

**Tomorrow's
Engineers Week**

Schools COP

Lesson: COP26 and future careers

Year: KS3 **Date:**

Topic: PSHCE/Careers/Geography/Science

Learning objective and outcome

By the end of today's lesson, students will understand:

- What COP26 is
- How climate change will affect you in the future
- How future careers could help to solve the problems caused by climate change

Introduction (10 min)

Access prior knowledge: Powerpoint slide 1 has a multiple choice 'call my bluff' style question asking what COP stands for. Hands up for each option. Reveal correct answer and details on slide 2.

For students who need some more information about what climate change is, use slide 3 to summarise (short explanatory clip from the BBC news website) then move on to slide 4.

For students who are already familiar with climate change, move on to slide 4, a **Think, Pair, Share** activity where students are encouraged to discuss their initial ideas about what climate change may mean for them in the future.

Film viewing

(up to 20 mins)

Students view the Tomorrow's Engineers Week Schools COP film which demonstrates some ideas that young people have already had to tackle climate change and how engineers (and engineering careers) can help achieve net zero.

The film is 20 minutes, but if time is short, you could view the 1 minute trailer which just gives a taster of the ideas young people have.

Both films will be on the website.

Long version:

tweek.org.uk/schools-cop-film

Short version:

tweek.org.uk/schools-cop-trailer

Follow-up activity

(depending on time available)

Explain that COP26 has a variety of goals to achieve. These are summarised here: ukcop26.org/cop26-goals. In the following activity, students are going to think about how their future jobs could help to achieve these goals. Split the class into 4 groups to consider:

- What YOU can do to tackle climate change in your future career
- What YOUR SCHOOL or LOCAL COMMUNITY could do to tackle climate change
- What THE COUNTRY needs to do to tackle climate change
- What ENGINEERING solutions do you think could tackle climate change

At the end of this plan (page 8 to 11) are suggested questions for each group to consider.

If this approach seems too vague for your students, you could look to focus on topics, such as:

- renewable energy
- curtail deforestation
- speed up the switch to electric vehicles
- protect and restore ecosystems
- build defences and warning systems to avoid loss of homes, livelihoods and even lives

The teacher may wish to make the selection beforehand depending upon the ability and prior knowledge of the group. The goals are bullet pointed on slide 6 and 7.

Follow-up activity

(depending on time available)

Split the class into smaller groups for a carousel discussion activity.

Each smaller group is allocated one of the goals and given a large sheet of paper. They should put themselves in the roles of a scientist, engineer or designer and spend a few minutes generating ideas about the skills and future jobs which will be required to achieve that COP26 goal. They can mind-map/spider-diagram their ideas (each group should nominate a scribe).

Their ideas may include things that they have seen in the Schools COP film as well as new ideas of their own.

When the time is up, the groups will go on tour around the various goal stations where they review what each group has written down.

The teacher should gauge how much time is needed at each carousel station to maintain pace and engagement.

Plenary

When the groups have made it back to their original stations, take whole class feedback on what has been learned and discussed during the session through a class debate with the teacher in the chair: prompt questions are given on slide 9.

Now it's time to vote on what you think the priorities should be from the ideas discussed in the broadcast. If you did not watch the full broadcast, vote on the ideas you have discussed in class to identify the most important. Teacher (or a nominated student) records vote results and summarises class discussions on the feedback form.

Please complete the follow-up feedback form at teweek.org.uk/schools-cop-survey
For more inspirational stories of net zero engineers visit teweek.org.uk

Key words

COP26

Climate change

Resources

- A projector and screen to show the PowerPoint slides and broadcast/film.
- Large sheets of paper and marker pens for the carousel discussion activity.
- To take this lesson further, there are a variety of resources available at Neon (neonfutures.org.uk)

Questions for smaller groups to consider:

Topic 1: Youth & Public Involvement

- What kind of things could you be working on as an engineer in 10 years' time, to help reduce the impact of climate change?
- What can schools do to encourage young people to take subjects which can help tackle climate change?
- What would you say to your peers to get them interested in a career in helping meet net zero?
- What skills will we need as a workforce to tackle climate change and achieve net zero?
- How do we get people interested in a job that will help achieve net zero?

Topic 2:

Science & Innovation

- What inventions do you think could help achieve net zero?
- What inventions do we need to reverse climate change?
- What skills will we need to come up with solutions to climate change?
- What is stopping us creating ideas that will achieve net zero?
- How do we get people interested in a job that will help achieve net zero?

Topic 3:

Nature, Cities, Regions
& the Built Environment

- How do we improve our rural areas and protect wildlife from climate change?
- What will cities of the future look like?
- How will the built environment affect my career choices?
- What skills will we need to come up with ideas to make the changes we need to see happen?
- What is stopping us creating ideas that will achieve net zero?
- How do we get people interested in a job that will help achieve net zero?

Topic 4:

The Climate Crisis and me

- What do you see changing around you?
- What is the biggest impact of climate change going to be on you and your friends?
- What do you think you could do in your career to stop the worst excesses of climate change?
- Will this affect your career choices?
- What is stopping you pursuing a career that will achieve net zero?
- How do we get people interested in a job that will help achieve net zero?