

**Topic:** Sustainable Resource Management

**Grade Level:** 6th Grade (Age 12)

**Duration:** 90 minutes

**Learning Objectives:**

- Understand the principles of sustainable resource management
- Identify ways to reduce waste in daily life
- Develop practical solutions for resource conservation
- Create action plans for community involvement

✓ Waste audit sheets

✓ Recycling bins

✓ Digital scale

✓ Sample materials for sorting

✓ Resource cards

✓ Action plan templates

✓ Interactive whiteboard

✓ Student journals

## Introduction (15 minutes)

"Imagine waking up one morning to find your house completely filled with everything you've thrown away in the past year. What would that look like? How would you feel?"

*[Allow 30 seconds for students to visualize and reflect]*

Opening Activity: "Trash Timeline"

- Students create timeline of their waste from morning to night
- Share and discuss patterns in small groups
- Identify potential areas for reduction

**Engagement Strategies:**

- Use dramatic statistics about waste
- Show before/after images of landfills
- Connect to students' daily experiences

## Understanding Resources (20 minutes)

"Resources are like the ingredients for life on Earth. Let's explore what makes something a resource and why they're so precious."

*[Display resource classification diagram]*

**Interactive Classification Activity:**

1. Divide class into resource detective teams
2. Distribute resource cards to each team

3. Teams sort resources into categories:

- Renewable vs. Non-renewable
- Natural vs. Manufactured
- Essential vs. Non-essential

**Address Common Misconceptions:**

- "Renewable means unlimited"
- "Recycling solves all waste problems"
- "Individual actions don't matter"

## The 3Rs Revolution (25 minutes)

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"Welcome to the 3Rs Revolution! Today, we're going to become change-makers by mastering the art of Reduce, Reuse, and Recycle."

*[Set up 3 stations in the classroom]*

### Station Activities:

#### Station 1: Reduce Challenge

- Audit lunch packaging waste
- Design waste-free lunch solutions
- Calculate potential waste reduction

#### Station 2: Reuse Innovation

- Transform common waste items
- Design upcycling projects
- Create sharing economy solutions

#### Station 3: Recycle Investigation

- Sort materials correctly
- Track recycling journey
- Calculate environmental impact

### Differentiation Strategies:

- Visual learners: Provide sorting charts and diagrams
- Kinesthetic learners: Hands-on sorting activities
- Advanced students: Calculate environmental impact metrics
- Support needed: Simplified sorting categories

## Waste Detective Activity (20 minutes)

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"Now that we understand the 3Rs, let's become waste detectives and investigate our own impact!"

### Investigation Process:

1. Form detective teams (4 students each)
2. Distribute waste audit sheets
3. Conduct mock waste audit
  - Weigh different waste types
  - Record findings
  - Analyze patterns
4. Present findings to class

**Facilitation Notes:**

- Ensure safety with clean, pre-selected waste items
- Guide proper use of digital scales
- Encourage scientific observation
- Support data recording accuracy

## Action Planning (20 minutes)

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"Great detectives don't just find problems - they solve them! Let's create action plans to make real change."

### Action Planning Framework:

1. Individual Goals
  - Personal waste reduction targets
  - Daily habit changes
  - Weekly monitoring plan
2. Family Involvement
  - Family meeting agenda
  - Home audit plan
  - Shared commitments
3. School Initiatives
  - Classroom recycling system
  - Waste-free lunch program
  - School-wide campaigns

### Extension Activities:

- Create digital waste tracking app
- Design school recycling program
- Develop community awareness campaign

## Assessment and Reflection (10 minutes)

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"Let's reflect on our journey as resource managers and waste reduction experts."

### Assessment Methods:

- Exit Ticket Questions:
  - What surprised you most today?
  - Which 'R' will be easiest/hardest to implement?
  - How will you share this with your family?
- Action Plan Review
- Peer Feedback Session

### Homework Assignment:

- Complete family waste audit
- Document one day of waste reduction
- Create family action plan

- Share results on class platform