



New England Science & Sailing

EDUCATIONAL
PASSAGES

North American Marine Environment Protection Association
NAMEPA

IMPORTANT DATES

April 1: Submissions open

April 30: Submissions close

May --: Winners announced

2026 RECYCLE REGATTA EDUCATOR TOOLKIT

The Recycle Regatta is a free, fun, hands-on competition that children of all ages can participate in! First, students will build a model sailboat out of recycled and repurposed materials. Then, students will race their boat to victory while learning all about engineering, mathematics, sailing, buoyancy, and stewardship. This Educator Toolkit serves to help you bring the Recycle Regatta from anywhere. To officially take part in the 2026 challenge, visit educationalpassages.org/recycle-regatta for all the details. There will be a prize for fastest and most creative submissions.

HERE'S HOW TO HOST YOUR OWN RECYCLE REGATTA:

PREPARE

Gather recyclables or otherwise discarded materials. Participants can bring these items from home or encourage a Recycle Regatta donation bin in your school, classroom, or institution. If you are able, organize a community clean-up and repurpose the materials!

All items should be washed and safe for handling (no sharp edges, etc.). Please note - other supplies will need to be accessible, including: scissors, tape, glue, pencil, paper, testing bin, calculator, and stopwatch).



INTRODUCE

Set participants up for success by introducing key concepts needed for the Recycle Regatta. Visit the Recycle Regatta website for free educational videos on the physics of sailing, marine debris, buoyancy, the engineering method, and more. You can also book an Online Experiential Learning Program with New England Science & Sailing (NESS)!

DESIGN

Allow participants time to design a blueprint. This step is imperative for the engineering process! Participants will brainstorm what materials they will use for their boat and draw out a sketch. This can be done on scrap paper, in a class journal, and on the *DATA FORM*.

BUILD

Participants will bring their blueprints to life with the materials they are repurposing, working alone or with a partner. Make sure they know making changes and modifying is okay! When participants feel their boat is ready to test, move to the next step.



TEST

Set up the testing bin - a container (the bigger the better) with water, and mark a "start" and "finish" line. This will be your distance. Participants will first put their boat in the bin to test if it stays upright and floats. Then, test speed by providing a wind source and time how long the boat takes to cross the finish line. The wind source can be anything from a small paper fan to a piece of cardboard, or a powered fan (spaced away from water source). Be sure to keep it consistent for everyone. Each participant should have a minimum of three trials so there is an opportunity to learn more about scientific averages. Participants should record their data by using the *DATA FORM* that we've provided at the end of this toolkit.



CALCULATE

Participants will "race" against others in their fleet by submitting speed calculations. To calculate speed, use the formula **SPEED = DISTANCE/TIME**.

Start by measuring the distance (length) of the testing bin with participants. Participants will time how long their boat takes to cross the bin per trial. Divide the length of your bin (distance in cm) by time. Make sure to record your data on the *DATA FORM*, and include units you used.

EXAMPLE

Bin length (distance) = 10 cm

Time to sail across bin distance (time) = 2 seconds

Speed = 10 cm/2 seconds which is **5 cm/second**

MODIFY

Engineers learn from their mistakes! Change and re-test boats again and again until participants feel they have the fastest or most creative vessel. Refer to the Engineering Design Process (see diagram to right) as you work. In the official 2026 Recycle Regatta, each fleet will have a prize for fastest as well as most creative entries.

HOST YOUR OWN REGATTA

To host your own Recycle Regatta, use the last two pages of this Educator Toolkit. One is the "*RECYCLE REGATTA CHALLENGE INSTRUCTIONS*".

Print or virtually display this list so all participants can see it. The second is the "*DATA FORM*". Each vessel (individual or team) should have their own to record on. Then, set up your station and bin with water and wind source, encourage your builders, and start testing! Keep a leaderboard to track the fastest boats and decide which boats will be submitted to the official 2026 Recycle Regatta by April 30th.

THE ENGINEERING DESIGN PROCESS:



New England Science & Sailing

EDUCATIONAL
PASSAGES

North American Marine Environmental Protection Association
NAMEPA

DOCUMENT

Take a photo of each completed vessel. All participant submissions for the official entry will need to have an accompanying photo or a video of their boat for verification (photos do not need to include the individual but must include the boat). Blueprint photos are also encouraged as it is great to see the process. Previous winning designs and boats can be viewed on our website.

SUBMIT

Once participants have completed all the steps, submit official entries by using our online form between April 1st and April 30th at midnight. Facilitators can submit their participants' boats individually, or individuals can submit on their own. Visit our website for all the details.

STAY TUNED

Winners will be contacted by email and will be officially announced in May. We will also post the 2026 Recycle Regatta winners on our website and on Educational Passages' Facebook Event.

THIS ACTIVITY SUPPORTS THE FOLLOWING CURRICULUM STANDARDS

NEXT GENERATION SCIENCE STANDARDS

Grades K-2: K-PS2-2, K-ESS3-3, 2-PS1-2, K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3

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

Grades 6-8: MS-ESS3-3, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4

Grades 9-12: HS-ESS3-4, HS-ETS1-2

OCEAN LITERACY PRINCIPLES

Principle 6: The ocean and humans are inextricably linked.

Grades K-2: 6.A.1, 6.A.5, 6.C.3, 6.C.5, 6.C.6

Grades 3-5: 6.A.6, 6.B.1, 6.C.1, 6.C.3, 6.C.7, 6.C.8, 6.C.11

Grades 6-8: 6.A.10, 6.B.2, 6.D.20, 6.D.21, 6.E.7, 6.E.12

Grades 9-12: 6.D.11, 6.E.6, 6.E.9, 6.E.14

CASEL SOCIAL-EMOTIONAL LEARNING STANDARDS

Responsible Decision-Making:

- Recognizing how critical thinking skills are useful both inside and outside of school
- Reflecting on one's role to promote personal, family, and community well-being
- Evaluating personal, interpersonal, community, and institutional impacts

Self-Management:

- Setting personal and collective goals
- Using planning and organizational skills

QUESTIONS?

Full rules and guidelines, as well as the official entry form, can be found at educationalpassages.org/recycle-regatta/. You can also reach out to us directly via email at info@educationalpassages.org.





New England Science & Sailing

EDUCATIONAL
PASSAGES

North American Marine Environment Protection Association
NAMEPA

RECYCLE REGATTA DATA FORM

ENGINEER'S NAME(S):

FLEET (CHECK ONE):

MINIBOAT
(GR K-2)

OPTI
(GR 3-5)

HARTLEY
(GR 6-8)

LASER
(GR 9-12)

BOAT NAME:

SKETCH YOUR DESIGN HERE:

BRIEF LIST OF RECYCLABLE MATERIALS USED:

DATA ENTRY:

	TRIAL #1	TRIAL #2	TRIAL #3	AVERAGE
DISTANCE (cm)				
TIME (s)				
SPEED (cm/s)				
SPEED IN KNOTS (nm/hr)				

CHALLENGES YOU HAD TO OVERCOME TO SUCCEED: