Writing a good report

A good report of your project is written as a short scientific paper. It should therefore have a title, abstract, introduction, material & methods (or model) section, results, discussion, and a list of references. There are courses and booklets on how to write a good paper (e.g., see the links on the course website), and we trust you all know the basic things like, number your pages, label your axis, use a spelling checker, etcetera. Here we provide a short list of suggestions to turn your report into an exciting story.

- Most importantly, a good paper reads like a good story. Do not paste a large number of figures and tables together with a minimum number of connecting sentences in between, but tell a story from which you refer to a limited number of figures and tables. The reader should be able to enjoy the story without looking too much at the figures. In the text you may write sentences describing some interesting result, and just end that sentence with (see Fig. 3a).
- Figures and tables should have legends that are self-explanatory. Without reading the text one should be able to understand what the figure is about, and what its main message is. Combine related results as panels into one figure. After some general explanation about the figure, describe each panel in the figure legend, e.g., Panel (b) depicts the fit of the model to the data.
- Do not write a sequential story of all the things you did. Make a selection of the results that are interesting for your story, and make a plan for the most natural order to present these results. Your story should revolve around its main take-home message.
- Scientific writing means that your sentences should basically be true statements. If you are not sure about the general validity of a statement you should rewrite it into something less general, or prove your point with a reference to the literature. Things you don't know, you may pose as a question, or write ``it is tempting to speculate".
- Divide up your pages in subsections and paragraphs. Subsections should have a subtitle such that the reader knows what to expect. Each paragraph typically has a single take-home message. Check whether all the sentences in a paragraph are truly contributing to that take-home message. If not, those sentences probably belong to another paragraph. Split your paragraph when it contains too many take-home messages. End your important paragraphs with a summarizing sentence telling the reader what you have just told him/her.
- Check your report for repeats. Do you have to describe the same things several times because you have a suboptimal order in which the results are described?
- Be concise; do not elaborate on what is not important. Dare to make choices on what is important.
- Plan on what you should write where. The introduction should make the reader interested and bring him/her up to the right level. The results section has paragraphs like: In order to test whether such and such, we did this and this. We found the following (see Fig 5), which means that... Therefore, we next tested whether ... The discussion gives more interpretation, relates your results to the results in the literature, gives possible caveats, and follow up work.
- Write in an active tense and let the most important subject of the sentence also be its subject. Don't write ``Fig 3 shows that predators oscillate due to", but write ``Predators oscillate due to ... (Fig. 3).", because it is the predators that are important, and not Fig. 3.
- In the text, references should be made by name and year, e.g., (Pugsley, 1996; Matsunaga *et al.,*1997). Unpublished or submitted studies should be referred to as such (e.g. J.M. Smith,

unpublished), or as a personal communication. Choose a particular style to make your list of references, and try to make the list automatically with some standard program (RefWorks, Zotero, EndNote, Mendeley). Choose the style of a particular journal, e.g., PNAS, and use that consistently.

This Rubric gives an idea on how we evaluate reports:

	GOOD	**SUFFICIENT**	**WEAK**
1. General	Report contains all the sections and was delivered in time.		Report does not contain all the sections and/or was not delivered in time.
2. Introduction	There is a clear introduction with citations to relevant papers. It concentrates on the research question, which itself is clearly stated. The introduction invites one to read on.	There is a clear introduction, that is centered around the research question, which itself is clearly stated.	The introduction is too short, and/or difficult to understand, and/or does not corrrespond to the research question.
3. Materials and Methods	The section is written in the correct style, is crisp but still contains all the information required to repeat the research.	The section is written in a correct style and contains the most important information.	The section is written in an incorrect style, and/or is missing important information.
4. Results	The results are presented as a very readable story. Everything is clear and provided. Conclusions are well supported. The story is structured around the major take home message.	The section forms a story that is easy to read for an outsider. Some information is lacking, or some results are incorrectly interpreted. The broad outline is clear.	The results are inconsistently described, making it difficult to understand for an outsider. The section is largely a list of results, and fails to build up a story leading up to the most exciting results. Incorrect conclusions are drawn.
5. Figures & Tables	Figures are clear, and provide a clear message. They are organized into panels that belong to eachother, and have legends that can be understood without reading the text. The text forms a story that now and again refers to a figure.	Figures are clear, but there are too many small figures. Legends are insufficient to understand the message of the figure.	The figures are unclear, poorly organized. The paper is a collection of figures with very little text between them. Legends are too short or difficult to understand.
6. Discussion	The discussion goes back to the initial research problem. Results are critically examined. There is a link with the literature. There are suggestions for follow up.	The discussion goes back to the initial research problem and ties the loose ends.	The discussion is very short, missing and/or not in line with the rest of the report.

	GOOD	SUFFICIENT	WEAK
7. Scientific quality	The line of research is well designed and well understood. Key arguments and assumptions are supported with references from the literature or other background information. The report contains few inaccuracies.	The line of research is clear and has been understood. The majority of the arguments and assumptions are supported scientifically and there are only few inaccuracies.	The line of research is poorly designed and/or poorly understood. There is little scientific support for the arguments and assumptions. The report contains major inaccuracies.
8. Layout	The layout is clear and throughout the report the same. The layout shows that sufficient attention is paid to the report.	The layout is clear and throughout the report the same.	The format of the report looks messy and/or is not consistent. It is not divided into sections. Pages, figures or tables are not, or incorrectly numbered.
9. Structure	The order of the paragraphs in the different sections is logical, with smooth transitions. It is a well-constructed story without repeating information.	The order of the paragraphs is mostly logical. Transitions are mostly smooth. There is some redundant information.	The order of the paragraphs and/or sections is unlogical. Transitions between paragraps are jumpy. The story is hard to follow.
10. Style	Writing style is scientific and pleasant to read. Sentences are not too long or too short, and word usage is varied. Good use of punctuation.	Writing style is not very scientific. Parts are well written, but others have poor sentences. There is little variation in word uage.	The style is unscientific. Sentences are poor, too short or too long. There is little variation in the vocabulary
11. Spelling and grammar	There are (almost) no errors in spelling and grammar.	Occasional spelling or grammar mistakes, but this does not affect the readability of the report.	There are many errors in spelling and grammar. This affects the readability of the thesis.
12. References	All relevant references are provided, references are consistent, you show you know the literature.	Most relevant references are provided, references are consistent.	There are no or too few references to relevant sources. References are inconsistent.