eedama

Teacher Pack

Sustainability in Action

Plug-and-play activities, SDG alignment, and impact tracking.

Built for busy teachers who want real-world learning
without the admin burden.

Rethink. Realize. React.

AGES 4-7

TEACHER PACK

Teacher Pack: Ages 4-7

What's Inside

- 3 age-appropriate DIY activities with steps and materials
- Lesson-to-SDG alignment you can drop into plans
- 'Track Your Impact' as a certificate-style chart
- CTA page to book Eedama workshops and field trips

1. Set Up a Reuse Corner

Objective: To teach young learners about waste reduction and resourcefulness by creating a dedicated space for reusing materials in the classroom.

Materials:

- Two sturdy, medium-sized boxes
- Pre-made or student-decorated labels: "Paper to Reuse" and "Craft Offcuts"
- A variety of clean, safe, and reusable materials
- Child-safe scissors, glue sticks, and crayons

Step-by-Step Instructions:

1. **Introduce the Concept:** Begin with a class discussion about where trash goes and why it's important to make less of it. Introduce the idea of "reusing" as a way to give items a second life.
2. **Decorate and Label:** Have the students decorate the two boxes. Attach the labels prominently on each box.
3. **Establish the Rules:** Clearly explain the rules for the Reuse Corner. Emphasize that all items must be clean and safe.

1. Set Up a Reuse Corner (continued)

1. **Initial Collection:** Encourage students to find items from their desks or backpacks that can be placed in the Reuse Corner.
2. **Creative Craft Time:** Dedicate a 15-20 minute "Reuse Craft" session where students can only use materials from the Reuse Corner to create something new.
3. **Appoint Green Monitors:** Appoint two students each week as "Green Monitors" to ensure the corner stays tidy.
4. **Regular Integration:** Make the Reuse Corner a regular part of classroom life.

2. Sorting Relay: Rubbish vs Recycling

Objective: To help students understand the difference between recyclable and non-recyclable waste and the importance of proper sorting.

Materials:

- Mixed collection of clean waste items (paper, cardboard, plastic bottles, metal cans)
- Two large baskets or bins
- Labels: "Recycle" and "Rubbish"

Step-by-Step Instructions:

1. **Educate on Local Recycling:** Research and present a simplified version of your local recycling guidelines using visuals.
2. **Set Up the Relay:** Place baskets at one end of the classroom and create a starting line at the other end.
3. **Explain the Game:** Each student picks one item, runs to the other end, and places it in the correct basket.

2. Sorting Relay (continued)

1. **Teacher Checkpoint:** Act as the "sorting checker." If a student places an item in the wrong basket, they must go back and sort it correctly.
2. **Start the Relay:** Begin the race. Encourage teamwork and friendly competition.
3. **Debrief and Discuss:** Review the items in each basket. Discuss why certain items couldn't be recycled.
4. **Connect to Impact:** Explain how sorting waste correctly helps the environment by saving resources and reducing pollution.

3. Plant a Seed in a Reused Cup

Objective: To provide a hands-on experience with plant life cycles and demonstrate how everyday items can be repurposed.

Materials:

- Clean yogurt pots, paper cups, or small containers
- Potting soil or compost
- Easy-to-grow seeds (beans, sunflowers, or marigolds)
- Popsicle sticks or small twigs for labels
- Pencils or markers
- A tray or waterproof surface
- Small watering can or spray bottle

Step-by-Step Instructions:

1. **Decorate the Planters:** Allow students to decorate their reused cups to create a sense of ownership.

3. Plant a Seed in a Reused Cup (continued)

1. **Prepare for Planting:** Have each student fill their cup about two-thirds full with soil. Discuss the importance of soil for plant growth.
2. **Plant the Seeds:** Give each student one or two seeds. Instruct them to poke a small hole, drop the seed in, and gently cover it.
3. **Label the Plants:** Have students write their name and the date on a popsicle stick and place it in their cup.
4. **Watering:** Demonstrate how to water the seed lightly. A spray bottle is a great tool for this.
5. **Find a Sunny Spot:** Place all the cups on a tray in a sunny spot in the classroom, such as a windowsill.
6. **Track Growth:** Create a classroom "Impact Chart" where students can draw or write about their plant's growth each week.
7. **Transplanting (Optional):** Once the seedlings are big enough, discuss transplanting them into a school garden or sending them home.

AGES 8-11

TEACHER PACK

Teacher Pack: Ages 8-11

What's Inside

- 3 age-appropriate DIY activities with steps and materials
- Lesson-to-SDG alignment you can drop into plans
- 'Track Your Impact' as a certificate-style chart
- CTA page to book Eedama workshops and field trips

1. Paper Audit & Reduction Plan

Objective: To raise awareness of paper consumption and empower students to create and implement a plan to reduce paper waste in the classroom.

Materials:

- Clipboards and tally sheets for each team
- A designated recycling bin and a "Reuse Corner" for single-sided paper
- Poster paper or whiteboard for creating the class "Paper Pledge"
- Markers and pens

Step-by-Step Instructions:

1. **Form Audit Teams:** Divide the class into small teams. Each team will track paper usage in a specific area for one week.
2. **Conduct the Audit:** Provide tally sheets to record new sheets of paper used for photocopies, notebooks, and printouts.

1. Paper Audit & Reduction Plan (continued)

1. **Analyze the Data:** Have each team present their findings. Calculate the total amount of paper used and discuss the biggest sources of waste.
2. **Identify "Quick Wins":** Lead a discussion to identify easy changes like printing double-sided, using smaller fonts, or digital homework submission.
3. **Create a Paper Pledge:** Write a class "Paper Pledge" with a specific, measurable goal (e.g., "Reduce our paper use by 25%"). Have every student sign it.
4. **Develop an Action Plan:** Create an action plan with clear steps the class will take. Assign responsibilities for different tasks.
5. **Review and Revise:** Schedule weekly check-ins to review progress. Adjust the action plan as needed.

2. Build a Mini Solar Oven (No-bake Test)

Objective: To introduce the principles of solar energy and heat transfer by building a simple, effective solar oven.

Materials:

- A pizza box or shoebox with attached lid
- Aluminum foil
- Black construction paper
- Clear plastic wrap or plexiglass
- Tape and scissors (adult supervision)
- Wooden skewer or stick
- Food-safe item to test (marshmallow, chocolate, cracker with cheese)

2. Build a Mini Solar Oven (continued)

Step-by-Step Instructions:

1. **Prepare the Box:** Cut a three-sided flap in the top of the box lid, leaving a one-inch border. This flap will act as a reflector.
2. **Line with Foil:** Line the inside of the flap with aluminum foil, shiny side out. Also line the bottom of the box's interior with foil.
3. **Create the Heat Absorber:** Cover the foil on the bottom with black construction paper. Explain that black paper absorbs the sun's heat.
4. **Create the Window:** Tape a double layer of clear plastic wrap over the opening. This traps heat inside the box.
5. **Assemble the Oven:** Place the food item inside on the black paper. Close the lid and prop the reflector flap open with the skewer.
6. **Observe and Record:** Place the solar oven in a sunny spot. Have students observe and record changes over time (30 minutes to 1 hour).
7. **Discuss the Science:** Discuss reflection (foil), absorption (black paper), and insulation (trapped air). Explain how solar energy is renewable.

3. Upcycle a T-Shirt Tote (No Sewing)

Objective: To teach students a practical upcycling skill by turning an old t-shirt into a reusable tote bag without any sewing.

3. Upcycle a T-Shirt Tote (continued)

Materials:

- Old, clean t-shirts (thicker fabric = sturdier bag)
- Fabric scissors (adult supervision)
- Ruler or measuring tape
- Marker or chalk for drawing guidelines

Step-by-Step Instructions:

1. **Prepare the T-Shirt:** Lay the t-shirt flat on a table. Cut off both sleeves along the seams.
2. **Widen the Neckline:** Cut around the neckline to create a wider opening for the tote bag. This will be the top of your bag.
3. **Create the Fringe:** Turn the t-shirt inside out. At the bottom, cut vertical strips about 1-2 inches apart and 4-5 inches long.
4. **Tie the Knots:** Take two adjacent strips and tie them together in a double knot. Continue for all strips, sealing the bottom of the bag.
5. **Reinforce the Bottom (Optional):** For a stronger bag, tie each strip to the one next to it from the adjacent pair. This creates a woven, more secure bottom.
6. **Turn and Decorate:** Turn the bag right side out. The knots will now be on the inside. Students can decorate with fabric markers or paint.
7. **Showcase and Discuss:** Have a "fashion show" where students show off their creations. Discuss the problem of single-use plastic bags and how reusable bags make a positive impact.

AGES 12-16

TEACHER PACK

Teacher Pack: Ages 12-16

What's Inside

- 3 age-appropriate DIY activities with steps and materials
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1. Energy Hunt & Savings Pitch

Objective: To engage students in a real-world energy audit of their school, calculate potential savings, and develop a persuasive pitch to advocate for energy conservation.

Materials:

- A map of the school
- Clipboards and notebooks or phones for taking notes and photos
- A simple wattage list for common school devices (lights, projectors, computers)
- A calculator

Step-by-Step Instructions:

1. **Form Energy Audit Teams:** Divide the class into small teams and assign each team a specific zone of the school to audit using the school map.
2. **Conduct the Energy Hunt:** Teams will patrol their assigned zones looking for energy waste. Document findings with notes and photos.

1. Energy Hunt & Savings Pitch (continued)

1. **Calculate the Waste:** Back in the classroom, use the wattage list to estimate the amount of energy (kWh) and money (AED) being wasted. Use formula: Watts x Hours / 1000 = kWh.
2. **Brainstorm Solutions:** As a class, brainstorm practical solutions from behavior changes (e.g., "turn it off" campaign) to technology upgrades (motion-sensor lights).
3. **Prepare the Savings Pitch:** Each team will prepare a 3-5 minute persuasive pitch presenting the problem, proposed solutions, and potential savings.
4. **Present the Pitch:** Host a "Savings Pitch" event where each team presents their findings. Encourage use of visuals and data.
5. **Create an Action Plan:** Based on the most compelling pitches, create a school-wide energy conservation action plan. Assign roles and responsibilities to students to help implement the plan.

2. Circular Economy Shark Tank

Objective: To challenge students to think like entrepreneurs and design a product or service that applies circular economy principles to solve a real-world waste problem in their school.

Materials:

- Poster paper, whiteboard, or presentation software (e.g., Google Slides)
- A timer
- Optional: A collection of clean, safe waste materials from the school for inspiration

Step-by-Step Instructions:

1. **Introduce the Circular Economy:** Begin with a lesson on the circular economy, contrasting it with the traditional linear model of "take, make, dispose." Use diagrams and real-world examples.

2. Circular Economy Shark Tank (continued)

1. **Identify a Problem:** Have students brainstorm waste streams in their school. This could be food waste in the cafeteria, old electronics, or single-use plastics. Each team should choose one specific problem to tackle.
2. **Design a Solution:** Teams will design a product or service that addresses their chosen problem using circular economy principles. They should consider the entire lifecycle of their product, from sourcing materials to end-of-life.
3. **Develop a Business Case:** Guide students to think about the key elements of a business pitch. They should define their target user, outline the problem and their solution, and identify the potential positive impact (both environmental and economic).
4. **Prepare the Pitch:** Each team will prepare a 5-7 minute pitch to present to a panel of "sharks" (teachers, peers, or even local business leaders). The pitch should be clear, concise, and persuasive.
5. **Host the Shark Tank:** Set up a "Shark Tank" event where each team presents their idea. The sharks can ask questions and provide feedback on the viability and circularity of the proposed solutions.
6. **Award and Implement (Optional):** The sharks can choose a winning idea to receive a (symbolic) investment or award. If feasible, the winning team could be given the resources and support to pilot their idea at the school.

3. Water Footprint Calculator & Action Plan

Objective: To educate students about the concept of hidden or embedded water in everyday products and empower them to take action to reduce their personal and collective water footprint.

3. Water Footprint Calculator & Action Plan (continued)

Materials:

- A list of common foods, products, and their associated water footprints (e.g., a pair of jeans, a smartphone, a hamburger). This data can be researched and provided by the teacher
- Worksheets for students to calculate their own water footprint
- Poster paper or a whiteboard for creating a class action plan

Step-by-Step Instructions:

1. **Introduce the Concept of Hidden Water:** Start with a discussion about direct water use (e.g., drinking, showering) versus indirect or "hidden" water use—the water required to produce the food we eat, the clothes we wear, and the products we use.
2. **Explore Water Footprints:** Provide students with the list of water footprints for various items. In small groups, have them discuss the most surprising or shocking examples. This helps to make the abstract concept of a water footprint more concrete.
3. **Calculate Personal Water Footprints:** Distribute the worksheets and have students estimate their own daily or weekly water footprint based on their consumption habits. This personalizes the issue and provides a baseline for improvement.
4. **Identify "Swap" Opportunities:** As a class, brainstorm simple swaps that can significantly reduce their water footprint. Examples include choosing a chicken burger over a beef burger, refilling a water bottle instead of buying a new one, or taking shorter showers.
5. **Create a Two-Week Challenge:** Challenge students to choose two water-saving swaps to commit to for two weeks. They should track their progress and any challenges they face in a journal.
6. **Report Back and Reflect:** After the two-week challenge, have students report back on their experiences. Discuss what was easy, what was difficult, and what they learned. Calculate the collective water savings of the class to demonstrate the power of collective action.

Book Eedama School Programs

Bring Eedama to your school!

Book a hands-on workshop or field trip (Desert Conservation, Recycling Facility, Urban Farm, and more). We align to SDGs, tailor to year groups, and handle logistics.

www.eedama.org

Visit our website to register interest and access our school catalogue.

Our Mission

Eedama's mission is to empower individuals, organizations, and governments with the knowledge and tools to create positive change. By fostering understanding and action, we aim to build a society where everyone has the capacity to make a meaningful impact on their environment.

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