YOUNG SMART CITIES

Co-funded by the European Union

Student Worksheet: Smart Mobility

Name	Class	Date

Big Question: How can cities make moving people around cleaner, safer, more accessible, and less dependent on private cars?

Smart mobility combines sustainable transport, technology, and inclusive planning. It can include public transport, walking and cycling, micromobility, shared mobility, trams and light rail, Mobility as a Service, electric vehicles, and real-time transport information.

Lesson 1: What Makes Mobility Smart?

Activity 1: Mobility Starter

Think about mobility in your city. Choose the three biggest mobility challenges it currently faces.

Mobility priority		Mobility priority	
Less congestion		Safer walking and cycling	
Cleaner air		More equitable access	
Lower emissions		Better real-time information	
More public transport		Less reliance on private cars	

My/our top mobility priority for our city is: _____

Outline why it matters and who is affected:

_____

_____

_____

Activity 2: Which Mobility Type?

Classify each example using a category from the article: private, public, micromobility, shared mobility, trams/light rail, or MaaS. Then explain one advantage or challenge.

Mobility example	Type	Advantage / challenge
Electric tram		
City bus		
Real-time public transport tracking		
Car-sharing service		
Privately owned car		
App combining bus, train, bike and car-share		
Bicycle or e-bike for a short trip		

Choose one example. How could it reduce car dependency or improve access?

_____

_____

_____

Activity 3: Smart Mobility Vocabulary

Match each term to the correct definition.

Term	Definition
1. Micromobility	A. A digital platform that combines planning, booking, and payment across different transport modes.
2. Shared mobility	B. Transport open to everyone, such as buses, trams, subways, and trains.
3. Mobility as a Service (MaaS)	C. When people cannot use a service because they lack devices, internet access, or digital payment options.
4. Public transport	D. Small personal vehicles such as bicycles, e-bikes, and e-scooters for short trips.
5. Digital exclusion	E. On-demand access to vehicles or rides without owning them.

Answers: 1 = ___ 2 = ___ 3 = ___ 4 = ___ 5 = ___

Activity 4: Citizen First Mobility

Choose one mobility problem from Activity 1. Explain how different groups could be affected.

Citizen group	How are they affected?
Young people	
Older people	
People with disabilities	
Low-income households	
People without smartphones/internet	
People living outside central areas	

Most important inclusion insight you have observed:

_____

_____

_____

Lesson 2: Design a Smart Mobility Solution

Activity 5: Mobility Solution Lab

Choose one challenge for your team.

Challenge	Tick
Reduce dependence on private cars	
Improve reliability of public transport (time, change of modes, accessibility)	
Create safer cycling routes	
Expand micromobility safely	
Improve shared mobility access	
Integrate transport with MaaS	
Reduce digital exclusion	
Other: _____	

Activity 6: Build Your Mobility Idea

Which transport or digital tools will you use? Tick all that apply.

Tool	Tick	Tool	Tick
Improve public transport		Expand trams/light rail	
Expand walking and cycling routes - and make them safer		Connect services through MaaS	
Provide safe micromobility options		Improve real-time travel information	
Improve shared mobility options		Improve digital ticketing and route planning	

Give a brief outline of how your solution works:

_____

_____

_____

Identify who benefits from the solution:

_____

_____

_____

Outline how it reduces emissions, congestion, or car dependency:

_____

_____

_____

Outline how you will keep the service accessible and inclusive:

_____

_____

_____

Identify what could limit the solution. Tick at least two items.

Consideration	Tick	Consideration	Tick
High infrastructure cost		Ongoing maintenance needs	
Public support or trust		Could anyone be disadvantaged?	
Digital exclusion		Unequal access between neighbourhoods	
Does it meet citizens' needs?		Other: _____	

Explain how you will reduce these challenges:

_____

_____

_____

Activity 7: Draw Your Prototype

Draw your smart mobility idea. Show the route or transport modes, any digital tools, who uses it, how it connects with other transport, and one inclusion feature.

Activity 8: 60-Second Pitch

Prepare a 60-second pitch for your idea by addressing each of these 6 steps:

Starter	Notes
1. The mobility problem is	
2. Our solution is	
3. It changes travel by	
4. Technology/data helps by	
5. It is accessible and sustainable because	
6. One challenge is, and we address it by	

Activity 9: Peer Review

Ask your peers for feedback on your pitch, addressing these 4 steps:

Question	Feedback
Strongest part of the mobility idea	
Who gains better access?	
Does it reduce CO2 emissions and pollution?	
One improvement suggestion	

Exit Ticket

Complete these sentences to show what you understand about smart mobility.

Sentence starter	Complete the sentence
Smart mobility is not only about technology because	
One example of shared or public mobility is	
Digital exclusion matters because	
My favourite mobility idea from today was	

Teacher Notes

Learning objectives

- Explain how smart mobility can reduce congestion, emissions, and car dependency.
- Distinguish private, public, micromobility, shared mobility, and MaaS.
- Consider access, digital exclusion, cost, policy, and public trust.
- Design an inclusive mobility solution using transport and digital tools.
- Explain or ask students to read the YSC Knowledge Pill: https://youngsmartcities.com/learn/smart-mobility/

Suggested timing

Lesson	Timing
Lesson 1	10 min Activity 1 | 20 min Activity 2 | 10 min Activity 3 | 15 min Activity 4
Lesson 2	10 min Activity 5 | 20 min Activity 6 | 15 min Activity 7 | 15-20 min Activities 8-9 | 5 min Exit Ticket

Differentiation

Younger students: use familiar travel modes and focus on one clear benefit. Older students: ask students to compare benefits with access, cost, data, and implementation challenges and to define how they would measure success over time.