RE-ENERGY CHALLENGE

Become a Renewable Energy Engineer!

2025/2026

The Re-Energy Challenge is a great way to open your students up to the world of renewable energy by building a STEAM-based model. Submissions will be scored out of 60 points based on the identified criteria found in the assessment rubric on the last page.

Due to the popularity of this challenge, there will be two divisions - junior learners (Gr 3-8) and senior learners (Gr 9-12). Your submission will be automatically placed in the grade you identify when you submit.

Challenge Instructions

Step 1: Register for the Challenge

If you are reading through this challenge package and have yet to register your class or club for this challenge, click the button below to register. Once you've registered, please continue to Step 2!

REGISTER HERE

Step 2: Tips to Get Started (optional)

To help familiarize yourself with renewable energy technology concepts, use the following resources:

- Educator Resource
- Educator Video

We **recommend** having your class/club complete a selection of learning activities from the Re-Energy Program to equip your learners with the necessary knowledge and skills for the challenge and to watch GreenLearning's Re-Energy Webinar - Re-Energized with your class. (See next page)

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Re-Energy Program

Re-Energized Webinar (Gr 3-6)

Re-Energized Webinar (Gr 7-12)

Step 3: Start Designing and Building

Now it's time for your learners to start designing and building their model(s)!

Choose from one or more renewable energy technology idea below **or** come up with your own renewable energy concept that you want to build.

Your model can be based on the construction plans below, or feel free to explore other options on how to build and design your model. **Make sure to use as many sustainable materials as possible.**

Tip: Review the **Physical Model** section of the Assessment Rubric on the final page of this package.

Optional worksheet: this worksheet will help you get started on planning how you want to design and build your renewable energy technology model!

- Electric Vehicle
- Penny Battery
- Flywheel Model
- Solar Oven
- Solar Car
- Wind Turbine
- Hydroelectric Generator
- Biogas Generator

For further inspiration, check out past Re-Energy projects!
Re-Energy Challenge Showcase

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Step 4: Project Summary, Learnings & Reflection Questions

Next, have your learners provide an overview of their project, share their project and reflect what they have learned with the school, their community, on social media or any other platform. This is a great chance to share photos and videos.

Tip 1: See the **Supporting Materials** section of the Assessment Rubric on the final page of this package

When submitting photos and videos of the project, where student faces are apparent, please see the Reminder section below about media release forms.

Tip 2: Review the **Project Summary, Learnings and Reflection** section of the Assessment Rubric on the final page of this package

Project Summary, Learning & Reflection Worksheet

Reminder

As part of Step 4 for the Sharing Your Learnings section, photos and videos are encouraged and play a large role in scoring. When submitting photos and videos of the project where student faces are apparent, please ensure a **media release form** has been signed. If no photos or videos contain student faces, please skip to the next section of this challenge package.

If students' parents(s) and/or guardian(s) have already signed-off on media releases for their child at the beginning of the school year specifically for the school, please note there is an option for the teacher themselves to sign-off all their students participating in the challenges.

Teacher Sign-Off for Students with School Media Releases

Individual Student Media Release Form

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Tell Us What You Think (optional)

Although this section is not scored, we encourage you to take a moment to provide feedback on your experience in leading your students on their challenge journey. This feedback helps us improve for the following year.

Educator Feedback Form

Step 5: Time to Submit!

Your learners have worked so hard to put together an amazing project submission - now it's time for you to submit their work! Make sure to submit by **11:59pm PST on May 13th, 2026!**

SUBMIT CHALLENGE HERE

Submission Checklist:

Use the Assessment Rubric below to support your Challenge process

- [ ] Project Summary, Learning & Reflection Worksheet (found under Step 4)
- [ ] Photos & Videos of Model
- [ ] Media Release Form(s) (found under Reminder)
  - [ ] Parent and/or Guardian Signature

    OR
  - [ ] Teacher Sign-off
- [ ] Educator Feedback Form (reminder this piece is not scored - found under Tell Us What You Think)

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Assessment Rubric

Criteria	Level 4	Level 3	Level 2	Level 1
Physical Model				
Model Construction & Function Operation and Application; Can also include above worksheet of model draft or photos/videos of the construction process and how well the model functions. **(10 points)**	A strong model design that is highly logical and excellently built including strong ability to harness renewable energy. **(8-10 points)**	A good model design that is logical and well built including the ability to harness renewable energy. **(6-7 points)**	Model design that is somewhat logical and built well with some ability to harness renewable energy **(3-5 points)**	Model design that is illogical and/or not built. Minimal to no inclusion of harnessing renewable energy. **(0-2 points)**
Model Design & Creativity Creativity & Sustainability **(10 points)**	Design is highly creative with excellent use of sustainable design and materials. **(8-10 points)**	Design is creative with good use of sustainable design and materials. **(6-7 points)**	Design is somewhat creative with some use of sustainable design and materials. **(3-5 points)**	Design is not creative with minimal to no use of sustainable design and materials. **(0-2 points)**
Supporting Materials				
Supporting Materials Evidence of learning, photos, videos, slide deck, other supporting materials **(15 points)**	5+ photos, videos were submitted demonstrating the learner experience. **(12-15 points)**	3-4 photos, videos were submitted demonstrating the learner experience. **(8-11 points)**	1-2 photos, videos were submitted demonstrating the learner experience. **(4-7 points)**	No photos, videos were submitted demonstrating the learner experience. **(0-3 points)**
Project Summary, Learning & Reflection				
Summary of Project Overview of project, reason for building, how well it functions, design and creative thought process, etc. **(5 points)**	A strong summary of the project. Highly detailed points on functionality, design and creativity of model(s). **(4-5 points)**	A good summary of the project. Some detailed points on functionality, design and creativity of model(s). **(3 points)**	Some form of a summary of the project. Few detailed points on functionality, design and creativity of model(s). **(2 points)**	Lacking a summary of the project. Very minimal detailed points on functionality, design and creativity of model(s). **(0-1 points)**
Sharing Your Learning Communication & Collaboration **(10 points)**	Learning was shared with clear educational intention and through multiple forms. **(8-10 points)**	Learning was shared with some educational intention and/or through multiple forms. **(6-7 points)**	Some learning was shared **(3-5 points)**	No learning was shared throughout this challenge **(0-2 points)**
Reflection Questions Creativity, critical thinking & knowledge mobilization **(10 points)**	Learner response displays a strong understanding of renewable energy technologies and is highly creative. **(8-10 points)**	Learner response displays an understanding of renewable energy technologies and is creative. **(6-7 points)**	Learner response displays some understanding of renewable energy technologies and is somewhat creative. **(3-5 points)**	Learner response displays minimal understanding of renewable energy technologies with low creativity. **(0-2 points)**
Total Points: /60				

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