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WRITTEN LESSON PLAN

PERSONAL PLASTIC FOOTPRINT

Age group: 12–15 years
Duration: 45 minutes of classroom activities, plus one week of personal logging. Schedule the comparison after students have recorded data.
Topic: Understanding and reducing everyday plastic consumption

Learning objectives

- Record plastic items used during a week, including type, quantity and context.
- Use an online footprint calculator as a comparison tool and identify differences from personal records.
- Create and interpret a class chart of plastic use, using anonymous or group-level data.
- Propose and commit to one realistic change in personal plastic consumption.

Materials and teacher preparation

- Personal Plastic Log worksheet (included below), printed or digital; pencils or pens.
- Computer or tablet with internet access and projector or screen.
- Plastic Bank Plastic Footprint Calculator: https://plasticbank.com/plastic-footprint-calculator/ (check availability and suitability before class).
- Shared Google Sheet for anonymous or group totals; Google Sheets charts or Canva for data visualisation.
- Sticky notes, markers or a Padlet board for brainstorming.
- Prepare a spreadsheet with columns: category, number of items, group or class total. Show a sample chart before students enter data.

DETAILED LESSON PROCEDURE

1. Introduction · 5 minutes

- Introduce “plastic footprint” as a way to consider how much plastic we use and discard. Ask students to name plastic items they used today.

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- Show the Plastic Bank calculator interface and explain that it asks about lifestyle and consumption habits.
- Discuss: “Why might using a calculator like this help you understand your personal impact more clearly?”

2. Plastic Use Logging · 10 minutes + one week

- Distribute the Personal Plastic Log. Demonstrate an example: “Plastic snack wrapper | packaging | 1 | school snack”.
- Clarify categories: food packaging, disposable items, bottles, bags and other plastic items. Explain how to record repeated items consistently.
- Students record the plastic items they use during the next seven days, noting item type, quantity and context.
- Remind students that the purpose is observation, not judgement. Do not require them to buy anything or photograph private spaces.

3. Calculator Comparison and Data Entry · 10 minutes (after logging has begun)

- Individually or in pairs, students use the Plastic Bank calculator to estimate their footprint, where access is available.
- Students compare the estimate with their personal logs: which categories appear in both, and what is measured differently?
- Enter anonymous category totals into a shared Google Sheet. Create a pie chart or bar chart showing group or class consumption patterns.
- Ask students to identify the largest category and explain why a calculator estimate may differ from a one-week item count. If the calculator is unavailable, use a teacher-prepared example estimate and retain the comparison task.

4. Group Discussion and Brainstorming · 15 minutes

- In small groups, compare calculator estimates with recorded data. Ask: “Where are the major differences?” and “What surprised you about the numbers?”
- Each group identifies the main sources of plastic use and suggests at least three realistic ways to reduce unnecessary single-use plastic.
- Record suggestions on sticky notes or Padlet. Discuss whether each change is affordable, convenient and possible in the students’ circumstances.
- Groups select one recommendation to share with the class and explain why it could make a difference.

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5. Wrap-Up and Reflection · 5 minutes

- Each student shares one insight from the calculator comparison or their recorded data.
- Students write a personal pledge naming one specific behaviour they will try to change in the coming week.
- Agree on a simple way to check the pledge later (e.g. count disposable bottles used during the next week).

READY-TO-USE STUDENT MATERIALS

Worksheet A · My 7-Day Plastic Log

- Name or anonymous code: _____ Week: _____
- For each entry, complete: Day/date | Plastic item | Category | Quantity | Where/why used | Possible alternative.
- Example: Monday | Snack wrapper | Food packaging | 1 | School break | Reusable snack container.
- Day 1: _____
- Day 2: _____
- Day 3: _____
- Day 4: _____
- Day 5: _____
- Day 6: _____
- Day 7: _____

Worksheet B · Calculator and Data Comparison

- Plastic Bank calculator result and unit (if available): _____
- My log total for the week (number of recorded items): _____
- My most common plastic category: _____
- What does the calculator estimate that my log may not measure? _____
- What differences did I notice? _____
- Why should I avoid treating these two numbers as directly equivalent? _____

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Worksheet C · Reading Our Class Chart

- Chart type: bar / pie largest category: _____
- One pattern I notice: _____
- One possible explanation for this pattern: _____
- One action our class could take: _____

Worksheet D · Group Ideas and Personal Pledge

- Our group's three ideas: 1. _____ 2. _____ 3. _____
- The most realistic idea is _____ because _____.
- My personal pledge: "Next week I will _____ instead of _____."
- How I will check my progress: _____
- Reflection after one week: What worked? What was difficult? _____

Assessment and success criteria

- The personal log contains dated entries with type, quantity and context of plastic use.
- The student can explain a meaningful difference between calculator estimates and diary records.
- The student can read the shared chart and identify a pattern.
- The group proposes practical reduction strategies; the personal pledge is specific and measurable.

Differentiation, safety and follow-up

- Support: provide example entries, a category word bank, and the option to work with a partner or teacher-prepared sample data.
- Challenge: calculate category percentages or compare two weeks, while noting that counts are not the same as plastic mass.
- Privacy: use anonymised class data; avoid uploading names or personal lifestyle details to third-party tools without appropriate school permissions.
- Follow-up: revisit the personal pledge after one week and compare results.

Expected learning outcomes

- Greater awareness of personal plastic consumption through logging and calculator comparison.

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- Better understanding of how individual habits compare with broader estimates and group patterns.
- Motivation to adopt specific, realistic habits that reduce unnecessary plastic use.

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