

Student Teaching: Positive Externalities

How this task runs across two lessons

Today, in class: Get into workable groups built around your focus, read your resources (textbook + attached article) and prepare how you will teach your focus to one other individual— diagrams on paper, discussion questions, a mini quiz, a half-drawn diagram for them to finish, whatever works.

Next class: Pair up with someone from the other group and teach each other.

Task: Peer teaching

Group One	Group Two
Focus: Positive externalities of production <i>Case study: solar power</i> What you need to teach • Key definitions • Welfare loss • Diagrams • Calculations (HL only — Mr O'Donnell will cover this later) • Examples • Solutions for correcting positive externalities • How to draw solutions on a diagram • Evaluating different solutions Resources • Textbook chapter on positive externalities • Attached article (Appendix A): "Why farmers in California are backing a giant solar farm", NPR	Focus: Positive externalities of consumption <i>Case study: cycling to work</i> What you need to teach • Key definitions • Welfare loss • Diagrams • Calculations (HL only — Mr O'Donnell will cover this later) • Examples • Solutions for correcting positive externalities • How to draw solutions on a diagram • Evaluating different solutions Resources • Textbook chapter on positive externalities • Attached article (Appendix B): "Cycle to Work Scheme found to deliver annual benefits of £573m to UK economy", BikeRadar

How to teach each other

Try to teach each other by doing — don't just talk at each other and read out the dot points. Make the other person do the diagrams. Get them to draw it and ask them questions to check their understanding. Make them explain things back to you. Teach like you'd want to learn!

Have your materials ready before Lesson 2: blank paper for them to draw diagrams on, a half-drawn diagram for them to finish, a short quiz, or some questions to test their understanding. It's up to you — teach me how to teach.

Why farmers in California are backing a giant solar farm

By Dan Charles, NPR — 26 February 2026

A mammoth solar farm is moving forward in the heart of California. If built, which seems increasingly likely, it would cover 200 square miles of land and generate 21,000 megawatts of electricity, enough to power entire cities. Huge batteries will store some of that power until it's needed most.

Farmers are among the project's backers. They don't have enough water to grow crops on big chunks of their land, and they're looking for new uses for it.

"We're farmers, and we would rather farm the ground," says Ross Franson, president of Woolf Farming and Processing, his family's business. "If we had the water to do it, we would farm it. But the reality is, you don't. You have to deal with the cards you're dealt."

Franson is on the board of the Westlands Water District, a farmer-run organisation that is a key player in this effort, negotiating with solar companies and government regulators on behalf of its members.

These farmers are now facing a new water crisis. A canal has been delivering less water in recent years because of droughts and competing claims on that water. Until recently, farmers had a backup supply: they could pump water from aquifers a thousand feet underground. Now, a new state law is coming into force that bans overpumping from the aquifer.

So farmers in the district have been leaving large chunks of land unplanted. A solar developer called Golden State Clean Energy saw the opportunity, presenting the water district with a master plan for a collection of vast solar projects.

Patrick Mealoy, a partner at Golden State Clean Energy, says the project had to be large enough to justify building new, multibillion-dollar power lines to carry electricity from the valley to Los Angeles and Silicon Valley. If built, the cost of those power lines — along with the benefits of greater electricity supply — will eventually show up in consumers' electricity bills.

About 150 farmers within the district have signed up to put solar on some of their land. "We look at it as a new crop. We're harvesting electricity," says farmer Jeremy Hughes. The guaranteed income makes it possible for him to keep farming the rest of his land.

In the small towns nearby where many farmworkers live, however, there are worries that local residents won't see many benefits from the project. Rey León, mayor of the town of Huron, wants some of the solar revenue to flow to the community for education and training, to help people find jobs in the new solar industry. "We are shareholders," he says. "We kept these communities alive, these economies robust. There's no excuse to leave us out." The water district and Golden State Clean Energy have been discussing a community benefits package, but no details have been released.

Caity Peterson, of the Public Policy Institute of California, says other farming communities in the state may try to copy what is happening here, since they too will have to stop pumping so much water from the ground as the new law takes effect.

Source: Dan Charles, "Why farmers in California are backing a giant solar farm," NPR, 26 February 2026, [npr.org](https://www.npr.org).

Cycle to Work Scheme found to deliver annual benefits of £573m to UK economy

By Paul Norman, BikeRadar — 23 October 2025

It has been over 25 years since the UK Cycle to Work scheme was introduced, enabling employees to use salary sacrifice to purchase bicycles and e-bikes, as well as cycling equipment for their commute.

The Cycle to Work Alliance, a consortium that includes Halfords, Evans Cycles, Perkbox, Cycle Solutions and Cyclescheme, commissioned independent research to quantify the scheme's benefits.

The total annual financial benefit is assessed at £573 million, in addition to reductions in congestion and transport emissions, which were not quantified.

The numbers break down into cost savings for commuters, increased workforce productivity, retail income from new bike purchases, and the accompanying tax revenue.

Local transport minister Lilian Greenwood said: "The Cycle to Work Scheme has been a real success story, helping millions of people choose a healthier, greener way to travel while boosting local economies and supporting jobs."

Commuting cost savings

The research evaluated the saving to employees who switched from commuting by car to using a bike at £1,262 a year. Around 80% of participants say they now cycle every week, up from 40% before joining the scheme.

Productivity increases

There is an estimated economic benefit of £37 million across the UK economy. This comes from reduced absence through sickness, valued at £63 per person per year, and improved attendance, estimated at £115 per person per year.

Retail income

Bikes, accessories and cycle clothing worth £219 million were purchased via the scheme in 2023/24. HM Treasury also benefits, with £43.8 million of VAT collected on those purchases.

200,000 participants a year

In 2023/24, 199,000 employees used the scheme, a number that rose by 10,000 in 2024/25. Since its launch, the scheme has been used by more than 2 million riders — 38% of whom are new cycle commuters.

Source: Paul Norman, "Cycle to Work Scheme found to deliver annual benefits of £573m to UK economy," BikeRadar, 23 October 2025, bikeradar.com.