

## HANDS-ON MINDS-ON INDUSTRIAL PRACTICES

**Name of Submitter:** Patricia Velasco

**Submitter Email:** [patriciavelasco@wcps.org](mailto:patriciavelasco@wcps.org)

**Presentation Title: All About DNA**

This presentation explores innovative strategies for teaching DNA concepts using a blended approach that merges hands-on manipulatives with digital tools, fostering a student-centered classroom and supporting differentiated instruction. By combining physical models and interactive simulations, educators can meet diverse learning needs while deepening conceptual understanding. The session emphasizes STEAM integration, showing how art and design enhance engagement and comprehension in molecular biology. Grounded in design thinking, problem-based, and project-based learning, this method promotes inquiry and real-world problem solving. Instructional design is framed to support vertical alignment, transforming science classrooms into dynamic, interdisciplinary environments that encourage exploration and collaboration.

**Presentation Target:**

High School

**Presenter(s):**

1. Patricia Velasco, Science Lead Teacher (9-12), Wayne County Public Schools