



SDSE Reviewer Guidelines

The current refereeing process

Most submitted lesson plans follow this procedure:

1. When a lesson plan is received and deemed suitable by the managing editor, it is sent to one external referee.
2. The referee and managing editor write full reports based on the criteria below and blind tool track the lesson plan with comments and suggestions.
3. The managing editor will make one of the following decisions (1) ask the author to revise and resubmit; (2) reject the lesson plan.

Submissions are not blinded. Referees are not disclosed to the author.

Detailed review expectations

The external referee and managing editor write a review that (1) gives an overall summary of the paper, (2) gives a recommendation on whether the lesson paper is accepted, revised and resubmitted, or rejected and (3) addresses each of the six criteria listed below.

That is, eight headings (*Overall summary, Recommendation, Rich task and context, Cognitive demand, Pedagogy, Language and content, Accessibility and implementation, Presentation of task*), with comments under each heading, are expected in the review.

Some of these comments may have been written using tool track so the reviewer should refer the author to the tool tracked comment in their written review.

Note: For the Rich Task and Context and Cognitive Demand criteria not all of the aspects can be met but the lesson plan should manage some of them.

1. Rich Task and Context

- Is there a relevant authentic context, a problem(s) that is worthwhile solving or interesting? Do the

students learn more about the world in the context sphere? [Bear in mind this can be subjective – not everyone thinks the number of whiskers on cats is worthwhile, this might be a signal that more description/explanation is needed as to WHY?]

- Will the activity be interesting and engaging for the stated year level? Does it have the potential to reveal patterns and unexpected results?
- Does the activity promote essential statistical experiences (e.g., multivariate thinking, EDA, posing new investigative questions, experiencing variation and random behaviour)? Does the activity foster statistical reasoning, imagination and thinking?
- Are students encouraged to explore, represent, interpret and interrogate data? Are they encouraged to invent (e.g., language, statistical ideas such as a measure for variability) and ask “what if” questions?

2. Cognitive Demand

- Is the lesson cognitively demanding? Does it make students think?
- Is it a low threshold high ceiling task? That is, the task is accessible to a wide range of learners, offers students challenges to think for themselves and extends the thinking of students who need a real challenge.
- Does it deepen and broaden students’ statistical content knowledge, develop statistical concepts, and engage them in statistical thinking?
- Does it help them make connections among calculations, representations (including visuals) and meaning, connections among the steps of the statistical process and connections among different areas of statistics?
- Do students need to justify their methods and reasoning, and critically reflect on and evaluate conclusions drawn?

3. Pedagogy

- Is the lesson pedagogically sound? Does it follow recognised learning principles? For example, does it incentivize students to engage in understanding the ideas (making conjectures and testing out); use visual imagery; allow students to play around with chance-generating mechanisms; develop strategies to enable students to link across and use multiple representations; and use contexts that students can relate to?

- Are visualisations (static or interactive) used for developing concepts?
- Does the lesson provide opportunities for the teacher to observe students' thinking and respond?
- Does the lesson allow for group work, and collaboration, and promote communication and discussion?

4. Language and Content

- Is the statistical content presented in the activity correct?
- Is the statistical language used correct?
- Is there a need to add further explanation of the content and use of language in the teacher notes?

5. Accessibility and Implementation

- Are the resources used appropriate and accessible for all teachers in NZ?
- Would teachers with not much experience and knowledge of teaching statistics be able to implement this lesson? Do some parts of the lesson need more explanation for these teachers in the teacher notes?

6. Presentation of Task

- Does the lesson plan or activity follow the template (see SDSE Template guidelines)?
- Is the learning intention in the overview statement clear? Does the activity achieve the learning intention?
- Are the learning objectives, the key statistical ideas and statistical concepts being developed clearly identified? Does the activity actually develop students' understanding of the stated statistical ideas and concepts?
- Has the activity been trialled in an actual classroom? Are there teacher and student quotes?
- Is technology an integral part of the task?
- Is the standard of English excellent (e.g., spelling, grammar, logic)? Are the tasks written in such a way that the wording is consistent and clear to the student and teacher? Is it written in a conversational style? Is the overall structure of the activity coherent and easy to follow?
- Have appropriate acknowledgements been made? Is the activity original or a reworking of an existing activity (Google a few key words to see if similar lessons are already out there)? If the activity

has been around "for ages", what new innovative features does this lesson plan bring? Or is there a justification for not enough people knowing about the activity?

- Does the resource draw on the literature? If so, is there a need to expand on certain aspects in the teacher notes (e.g., frameworks that would be useful overviews for teachers)?

Copyright

When lesson plans are sent to referees, attention needs to be paid to copyright issues. If the activity and/or lesson plan seems to be lifted from another source, check that copyright permission has been gained from the original author. Check in particular for copyright of images, tables and figures. In your report please alert the managing editor of any potential breaches of copyright.

Comments for the managing editor only

The referee may wish to submit comments to the managing editor that are NOT meant for the author. Such comments should be clearly marked in the report.

Anonymity and Confidentiality

At no point is the identity of the referee disclosed to the author. Each referee should take care not to make any comments that would reveal their identity. Furthermore, the referee needs to pay attention to confidentiality. SDSE policy is that NO copies of lesson plans released to referees should be shared with others. At all times the lesson plan, report and name of author should be kept confidential and the lesson plan should not be cited before it is published.