



NEXT STEP 02

*Empowering schools to design a more desirable
and sustainable future*

“Indigenous People of the world”

Nordbygdo Ungdomskule, Secondary School, Norway



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Short Description:

This Implementation in Nordbygdo Secondary School had STEAM of “Indigenous people” as base. Working over 6 weeks, with 6 teachers and 65 students. The main work was in the school during regular classes, based on the curriculum of Interdisciplinary subjects. In the SRT you can see that the community work has been strong in this implementation with inspirational workshops, lectures and visits in the different phases of feel and imagine from Western Norway University, The local museum; Sunnhordland Museum, Spinae Company, and other specialists on the subjects. In The share phase 70 students from two of the regional elementary schools were invited to be a part of a presentation day where the Secondary school students shared all the create material and knowledge to the younger students.

1. Introduction

NEXT STEP offers a range of exciting ideas and tools to use in your classroom and be able to realize STEAM activities. In this Template of STEAM education we will look at using the method of GSO when studying the universe under the title “Indigenous People of the world”

Main aim

The NEXT STEP project is proposing a whole school approach to science learning. Building on previous successful European open schooling and STE(Arts)M initiatives, the project will bring about the NEXT STEP in education by providing a roadmap for the transformation of school classrooms into open and creative learning spaces. NEXT STEP methodological approach exceeds the state of the art regarding existing creative approaches and STEAM initiatives. In this framework the NEXT STEP project will design and set in operation the STEAM IDEAS’ Square, an innovative learning environment which will be the nucleus of the school’s activities. NEXT STEP will demonstrate how these environments a) can offer opportunities for deeper learning of STEAM, b) can improve the innovation and creative capacities of learners, c) can support the new role of teacher as a coach of the learning process, d) can facilitate effective cooperation with external stakeholders and e) can inspire policy-makers, school heads and school staff to imagine the schools of tomorrow.

Vision of the Project

The NEXT STEP vision for a creative and innovative school is the development of the creative and innovative classroom of tomorrow, the STEAM IDEAS’ Square, in which education relies on an interdisciplinary, arts-based methodology within an entrepreneurship and design thinking framework.

The Self-Reflection Tool is offered to the participating School Heads.

You can register to the webtool through the website <https://srt.the-next-step.eu> .

General description of this specific implementation

Implementation of “Indigenous people” with 65 students and 6 teachers. Over 6 weeks. Interdisciplinary subjects in the project were: Language; Norwegian, Arts and crafts, Philosophies of life and Ethics, Natural science, Physical Education, Social studies.

The aim of the product was to get the students to be aware and share their new developed knowledge with younger students in form of an Idé Square. To develop and reflect about the thematics and understand the connection between topics and subjects and awake an awareness of Interdisciplinary between students and teachers.

For the teachers to have a better understanding of Next Step and the STEAM education and how an implementation can look like in their school structure.

The scenarios structure

All the students and teachers in this project worked during the weeks in their ordinary subject horse and parallel with each other. Every Friday the students and teachers had 4 joint lectures where they went through the different phases of feel, imagine, create and share. The TEAM projekt was based on the curriculum and the forms were planned by the teachers before the 6 weeks of THEME. Every week the teachers had planning meetings where they touched base on where the different subjects had been thrown and what they could work further on in an interdisciplinary way.



2. Essential Features of the STEAM IDEAS' Square

STEAM IDEAS' Square - (SIS) which will be the main core of the school's creative and innovative activities will have two substances: digital and physical. In its premises and via its digital tools in-school interaction between STEM and other disciplines schoolteachers and among all the relative stakeholders (students, educators, parents, artists, scientists, local community authorities, industrial stakeholders, and policy makers) will be established with the purpose to run complex and exciting real-life educational world projects. Teams of students (from the same or different classes) can also work and cooperate under the SIS umbrella.

By connecting curious minds and specialists and leading them to think “outside of the box” will help to speed up the flow of ideas to **transform the school and its classrooms to a unique creative space** for educational innovation and STEAM education. Through collaboration and the appropriate pedagogies, prototyping, pedagogical innovation, creativity (along with distance learning opportunities) and well-being at school will be established .

In addition, the capacity to work with external organizations so as to explore how such partnerships and networks can be built through a long-term strategy, based on trust and common objectives they contribute to key competence development.

A way to implement and use the ideas of NEXT STEP project is through developing a series of scenarios of use that are in line with the proposed approach and involve schools in a series of creative and innovative activities for the improvement of the local cities, settlements, and communities' physical and built-up environments, while engaging key stakeholders (experts, researchers, local communities, businesses etc.) in the process. Different scenarios about different school typologies will be created and these with the help of the right Strategies will help schools to evolve One of these scenarios that is suitable for a STARTER school (according to our typology) is the one presented later in this document.

The NEXT STEP approach in this school

The school of Nordbygdø has been working under this structure for 4 years but is then called “The method of grade based classroom”. Which is an educational system where the students are educated as a grade more than one ordinary class. The teachers are then more able to connect with each other and follow the education to more students and subjects. This gives shared awareness and responsibility. The form fits perfectly for STEAM education and Next Step approach.

The scenarios proposed structure

The Secondary School of Nordbygdø followed the STEAM approaches during this Implementation booth for the students and the teachers. Inspiring an Interdisciplinary learning inviting specialists and community workers in given fields and topics. All the phases of Feel, Imagine, Create and Share had systematic focus on science and art and exploration ways of gaining and giving knowledge.

The school worked as the Ide Square, booth inside the students base related classroom but also using the outside surroundings for activities, inviting guests and students to especially the share phase.



3. NEXT STEP Scenario Template

First a brief synopsis of the NEXT STEP scenario and then a list of information as a with the basic information.

3.1. Synopsis



3.2. Scenario Identification card

Category	Description
Teaching theme/problem	Finding data that connect the Indigenous people of the world
Keywords	Identity, Sustainability, Culture, Democracy
Language	Norwegian, Different Indigenous languages
Thematic classification	Social studies
Suggested age group	Secondary School
Estimated level of difficulty	Advanced
Material and technical infrastructure needed	This can be adjusted to the school. But this implementation had everything from technical resources, computers for all students, material for building igloo, dream catchers, food from different cultures and so on.
Stakeholders Synergies	Western Norway University, The local museum; Sunnhordland Museum, Spinae Company.
Typical interaction time	A week in hole
Organizational structure	“The method of grade based classroom”
Teaching level	Medium level
Level of interactivity	High
Type of interactivity	Multiply interactivities
Authors, Publisher name	Magdalena From Delis, Inger Berit Hagen
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O2 Scenario of Use Template – “Indigenous People of the world”

4.1. Feel.

				
Act #	Description of activities, strategies, methods, means, resources and synergies	Learning goals - Learning outcomes Features/Competences	STEAM Fields	
<p>Educator/s Teachers (Different fields)</p>	<p>Educator actions</p> <p>A1 Making an ID circle, an activity to create awareness about your own identity</p> <p>A2 Film: Sami Blood. The film is set in Sweden in the 1930s and concerns a 14-year-old girl who experiences prejudice at a nomad school for Sami children, and decides to escape her town and disavow her Sami heritage.</p> <p>A3 Guest speaker: Where do the inhabitants of our community descend from?</p> <p>A4 Guest speaker: A travel around the world to visit indigenous people</p> <p>A5 Guest speaker from HVL: A lecture about human and indigenous rights</p> <p>A6 Guest speaker: Maori culture through massage and dance</p>	<p>Educ Method</p> <p>A1 Guided discovery</p> <p>A2 Introduction to the theme</p> <p>A3 Local historian giving a interactive lecture based on dramatic means</p> <p>A4 Community worker from Spinae Company working through drama process</p> <p>A5 Introduction to the theme</p> <p>A6 Community worker with training from the Maori people doing a practical workshop</p>	<p>The sum of various sessions are meant to arouse interest in indigenous peoples culture, history, rights and current living conditions around the world.</p> <p>Illuminate democratic processes.</p>	





	Tools: Film and evaluation tasks: https://www.filmweb.no/skolekino/incoming/article1313950.ece		In classroom Duration 2h
Students	Actions A1, A3-6: The students are actively engaged in the sessions through different competences, both mentally, verbally and physically. A2: The students are assigned tasks to reflect on the film after watching it.	From the Norwegian curriculum in social studies: Explore how human and indigenous rights and other international agreements have an impact on national politics, people's lives and equality and equity	Time 2h
	Tools PC		
STEAM Ideas' Square (SIS) Operation School Community Synergies	The teachers from the different subjects come together and plan the outline of the project. Every Friday we have 4 classes of interdisciplinary education, where the goals from different subjects are merged together and teachers from different subjects alternate to teach. In addition we make an outline for every subject involved in this project, to provide knowledge and competences to strengthen and support the project as a whole. To sum up: There are two parallel processes that support each other, the teaching of different subjects under the umbrella “indigenous people” and the interdisciplinary classes run on Fridays. All of this is planned together in an extended teachers’ meeting.		Time 4 h
School - Stakeholders Synergies	Planning content together with different guest speakers.		Time 1 h



O2 Scenario of Use Template – “Indigenous People of the world”

4.2. Imagine

				
Act #	Description of activities, strategies, methods, means, resources and synergies	Learning goals - Learning outcomes Features/Competences	STEAM Fields	
Educator/s Teachers (Different fields)	<p>Educator actions</p> <p>A7 Social studies</p> <ul style="list-style-type: none"> - national minorities - Nowegianisation, the obliteration of minority languages and cultures as a political assimilation policy 1850-1950 - indigenous people around the world (with a special focus on Maori, Inuit, Quechua and Masai) <p>A8 Norwegian</p> <ul style="list-style-type: none"> - Nowegianisation and the consequences for languages in the past and present - debate in roles: conflict of interest - social development needs versus indigenous land rights (deforestation, windmills, pipelines) - Sami tales, legends and myths - Sami pop culture today <p>A9 Knowledge of Christianity, Religion, Philosophies of life and Ethics</p> <ul style="list-style-type: none"> - nature religions, spirits and the belief of nature as animated <p>A10 Arts and craft</p>	<p>Educ Method A7-A9</p> <p>A mix between lectures, interactive workshops, practical assignments and drama sessions. Based on a philosophy of exploratory teaching.</p> <p>A10</p> <p>Practical assignment.</p>	<p>Teaching various subjects under the umbrella “indigenous people” to strengthen the knowledge and competences in the students. Enabling them for the next phase (create) where they are taking over the project and making it student run.</p> <p>Goals from the Norwegian curriculum:</p> <p>Social studies: reflect on the injustice the Sami and national minorities have been exposed to through the political process called <i>Norwegianisation</i> where the Sami and the national minorities lost the right to their language and culture, and the consequences it has had and is still having at individual and societal level</p> <p>Norwegian: explore fiction and non-fiction texts originated from various indigenous people and the texts' purpose, content, genre features and means of action</p> <p>Knowledge of Christianity, Religion, Philosophies of life and Ethics: reflect on Sami spiritual traditions</p>	





O2 Scenario of Use Template – “Indigenous People of the world”

	<ul style="list-style-type: none"> - making dream catchers (Native American culture) 		<p>Arts and craft: reflect on how identity and belonging to a place are communicated in clothing traditions, art or objects</p> <p>Thinking critically.</p>	
	<p>Tools: Sami podcast, an episode about being young and finding your identity as Sami today: https://tv.nrk.no/serie/gozuid-alde-paa-tv/sesong/1/episode/2/avspiller Shame and pride, discovering a sami heritage: Den stille kampen – 1. Skam og stolthet (Sesong 1) – NRK TV How to win the Sami language back: https://tv.nrk.no/serie/den-stille-kampen/sesong/1/episode/4/avspiller Interdisciplinary resources on indigenous people: Tverrfaglige ressurser om urfolk (skolestudio.no)</p>			
Students	<p>Actions A7-A9 The student role switches between a receiver and a contributor, where the teachers are giving input and the students are processing and exploring through different assignments. As an example, the students were given roles (local politician, environmentalist, indigenous person, global industrialist) and had to explore a certain issue to participate in a debate. They started out in groups to help each other find arguments supporting the view of their given role, then split up and met opponents with other views and acted out different panel debates.</p> <p>A10 Finding out the symbolic and historical meaning of the artifact, then making one themselves, exploring different materials and techniques.</p>			<p>In classroom Duration</p> <p>4 h</p>
STEAM Ideas' Square (SIS) Operation School Community Synergies	Teachers from all subjects involved meet up for a 30 min pep once a week to check in that we are on track, sharing content and evaluating the process, and adding new ideas as we go.			<p>Time</p> <p>1h</p>
School - Stakeholders	Workshops with Haka and the Local museum.			<p>Time</p> <p>3h</p>



Synergies	
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4.3. Create

				
Act #	Description of activities, strategies, methods, means, resources and synergies		Learning goals - Learning outcomes Features/Competences	STEAM Fields
Educator/s	Educator actions	Educ Method	<p>From the curriculum:</p> <ul style="list-style-type: none"> - investigate and discuss current ethical issues relating to human rights, indigenous peoples' rights, sustainability and poverty - investigate how art, including Sami art, can contribute to social criticism, and create artistic expressions that highlight challenges in our own time <p>Illuminate democratic processes and work together with others.</p> <p>Discussions and reflections, making decisions so the project moves forward. Learning to learn.</p>	
	<p>A11 Split the students in 4 groups. Facilitate for the students to brainstorm ideas for the sharing phase.</p> <p>A12 Gather all students and make a collected list of ideas from brainstorming in A11. Students sign up for the idea they like the most.</p> <p>A13 Teachers make groups based on the students' desired topic (A12). Students meet up in their groups. From this point the groups are student run and they must decide on goal, theme and content. Teachers act as facilitators and coaches.</p> <p>Tools:</p>	<p>Guided exploratory student participation</p>		



O2 Scenario of Use Template – “Indigenous People of the world”

	PC, software to make an online form where the students can choose what idea/group they want to join	Working collaboratively.	
Students	Actions Actively participate in brainstorming. Make an individual choice on where to participate based on interest and knowledge. Contribute in the group process and create goals, theme and content.		In classroom Duration 4 h
	Tools: The different groups have different assignments and are in need of different tools. Examples: The group making food needs the ingredients of the recipe. The ones building igloos need paper, glue and crayons.		
School Community Synergies STEAM Ideas Square	Western Norway University, The local museum, Sunnhordland Museum, Spinae Company. The community Synergies came with different workshops, academic related, scientific, and artistic.		Time 3x3 h
School-Stakeholders Synergies	Working together with the primary schools to find the form of the visit. Create a meeting place where the students from the two primary schools can meet and make the students get to know each other better (they will be in the same class the next school year). Create a meeting place where the students from the two primary schools can get to know the students from secondary school, to contribute to a more safe and good transition into secondary school the next school year.		Time 2h



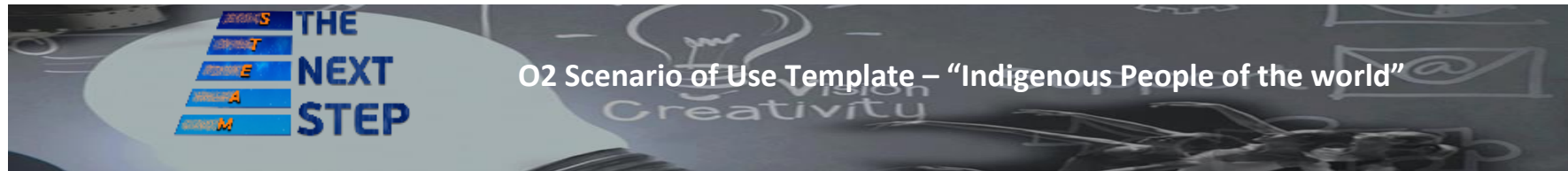
O2 Scenario of Use Template – “Indigenous People of the world”

4.4. Share

					
Act #	Description of activities, strategies, methods, means, resources and synergies		Learning goals - Learning outcomes Features/Competences		STEAM Fields
Educator/s	Educator actions		Educ Method		
	Being the safety net of the students. Supporting them to get organized in time.		<i>Curriculum based</i>		
Tools:		Supporting what the students needed in the different stations and having an overview over the students so everything was in flow.		<ul style="list-style-type: none"> To take responsibility Leading a group (guest students from primary school) Present facts in an interesting and motivating way. Sharing knowledge. Working together in my group and having the same focus. Develop social experience skills. Building a meeting point sharing science and arts, Developing academic mindsets 	
Students		<p>Actions: A14 Sharing knowledge and competences from the last 6 weeks. In this implementation 8 groups are divided into 5 stations. A 9th group works as project managers and guides, and there is also a 10th group where all students are together (dance) as part of the welcoming.</p> <p>The guests are divided into 5 groups led by the secondary students (the guides), meaning that there will be one group at each station at all times.</p> <p>Outline of the visit: 10.30 Welcome at the sports hall - haka dance, presentation of the project, info about the arrangements. Divide the guests in 5 groups, do ice breakers and small “get to know each other” games. 11.00 Start visiting 3 stations inside/outside school, 20 minutes each 12.00 Break - socializing outside</p>			
				Using the school Ide square Full day 7 h	



	<p>12.30 Continue at the 2 remaining stations, 20 minutes each 13.10 Finish stations, walk back to the sports hall 13.15 Teaching and practice haka dance with the visitors 14.00 Day ends</p>		
	<p>Tools: The different groups had different needs:</p> <ol style="list-style-type: none"> 1. “Lavvu station”: Fire sitting space, tent/lavvu, hot chocolate, story telling F1), F2), F3) 2. “Horn Station”: Need 2 elk horns, fur, Rope, Measurements F3) 3. “Fokus Station”: Nothing F7), F8) 4. “Food station”: Stand, Food from different cultures made by students, recipes. F8C) 5. “Culture attributes”: Dream catchers, jewelry, weapons, clothes books, scripts etc. (self made) F1), F2), F3) 6. “Escape room”: Different assignments, film, technical and riddles. F2), F3), F4), 7. “Theater sketch”: Building the scenery, costumes etc. F2), F8) 8. “Igloo Station”. Paper, glue, crayons, selfmade igloo bas construction. F3), F4) 9. Guides: Time schedule and names of the guests F5, F6, F7, F8) 10. “Haka dance”: F2), F8E) 		
<p>School Community Synergies STEAM Ideas Square</p>	<p>The whole school of Nordbygdo was used as a big STEAM Ideas Square. The school is a base school with opportunity to open spaces. The outside was used with different stations as for example a campfire by a lavvu, and the gym facilities for the haka dance, and different stations in the “yellow base’s” classrooms inside the school.</p>		<p>Time 5 h</p>
<p>School-Stakeholders Synergies</p>	<p>About 75 students from Rommetveit and Hystad primary schools as interaction guests. The were divided into groups that were lead and hosted by students from the Implementation School.</p>		<p>Full school day</p>



O2 Scenario of Use Template – “Indigenous People of the world”

5. Features / Competences

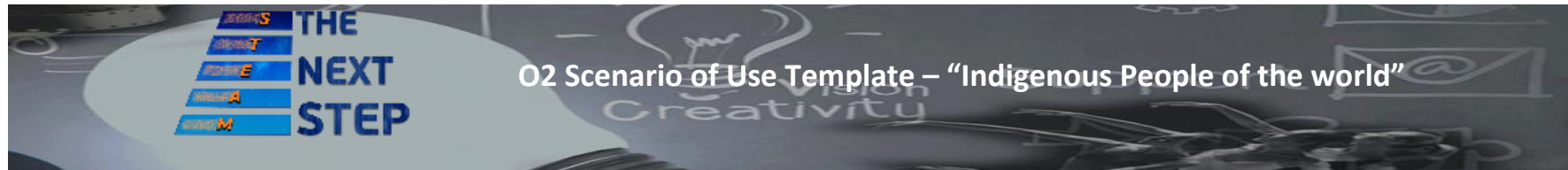
The development of key competences is further facilitated by the provision of context from other disciplines and can:

- a) offer opportunities for deeper learning of STEAM,
- b) improve the innovation and creative capacities of learners,
- c) support the new role as a coach of the learning process,
- d) facilitate the effective cooperation with external stakeholders and
- e) inspire policy makers, school heads and school staff to imagine the schools of tomorrow.

All the above in total in the context of a functional NEXT STEP STEAM IDEAS’ square will drive to overcome the organizational and technical barriers and to integration of creative and innovative culture in every day school practices and to aggregate and create projects and activities customized to the specific needs of schools.

Deeper Learning Competences, European As defined in the Recommendation of the European Parliament and of the Council of 18 December 2006 on Key Competences for Lifelong Learning (2006/962/EC):

To address these strategies a Deeper learning approach as described by the Hewlett Foundation model (Pellegrino & Hilton, 2013) can be adopted in order to define the exact indicators needed to measure the efficiency of the project’s objectives. A selection of certain deeper learning competences that correspond to a range of ages wider than the high school students (which is the main target group of the deeper-learning competences model) can be classified in the following three groups (Frans & Andreotti, 2018):



Group A: Cognitive competencies

- (1) Mastering rigorous academic content - A1
- (2) Thinking critically - A2

Group B: Interpersonal competencies

- (3) Working collaboratively - B3
- (4) Communicating effectively - B4

Group C: Intrapersonal competencies

- (5) Learning to learn - C5
- (6) Developing academic mindsets - C6

As defined in the Recommendation of the European Parliament and of the Council of 18 December 2006 on Key Competences for Lifelong Learning (2006/962/EC):

- F1) Literacy competence – GA1
- F2) Multilingual competence
- F3) F3M. Mathematical competence and F3S. competence in science, F3T. technology and F3E. engineering //or/ F3MS, F3ST (STEM=F3)
- F4) Digital competence - F4
- F5) F5P. Personal, F5S. social and F5L. learning to learn competence (C5)
- F6) Civic competence
- F7) Entrepreneurship competence
- F8) F8C. Cultural awareness and F8E. expression competence



NEXT STEP Partnership



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