

KEVICC

Cooperative Learning Project

Key Stage 3 Science & Technology

Our Cooperative Learning Projects help you to become rounded, balanced learners. Growing your independence and self-management, our projects also reflect our College cooperative ethos. Each project will focus on one or more of our cooperative values: Democracy, Equity, Self-responsibility, Self-help, Equality and Solidarity.

Project Title

Hydroelectric power in Totnes

Project Brief

Over the past few years a hydroelectric plant has been planned, designed and built at the weir at Elmhurst. Consider the following questions.

Science elements - How is hydroelectric power contributing to the generation of energy in Totnes? Why is it important for renewable energy resources like hydroelectric power to be developed and invested in? What are the challenges associated with hydroelectric power and other renewable energy resources?

Technology elements - What are the challenges associated with designing the turbines used in hydroelectric power stations and how do they differ from those used for wind turbines? How are the designs developed and how are the turbines manufactured? What materials are used and what properties do these materials have that make them suitable?

Combined elements - Now that Totnes has developed an Archimedes' screw based power generating site, what other alternatives are there for the local community? What other potential energy collection sources are there and where could they be located in the Totnes area to make Totnes a green energy centre?

This is a really valuable piece of work that could be passed onto the local community groups as part of their consultations.

Learning Skill(s) developed

Research skills including locating relevant information and selecting relevant sources. Extended writing, applying information, comparing data.

Cooperative Value(s) developed

Self-responsibility, Self-Help and Solidarity

Final project format

Present in your own way, but it could use, design drawings, maps, reports, models and diagrams. Any format is acceptable, but should be organised and presented in a clear and appropriate way.

Teacher feedback

| Effort scale | Achieved |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Secure Some positive independence can be seen. Some research of the context has taken place. Analysis of some of the current issues. Evaluation of future options comes through. | |
| Thorough A good level of independence shown. Research has taken place to explain the context effectively. Analysis of the current issues is thorough. Evaluation of future options comes through in detail. Well expressed personal opinions, supported by well-judged conclusions. | |
| Outstanding Excellent independence shown. Research is outstanding and explains the context thoroughly. Analysis of the current issues is very detailed, with all angles covered. Evaluation of future options is detailed and holistic. Very well expressed personal opinions, supported by well-judged, persuasive conclusions. | |

What was great about this project:

What would have made your project even better: