Y3 Huckel Workshop Questionnaire

For all questions marked “Likert”, students respond on a 7-point Likert scale, with the descriptions corresponding to 1 and 7 indicated below the question.
For all questions marked “MC”, students can select one of the answers listed.
For all questions marked “Free-Response”, students may write an answer in a text box.

Prior to the submission of the survey, students will be provided with the following privacy notice:

> By submitting this anonymous survey, you agree that the information you provide may be used for educational research, for the purpose of developing better teaching resources for using the University of York Chemistry Department, and for the purpose of disseminating the insights gained from analysing this data. The data will be processed on the basis of your consent, and to carry out research of public interest. None of the information requested can be used to identify individuals; statistical data will only ever be presented in aggregated form. The raw data collected will not be shared with anyone other than University of York researchers directly involved in the project, and data will not be transferred internationally. For the remainder of this privacy notice see General Privacy Notice.

After submission of the survey, students will be given the opportunity to sign up to find out the results of the research:

> If you would like to be notified of the results of this research, please use this form to provide your e-mail address. Your e-mail address will not be linked to the answers you have just provided.

Pre-Workshop Questions

Likert: How would you categorise your feelings towards using Python as a tool?

- Confident - Apprehensive
- I am competent - I know nothing yet
- Uninterested - Excited

Likert: How interested are you in learning programming skills?

- No interest at all - I want to be able to write code regularly

Likert: I feel confident writing for loops and using numpy arrays in Python.

- Strongly Disagree - Strongly Agree

Likert: I feel confident in my understanding of Huckel Theory.

- Strongly Disagree - Strongly Agree

Free-Response: Please write two lines of code which will print every integer from 0 to 9. If you’re not sure, please enter your best guess.

Free-Response: Describe briefly what information about a molecule can be obtained by diagonalising a Hamiltonian. If you're not sure, please enter your best guess.

Post-Workshop Questions

Likert: How would you categorise your feelings towards using Python as a tool?

- Confident - Apprehensive
- I am competent - I know nothing yet
- Uninterested - Excited

Likert: Using Python through Google Colab was

- Confusing - Straightforward

Likert (Group A): I appreciated seeing how code could be used for a chemical application before being taught the programming content of the workshop.

- Strongly Disagree - Strongly Agree

Likert (Group B): I appreciated being taught the programming content of the workshop before seeing how code could be used for a chemical application.

- Strongly Disagree - Strongly Agree

Likert: Seeing pre-written code made me feel

- Overwhelmed - Reassured

Likert: Writing code made me feel

- Overwhelmed - Reassured

Likert: How collaboratively did you work?

- Completely independently - Entirely collaborative

Likert: I feel confident writing for loops and using numpy arrays in Python.

- Strongly Disagree - Strongly Agree

Likert: I feel confident in my understanding of Huckel Theory.

- Strongly Disagree - Strongly Agree

Free-Response: Please write two lines of code which will print every integer from 0 to 9. If you're not sure, please enter your best guess.

Free-Response: Describe briefly what information about a molecule can be obtained by diagonalising a Hamiltonian. If you're not sure, please enter your best guess.

Free-Response: What's the most important thing you gained from the workshop?

Free-Response: What would you change about this workshop to make it more useful for you?

Free-Response: What, if anything, did you enjoy about this workshop?

MC: Which of the following best describes your current gender identity?

- Male
- Female
- Non-Binary
- Another term (please state)
- Prefer not to say

Likert: How much experience of programming do you have?

- I’ve never coded before - I write some code every week