**Examples of introduction sections**

A example of a good introduction to a biology report
[Footnote](http://unilearning.uow.edu.au/report/2biii1.html#Footnote)

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| Worldwide, many bacteria are showing resistance to antibiotics. This is becoming a major problem for health care professionals; for example, multiple strains of a potentially deadly bacteria, *Staphylococcus aureas*, are already resistant to all antibiotics except vancomycin. The reports of vancomycin resistant strains of *S. aureas,* which appeared from three different areas of the globe last year, sent shock waves through the medical community (Levy, 1998). Escherichia coli (*E. coli*) is another bacteria that is beginning to show signs of antibiotic resistance. *E.coli* is a rod shaped bacteria which inhabits the human colon, living off organic material which would otherwise be eliminated with the feces. *E. coli* and the other intestinal flora may make up 40% of the mass of feces and as a result E. coli is used as an indicator species to detect contamination of lakes and streams by untreated sewage. Under normal conditions *E. coli* is harmless but some strains can cause blood poisoning, urinary tract infections, diarrhea and kidney failure, illnesses that are more common in people who have weakened immune systems. In most cases these *E. coli* infections can be successfully treated with antibiotics such as ampicillin and chloramphenicol; however, some of the strains, such as those that cause urinary tract infections, have been shown to be resistant to certain antibiotics (Morrell, 1997, Levy, 1998). This experiment aimed to test the sensitivity of four E. coli strains (EC1, EC2, EC3, EC4), isolated from patients in a local hospital, to the antibiotics, streptomycin and chloramphenicol. It was hypothesized that separately both drugs would deter bacteria growth but that a combination of both drugs would be most effective.  | Broad context (summary of previous research) More specific context to this experiment (summary of previous research)Significance of the researchAims of the researchHypothesis |

Adapted from **Dr Sharon Robinson**, Biology 104, University of Wollongong

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| Toads and rats are both vertebrates of similar size. Their physiology, however, is quite different, as toads are ectothermic and rats are endothermic (Campbell et al., 1997, pg. 487). Toads regulate their body temperature through behavior. Rats have a high metabolic rate. They maintain their body temperature at 37 degrees Celsius. In this study, the anatomy of the toad and rat were investigated.    | Background to the experiment.Technical words are not defined.How does this information relate to the previous information? The presentation of information in the introduction needs to be building the case for defining the gap in the research this study aims to fill.Although the aim of the research is outlined here, the reason for making this comparison has not been established. The hypothesis or expected result of the research has also not been stated. |

An example of a POORLY written introduction to a biology report
[Footnote](http://unilearning.uow.edu.au/report/2biii1.html#Footnote2)

Adapted from **Dr Wendy Russell,** Biology 103, University of Wollongong

A example of a good introduction to an Engineering scientific report

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| Advanced ceramic materials such as zirconia have great potential as substitutes for traditional materials in many engineering applications; however, problems such as difficulties in producing products of reliable and consistent quality and high manufacturing costs have thus far restricted their use by engineers. Difficulties in achieving reliable and consistent quality stem largely from the formation of thermal gradients that often occurs during conventional sintering processes. Slow, controlled heating and cooling rates have been used to solve this problem. While this solution facilitates the manufacture of high quality components, it does so at the expense of production rate, and deterioration of the mechanical properties of the ceramic because of an increase in grain size. This solution, therefore, achieves quality at the expense of an economical production rate.Recently, interest has been growing in alternative sintering techniques that could overcome the problem of thermal gradients more economically. One of the most promising is the use of microwaves to sinter ceramic compacts. Microwave sintering has many attractive features, including rapid volumetric heating and low cost. It may have other advantages as well, as there is some evidence that the mechanical properties of microwave-sintered ceramics are superior to those of conventionally-sintered ceramics. This superiority has been largely attributed to the smaller grain sizes resulting from the short, rapid sintering cycle.Until now, there has been no report of any systematic study of the microstructures produced by microwave sintering, or their relationship to the properties of the sintered product. The aims of this project were to compare the resultant properties and microstructure with material sintered by conventional constant heating rate processes. The relationships between density and grain size were studied. It was predicted that microwave sintering would alter the densification/grain growth relationship. The effects of heating rate and yttria content were also investigated. It was predicted that yttria content of ceramics sintered conventionally or by microwave would not differ. | Establishing the fieldPreparing for present research Showing the research gapIdentification of the gapIntroducing present researchHypotheses  |