

LET'S BEE SCIENTISTS: YOUTH CO-CREATING ECOLOGICAL SCIENCE ON POLLINATORS

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To address the global challenge of insect pollinator declines, we need interdisciplinary action by empowered youth that understand ecological diversity. Increasing this informed environmental empathy requires science curriculum that incorporates creative approaches to learning in nature and with community. Designing curriculum using co-designed citizen science can improve scientific literacy alongside science communication, whilst empowering students as co-researchers.

Through a participatory action research PhD in entomology, we developed two interdisciplinary school curriculums (primary and secondary). We aimed to foster understanding of local pollinators and the scientific method using creative pedagogies. High school students co-designed an experiment to understand flower preferences of wild pollinators in their own backyards. They created artificial flowers to test their hypotheses based on observations in nature. All students collected data which the high school students interpreted. Students also created visual and musical science communication projects based on their findings and experiences.

This process inspired student reflections on the intersection between 'scientists' and 'artists'. Students' understandings of pollinators expanded to include a diversity of insects for whom they developed greater empathy. This resulted in students creatively expressing a passion for science as a means of understanding the nature on their doorstep and proposing practical actions to conserve pollinators.

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