A. Briefly describe overall research program at your laboratory.

Preparation of photochromic materials which involves synthesis of metal-organic frameworks which properties change as a function of light.

B. Briefly describe specific project(s) for your teacher:

Preparation of photochromic compounds (several steps of organic synthesis which include mixing compounds, weighting the right amount of materials, heating mixtures, isolation of organic molecules, purification of organic molecules). Brief explanation is given on-line through the YouTube video prepared by our group:
https://www.youtube.com/watch?v=n-vZCncCJPU&t=8s

The outreach events in the schools using this material:
https://www.youtube.com/watch?v=kXMrXf8Jgg4

C. Will any other people (post docs, grad students, undergraduate students, colleagues, etc.) be involved directly with your teacher?

It is anticipated that three senior graduate students will supervise the teacher with the synthetic efforts: Gaby Leith, Corey Martin, and Abhijai Mathur.

D. Will you require any advanced reading/preparation for the teacher? If yes, please briefly describe.

No preparation is necessary. General information about the Shustova group could be found online https://www.shustovalab.org