TEACHER VERSION

NAME OF SCENARIO

Full Author Name(s) - First and Last
Department Affiliation
School or Corporate Affiliation
Street Address of Affiliation
City ST Zip or Mail Code Country
Email Address

**** We use a double-blind referee system so DO NOT provide
the above information in first submission ****

Abstract: Offer an abstract which describes what the students will do and learn,
descriptions of mathematics, area of application, and outcomes expected for the scenario.
This should help the teacher decide if the material is suitable for a given class and guide
the student. This will appear in both Student and Teacher Versions.

SCENARIO DESCRIPTION

In the submission process authors will have ample opportunities to offer tags and precise
descriptive notations which will accompany the published versions, so there is no need
for keywords or tags here.

This is the Scenario Description of the scenario for the student, with pointers to data sets,
supplementary files, videos, etc. It should have clear statements, instructions, hints,
necessary materials and possible references, but not to material which "gives away" a
solution. E.g., if there is historical material cited then that should be given in a set of
references [Hutchinson1978].

Do not provide author identification information in original submission for consideration
as we use a peer-reviewed, double-blind system.

This ``Scenario Description'' section should be the first section in the Student and
Teacher Version with rich detail for student use and then followed by the ``Notes for
Teachers'' section in which the teacher shares with colleagues issues and possible solution
strategies surrounding this modeling scenario.

Submission Version

For submission authors should submit a Teacher Version with all author identifying information stripped out. This should be a pdf version of the material.

Authors may also submit supporting documents such as pdf's of code files, e.g., MatLab, Mathematica, Maple, SAGE, R, etc. and spreadsheets and data files; again these are to be submitted without author identifying information.

Video files should be uploaded to YouTube and the author should refer to them by URL in material submitted for consideration. Upon acceptance, the YouTube video (perhaps modified per the referee/edit process) will be uploaded to the SIMIODE channel.

Below is a set of References which appears in the Student Version. Note, there is a second set of References one can use for the Teacher Version.
completeness.

REFERENCES

[Hutchinson1978] Hutchinson, G. Evelyn. 1978. *Introduction to Population Ecology*. New Haven CT: Yale University Press.

NOTES FOR TEACHERS

This is a set of comments about the scenario, for the teacher only. It might include a ``solution'' or a number of solution strategies. However, the main narrative should be about how to use the scenario in teaching, e.g., what are prerequisites, how long might one devote to it, what resources for students could be expected to be used, what issues which cause students difficult or ease should be expected to come up, discussion of technology use, pointers to other files, etc. This information will be entered by submitting authors more concisely in the Tag Ontology found in the full submission process. This set of comments offered in the ``Notes for Teachers'' might have its own pointers to data sets, supplementary files, videos, etc. for student and teacher use. The material for students could be something the teacher might use with discretion. There could be an extended bibliography [Gause1934, HughesHallett2022] for additional teacher resources, analyses, data, etc.

REFERENCES

[Gause1934] Gause, G.~F. 1971. *The Struggle for Existence.* New York: Dover Publications, Inc. First published in 1934 by The Williams & Wilkins Company.

[HughesHallett2022] Hughes Hallett, D. 2022. Data Driven: Differential Equations at the Frontier. SIMIODE EXPO 2022 Keynote Address Video. https://www.youtube.com/watch?v=FstfvmFt07Y&list=PLHUyzRr_S0Tuu8vQujEcB4meU-H7T6mp-&index=2&t=5s .