



Project ReCharge STEAM Curriculum & Training

Project ReCharge was created in cooperation with:

The National Science Foundation (NSF): ITEST Division of Research on Learning. Award Number 1433597 (Project ReCharge), The University of Nevada, Reno, Envirolution & Washoe County School District

TEACHER BENEFITS

Comprehensive STEAM Curriculum around sustainability and energy efficiency!

- 25 lessons and growing
- Standards linked to NGSS, 21st Century Competencies, Common Core Standards, National Art Standards, and more!

FREE Professional Learning!

- 20+ hours of professional learning
- Earn \$500 or equivalent in-service credits
- Taught by classroom teachers
- Regional professional learning communities and networking

Classroom materials provided in packaged kits

Up to a \$2,000 value!

- Class kits of 8
- Saves teachers time and money

Teacher website and portal

- Access all program components anywhere, anytime
- Order restock of materials
- Get the most up-to-date curriculum every year

Access to other Envirolution programs

- Access to a network of STEAM guest speakers
- 1 time per year usage of energy-generating bike
- First communication about Introduce a Girl to Engineering Day, Career Quest Field Trips, Sustainability & STEAM themed Camps, and more!



“Project ReCharge has been able to engage students in things that are happening in the world right now and the level of excitement and intrigue among students on how the world works is a very amazing thing to see.”

**- Greg Mingo, Principal
Grant Sawyer Middle
School**

BECOME A PRC TEACHER TODAY!

Learn more and sign up for the 2024-2025 cohort at:

envirolution.org/becoming-a-prc-teacher/



Or contact Amy today for more information at:

amy.rice@envirolution.org



Who Should Apply

Elementary, middle, and high school science, technology, engineering or math teachers and educators involved in environmental science programs with a passion for sustainability. Our lessons can be tailored to the appropriate grade level for younger or older audiences.

PROGRAM REQUIREMENTS

- Participate in the HYBRID Summer Complete Training (July 10-12, 2024)
- Participate in 3 or more professional learning communities / professional development sessions throughout the 2024-2025 school year in a hub in your region
- Teach 5+ Project ReCharge lessons in your class, including pre & post tests and provide data and feedback
- Administer pre/post student & teacher attitude surveys
- Submit 1 or more student project
- Complete PRC Celebration with your students
- Provide student demographic data

“The content is very engaging and connects students to the real world. I really like how it gives students a reason to take an active part in the health of the planet.”
PRC Teacher

Already completed the program?
Join our Project ReChargers Professional Learning Community! Email amy.rice@envirolution.org to learn more!

JOIN ONE OF OUR REGIONAL TEACHER HUBS

Nevada

Carson City School District
Churchill County School District
Clark County School District
Douglas County School District
Elko County School District
Lander County School District
Lyon County School District
Nye County School District
Pyramid Lake Bureau of Indian Education
Washoe County School District

Arizona

Mesa Public School District
Flowing Wells Unified School District
Scottsdale Unified School District
Queen Creek School District

California

Sierra Plumas School District
Tahoe Truckee Unified School District
Nevada City School District

Colorado

Denver Public School District

Maine

Maine School Administrative District 17
Maine School Administrative District 75
RSU 5
RSU 9

New York

Buffalo Public Schools

Rhode Island

Portsmouth School District

OR, START YOUR OWN HUB IN YOUR REGION!
CONTACT AMY.RICE@ENVIROLUTION.ORG TO LEARN MORE

Project ReCharge STEAM Curriculum 5E Designed Overview

Sustainability Introduction

Sustainability Introduction Activities
Sustainability Commitment

HS-ESS3-3, MS-ESS3-3, 5-ESS3-1
C-3, KC-3, RW-2, T-2, SC-1

Energy and Electricity Unit

Lesson 1: Simple Circuits

4-PS3-2, 4-PS3-4
C-3, KC-2, RW-1, SC-1
Creating: Anchor 2

Lesson 2: Series & Parallel Circuits

4-PS3-2
C-2, KC-3, RW-1, SR-2, SC-1
Creating: Anchor 1
Responding: Anchor 9

Lesson 3: Conductors & Insulators

5-PS1-3
C-1, KC-1, RW-1
W.5.8

Lesson 4: Energy Changes and E-Bike

4-PS3-2, 4-PS3-4
C-1, KC-2, RW-2, T-3, SC-2
HS: MP.4



Resources and Energy Unit

Lesson 1: Electrical Generation

HS-PS2-5
MS-PS2-3
MS-PS2-5
C-2, KC-3, RW-2, T-2, SC-2

Lesson 2: Climate Scene Investigation

MS-ESS3-5
C-3, KC-4, RW-2, SC2

Lesson 3: MS Wind Energy

MS-ESS3-3, MS-ETS1-3
C-3, KC-3, RW-3, T-2, SR-2, SC-2
MS: MP.2

Lesson 3: HS Wind Energy

HS-PS3-3, HS-ETS1-3
C-3, KC-3, RW-3, T-2, SR-2, SC-2

Lesson 4: HS Geothermal

HS-PS3-4, HS-ESS2-3, HS-PS3-3,
HS-ETS1-1, HS-ESS3-2, HS-ETS1-3

Lesson 5: Solar Energy

HS-PS3-3, MS-ESS3-3
C-1, KC-2, RW-2, T-3, SC-1
HS: MP.2

Lesson 6: Transportation Introduction

HS-ESS3-4, MS-ESS3-3
C-1, KC-3, RW-3, SC-2
HS: RST.11-12.8

Standards Key

NGSS
21st Century Competencies
Common Core Standards
National Art Standards



Project ReCharge STEAM Curriculum 5E Designed Overview CONTINUED

Elementary Thermal Systems Unit

Lesson 1: Properties of Insulation

5-PS1-3, 3-5-ETS1-2

C-3, KC-3, RW-1, T-2, SC-2

W.5.1, W.5.8, W.5.9, RI.5.1, RI.5.1, RI.5.9, MP.2, MP.4, MP.5, 3-5. OA

Lesson 2: Passive Cooling

5-ESS3-1, 5-PS1-3, 3-5-ETS1-2

C-3, KC-3, RW-3, SC-2

W.5.8, W.5.9, RI.5.1, RI.5.1, RI.5.7, RI.5.9, MP.2, MP.4, MP.5, 3-5. OA

Lesson 3: Passive Heating

5-ESS3-1, 5-PS1-3, 3-5-ETS1-2

C-3, KC-3, RW-3, SC-2

W.5.8, W.5.9, RI.5.1, RI.5.1, RI.5.7, RI.5.9, MP.2, MP.4, MP.5, 3-5. OA

Electrical Systems Unit

Lesson 1: Lighting

HS-ESS3-4, HS-ETS1-3, MS-ESS3-3

MS-ETS1-3, 5-ESS3-1, 3-5-ETS1-2

C-1, KC-2, RW-2, SC-2, T-1

Lesson 2: Appliances

HS-ESS3-4, HS-ETS1-3, MS-ESS3-3, MS-ETS1-3,

5-ESS3-1, 3-5-ETS1-2

C-1, KC-1, RW-2, SC-2, T-2

Standards Key

NGSS

21st Century Competencies

Common Core Standards

National Art Standards

Secondary Thermal Systems Unit

Lesson 1: Building Envelope

HS-PS3-4, MS-PS3-3

C-1, KC-2, RW-1, SC-2

HS: MP.4, MS: RST.6-8.3

Lesson 2: Passive Cooling

HS-ESS3-4, HS-ETS1-3, MS-PS3-3, MS-ETS1-2

C-3, KC-3, RW-3, SC-2

HS: MP.2, MP.4, MS: RST.6-8.3

Lesson 3: Passive Heating

HS-ESS3-4, HS-ETS1-3, MS-PS3-3, MS-ETS1-2

C-3, RW-3, KC-3, SC-2

HS: MP.2, MP.4, MS: RST.6-8.3

Sustainability Detectives Unit

Lesson 1: Home Energy

5-ESS3-1, MS-ESS3-3

C-1, KC-3, RW-1, T-2

Lesson 2: Exploring Data

MS-ESS3-5, 5-ESS3-1

C-1, KC-1

8.SP.A.1

Lesson 3: Energy Trends

MS-ESS3-3

C-4, KC-3, RW-2

Lesson 3: Energy Auditors

HS-ESS3-4, HS-ETS1-3

MS-ESS3-3, MS-ETS1-4

C-1-3, KC-1-3, RW-1-2, T-1-3, SR-1-3

Sustainability Projects

HS-ESS3-4, HS-ETS1-3, MS-ESS3-3, MS-ETS1-1,

5-ESS3-1, 3-5-ETS1-2

KC-4, RW-3, T-3, SR-3, SC-3