Biology 'finding an article' exercise (v2)

Principle:

The idea is for each student to present one of the papers you selected. This is done through a series of questions.

Part A - How did you find the article?

NB: your search for an article can find inspiration in scoping reviews[1]. Describing the quest for your article will be done seeking inspiration from the protocols recommended for systematic reviews[2].

1) **What were you looking for?** *(2 points)*
   → PRISMA #6: Describe the rationale for the review in the context of what is already known.
   → a paper on a specific subject (give keywords used)? a review? etc…

2) **Describe your screening strategy** (*2 points*)

   → PRISMA #8: Specify the study characteristics (e.g., PICO, study design, setting, time frame) and report characteristics (e.g., years considered, language, publication status) to be used as criteria for eligibility for the review
   → PRISMA #10: Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated
   → Did you use tools to measure controversy? *(pubpeer, some watch list)*

3) **What was your source of information?** *(2 points)*
   → PRISMA #9: Describe all intended information sources (e.g., electronic databases, contact with study authors, trial registers, or other grey literature sources) with planned dates of coverage
   → wikipedia? pubmed? google scholar? research gate? etc…

4) **How many articles did you screen?** *(2 points)*
   → please give numbers associated with your workflow, i.e. how many papers were screened at the level of the title, abstract, figures…

Part B - Why is the article useful in context?

5) **What to expect from this article?** *(2 point)*
   Based on the abstract, an in relation to your objective (Q1), explain the information you anticipate to find in the article.[3]

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[1] Munn, Z., Peters, M. D., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC medical research methodology*, *18*(1), 143.

[2] Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., ... & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic reviews, 4*(1), 1.

[3] This step is intended to favor active reading by the students, following Sun, T. T. (2020). Active versus passive reading: how to read scientific papers?. National Science Review, 7(9), 1422-1427.

You will choose the 3 most significant figures, let's call them x, y and z.

6) **Based on the abstract, explain your choice of figures** (comment on all figures, selected or not). *(2 points)*
   N.B: You should favor figures presenting experimental data, i.e. avoid figures presenting background, schematizing the experimental plan or global results.

7) **Describe figure x.** *(2 points)*
   What is the question being asked? What is the principle/method of the experiment? Briefly describe the results. What is the conclusion?
   N.B.: it should be possible to follow your description without having access to the figure.

8) **Describe figure y.** *(2 points)*
   What is the question being asked? What is the principle/method of the experiment? Briefly describe the results. What is the conclusion?
   N.B.: it should be possible to follow your description without having access to the figure.

9) **Describe figure z.** *(2 points)*
   What is the question being asked? What is the principle/method of the experiment? Briefly describe the results. What is the conclusion?
   N.B.: it should be possible to follow your description without having access to the figure.

Conclusion and perspective (2 points)

10) **What are the main conclusions/perspectives of the paper?**

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[4] In analysing the content of the paper we focus on results and conclusions. We therefore overlook other parts of the article. For example, 'Science in the classroom' proposes in their '**learning lens'** seven categories of annotations: Glossary, Previous work, Author's experiments, Results and conclusions, News and policy links, Learning standards, and References and notes.