly more negative than positive comments	Some attempt at evaluation, comments valid but not necessarily well supported	No attempt to evaluate study or evaluative statements unsupported or inappropriate
Overall organization	Overall purpose, methods, results and conclusions of study clearly stated; seemingly effortless and seamless logical flow	Overall purpose, methods, results and conclusions of study clearly stated; logical flow always easy to follow	Purpose, methods, results and conclusions clearly stated; most of presentation flows logically	Purpose, methods, results and conclusions stated; possibly some awkwardness in logical flow	Major sections missing or lack of logical flow
Clarity of explanations	Sophisticated use of language maximizes interest , enjoyment and comprehension; explanations very clear, factually correct	All explanations clear and easy to understand, factually correct	Most explanations clear and easy to understand, mostly factually correct	Overall meaning is understandable; possibly some areas of slight confusion or minor factual errors	Serious difficulty explaining ideas, major factual errors; lack of comprehensibility
Use of terminology	Correct use of all terminology, attention to nuances of meaning, judicious use of clearly defined jargon	All technical terms used correctly and defined clearly, including terms with different common meanings; overuse of jargon avoided	Few errors in use of terminology; definitions provided for technical terms, overuse of jargon avoided	Most terms used correctly, possibly some incorrect usage or use of unnecessary or undefined jargon	Jargon terms used incorrectly, without definition; attempting to sound "scientific" without understanding meaning of terms
Writing style	Sophisticated, elegant style, complex yet lucid sentence structure, flawless grammar	Error-free, easy to read writing style, well practiced and polished use of language	Good basic writing style, easy to read, few errors, almost entirely in author's own words, little paraphrasing or unnecessary quotation	Mostly basic, correct writing style, relatively few errors and little awkwardness, minimal use of unnecessary quotation or paraphrasing	Serious errors and awkwardness, excessive use of quotation in place of author's own words, excessive paraphrasing

Evaluation Rubric for Laboratory Rotation Reports

Criteria	Outstanding	Very Good	Good	Satisfactory	Unacceptable
Categorization of behaviors	Fine attention to details of behavior, very clearly described allowing objective identification, organized in categories allowing a number of questions to be addressed through quantitative study	Clear descriptions of several behaviors allow objective identification, organized in meaningful categories, useful in generating research questions	Descriptions of several behaviors mostly clear and objective	Attempt to describe several identifiable behaviors, possibly not always completely clear and objective	Distinguishable behaviors not identified, descriptions not clear or do not allow objective identification
Use appropriate methods of quantification	Demonstration of ability to collect research quality replicated, quantitative observations as described in Measuring Behavior or other rigorous methods developed independently	Very well designed series of replicated quantitative observations of behaviors in several individuals; appropriate application of two or more quantitative methods described in *Measuring Behavior*	Quantitative observations involving good use of replication and observation of several individuals; application of one or more methods described in *Measuring Behavior*	Attempt to gather replicated, quantitative data from several individuals as outlined in *Measuring Behavior*; possible difficulty in applying methods	Lack of adequate replication, quantification, methods described in *Measuring Behavior* not used
Questions generated	Excellent sense of worthwhile research questions demonstrated, especially interesteing and insightful questions	Questions generated based on patterns noted in behavior observations, could lead to excellent research project	Observations lead to several valid questions which could be answered with further study	Questions generated relate to study system but may be difficult to address or lack close relationship to behavior patterns observed	No valid questions generated, questions cannot be addressed with study system
Further study suggested	Further study suggested would make an excellent research project or senior thesis	Well-conceived ideas for how further work could feasibly address questions	Concrete suggestions for how further work with study system could address questions	Some attempt to describe how further study could address questions, possibly impractical	No indication of how further study might address questions
Clarity and organization of report	Writing is smooth, correct, sophisticated; report has excellent logical flow and very clear descriptions and explanations	Writing is smooth with very few errors, organization is clear and logical, descriptions and explanations easily followed	Good writing style, mostly correct with little awkwardness, organization is generally evident and little difficulty in following descriptions and explanations	Mostly correct prose possibly with minor awkwardness, some attempt at logical organization, explanations and descriptions can be followed, possibly with some difficulty	Excessive awkwardness or ungrammatical writing, lack of any organization, major difficulty following explanations and descriptions

Evaluation Rubric for Research Project

Criteria	Outstanding	Very Good	Good	Satisfactory	Unacceptable
Preliminary observations and pilot studies	Especially insightful choice of observational methods, pilot trials verify feasibility and may test preliminary hypotheses (eg sources of bias)	Development of appropriate, objective and efficient methods for collection of behavioral data, pilot trials used to test methods and determine feasibility	Behaviors categorized and described, development of observation and data collection methods--tested in pilot trials	Some attempt at preliminary observation and data collection, possibly not very thorough or not very systematic	Preliminary observations inadequate to design a study, no attempt to test methods in pilot study
Development of questions, hypotheses, predictions	Questions addressed may provide significant new understanding; testing of multiple predictions has potential to provide especially conclusive results	Questions addressed provide interesting insights into study system; more than obvious empirical generalizations; several linked questions addressed or predictions from multiple hypotheses tested	Preliminary observations lead to valid research questions; one or more hypotheses with testable predictions proposed	Questions or hypotheses proposed, possibly somewhat unfocussed or data collected do not adequately address question or hypothesis	Failure to focus on a specific question or hypothesis or ideas are impractical
Design of study; potential interpretability of results	Design shows ingenuity and insight into system; biases effectively dealt with; regardless of outcome, results will provide interesting information	Design of experiment provides maximum information given practical limitations; biases efficiently controlled or eliminated; results likely to provide answers to questions	Quantitative data obtained, adequate replication, appropriate controls and sensitivity to sources of bias; data will allow statistical analysis	Quantitative data obtained, replication possibly minimal, some attempt at controls, data possibly difficult to analyze properly	Data are not quantitative, replication or controls inadequate, statistical analysis not possible
Conduct of research	High levels of persistence, effort, independence and dedication yield rewards in terms of quality of project; unusual degree of resourcefulness in dealing with problems; attention to details and documentation in notebook are excellent	Well planned--efficiency and good effort produce quality project; very good judgment in solving problems; thorough documentation in notebook	Efficient use of time and adequate effort, adjustments to research plan made as needed, positive attitude towards overcoming problems; key information documented in notebook	Effort adequate to carry out project but possibly inefficient use of time, attempt to address problems, but possibly unsuccessful due to inadequate effort, some attempt at record keeping but possibly minimal	Poor use of time, failure to address problems as they arise or to respond to suggestions, inadequate record keeping
Analysis and presentation of results	Publication quality data presentation with good attention to detail; appropriate statistical analysis, possibly carried out independently	Well thought out and clearly presented data summary as tables and graphs; all conclusions supported by statistical tests	Results summarized and presented using graphs and tables; appropriate statistical tests support conclusions	Results presented but possibly with inappropriate choice of tables and graphs, some attempt at statistics but some conclusions unsupported	Data not summarized quantitatively, failure to support conclusions with statistics

Evaluation Rubric for Research Project (continued)

Teamwork (if applicable)	Truly synergistic work leading to quality results; each person's talents used to good advantage	Teamwork and frequent discussion improve quality of work	Efficient division of labor, generally good cooperation	Team members divide work but possibly do not communicate adequately	Team unable to carry out work. Should have tried to solve problem or split up earlier.
Symposium Presentation	Extra attention to visual appeal, exceptionally clear, concise and easy to follow presentation of information	Context, methods, results, conclusions very clearly presented, little effort for audience to understand	Context, methods, results, conclusions generally clearly presented	Some points of the project presented but parts possibly unclear, missing key parts or too wordy	Presentation does not convey sufficient sense of the project due to omission or lack of clarity

Evaluation Rubric for Review Paper

Criteria	Outstanding	Very Good	Good	Satisfactory	Unacceptable
Scope and choice of question	Paper achieves an original synthesis addressing a novel idea.	Question chosen is interesting; narrow enough for in depth discussion.	Paper focuses on a well defined topic with reasonable choice of scope	Topic is evident but possibly not well defined; may be too narrow or broad to achieve goals	Topic not defined, no question addressed
Literature search	Judicious choices of sources allows ideas to be integrated in an original way; may go beyond an obvious collection of materials on similar topic	Sources chosen create a coherent story with clear connections.	Sources center on topic, creating a reasonably complete and picture; no extraneous material.	Sources are interrelated but may not be sufficient to clearly or fully address a question; some attempt to connect sources, but integration may be weak.	Sources chosen do not allow paper to focus on a specific idea or problem.
Biological content: Use of biological concepts to address question	Question addressed using concepts with excellent understanding and sense of relative importance of arguments	Question addressed with correct and complete use of concepts	Question addressed with generally correct and complete use of concepts	Question addressed but concepts applied with errors or incompletely	Did not address question directly
Appropriate details	Judicious choice of details maximizes interest and understanding	All relevant details presented, but details not critical to understanding omitted	Enough critical details presented for understanding, unneccesary details generally omitted	Most important details included but may include too much or too little detail for easy understanding	Some critical details missing, unnecessary details may be present
Statement of problem or question with background	Problem or question is stated engagingly with illuminating use of background material	Clear statement of problem or question set in appropriate context with background information	Problem or question explained with most relevant background information	Problem or question stated as in handouts, some, possibly incomplete, background material provided	Failure to clearly state the problem or question, lack of background beyond focus question from handout
Overall organization	Develops persuasive arguments and explanations; effortless and seamless logical flow. Excellent and original synthesis of sources.	Well chosen arguments and explanations; logical flow and connections always easy to follow. Sources used to prove points not just summaries.	Relevant arguments and explanations presented; builds case with mostly logically connected arguments, material from sources mostly integrated	Some arguments and explanations presented, possibly incomplete, or awkwardness in logical flow. Sources somewhat but not fully integrated.	Major sections missing or lack of logical flow; sources summarized but not connected.

Evaluation Rubric for Review Paper (continued)

Clarity of explanations	Sophisticated use of language maximizes interest , enjoyment and comprehension; explanations very clear, factually correct	All explanations clear and easy to understand, factually correct	Most explanations clear and easy to understand, mostly factually correct	Overall meaning is understandable; possibly some areas of slight confusion or minor factual errors	Serious difficulty explaining ideas, major factual errors; lack of comprehensibility
Use of terminology	Correct use of all terminology, attention to nuances of meaning, judicious use of clearly defined jargon	All technical terms used correctly and defined clearly, including terms with different common meanings; overuse of jargon avoided	Few errors in use of terminology; definitions provided for technical terms, overuse of jargon avoided	Most terms used correctly, possibly some incorrect usage or use of unnecessary or undefined jargon	Jargon terms used incorrectly, without definition; attempting to sound "scientific" without understanding meaning of terms
Writing style	Sophisticated, elegant style, complex yet lucid sentence structure, flawless grammar	Error-free, easy to read writing style, well practiced and polished use of language	Good basic writing style, easy to read, few errors, almost entirely in author's own words, little paraphrasing or unnecessary quotation	Mostly basic, correct writing style, relatively few errors and little awkwardness, minimal use of unnecessary quotation or paraphrasing	Serious errors and awkwardness, excessive use of quotation in place of author's own words, excessive paraphrasing

Evaluation Rubric for Presentations of Journal Articles

Criteria	Outstanding	Very Good	Good	Satisfactory	Unacceptable
Appropriate details	Judicious choice of details maximizes interest and understanding	All relevant details presented, but details not critical to understanding omitted	Enough critical details presented for understanding, unneccesary details generally omitted	Most important details included but may include too much or too little detail for easy understanding	Some critical details missing, unnecessary details may be present
Statement of context, relevance in field of animal behavior	Place of study in field clearly described, illuminating links to other studies or topics made	Place of study in field clearly described, some reference to relationship to other studies or topics	General relevance of study in field described	Attempt made to place in context, possibly not quite appropriately	No attempt made to describe context of study
Presenter's evaluation of the study	Clearly articulated, well supported statements of value and/or shortcomings of study	Evaluation includes positive value of study as well as clearly supported explanation of shortcomings	Good attempt with some support for conclusions; possibly more negative than positive comments	Some attempt at evaluation, comments valid but not necessarily well supported	No attempt to evaluate study or evaluative statements unsupported or inappropriate
Overall organization	Overall purpose, methods, results and conclusions of study clearly stated; seemingly effortless and seamless logical flow	Overall purpose, methods, results and conclusions of study clearly stated; logical flow always easy to follow	Purpose, methods, results and conclusions clearly stated; most of presentation flows logically	Purpose, methods, results and conclusions stated; possibly some awkwardness in logical flow	Major sections missing or lack of logical flow to presentation
Clarity of explanations	Sophisticated use of language maximizes interest and comprehension; explanations very clear, factually correct	All explanations clear and easy to understand, factually correct	Most explanations clear and easy to understand, mostly factually correct	Overall meaning is understandable; possibly some areas of confusion or minor factual errors	Serious difficulty explaining ideas, major factual errors; lack of comprehension by audience
Use of terminology	Correct use of all terminology, attention to nuances of meaning, judicious use of clearly defined jargon	All terms used, pronounced correctly defined clearly, including terms with different common meanings; jargon avoided	Few errors in use and pronunciation of terminology; definitions provided for technical terms, jargon avoided	Most terms used and pronounced correctly, possibly some incorrect usage or use of unnecessary or undefined jargon	Jargon terms used incorrectly, without definition; attempting to sound "scientific" without understanding terms
Style and delivery	Smooth spontaneous speaking style, interesting to listen to, involved with audience, animated expressions and gestures	Smooth, appropriately paced speaking style, eye contact with audience, few umms or ahhs, generally at ease	Speaks with relatively little reliance on notes, easily understood, appropriately paced, some nervousness, umms, ahhs is ok	Speaks with some reliance on notes, gets the basic ideas across but with some difficulty or lack of ease	Extensive reading from notes, prepared text or original article, major difficulty in communicating
Imaginativeness (an optional bonus)	Extra efforts to engage audience participation				
Use of visual aids (overheads: made by presenters or copied from article)	Entire presentation is illustrated by helpful, easily understood outlines, tables, diagrams; original graphs and tables from article fully and clearly explained	Visuals are readable, not too wordy, provide an outline of key points and enhance understanding; good choice and explanation of graphs and tables from article	Good use of visuals, including an outline of key points and one or more graphs or tables from the article, adequately explained	Some use of visual materials, at least including a table or graph from the article; more thorough explanations of quantitative material possibly needed	Visual materials lacking