LESSON PLAN

Mobility: Rethinking the daily school commute

Age Level: 12–18
Duration: 8-10 hours of lessons
Role of teacher: Coaching, guiding, moderating
Role of student: Taking agency, acquiring knowledge and skills, collaborating, reflecting

Learning objectives

- Understand the environmental, social, and health impacts of current school commuting habits.
- Identify challenges related to safety, sustainability, and accessibility in school mobility.
- Produce an evidence-based proposal that responds to the municipality's call.
- Present and refine a final solution after structured peer and/or expert feedback.

Skills development

- Critical thinking
- Exploratory investigation
- Data interpretation
- Collaboration and communication
- Empathy and stakeholder analysis

Nb: Teachers can explore the Teacher Training on Skills HERE to select those most appropriate.

Materials needed

- Laptops or tablets
- Access to local maps, mobility apps, or online GIS tools
- Projector for videos/slides
- Smartphones for documenting routes (optional)

Relevant YSC Knowledge Pills:

- Introduction to mobility in cities

Didactic objective of lessons:

Lessons	Phase	Didactic objective
Lesson 1	**Explore**	Engage students in understanding urban mobility challenges and exploring alternatives to private vehicle use by introducing key concepts through the Knowledge Pill on Mobility, and ensuring everyone reaches a shared foundational understanding of the subject**.**
Lesson 2-6	**Research, Analyse, and Ideate**	Guide students to identify what empirical evidence is needed, collect and analyse it, and use their findings to develop a proposal that is feasible, sustainable, and beneficial in delivering safer, cleaner, and more sustainable school commutes.
Lesson 7-8	**Present, Feedback, Reflect**	Support students as they present their proposal, gather feedback from peers, experts or stakeholders, and reflect critically to refine and improve their final product.

Nb: timeline is flexible

Problem-Oriented Learning Situation on School Mobility

Driving Question:
How can we redesign the daily commute to school to make it cleaner, safer and more sustainable for everyone?

Scenario:
Many municipalities report growing concerns linked to school mobility. During morning and afternoon peak hours, heavy car traffic creates bottlenecks around school entrances, increasing air pollution, reducing visibility and making streets unsafe for pedestrians and cyclists. In some areas, public transport may not be frequent or reliable enough, and safe cycling or walking routes are missing or poorly maintained. To address these issues, the municipality has launched a call for ideas, inviting students to examine their own travel experiences, identify local challenges and propose practical improvements that make everyday journeys safer, more efficient and environmentally friendly.

Task:
Students explore mobility in their local context and examine how the daily commute to school could be improved to make it cleaner, safer and more sustainable. Working in groups, they select one route, area or mobility challenge and develop a clear, evidence-based proposal that responds to the driving question. Their work should reflect realistic and meaningful ideas based on local needs.

LESSON OUTLINE

LESSON 1 – Explore (1 lesson)

Introduction to School Mobility

Objective: *Students develop a shared understanding of urban mobility challenges and opportunities, recognise how different transportation choices vary in sustainability, and acquire the foundational knowledge needed for their project.*

Opening Discussion

Teacher Action:

- Ask: "How do you currently get to school, and what challenges do you face along the way?"
- Write down key themes (traffic, pollution, road safety, public transport reliability, accessibility).
- Introduce different stakeholder perspectives (students, parents, drivers, cyclists, bus companies, local authorities).

Student Action:

- Share commuting experiences.
- Identify who is affected and how.

Why:
Builds a shared baseline and engages students emotionally and personally with the problem.

Short Presentation on Sustainable Mobility

Teacher Action:

- Show the video: Cities rise to the challenge: Sustainable Mobility
- Ask comprehension questions linking examples to the students' city context.
- Highlight challenges like moving from private to public/shared mobility forms, different types of sustainable mobility options, benefits of alternative modes of transport, and challenges in changing citizens' mindset regarding urban mobility
- Guide students towards examples of more sustainable mobility options like: walking, cycling, trains and light rail, e-buses etc.

Student Action:

- Observe and take notes.
- Relate video examples to their city context.

Why:
Provides factual background and introduces a range of possible solutions that help introduce safe, sustainable school mobility.

Introduce the Learning Situation & Driving Question

Teacher Action:

- **Present the driving question:**
  How can we redesign the daily commute to school to make it cleaner, safer and more sustainable for everyone?
- **Present the task:**
  Explain to the students that they will prepare and submit a proposal outlining creative solutions for improving their commute to school, making it cleaner, safer and more sustainable (see full description of task above).
  Emphasise that their work must follow an enquiry-based approach to ensure their proposals are grounded in solid, evidence-based reasoning:
  Explore → Research → Analyse → Ideate → Present → Reflect

Student Action:

- Read the Knowledge Pill on Mobility.

Why:

- Frames the challenge and ensures students have the basic knowledge needed and understand the task before starting research.

LESSONS 2–6 — Research, Analyse, and Ideate

Objective: *In smaller groups (3-4 persons), students gather evidence, analyse it, and develop potential solutions based strictly on* ***research and analysis.***

Nb: *Remind students that effective project management, including careful planning, clear role allocation, and setting realistic deadlines, is essential for completing their work efficiently.*

Step 1: Research & Evidence Collection (Lessons 2–3)

Teacher Action:

- Explain the types of evidence needed:
  - **First-hand evidence:** surveys, interviews, or focus groups with residents, schools, or local stakeholders.
  - **Second-hand evidence:** Knowledge Pills, reliable reports, academic studies, newspaper articles, or statistics.

- Emphasise that **no solution ideation should begin before evidence is collected and analysed**.

Student Action:

- Determine what evidence is needed for the task.
- Collect first-hand evidence: stakeholder input, surveys, interviews.
- Collect second-hand evidence: YSC KPs, research studies, government or NGO reports, news articles.

Why:

- Gathering reliable evidence ensures that proposed solutions are grounded in facts and local context rather than assumptions.

Step 2: Analyse Evidence (Lessons 4–5)

Teacher Action:

- Guide students to make sense of collected data: identify patterns, needs (i.e., dangerous crossings, overcrowded bus stops, lack of bike racks), constraints, and priorities (budget, space, existing infrastructure)
- Help students summarise findings visually (charts, tables, diagrams).

Student Action:

- Analyse collected data to identify key insights about:
    - **Where** are the problem points?
    - **Who** is impacted: residents, schools, businesses
    - **Why** do problems exist (pollution, safety risks, poor infrastructure)?
    - **How** can changes realistically be implemented?

Why:

- Critical analysis ensures that solutions are based on verified needs and context-specific evidence.

Step 3: Ideate Evidence-Based Solutions (Lesson 6)

Teacher Action:

- Encourage students to propose solutions **based on empirical evidence and analysis**.
- Ensure solutions address feasibility, sustainability, and community/environmental benefits.

Student Action:

Produce a proposal including:

- A map or diagram of the chosen problem area or route
- Describe the current commuting challenges

- Identify the motivation for change and vision for improvement
- Present clear solutions (safer crossings/bike lanes, car-free school streets, better bus timetables or shelters, incentive programs for walking or cycling)
- Identify stakeholders' priorities and outline the impact of change (students, parents)
- If maintenance is needed for the success of the project, present a plan identifying how the new space will be maintained (refer to smart tools and community engagement where relevant).

Why:

- Guarantees that design proposals are grounded in evidence, are practical, and socially and environmentally responsible.

LESSONS 7-8 — Present, Feedback, Reflect

Objective: *Students present proposals, receive feedback, and refine final solutions.*

Presentation & Feedback (Lesson 7)

Teacher Action:

- Explain that peer and expert review are important when preparing a proposal; they help improve the overall quality of the end product.
- Facilitate presentations to class or panel.
- Encourage external feedback from community members, parents, experts or other students.

Student Action:

- Present proposals using visuals and clear explanations.
- Reflect on feedback and make adjustments where needed.

Reflection Prompts:

- What have we learned?
- What does it mean for the future school commuters?
- What did peers/stakeholders like/dislike? Why? Can these be accommodated?
- Did everyone succeed in delivering their assignments?
- What can be improved next time?

Why:

- Reflection and feedback improve solution quality and develop metacognitive and collaboration skills.

Final Submission & Voting (Lesson 8)

Teacher Action:

- Collect refined proposals
- Facilitate voting or a mock municipal review.

Student Action:

- Submit final proposal.
- Vote for the strongest solution based on evidence, feasibility, and stakeholder impact.
- Submit proposals to your local authority

Optional Extensions

- **Field Trip:** Observe a school route at peak time to evaluate safety and traffic.
- **Guest Speaker:** Urban mobility expert, traffic officer, or environmental NGO representative.
- **Simulation:** Use mapping software to model route changes.