



# SPRING: Mosquito Intelligence Academy



Promoting simple, healthy living to reduce mosquito-borne diseases in our cities through FREE CA NGSS-aligned student science programs.

Grades	Disciplinary Core Ideas	Cross Cutting Concepts
K	CA NGSS K-LS1-1. LS1.C: Organization for Matter and Energy Flow in Organisms	Patterns
1	CA NGSS 1-LS1-1. LS1.A: Structure and Function	Structure and Function
2	CA NGSS 2-LS4-1. LS4.D: Biodiversity and Humans	Cause and Effect
3	CA NGSS 3-LS3-1. LS3.A.: Inheritance of Traits and LS3.B. Variation of Traits	Patterns
4	CA NGSS 4-LS1-1. LS1.A: Structure and Function	Structure and Function
5	CA NGSS 5-ESS2-2. ESS2.C: The Roles of Water in Earth's Surface Processes	Cause and Effect
6	CA NGSS MS-ESS3-3. ESS3.C.: Human Impacts on Earth Systems	Cause and Effect

\*Science and Engineering Practices (SEP) are dependent on time allotted

"Engaging, hands-on science lesson that promotes awareness about mosquitoes and how to take a proactive approach to prevent illness. The lesson was aligned with science standards and addresses students' learning modalities with realia, visuals, digital devices, and explicit direct lessons by the presenter."  
 ~6th Grade Teacher, El Monte

"The kids were engaged the entire time because it was very interactive. Looking at real mosquitofish, actual mosquito larvae, & insect specimens was so much better than just reading about it in a book."  
 ~ 1st Grade Teacher, Arcadia

"Each grade level gets their specific science standard met with lots of hands-on materials ... Students are able to take pamphlets and brochures home to parents to share with them what they have learned."  
 ~3rd Grade Teacher, El Monte

"I love the Lotería game with the input remote and immediate results graph. My students were engaged while downloading/recalling information at the same time! This is helpful for all students especially our English Language Learners. Oral language is very important for our students."  
 ~ 1st Grade Teacher, La Puente



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FREE [NGSS-aligned lessons](#) on mosquito bite prevention and ways to reduce of mosquito habitats



Students learn about mosquitoes, bite prevention, and mosquito habitat elimination by playing Mosquito Lotería (Bingo) or via a presentation and respond to pre-assessment and post-assessment questions. On average, there is a [20% gain in knowledge](#) between the pre- and post-assessment.

Students then play grade-specific games and visit the Mosquito Discovery table. The games support social-emotional development, language and reading development, fine motor skills, and promote play-based learning. At the Mosquito Discovery table, student expand their science language and knowledge by observing engaging phenomena and using tools that promote scientific learning.





# FALL: Citizen Science



Promoting simple, healthy living to reduce mosquito-borne diseases in our cities through FREE CA NGSS-aligned student science programs.

Grades	Disciplinary Core Ideas	Cross Cutting Concepts	Science & Engineering Practices
<b>Elementary School</b>	<ul style="list-style-type: none"> <li>Organization for Matter and Energy Flow in Organisms</li> <li>Structure and Function</li> <li>Biodiversity and Humans</li> <li>Growth and Development of Organisms</li> <li>Interdependent relationships in ecosystems</li> <li>Human Impacts on Earth Systems</li> </ul>	<ul style="list-style-type: none"> <li>Cause and Effect</li> <li>Patterns</li> </ul>	<ul style="list-style-type: none"> <li>Planning and Carrying Out Investigations</li> <li>Obtaining, Evaluating, and Communicating Information</li> </ul>
<b>Middle School</b>	<ul style="list-style-type: none"> <li>CA NGSS MS-ESS3-3. ESS3.C.: Human Impacts on Earth Systems</li> <li>CA NGSS MS-LS1.B: Growth and Development of Organisms</li> <li>CA NGSS MS-LS1: From Molecules to Organisms: Structures and Processes</li> </ul>	<ul style="list-style-type: none"> <li>Cause and Effect</li> <li>Patterns</li> </ul>	<ul style="list-style-type: none"> <li>Planning and Carrying Out Investigations</li> <li>Obtaining, Evaluating, and Communicating Information</li> <li>Constructing Explanations and Designing Solutions</li> </ul>

\*DCI, CCC, and SEPs are dependent on each teacher's unit focus

"Operation Mosquito G.R.I.D. provided the opportunity to show the relevance of their study of science. It was extremely engaging for my students to see what [other participating students] had found in their standing water. It also presented students with another avenue of how to use science as a potential career. They could see how science is used to help their community."  
~7th Grade Teacher, Monrovia

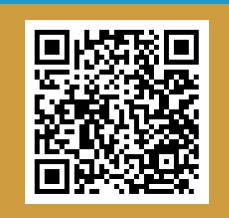
"Participating in G.R.I.D. would benefit students by actively engaging with natural phenomena and promote the development of scientific thinking."  
~ 6th Grade Teacher, West Covina

"A simple, hands-on lesson brought so much knowledge about public health for my students. We also made sure that our school is safe from standing water."  
~8th Grade Teacher, Sierra Madre

"My students benefited greatly from Operation Mosquito G.R.I.D.! We are always looking for ways to increase their scientific agency and the fact that they were able to apply the scientific process to a task that was helpful to their community was extremely meaningful."  
~7th Grade Teacher, West Covina



# FALL: Citizen Science



## Elementary: Vector Inspector Program



Students submit water samples from their property that are analyzed for evidence of mosquitoes. Middle school students also conduct mosquito egg surveillance at home.

High school students can participate by analyzing water samples for elementary students in their district.

## Middle School: Operation Mosquito G.R.I.D.



## Vector Inspectors of the Year

Operation Mosquito G.R.I.D. participants that complete 8 months of reporting are awarded "Vector Inspectors of the Year" at a school board or city council meeting to recognize the importance of their contribution to public health.



## Professional Development Opportunities

### *TAE401- Teacher training: Middle School Citizen Science Mosquito Surveillance Project*

Middle school teachers can sign up for our summer course to receive 3 college units from Cal Poly Pomona and learn about mosquitoes, mosquito-borne disease, and citizen science.

Our education specialists also provide professional development for school science departments by request.

Contact [ecohealth@sgvmosquito.org](mailto:ecohealth@sgvmosquito.org) for more information.

