Skills for STEM subjects

Workshop

Student Booklet

1. Starter – look at the 3 posters on the following pages.

* What are your first impressions of these scientific posters?
* Which one catches your eye?
* Which one do you like? Why do you like it?

Text

Description automatically generated1.

Diagram

Description automatically generated2.

Text

Description automatically generated3.

2. What does a good scientific poster look like?

**Task:**

* Find 2 more examples of scientific posters by visiting: <https://www.eposters.net/>
* Evaluate the posters using the criteria in the grid below.

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Poster 1** | **Poster 2** |
| **Text** |  |  |
| Limited text – only headline information |  |  |
| Information is carefully selected – key points rather than key sentences |  |  |
| Clear narrative of research |  |  |
| **Diagrams & Images** |  |  |
| Information presented in diagrams rather than words |  |  |
| Diagrams are clear |  |  |
| Images are relevant |  |  |
| **Structure & Design** |  |  |
| Flow of poster is logical – begins with aims and objectives & flows downwards in columns to methods, results, conclusions & references. |  |  |
| Poster is not overly-embellished with formatting and pictures. |  |  |
| Effective colours used, contrasting backgrounds (e.g. blue and yellow, black and white) to ensure text is easy to read. |  |  |

3. Creating your own scientific research poster

Task: Choose an article from the options below and click on the link to read.

Article 1: Giraffe genome holds keys to its peculiar body—and clues to hypertension treatments:

<https://www.sciencemag.org/news/2021/03/giraffe-genome-holds-keys-its-peculiar-body-and-clues-hypertension-treatments>

Article 2: Honeybees rally to their queen via’ game of telephone’:

<https://www.sciencemag.org/news/2021/04/honey-bees-rally-their-queen-game-telephone>

# Article 3: Food supplements that alter gut bacteria could ‘cure’ malnutrition:

<https://www.sciencemag.org/news/2021/04/food-supplements-alter-gut-bacteria-could-cure-malnutrition>

4. Creating a glossary of key terms:

Task:

1. Re-read your chosen article.
2. Select any scientific vocabulary to create a glossary (alphabetical list of vocabulary) of the key terms from your selected topic/article.

|  |  |
| --- | --- |
| Term | Definition |
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5.Note-taking techniques:

Task:

1. Choose the video below which matches the research topic you have chosen for your poster.
2. Watch the video and make notes using the Cornell note-taking method.

Topic 1: How did the Giraffe get it’s long neck: [https](file:///C:\Users\hugh\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\3CKGBG21\https)[://youtu.be/ER4GqBx\_YHM](https://youtu.be/ER4GqBx_YHM)

Topic 2: Honeybee communication: <https://www.youtube.com/watch?v=bFDGPgXtK-U>

# Topic 3: Food that fuels the microbiome to combat malnutrition: <https://www.youtube.com/watch?v=ThmdsHJ4g2g>

Cornell note-taking method

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Mind-mapping

6. Creating your own scientific research poster

Checklist:

|  |  |
| --- | --- |
| Limited text |  |
| Headline information only |  |
| Information presented in diagrams rather than words |  |
| Clear diagrams |  |
| No irrelevant images |  |
| Careful selection of information |  |
| Clear narrative of research |  |