

Setting up a Nordic CRAFT project?

In this compendium you will find:

- Guide to start a Nordic CRAFT project in eTwinning
- Guide to use the CRAFT model
- CRAFT evaluation criterias

A) Nordic CRAFT project in eTwinning

There are certain steps that you have to follow:

- Collaborate with minimum one class from another nordic country using the eTwinning platform - find partners and use the Twinspace for project planning and communication
- Use the basics of the didactic method in CRAFT
- Optional: Join the Nordic Craft competition - Nordic Craft championship

How to

- ☐ Sign up as a member in [eTwinning portal](#).
- ☐ Registration of your project: IMPORTANT - You have to use the words “Nordic CRAFT” in the title. E.g.

DESCRIPTION

Title 202 characters

Use letters or numbers but not) < >

Use of new technologies in school - **Nordic CRAFT**

Need more help? Se the [eTwinning help section](#) or [self teaching materials](#)



B) Guide to use the CRAFT model

CRAFT is an open framework that brings all school subjects into play, both separately, within the subjects and cross-curricular. The project is envisioned as a renewal of the subjects and as an umbrella term for working with ICT, problem solving, and innovation on global challenges and with authentic recipients. It is a method to develop good teaching and reflection by incorporating the 21st century skills as part of the didactics.

Involve students to take action on real-life problems and future dreams

How do you as a teacher set up tasks, that are ungooglable and connected to your students' life and dreams? Experience from CRAFT shows, that the use of technology really makes sense and creates didactic added value, when linked to students' problem solving.

Let the tasks be authentic, relevant and recognizable by letting the students:

- 1) meet everyday problems they actually can take action on
- 2) make independent, reflected choices
- 3) solve tasks for companies or organizations who have interest in the students' voices.

Examples: Create ideas of how the ice cream store can extend the ice season, Avoid food waste in your class, Create a classroom where technology doesn't interfere, Help young people in your town to fight social anxiety. Welcome refugee and their parents to your school.

Have a look at [this video](#), made by students from Odda Kommuna in Norway, showing their process.

The CRAFT Workflow

The model is intended as a flexible navigation tool, that can support students and teachers in the process from problem to solution.

The process is not linearly thought, but can be varied as needed. In some cases, it makes sense to let the students run the model several times to strengthen their understanding of the process. At other times there is a significant point in keeping the students in a single phase for a longer period, so that they learn how to study the problem, and not just choosing their first idea. In other contexts, it might be a good idea to lock a phase and define which digital tool or content is to be used.



Phase 1: Research









Purpose

To understand the Real-Life Problem and to find out the needs of the recipients.

Typical activities

In the **RESEARCH** phase the students explore and collect knowledge about the specific problem. They will typically figure out, what they already know about the problem. They will make research on the internet or in books to find out more about their problem from experts point of view. But they will also gain their own experiences by exploring the world themselves; They will make roleplaying games, interviews, surveys, observations etc. to find out the needs of the recipients and to understand the problem deeply. The students often visit people and places outside school.

Examples of digital tools to be used

	Camera	Maintain observations
	Voice memo	Maintain interviews
	mentimeter.com	Voting
	padlet.com	Sharing knowledge
	appear.in	Online interviews
	google.com	Searching

Phase 2: Make



Purpose







Creating many ideas together, making prototypes and test them to choose the best solution on the Real World Problem.

Typical activities

In the **MAKE** phase the students engage in brainstorming, selecting and improving their ideas with knowledge from the research phase. They create prototypes that incorporate the gained ideas. They may use simple cardboard and duct tape or sketching their design and explaining their thoughts. They may as well use available technologies like 3d printers, laser cutters, Micro Bits or maybe presentation tools to 'mock-up' an app. Maybe they decide to make a movie, an event, a storyboard, a roleplay, a diagram, a construction made of Lego, or something totally different. It depends on the purpose of the idea and the students choices.

Sometimes the students present their idea to the recipients to get feedback before proceeding to the next phase.

Examples of digital tools to be used

	mindmapping.com	Brainstorm
	tinkercad.com	3D prints
	Micro:Bit	Coding
	explaineverything.com	Sketching
	Camera	Testing
	Google Slides	Mock up

Phase 3 - Do



Purpose

To present and/or implementing the solution to an authentic recipient and get feedback







Typical activities

In the **DO** phase the students implement their solutions, either by pitching their ideas and reflections to a real audience, or by implementing their idea in practice in front of a recipient. They will make an overview of what is to be done. Hand out tasks and make the preparation. Often the students will make a presentation to explain their problem, their research, and show their prototype. They will often make posters and diagrams or maybe movies explaining their process, work and ideas. It is important, that the students are able to tell about their collaboration, innovation and their use of technology.

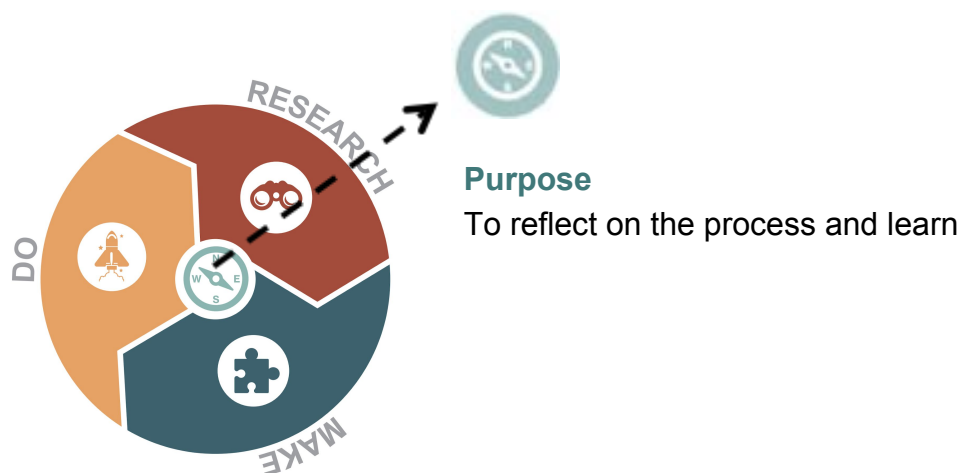
The students may participate in a national contest like the Danish Championship in Digital Skills - CRAFT. The students will get feedback from a real audience.

It is an important element that the students actually take action on their ideas and communicate and share their thoughts towards a real audience.

Examples of digital tools to be used

	mentimeter.com	Feedback
	trello.com	Collaborate and project planning
	Camera	Dokumentation
	youtube.com	Sharing
	pitcherific.com	Pitch-training
	Google Slides	Presentation







Generally - The Compass



Typical activities

Throughout the process it may be a good idea, if the students film or take pictures of their progress and turn it into a little movie, Vlog or infographic, where they tell about their work and collaboration. This will take some practice, but makes the students reflect on and learn from their process. Pictures and film can also be excellent to use when presenting. Students may also use technology for collaboration with team-members, feedback from experts, teachers or other authentic recipients.

Examples of digital tools

	Camera	Photo reflection
	bookcreator.com	Portfolio
	youtube.com	Vlog
	audacity.com	Podcast
	easel.ly	Infographics
	padlet.com	Feedback on students' reflections



The use of ICT for learning

1

- The group has not used ICT significantly - either for collaboration or product.

2

- The group has used ICT in a very traditional way. They have not explored new programs or technologies or used well-known programs in a new way, either in terms of collaboration or product. They reproduce information and practices basic skills.

3

- The students have used several aspects of ICT for products, collaboration and presentation. It carries a little touch of routine, but is well and thoroughly worked out.
- The students have used ICT, but they could have achieved the same goals without using ICT. ICT or other technologies have not made the big difference, but ICT support their product.

4

- The students have made a nice presentation and product using ICT. However, the product shows more signs of hard work than innovation.
- They have used ICT to collaborate and the use of ICT has supported their learning and process well. The use of ICT has made a difference.
- The students have worked as targeted and creative producers, but their product or prototype is not yet ready to be used by authentic users.

5

- The students have used ICT to support their knowledge construction and with this knowledge, they have developed and designed a creative and innovative prototype for authentic users.
- Their collaboration and presentation is supported by ICT in an efficient and clever way
- The students have worked as targeted and creative producers, and their product or prototype is ready , or almost ready, to be used by authentic users.

Information

In order to score high in this category it requires, that students think new in relation to ICT programs and technologies - well-known as new. Therefore, there is also an element of innovation in the ICT category. In addition, the group must show, that they have used ICT to support knowledge construction, collaboration and to pitch their idea creatively. Good ICT products, which are not entirely innovative, but very well worked out, do not score top points.

Well-known digital programs are typically Microsoft Office or Google Docs and most used apps from e.g. Skoletube.dk or App Store. Technologies include: 3d print, coding (all forms), circuit technologies, video production, laser-cut among others.



Collaboration

1

- There is no sign of collaboration
- The team do not mention collaboration in their presentation. Not all team members is a part of the presentation.

2

- Students do work together, but there is none- or only a few signs of collaboration between the students
- Students are speaking about their work, but no shared responsibility.

3

- The group has no tangible signs of collaboration, but their presentation is characterized by collaboration. Their work is connected.

4

- The group has, to some extent, evidence of their collaboration in the form of documents, pictures, videos or the like
- They can explain, that their main decisions have involved the whole group, but their work is not interdependent.

5

- The group shows tangible evidence of their collaboration and their process and products shows clearly, that their work is interdependent
- Their presentation is characterized by the fact, that everyone knows exactly what has been worked on and they know each other's tasks. They have made substantive decisions together.

Information

Tangible evidence of collaboration could be work in e.g OneNote / Evernote, video, padlet, SCRUM models or videos, etc. The presentation must show, that the whole group work as a team. The presentation must show, that the students are working together in a learning activity, with joint responsibility for their work. It should not be a single student, who presents it all.

Good collaboration is, when the elements are interdependent and decided together. The team members must negotiate and agree on the process, design, and conclusions of their work. The role of each student in the team is essential.



Problem-solving and innovation

1

- Problem solving has not been a central part of the the students project

2

- Problem solving is part of the students' project, but the problem is not a real problem, and the students' solution is not viable.
- Students have not had a real study of the problem.

3

- The problem is a real-world problem, but the students solution is not particularly innovative and possibly to implement. The solution is seen many times before.
- The students only show a little knowledge of the problem and have not studied it thoroughly.

4

- The problem is a real-world problem. The solution is innovative, but difficult to implement. Or maybe the solution is too obvious.
- They have examined the problem thoroughly and communicated their ideas to someone related to the problem to receive feedback.
- The students show how they have refined their solution and improved it through their process.
- The pupils have considered how the solution could possibly be implemented

5

- The problem is a real-world problem and the students solution is innovative, creative and feasible.
- They have examined the problem thoroughly both by talking to experts and people related to the problem.
- The students have thought about possibly ways of implementation in the real world, e.g. via feedback from people who can actually implement their solution.

Information

The problem must be a real problem from the real world. It may be a small problem. Students must have thoroughly examined their problem. It involves eg interviews, statistics, questionnaires, etc.

A good process of problem solving must be innovative and possible to implement. The students should have thought through an implementation plan. They may have contacted stakeholders in relation to their solution. The more their solution meets these points, the higher the score. It is very positive if they have included empirical data from stakeholders in their solution. Experts, users connected to the problem etc.