



Cross-curricular educational projects

7e and 6e classes • Observe, investigate, tell the story

Äerdschëff asbl • Sep 12, 2026

At a glance

How can an everyday situation become a collective investigation? These five projects connect science, languages, the arts and school life. Pupils measure, compare and produce records before proposing an action. Each proposal preserves the intention of the original document and sets out the learning, presentation and practical requirements.



What pupils will learn

- Plan an observation, keep a record and explain what conclusions it supports.
- Connect knowledge from several subjects to a concrete situation.
- Discuss a proposal and revise it in response to results and objections.

Scope and status

Educational proposals for 7e and 6e classes. The choice of subjects, working languages and assessment criteria must be agreed with the teaching team according to the ESC or ESG stream. These projects do not constitute an officially approved curriculum.

Reading guide

- Understand the approach and choose a project
- Put the five proposals into practice
- Organise follow-up and find the resources

The suggested teaching time is shared between subjects. Each project can be run separately. Results will be documented after the projects have been tried out.



1. Understand the approach

1.1 An investigation rooted in everyday life

The energy used in a room, leftovers from a meal, species in a schoolyard or a discarded object offer accessible starting points. The aim is to learn how to ask a question, observe systematically and distinguish what is known from what is assumed.

1.2 Sources and progression

The original PDF provides five themes, their subjects and timeframes. This version retains that set and proposes a more explicit sequence. In 7e, the teacher provides more support materials; in 6e, pupils justify a methodological choice and discuss an initial limitation. The specific curricula should be checked on eSchoolbooks, as indicated by MENJE.

1.3 Choose a project

Project	Learning focus	Duration and requirements
An energy-conscious school	Measure energy use and test an improvement.	One term; access to data and technical support.
Sustainable food from farm to fork	Connect the food journey, waste and meal choices.	One term; coordination with the canteen.
Climate justice	Compare situations and argue for a proposal.	One term; documented source material and roles.
Biodiversity explorers	Observe living things and monitor a habitat improvement.	One year; an agreed site and maintenance plan.
Mission Zero Waste	Distinguish processes, create and explain choices.	Around ten weeks; collection and the objects' future use.

Connecting evidence and decisions

The project becomes meaningful when pupils can connect a question, a record and a decision. A carefully prepared presentation makes this reasoning visible, including when a hypothesis is not confirmed.



2. Take action

The following five proposals set out the learning, sequence and expected records. They are followed by a shared framework for organisation and follow-up.

2.1 An energy-conscious school

Energy and climate · One term · Suggested teaching time: 16 h.

Which activities and equipment use energy in our school, and what improvement can we test without reducing comfort?

Objectives and subjects

Distinguish power (W) from energy (kWh), collect data and create an annotated graph. Physics and chemistry explain fossil and renewable energy, energy transformations and the greenhouse effect; mathematics covers measurements and averages; geography examines where energy comes from and what local options are available.

Suggested sequence

1. Observe and define the scope (2 h). Choose a room or a few energy uses together with the technical staff. Take an inventory, formulate a hypothesis and prepare a recording table. A guided visit to the installations can complement the investigation.
2. Measure and understand (4 h). Record available consumption data or measure the energy use of a suitable appliance. Note duration, unit and conditions of use. Calculate energy from power and duration; present the results graphically.
3. Compare possible approaches (4 h). Consider avoiding unnecessary energy use, adjusting equipment settings or using another energy source. Investigate what each approach changes, requires and leaves uncertain. Discuss comfort, cost and feasibility.
4. Test and report (6 h). Have the school approve a simple action, test it, then compare it with the initial situation. Prepare a poster and a short presentation for pupils, staff and families.

Outputs and assessment

The group submits its logbook, a labelled graph and a justified proposal. Assess the correct use of units, traceability of readings and connection between data and choices. Each pupil explains one measurement and one limitation: weather, occupancy or too short a period. An estimated saving remains distinct from a measured saving.

Requirements and adaptations

Materials: school data, a spreadsheet and, where suitable, a wattmeter used under supervision. Pupils do not handle electrical installations. In 7e, provide the table; in 6e, ask pupils to justify the protocol. An investigation at Äerdschëff can prompt discussion of uses, maintenance and energy choices.



2.2 Sustainable food from farm to fork

Food • One term • Suggested teaching time: 16 h.

How can we put together an enjoyable, affordable and accessible meal while reducing waste and taking account of the food's journey to the plate?

Objectives and subjects

Describe where foods come from and several stages of their production; measure waste; justify a menu choice. Biology explores nutritional needs, agriculture and effects on living things; mathematics covers proportions, distances and statistics; French covers source-based research, recipes and explanations for the public.

Suggested sequence

1. Investigate a meal (2 h). Choose a few foods and trace production, processing, transport and storage. Distinguish known information from assumptions. Compare seasonal availability and sourcing options.
2. Measure without judging (4 h). With the canteen, agree which types of food waste to measure, then weigh them for one week and record the number of meals. Calculate grams per meal and produce a graph. Also compare the distances travelled by selected ingredients.
3. Design alternatives (4 h). In groups, propose two menus or recipes, including quantities, season, indicative cost and ways to reduce leftovers. Distance travelled is one indicator; it is not sufficient to calculate environmental impact.
4. Share and adjust (6 h). Prepare a tasting or a meal with the canteen if conditions allow. Present a recipe booklet and the results to families. Gather feedback and improve a proposal.

Outputs and assessment

Expected outputs: a table of food-waste measurements, a graph, a recipe and a written justification. Check calculations, sources, clarity of writing and consideration of several criteria. Each pupil distinguishes an observation, a preference and a conclusion. The discussion does not rank families according to their eating habits.

Requirements and adaptations

Provide scales, containers and the catering team's agreement; plan for hygiene, allergies, dietary requirements and cost. Without a kitchen, create an exhibition of documented menus. In 7e, guide calculations; in 6e, compare two options. At Äerdschëff, extend the investigation to the resources needed to prepare and share a meal.



2.3 Climate justice

Climate inequalities • One term • Suggested teaching time: 12 h.

Why are the effects of climate change and the means of coping with them unequally distributed?

Objectives and subjects

Read a map and an indicator, distinguish responsibility, exposure and adaptive capacity, then defend a proposal. Geography and citizenship education examine where and how inequalities arise; French or German explores accounts, source-based research and argumentation. Solidarity becomes a question to investigate in specific situations.

Suggested sequence

1. Establish reference points (2 h). Study two areas selected by the teacher using identified sources. Read map dates, units and scales. Do not confuse total emissions, per-capita emissions and vulnerability.
2. Bring perspectives together (4 h). Connect data, history and accounts. Identify differences within each area, beyond a contrast between rich and poor countries. Each group prepares a sheet: facts, source, open question.
3. Prepare a deliberation (4 h). Assign roles based on source material: residents, associations and institutions. Propose two measures and discuss who benefits, who contributes and who risks being overlooked. Prepare an objection and a response.
4. Debate, then analyse (2 h). Organise an educational “climate tribunal” or a simulated conference for another class and, where possible, families. Step out of the roles to examine the arguments and reformulate a proposal.

Outputs and assessment

The dossier includes an annotated map, two sources and a short text setting out a reasoned argument. Assess indicator reading, the distinction between fact and judgement, listening and responding to an objection. Assess the quality of reasoning without imposing a shared political conclusion.

Requirements and adaptations

Provide a short set of source materials, a glossary and roles that avoid caricature. Allow a written or recorded contribution to the debate. In 7e, guide comparisons; in 6e, ask pupils to restate a different viewpoint. At Äerdschëff, discuss access to resources and the conditions for a fair ecological transformation.



2.4 Exploring local biodiversity

Garden and survey of living things • One school year • Suggested teaching time: 20 h.

What forms of life share our school spaces, and how can we observe their needs across the seasons?

Objectives and subjects

Recognise some organisms, describe their relationships and follow an observation protocol. Natural sciences introduce habitat, pollination and food webs; computing organises the data and its presentation. The work develops attention, patience and cooperation over an extended period.

Suggested sequence

1. Establish a baseline (4 h). Define an area of schoolyard, garden or park. Observe without collecting specimens, photograph where useful and identify with a guide. Record date, duration, place and conditions; flag uncertain identifications.
2. Choose a habitat improvement (4 h). Connect observed needs to an action: a small planted area, local flowering plants or different maintenance. Discuss resources and who will carry out follow-up. An insect hotel is only one option that must be justified.
3. Follow the seasons (8 h spread over time). Repeat the same route with a comparable observation time across several sessions. Record observations, growth and conditions in a spreadsheet. Prepare species profiles and a digital journal.
4. Tell the story of change (4 h). Analyse observations and organise a guided garden visit. Present panels, photographs and graphs to families. Distinguish what was observed from what remains to be understood.

Outputs and assessment

Expected outputs: field logbook, shared table, sourced profiles and a guided-visit route. Assess consistency of the protocol, care in identification and explanation of an ecological relationship. A change in the number of observations does not in itself prove the effect of the habitat improvement.

Requirements and adaptations

Provide guides, access to the site and maintenance during holidays. Keep the route accessible and offer varied observation tasks; a paper version can replace the online journal. In 6e, discuss season and observation effort. A visit to Äerdschëff can extend the investigation to relationships between the building, its uses and living things.



2.5 Mission Zero Waste

Reuse, creativity and awareness · Around ten weeks · Suggested teaching time: 16 h.

What can we avoid throwing away, and how can a creative work make that choice understandable?

Objectives and subjects

Distinguish reduction, reuse and recycling; describe a material; design and present an object or a musical composition. Science explores properties, transformations and the effects of waste on ecosystems; visual arts develops form and use, while music develops listening, rhythm and collective creation. The title expresses an ambition, not a guaranteed result.

Suggested sequence

1. Observe flows (2 h). Examine a small set of clean school waste and record materials and quantities. First look for what could be avoided. Distinguish a discarded object, a reusable object and material to be recycled.
2. Understand and choose (4 h). Examine how long materials, particularly plastics, persist in different environments. Where suitable, carry out a paper-recycling experiment. Compare possible uses of the collected objects. Choose a useful or artistic creation, stating the additional materials required and its final destination.
3. Make and test (6 h). Create sculptures, objects or percussion instruments from clean materials. Test strength, use and sound. Compose a rhythmic piece or a song; keep a logbook of trials and adjustments.
4. Exhibit and discuss (4 h). Organise an exhibition with a concert. Each group explains where the materials came from, the work carried out and what will happen to the creations. Compare the quantities collected, reused and still requiring treatment.

Outputs and assessment

Present the creation, a factual exhibit label, the trial logbook and the musical performance. Assess distinctions between processes, design choices and cooperation. The group identifies a limitation: transforming an object does not automatically make it sustainable or recyclable.

Requirements and adaptations

Targeted collection, clean materials, suitable tools and supervision are necessary. Plan storage and future use of the creations so as not to produce additional waste. Vary roles across making, music and documentation. At Äerdschëff, extend the discussion to needs, repair and length of use.



Organising the projects

Stage	Expected outcome	Responsibility / deadline
Prepare	Question, subjects, timetable, access and criteria defined.	Teaching team and partners; before the start.
Implement	Investigation logbook, interim review and adjusted proposal.	Pupil groups, supported by the team; throughout the sessions.
Review	Presentation, individual feedback and decision on next steps.	Pupils and teaching team; at the end, then agreed follow-up.

Resources and requirements

Plan for two teachers, coordination time and one investigation logbook per group. Share and rotate roles: observe, record, check, present. Use shared equipment and provide accessible paper or digital materials.

An Äerdschëff contribution can be developed with the team: an investigation visit, workshop, discussion of choices or support for the presentation. Content, availability, travel, supervision and budget remain to be agreed; this document does not confirm a booking.

Reviewing progress

- Before the project, collect an initial individual answer to the question. At the halfway point, comment on one record per group and identify what still needs checking.
- Assess the knowledge used, quality of records, reasoning and cooperation. Do not grade agreement with an opinion or families' private practices.
- At the presentation, ask each pupil what they learned, what they contributed and one limitation of their work. The teaching team compares these answers with the starting point and decides what follows.



3. References and resources

Curricula and scientific resources

[MENJE • Learning in secondary education \(in French\)](#)

Entry point for the curricula, teaching languages and assessment arrangements specific to each class.

[ADEME • Sustainable food: challenges and priorities \(in French\)](#)

Reference points for examining production, transport, consumption and waste together.

[ADEME • Food carbon-impact calculator \(in French\)](#)

A comparison tool to be used with explicit units, scope and limitations; a carbon value does not describe all the effects of a food.

[IPCC • AR6 Synthesis Report: Summary for Policymakers](#)

Scientific reference for preparing sessions on the mechanisms, risks, inequalities and responses to climate change.