

A4 ACTIVITY 4: EXPLORING ELECTRIC VEHICLES (EVS)

Background

Petrol and **diesel** have been the principal transport fuels ever since the invention of the **internal combustion engine** in the late nineteenth century. This tradition relies on **fossil fuels** and creates **CO₂**. Today we are looking for alternatives. **Battery powered motors** already exist, but the limited achievable travel distance means that electric cars are not yet rivalling **petrol** or **diesel** cars in terms of practicality or performance.

Since the first safe prototype, a **lithium ion battery**, was built in 1985, the replacement of petrol or **diesel** powered vehicles with electric alternatives has become increasingly likely.

In this activity students **compare and contrast** an **electric car** with a **petrol** or **diesel** one.

Suggested approaches:

- Ask students to brainstorm about their understanding of electric cars in groups. A summary of ideas could be written up for further reference.
 - Show the [Science Squad video](#) available on the SEAI site. After seeing the video the students can revisit the earlier discussion and see how the video affects their original findings.
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What to do:

1. Divide the class into three groups:

Group A is the sales group. The members must devise a campaign to sell an electric car like the LEAF and present a sales pitch to the class.

Group B is another sales group. They are selling traditional cars and must draw up a number of arguments against electric cars in favour of petrol driven cars. They must present a sales pitch focusing on the advantages of traditionally powered cars over electric vehicles.

Group C is a client group. The members do not know whether to buy an electric car or a traditional car. They must draw up a list of questions for the sales groups.

2. Using the [SEAI](#) programme [Aran Island Electric Vehicle](#) as their case study, and drawing on other **resources**, each group should write a summary of the programme, describing it from their assigned viewpoints.

The groups should present their cases to the class within a given time frame, and this should be followed by a questions-and-answers session.

3. The groups can disperse, and a final discussion can take place where students give their individual opinions about electric vehicles and the teacher evaluates the presentations with the class.
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Resources:

- The [Aran Island Electric Vehicles](#) webpage is essential to the task.
- [Click here](#) for a pdf booklet on the Aran Islands Electric Vehicles programme.
- The [ESB webpage on electric cars](#) could prove useful.
- [Click here](#) for RTE coverage of electric cars, including the Aran Island project.