Cooperation between TVO and schools

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Forms of school cooperation

- Student visits to Olkiluoto
- Lectures by TVO experts
- Loan of electrochemical kits to schools
- Taking part in student and recruitment fairs
- Articles in student publications
- Editing of "Energy in Society" supplement in physics schoolbook
- "Energy in western Finland" – Open Days for 15-year-old pupils
- *Ydinasiaa* virtual school and web pages about nuclear industry

Foster Class Programme

- Cooperation between TVO and Eurajoki comprehensive school
- lasts three years, from 7th to 9th grades (13 - 16 year-olds)
- Four excursions during one semester
- Excursions included in school curriculum
- Excursions supports school's educational objectives

Stages of the excursion

- Preparation of the visit
- Participating in the outing
- Feedback
  - Feedback discussion at the end of the visit
  - Feedback discussion in school
  - Report

Excursions in the 7th grade

1. Introduction to the Foster Class Programme and the parties (TVO personnel <-> students <-> teachers)
2. Water purification process at TVO (purifying the water for human consumption)
3. Circulation of water in Olkiluoto facility, wastewater treatment plant, groundwater, geology
4. Overnight camp; waterways, plants and animals in Olkiluoto

Water purification process at TVO

Excursion for 7th-graders

Tiironkoski

Sample 1 is taken directly from the River Eurajoki, from Tiironkoski bridge.

DynaSand

Sample 2 is taken from DynaSand, where the water is purified mechanically by filtering through sand.

Water purification process at TVO

Korvensuo artificial lake

Sample 3 is taken from the artificial lake of Korvensuo, where water is pumped after sand filtering.

Water plant

Sample 4 is taken from the water used by the water plant.

Sample 5 is taken from drinkable water, which has been purified in the water plant. Students may taste this sample.

Water purification process at TVO

Testing of Samples

Following characteristics of the sample are tested: **pH, temperature, electrical conductivity, opacity, smell**

The Results of the measurements are collected in an excel file.

A report is made for the day, where the research, results and conclusions are presented.

The report and feedback is given at school.

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Foster Class Programme

For 8th-graders

- **Regional history, water and electro-chemistry, nuclear power as part of energy mix, life cycle of electricity and wood**
- **Posiva's final disposal of spent fuel in the bedrock of Olkiluoto, various rock types and geological studies**

Foster Class Programme

For 9th-graders

- Environmental issues at TVO, own environmental project: measuring noise on Olkiluoto area
- Operation of the nuclear power plant and cooling water circulation
- Nuclear physics, radiation measurements
- Excursion to Helsinki University of Technology and Radiation and Nuclear Safety Authority (STUK)

Benefits – School and Company

1. Contact with working life (information about different professions)
2. Increases interest in further studies in natural sciences and creates a positive attitude toward natural sciences
3. Enhances cooperation in local area
4. Learning from experience, added value to learning
5. Opportunity to see things taught at school put into practice (theory/practice), applying learned skills
6. Development of school and teaching through wider opportunities
7. Integration of various subjects
8. Behaviour, social interaction skills, good manners
9. Understanding the importance of energy production to society

Pupils' opinions of the Foster Class Programme

- New kinds of teaching environments and better tools
- Receiving information about e.g. the activities carried out in Olkiluoto (TVO and Posiva)
- Understanding the principles of nuclear power and electricity production
- Understanding the water purification processes
- Using various equipment in e.g. a laboratory
- Combines fun with usefulness
- Makes learning more meaningful and more effective
- Learning to know new things and new people cooperation with other adults (than teachers)
- Improved teamwork skills
- A welcome and fun change to schoolwork
- Many wonderful and new experiences
- The visit to the Radiation and Nuclear Safety Authority (STUK) was interesting, a good *Grand Finale* for the programme

Science and Technology Camps

”Experience breeds interest”

- Developed by the Economic Information Office (TAT) for younger pupils
- Every year two Science camps in June and one Techonology camp in August
- Camps held over three summers, in 2003-2005
- There will be 3 camps during this summer
- Different programmes every year

Science and Technology Camps

”Experience breeds interest”

- An opportunity to explore natural sciences and technology from a young age
- Research, discussion and experiments carried out from childrens’ perspective
- Learning different ways of working
- Making new friends

Science and Technology Camps

”Experience breeds interest”

Summer 2004

- topics in the camp varied from space to mechanics, electricity and chemistry
  - Home-made rockets
  - A styrofoam planet rover
  - A wooden launcher
  - Home-made super balls
  - Various electric connections

Science and Technology Camps

”Experience breeds interest”

- For younger children, 8-12 years
- Day camps from Monday to Friday, 9 am. to 2 pm.
- Camp fee 125 €/child/week and 100 € for siblings
- The instructors are university students of natural sciences, technology and pedagogics, working for the summer at TVO
- Science and Technology Camps have been very popular, 22 participants (both girls and boys) in every camp

Feedback and comments from parents

- Children remained enthusiastic all week. Better than we expected.
- It is great that these camps are organised in Eurajoki. The senior secondary school is already a so-called "electric school", but people form 80% of their opinions already at the age of 10 years.
- The idea of a science camp is really good. Many camps seem to focus more on physical exercise, this makes a nice change!
- It is good that children are given something interesting and educational to do. Thanks to all the instructors for a job well done.
- We live quite far away from the camp site, but the transport service provided by TVO worked well.
- Looking forward to the next camp.
- Children have said that the food is good.
- Thank you! Looking forward to renewing the nice experience.

Why does TVO collaborate with schools?

- All parties benefit from the school cooperation
- New contacts between the school and TVO
- Improves close regional cooperation
- Improves students' interest in the energy industry

- Positive publicity and image for the company

Thank you