



# EVALUATION OF DATA ADVENTURES

## DATA LITERACY PROJECT BRIEF

### THE PROJECT

This project is funded through a *Department of Education*, Education Innovation and Research (EIR) Program early-phase grant awarded to the **Santa Clara County Office of Education** (SCCOE) in 2021. The project is a collaborative efforts between SCCOE, WestEd, and San Jose State University (SJSU).

PRG is serving as the external evaluator for the grant and is designing an implementation and impact evaluation of Data Adventures, a middle school data literacy curriculum designed to spark interest and engagement in data science.

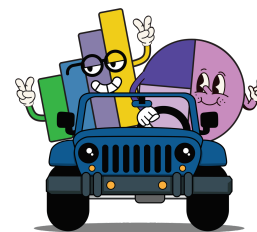
### SETTING & PARTICIPANTS

- Middle schools in and around Santa Clara County, CA
- 6th through 8th grade students
- Teachers across disciplinary subjects, including math, science, English, social studies, and art



### THE PROGRAM

Data Adventures aims to make data literacy and the development of data science skills accessible to all learners. Through a universal design for learning (UDL) framework and an iterative co-design process, the Data Adventures team developed a series of three classroom curriculum units to help students explore real-world data through creative, culturally-relevant lessons.



**DATA  
ADVENTURES**

Each Data Adventures unit encourages students to collect and analyze real data through different gaming mechanisms. Students practice calculating measures of central tendency and creating data visualizations. Each unit culminates in a storytelling project to disseminate their findings to peers, improving data interpretation and communication skills.

#### DATA ADVENTURES UNITS

##### AVATAR MAKER

Students explore identity through data and storytelling, culminating in a digital story that celebrates identity and belonging.

##### FESTIVAL MAKER

Students analyze data about "creatures," explore patterns through data visualization, and create a multimedia story based on their findings.

##### GAME MAKER

Using data to drive strategy, creativity, and fun, students mash-up game design to create, test, and share original games.

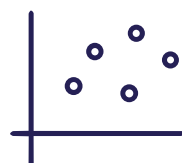
Teachers complete a three-day professional learning seminar to learn how to teach Data Adventures in their middle school classroom and receive UDL-aligned lesson materials to increase accessibility for diverse learners.

### THE EVALUATION

**Pilot Testing.** PRG supported a multi-year co-design and iterative pilot testing phase by collecting and synthesizing quantitative and qualitative perspectives from teachers and students on the program's feasibility, acceptability, and appropriateness for middle school students.

**Experimental Study.** Starting in Fall 2026, PRG will conduct a rigorous impact and implementation evaluation of Data Adventures. The impact study is a cluster randomized controlled trial (RCT) where recruited middle school teachers will be randomly assigned to an initial implementation (treatment) condition or a delayed implementation (control) condition.

Program impact will be measured on the following outcomes using a Participant Questionnaire administered in the Spring of each implementation year:



- Statistical data literacy knowledge
- Understanding of Data Habits of Mind
- Interest and self-efficacy in data science
- Attitudes toward data