TEACHER GUIDELINES

Compiled, authored and edited using material from the Yedac-project and texts

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Read more: http://www.yedac.eu/

These teacher guidelines are meant to be a further introduction into the YEDAC-project with the intention of giving background explanations to the material and supporting practical work by advice taken from practice. Furthermore, there are additional suggestions, tips and tools. You can find some links in it forwarding you to more detailed information in the web or in the annex.

I. INTRODUCTION

The EU CIP-Project Young Entrepreneurship Developing in Action aims at supporting teachers in developing learning environments and processes for entrepreneurial education in the wider sense of the word, i.e. strengthening a sense of initiative, developing ideas into action – not at founding companies – by offering an entrepreneurial learning model and a learning process model.

These guidelines for teachers focus on the Why and How of ENTREPRENEURIAL EDUCATION and try to give background as well as practical information, tools and prototypical learning examples.

II. ENTREPRENEURIAL EDUCATION (EE) – BACKGROUND

We all experience rapid changes in our daily environment. Also societies as a whole experience the same. Western societies are faced with huge challenges if they want to keep up the standards of the last century. Modern technologies and globally active multi-national concerns shift work places in the industry to countries with cheaper labour, while at the same time a growing number of school children leave our compulsory education without basic skills like proficient reading and writing, thus leaving them poorly equipped for dealing with a labour market looking for highly trained flexible youngsters who can communicate in various languages by digital means. (Read more about the background: www.yedac.eu, Acquiring the key competence of a Sense of Initiative and Entrepreneurship)

What can we do to improve education?
What can we do to provide youngsters better for the new situation?

In 2006 the EU has set up the eight key competences for Lifelong Learning, thus making it clear that we cannot hope to define *content* for an education for the future, but only so-called dynamic or key competences. The idea is that every European should aim at acquiring these to enable them to adapt competently to new situations. Furthermore, the EU-commission has set up the Strategic Framework Education & Training 2020. Through this, member states have identified four common objectives to address these challenges by 2020:

- Making Lifelong Learning and mobility a reality
- Improving the quality and efficiency of education and training
- Promoting equity, social cohesion, and active citizenship
- Enhancing creativity and innovation, including *entrepreneurship*, at all levels of education and training

So, strengthening the sense of initiative and entrepreneurship is explicitly seen as an active strategy to enable citizens to cope with these changes.

Why and how can entrepreneurship education in the wider sense be an answer to global challenges?

On commission level entrepreneurship is one of the main strategies for the future: as a key competence (number seven: Sense of Initiative and Entrepreneurship) as well as one of the four goals in the Strategy 2020. It can be entrepreneurial education in the narrow sense (aiming at enabling people to become entrepreneurs and setting up businesses or companies) or in the wider sense, meaning providing settings that encourage students to come up with ideas and initiatives within their region and school, and within subject matter and allowing them to develop these ideas further into products or services.

So we have to look at the key competence a bit closer. To name a few of the more prominent features short-listed from the key competences by the YEDAC-project (read more: Acquiring the key competence of a Sense of Initiative and Entrepreneurship) ENTREPRENEURIAL EDUCATION in the YEDAC context aims at

- strengthening the sense of initiative of individuals within their communities. We need people who react to local issues by actively working towards improvement.
- pupils to seek and take opportunities within their scope of action and fostering problem-solving skills by developing ideas into action
- curiosity, creativity and innovation starting from educational content
- allowing calculated risk taking and taking on responsibility
- encouraging competence and product development
- fostering communicative skills like convincing/inspiring
- seeking to create value and quality
- strengthening self- confidence in pupils by trusting them to solve problems
- helping to develop persistence by encouraging them to develop ideas into action
- allowing for self-directedness in educational contexts
- encouraging a sense of aesthetics (e.g. in designing products that are accepted by others)

How can we make this happen?
Entrepreneurial spirit in the region/school authority

If schools and teachers want to change and allow for entrepreneurial activities/enterprises they find they are embedded in an environment that can either be supporting or discouraging this kind of change. An open attitude of society and of school authorities and legislation that tolerates cooperation with the "real" world is a necessary prerequisite. Parental involvement and involvement of entrepreneurs in the region will support competence-oriented learning activities. Also universities seeking to create value can give important incentives (social capital approach).

The network "Entrepreneurship Education and the World of Work" has set up indicators for supportive conditions in the environment of schools. Among these:

■ there exists a national political understanding and interpretation of the Europe 2020 vision, and ENTREPRENEURIAL EDUCATI-ON specifically
■ ENTREPRENEURIAL EDUCATION encompasses all age levels beginning from the earliest stages of education in childhood up to tertiary education and adult education and stimulates a progression in skills and competences through teaching methods and activities within and outside of school and formal learning
■ ENTREPRENEURIAL EDUCATION strategies and policies cover all aspects and dimensions e.g. development of talents and potentials of individuals …
■ national and regional education acts give guidelines and tools that enable school managements continuously to evaluate and develop ENTREPRENEURIAL EDUCATION/CE in school

The YEDAC-project was set up in the background of Entrepreneurial Regions of Europe to ensure favourable conditions in the environment. Yet, some of the measures may not be publicly well known and the spirit might not yet be visible in the educational system. So it is necessary to actively engage in networking with educational authorities as well as bodies responsible for economy (Chambers of Commerce, Economy …) as well as entrepreneurs to find all the support available in the region. Most regions are informed about EU-policy and are aware that in order to foster economic growth and labour possibilities such initiatives are necessary to help young people discover their talents. The Yedac-projectteams in the region can help you to connect (see: wwwyedac.eu).

III. IMPLICATIONS FOR EDUCATION

All learning and teaching takes place in a context and is either implicitly or explicitly following traditions. These must be taken into account when one is focusing on change. In order to find implications for the educational system we will address a few aspects in the following.

A. COMPETENCE-ORIENTATION IN EDUCATION

In a world dominated by digital media and abundance of information, learning must have a different connotation. It can no longer focus on knowledge reproduction, but must focus on enabling individuals to adapt their actions flexibly in varying contexts. So education focuses on competence-development in learners rather than on passing on knowledge (read more about this: www.yedac.eu, Acquiring the key competence of a Sense of Initiative and Entrepreneurship)

Competence-oriented learning accepts the learner as equal to the teacher, builds on prior knowledge of the learners and enables them to do further research and discover rather than being receivers of a fixed body of knowledge to name a few changes important for our project.

B. TEACHER COMPETENCES FOR ENTREPRENEURIAL EDUCATION

We have already focused on qualities youngsters can obtain through Entrepreneurial Education, but what kind of qualities and competences do teachers need in order to bring about change?

Entrepreneurial learning is model-learning illustrated in the saying "No use teaching our children, they imitate what we are doing anyway". So teachers should be models for entrepreneurial thinking (showing initiative, seizing opportunities, taking risks and responsibility …) and should encourage pupils to find other role models in their surroundings (parents, relatives, local/regional environment), and know about entrepreneurship themselves. In this new kind of learning teachers should be able to initiate and support team processes, encourage students to develop and pursue ideas, foster communication processes that lead to understanding – mostly a new role for teachers. And, of course, they need didactic competences to integrate entrepreneurial aspects into their subject teaching.

TEACHER COMPETENCES

Knowledge about Entrepreneurship and Entrepreneurship Education, open minded reflected attitude towards Entrepreneurship

ENTREPRENEURIAL COMPETENCES	PERSONAL COMPETENCES	DIDACTIC COMPETENCES
The teacher can …	The teacher is able to …	The teacher can …
… identify und seize opportunities	… manage conflicts	… define competences for EE
… "network"	… co-operate in teams	… plan EE learning environments
… organize and plan activities	… communicate with other	… organize learning activities in the framework of EE
… devise a plan	… give advice	
… make decisions	… support the personal learning development	… integrate EE in subject-teaching
… make use of expertise		… assess learning activities
… seek to create value and quality	… reflect their own role as a teacher	… reflect teaching activities
… take responsibility for an activity	… identify strengths and capacities	… improve teaching activities
… take risks	… handle mistakes constructively	… change mindsets
… create new ideas	… find ideas to solve problems	… motivate students
… act innovatively	… understand and follow up other's ideas	… encourage students' ideas/talents and their interests
… turn ideas into actions	… argue for or against ideas or products	
… dedicate oneself to an activity	… help find consensus	… create continuous support for development of all relevant competences for entrepr. spirit
… make an effort for achieving goals in an activity	… cultural awareness	
	… societal awareness	… foster students' creativity
… present ideas and products	… raise and discuss ethical topics	… facilitate/coach students' work
… support the development of project management skills	… act and react in a flexible way	… optimize the use of resources
		… diagnose students' abilities
		… set up inclusive learning environments

C. NEW WAYS OF LEARNING

Competence–oriented and especially key-competence-oriented teaching is based on learning experiences of pupils and not only on classroom teaching. So what kind of learning experiences does it take to develop the key competence **entrepreneurship** (including the characteristics mentioned)?

Here we are shortlisting a few learning experiences that have been found helpful in developing key competences in general. The following list is supposed to give an idea how subject teaching can be changed into competence-oriented teaching:

- Project learning
- Active learning
- Explorative learning
- Experiential learning
- Learning in real(istic) settings, authentic learning
- Collaborative learning
- Productive learning
- Creation of value(s)
- Entrepreneurial learning
- Learning close to one's own ideas
- Collaborative learning

Also failure and sidetrack-tolerant learning or learning from mistakes is necessary. In short: settings in which the learners are active and the teachers adapt learning environments and support learners.

D. NEW ROLES FOR TEACHERS

We have stressed above that by adopting competence-oriented learning approaches the role of the teacher changes immensely. The teacher is no longer the provider of knowledge but a facilitator of pupil's learning. In order to do this, they have to focus on the competences their students should acquire and design learning activities and processes and learning environments in which the learning of students can best take place. In order to raise pupils' motivation the teacher explains how this competence connects to the real world and how it will be assessed at the end of the learning process. So teaching means facilitating and coaching students' learning processes not only individually but in the learning community. Pupils engage in tasks that they experience as relevant, because there are problems they are asked to discover responses to and because they decide to a large extent about their products. Teachers set tasks which are open to individual solutions (no one-correct-answer-is-possible tasks). Furthermore, competence assessment is different from writing papers and exams. It should allow for demonstration of behaviour of a certain quality in a (slightly different) context. So a demonstration of acquired competences or the assessment of a product or service should take place at the end of such a learning process. The YEDAC-project aims at supporting teachers in all these stages.

E. IMPLICATIONS FOR SCHOOL CURRICULA

In many countries in Europe school curricula or parts of them are already competence-oriented and focus on talent development and career orientation in pupils. School curricula often do not, however, focus on key competence development even though all European countries have committed themselves to this strategy. However, curricula in many cases stress world orientation and allow openness to third parties (companies, local community …).

It would be helpful if school curricula explicitly mentioned key competence acquisition as a learning goal and allowed enough space for learning activities that are not strictly targeted to subject matter goals in a limited time frame. It is helpful if there is room for multidisciplinary integrative approaches/work, which is the case in some countries (like Austria) already. Links to real world topics/problems are possible in every subject, it is probably a question of explicitly seeking these opportunities.

F. CHANGES IN SCHOOLS

In order to make key-competence acquisition and entrepreneurial thinking possible in schools the mission statement should explicitly mention this as a goal. Topics like teachers being facilitators, parental involvement in learning activities inside and outside of school, and re-thinking homework as well as schoolwork should be reflected on a whole-school basis. Furthermore, collaboration between teachers should be encouraged and facilitated by providing time for team work. School time structure should provide room for multidisciplinary and theme oriented approaches (e.g. time set aside for project-oriented work, one week per term, a day a week …) Schools could create a network that could involve cont(r)acts with entrepreneurs/organisations in the region, should encourage peer work "greenhouses" in many ways, fostering the growth and enrichment of pupils. School facilities can be used in many ways, thus opening up to the community, providing services and offering cooperation. In this way schools could allow for entrepreneurial activities/enterprises of students in many ways.

IV. YEDAC IN SCHOOLS

As shown above the YEDAC-project has analyzed learning environments, learning culture and activities necessary for teaching and learning that leads to key competence acquisition and an entrepreneurial mindset. Teachers have to integrate these ideas into their teaching of subject matter. To support teachers in doing so the YEDAC-project has developed a didactic model called Entrepreneurial Learning Model.

A. THE ENTREPRENEURIAL LEARNING MODEL

The Entrepreneurial Learning Model sums up the approach in the following picture. The basic idea is to gain an entrepreneurial mindset through innovative learning in subjects by cross-curricular, multi-disciplinary and competence-based approaches. This can best take place in a carefully prepared learning environment that includes real world context (companies/problems…), a participative learning culture that accepts that both teachers and students are learners and learning activities that allow for innovative thinking and actions.

THE YEDAC ENTREPRENEURIAL LEARNING MODEL

The Entrepreneurial Learning Model is based on the trend across Europe to develop competence-oriented education, and should normally start from subject competences which are acquired in an entrepreneurial way. This is maybe the most difficult to achieve and yet it also solves the ever-present problem of time and curriculum pressure. So students learn what they are meant to learn, but in a different way!

Furthermore, the ELM shows another three elements and all together promote the fourth – the acquisition of entrepreneurial competences. Entrepreneurial competences are best acquired in a *Participative Learning Culture* that is based on a democratic understanding and characterized by participative and transformative leadership meaning that teachers and students and parents in such a school are also encouraged to show initiative and find their ideas are equally valued no matter the background they are from. Another important aspect is a culture of acting together in big or small teams rather than teachers as lonely experts in their classroom and thirdly, there is this basic assumption that learners are seen as partners in the process rather than being on the lowest rank in school hierarchy. In short: the learning culture in which a YEDAC-project can thrive is not characterized by hierarchic structures, but by a cooperative and participative climate which is also open to stakeholders in the education process outside school, like entrepreneurs. In the Learning Culture also Learning Organization is included.

As schools are not "islands entire by themselves" it is important that we organize a *Real World Learning Environment* that inclu-des also the wider region and possibly entrepreneurs to open up to entrepreneurial thinking instead of "school thinking". It can be connected to an "entrepreneurial region of Europe" in which we assume awareness-raising for EE has also taken place. But, of course, other regions may have other reasons for awareness raising, the point is, that schools cannot all on their own create this fundamental change and are maybe seen as "aliens" in a system that is not at all familiar with EE. So the "psychology", the overall atmosphere among parents and the community will influence the project. And what is also meant here is that entrepre-

neurial projects do not only take place in classrooms– they must needs connect to stakeholders and entrepreneurs in the region. Learning activities and products will not stop in front of school borders, but will start from needs in a region and/or in a school subject (see tool: Context Analysis).

Learners need autonomy to be motivated, a sense of direction and social relationships. The described *Empowering Learning Activities* intend to take students by their own interests and guide them through a creative and cooperative learning experience involving setting their own learning goals (within a defined frame), analyzing context, defining the learning path and taking responsibility for their actions.

The *Real World Learning Environment*, the *Participative Learning Culture* and the *Empowering Learning Activities* are set out in a way that students can acquire an entrepreneurial mindset, BECAUSE it is them who take initiative, search and take opportunities, communicate in different contexts, turn their ideas into in action, create value-added products and finally (or during the process) sell their ideas to a wider audience. By actually going through a process they are not only allowed but required to show some of this behavior, reflect upon it and get feedback by peers and teachers on their progress.

B. THE ENTREPRENEURIAL LEARNING PROCESS MODEL

How do we organize a learning process?

The YEDAC process model is referring to the YEDAC Entrpreneurial Learning Model and suggests a learning design, which can be used by teachers in their planning of teaching. Competence-oriented teaching starts by agreeing on the competences to be acquired. These are the **Entrepreneurial competences mentioned above and key concepts from 3 subject matters** to be defined by the teachers. So team cooperation of teachers is a necessary pre-requisite for the process (see section Tools for "Tips on Teambuilding) . As the school should provide an open learning environment the teacher preparation includes information of all relevant levels and networking to provide for real world problems in the school context. It is structured in three phases: Explore (the topic, the context, entrepreneurship); Develop (the idea, product or service) and Deliver (your product or service and evaluation). We see reflection as such a vital element of every learning process that it is integrated into every workshop and not mentioned as an extra.

THE YEDAC ENTREPRENEURIAL LEARNING PROCESS MODEL
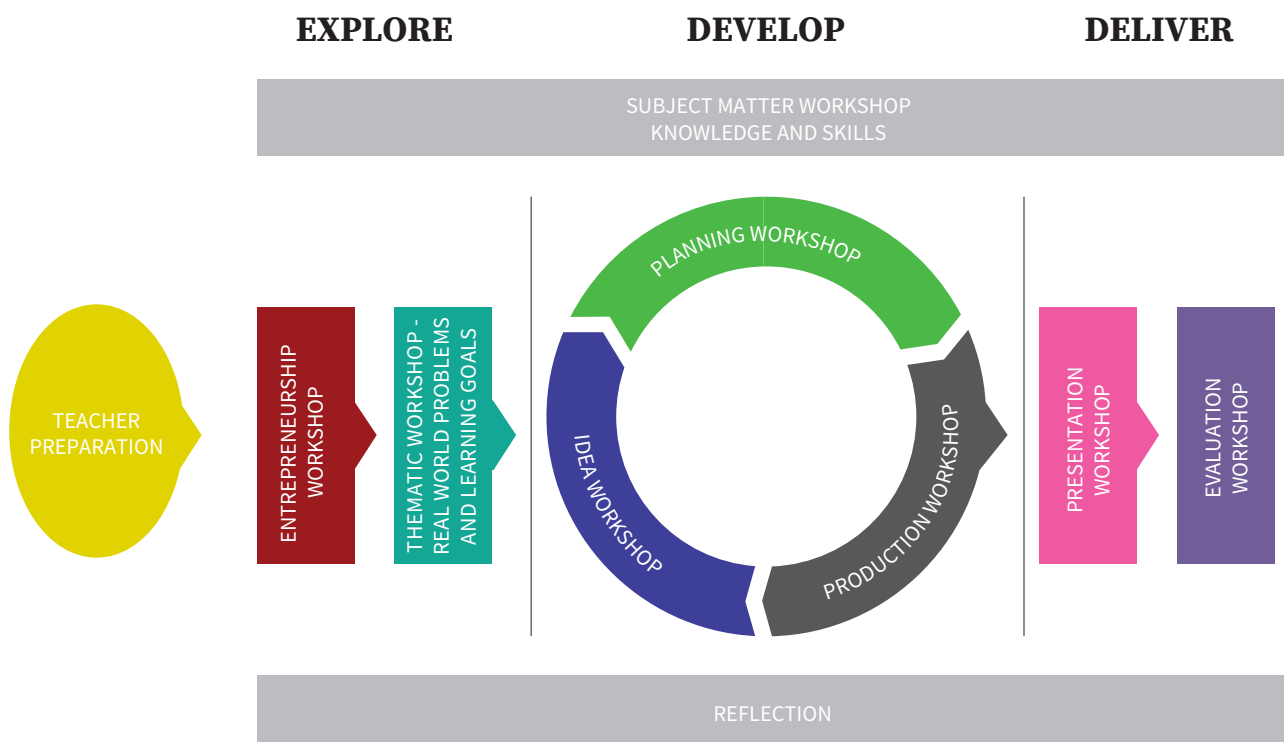
The Learning Process Model starts with Teacher Preparation. We have structured the learning process into three phases: Explore – Develop – Deliver. The different phases will be described below. It has been stressed before that the idea is to connect entre-preneurial learning to subject matter learning. That is why throughout all the learning phases at the top there is this reference to subject matter and knowledge, tools and skill workshops – to make sure learning is always connected.

Reflection is essential for all learning, especially for learning processes which are a bit "out of the box". Learning achievements must be made obvious or they will not be noticed. So again through all the phases and in all the workshops we understand that there will be time-slots for reflection and self-evaluation and feedback (the Method Cards can help you with methods to structure this process).

PHASE 1: EXPLORE

The teachers invite the learners to take part in this experience and explain the concept of the key competences and especially key competence number seven and the shortlist of the entrepreneurial mindset as well as introducing the scope of entrepreneurship.

In the:

- **Entrepreneurship Workshop** the entrepreneurial mindset is explored. This can be done by inviting entrepreneurs or asking children to do research (see section V for tips, p 14 f). They are then introduced to the different items of the entrepreneurial mindset and both to entrepreneurship as a career opportunity and as a key competence promoting sense of initiative and an enterprising behaviour and active citizenship. The entrepreneurial competences in the YEDAC process model should be introduced to the pupils as a learning outcome together with the self-assessment tool (method cards).
- As has been stressed before, teachers should try and connect entrepreneurial learning to **subject matter** and an individual learning goal concerning subject matter should be introduced or made visible by the teachers at this stage – or identified by the pupils themselves.
- In a next step **Thematic Workshops** focus on themes connected to the subjects and the region in partnership between students, teachers and entrepreneurs and select different needs and points of view based on subject matters. Initial research data about the themes are gained through observation, interview and desk research (see also tool section VI: Context Analysis). To facilitate this process the YEDAC-project has developed both method cards for teachers and for students in the languages of the project partners. Please find an overview in the toolbox.

PHASE 2: DEVELOP (ITERATIVE PROCESS)

The three workshops in this phase can be organized according to the needs of the learners and their learning process.

- In **Idea Workshops,** constructed according to the themes, students, teachers and entrepreneurs can work as partners. Students create and sell new ideas to be further developed in teams that are formed around the ideas with the highest potential. Ideas are developed through brainstorming, inspiration from others and evaluation. Here risk taking as a concept comes in (see tools: risk taking, method cards).
- In **Planning workshops** the students develop their ideas further, transfer them into individual learning goals, delegate work, cooperate, use project management tools to allow ideas to turn into products.
- In **Production workshops** plans are executed and products or prototypes are actually made or services developed. The pupils carry out the process from an idea to a product in teams with mutual facilitation and guidance. As the products and learning paths are new to everybody, pupils, teachers, and other experts work as partners in the process. Projects are described in terms of individual learning goals, **planning** of time and planning of roles (see Section VI for project management tools). Production can be supported by methods like sketching, persona, co-creation and physical prototypes (Tools, method cards).
- On demand – like in all the other phases - **Subject Matter Workshops** are established to offer knowledge, tool and skills needed to acquire the learning goals and for the realization of projects. Teachers plan the workshops together with students and other experts. They can contain subject matter, and tools and skills from subjects or can be driven by the needs of the project idea.

PHASE 3: DELIVER (LINEAR PROCESS)

- The pupils have to plan how to best win acclaim for their product. In **Presentation Workshops** the pupils acquire the necessary skills to communicate their ideas and products clearly for teachers and other partners. Ideas for presentation techniques include storytelling, user journey or videos and/or social media (method cards).
- In **Evaluation Workshops** the meanings and consequences in the development of projects are reflected in a way that leads to new ways of action and new learning of subject matter. Evaluation can be done as "Did and To-Do", "Learned and to Learn" and Self-assessment.

Reflecting is seen as crucial throughout the learning process and should be integrated into every phase. Learners are supposed to continually reflect the steps in the project and their own development around the ideas, learning processes, learning out-

comes and products or services produced in the projects. Reflection includes feedback from peers, teachers, external partners and other networks.

For all the steps in this process the YEDAC-project supports teachers with tools and methods – see section VI Tools

C. TEACHER ACTIVITIES IN A YEDAC PROCESS

We would now like to transfer the information above into actual activities teachers will do. The information below is about the steps a teacher has to set in order to prepare, deliver and evaluate a YEDAC-activity in school. Special focus is given to the context analysis, risk taking, the communication, the assessment and the evaluation activities that may be included in the school based YEDAC-activity.

What does a teacher have to do to arrange for a YEDAC-activity to promote an entrepreneurial mindset among students? The following lists are intended to give an overview and idea on possible activities.

1. PREPARATION

- Inform the colleagues about the YEDAC-project/entrepreneurial mindset
- Form a group of teachers willing to be involved (including 3 different subjects) see also section Tools for Tips on teambuilding)
- Inform the students about the YEDAC-project

2. PHASE 1: EXPLORE

- Do a first needs assessment starting from subject matter/ the region
- Engage in pre-research with colleagues and students to analyze the region
- Contact entrepreneurs/people supporting problem-solving in the region – start creating a network
- Negotiate and set project programme and schedule hours
- Negotiate and agree education with authorities, parents, inspectorate on issues concerning safety, responsibility, insurance, accountability etc.
- Moderate a process of setting priorities
- Facilitate a process of brainstorming followed by choosing ideas to work on
- Approach entrepreneurs or role models willing to be involved
- Assist students in specifying and elaborating the ideas further
- Help students to turn their ideas into project goals
- Identify together with students and teachers relation with subject matter
- Discuss with other teachers/parents/… to set up a reward and incentive structure
- Help students to turn their project goals into their own subject learning goals
- Help students to relate these goals to their needs and the entrepreneurial competences they wish to acquire
- Prioritize the entrepreneurial competences your students and you will focus on
- Design learning itineraries to acquire the selected entrepreneurial competences
- Identify and discuss the teachers' roles and inputs in the learning process
- See also method cards: theme, network, goal

3. PHASE 2: DEVELOP

- Deliver your inputs in the classroom
- See to it that group compositions match the goals
- Moderate group work where necessary
- Engage in monitoring and evaluation
- Include subject assessments
- Provide feedback
- Deal with power issues and conflicts in groups when necessary

4. PHASE 3: DELIVER

- Organize and facilitate presentations
- Promote publicity
- Support the evidencing of learning outcomes
- Assess individual and group competences

5. ASSESSMENT

(Self/peer or teacher) assessment within a YEDAC-activity should include and had best be planned from the start:

- Assessment of entry level (see method card)
- Assessment of progress in subject competences
- Assessment of progress in entrepreneurial competences
- Product assessment (it is recommended to use a jury of local entrepreneurs)
- Assessment of presentations/publications
- Summative assessment of subject matter competence
- Summative assessment of entrepreneurial competences

6. EVALUATION

Evaluation as part of a YEDAC-activity in school will include:

- Evaluation of the activity plan
- Evaluation of the implementation of the YEDAC-activities (according to plan: yes or no? Availability of tools, infrastructure, support, feasibility of the plans etc.)
- Evaluation of the project students are working on
- Evaluation of the overall progress students make in terms of subject knowledge
- Evaluation of the overall progress of students in terms of entrepreneurial competence
- Evaluation of the teaching/facilitating
- Evaluation of the overall project output (services/ products)
- Evaluation of the overall learning outcomes (subject and entrepreneurial competence
- Evaluation of the YEDAC-learning process as a whole (satisfaction and suggestions)
- For tips on evaluation methods and tools lots of websites are available, e.g. http://www.sealll.eu/docs.php;

D. THE ROLE OF THE SCHOOL LEADER

Organizing a project using the Yedac approach in schools is a challenge to students and teachers. Besides that, it requires an involvement and commitment of the school leader. Her, or his presence and support in the development and the implementation of such projects is crucial.

Initial orientation
Once the project is introduced to the school or initiated by one or more people in the school, a need arises for the school leader to launch, or to take part in a first meeting. During such meeting it is important to explore a few basic choices such as (who may, or are supposed to take part in the project, what will be the scope of the project (both content-wise as well as far as the number of teachers and students involved). Which classes will take part in the project and what steps are required to allow the teachers to develop a shared project in a well co-ordinated way.

Clear negotiations and agreements
Of course the things discussed during the initial phase need further exploration. Teachers have to be approached and together with them the project will need to be further outlined. This eventually will lead to a draft proposal, on which all teachers concerned together with the school leader will reach an agreement. Such an agreement provides clarity about the people involved, the hours available, the time available for preparation and related professional development (if needed). It must also provide clear agreements on practicalities (rules, insurance issues, inspection issues, communication to students and parents etc.)

High expectations and full support

Agreements are one thing, but they do not make things move. What makes a project move is inspiration and leadership. School leaders are important in this process. Their presence during the establishment of the project group demonstrates their interest and mental support. By being present or by taking a role in the external communication about the project (with parents and with entrepreneurs) they may demonstrate their commitment and support in this project. Teachers will experience this an appreciation of their initiative and efforts. Such opportunities may arise when meetings with parents or with entrepreneurs take place, be it as start of the project´, as party of the project or as eventual presentation of project result.

Conditions

Some conditions ask for special attention. In order to support the feasibility of the project it is important to be clear about the time for the project tasks (including, conceptualization, development, delivery, communication and follow up). Time is not the only thing needed. The time also requires space in the agenda for team meetings. Schedules will have to allow for this. Entrepreneurial project tend to include also other activities than only classroom based activities. This may best be though through in advance. Rules and agreements on how and under what restrictions students may operate inside and outside the school may be indicated. What are the available facilities to be used for project purposes, or what are the procedures to identify this later on when needs for facilities not yet agreed upon may arise.

Publicity

Entrepreneurial projects require publicity, and are publicity. The school leader may perceive this as a chance to show the entrepreneurial ambitions of the school and at the same time as an opportunity to allow teachers and students to present and celebrate their achievement in the

Support in transfer and dissemination

Projects tend to be followed by new future projects. If so, it is important to pay special attention to the transfer and dissemination of the project to other teachers than just those who participated in the project. Here again the school leader may operate as a facilitator. The project models, tools and experiences may be shared with other during team meeting, CPD days, or workshops. Such follow up only occurs when this is made part of the planning and is given support to.

V. 1. TIPS FOR DEVELOPING AN ENTREPRENEURIAL MINDSET

Since entrepreneurial learning is also role model learning we need to provide pupils with models. You can make use of the following ideas as appropriate:

- Ask pupils to do some research in their family. Is there an entrepreneur/a person showing sense of initiative (maybe in the community) in the wider family? – If so, do conduct an interview on how it all started, what it takes to persist, what are advantages/disadvantages.
- Do research in the local surroundings of your school. Which big and small enterprises are located there? Are there new entrepreneurs, small businesses that started from scratch? What was the motivation behind it, what are unique selling points, what makes it useful for the area? – You may want to decide on the scope of this research, what about "Radius 2000"? Your school is the centre of a circle and within a radius of 2,000 (or 1,000 or 5,000 m if appropriate) you have your pupils do the research. You can also turn it into a school project using a wider scope.
- Invite a successful/newly started/innovative/young entrepreneur to class and have children conduct a group interview.
- Visit an innovative (social) enterprise/new start up in your surroundings and have children explore all the ideas/necessities behind this.

SOME REMARKS ON TAKING RISKS IN A SCHOOL CONTEXT

Real innovative learning takes place when you get out of your comfort zone and start taking risks. However, which risks can be taken in a school project? – They can definitely not be on a health and safety level. So what risks can children take at school?

- Investment of time (school and sparetime)
- Investment of energy
- Investment of (fake) money
- Competition could be one of the answers, but in a way that it is through challenging not blocking creative energy
- Challenge to win a reward
- Casting to get a certain position

SUBJECT TEACHING LEVEL/ THEMATIC WORKSHOP

In order to make subject teaching entrepreneurial focus on what there is to learn rather than what you need to teach. Make children do some research into

- What in your subject goes back to an innovative/creative idea? Which new inventions pushed research in your subject further? Who were these people, how did they conceive their ideas?
- Start from unresolved questions/problems in your subject
- What are current problems/challenges in your subject where there are yet solutions needed? Point them out, have children imagine in what way the world would be different if there were solutions to this problem.
- What are pupils' questions regarding your subject? Make them pursue their own questions on a topic.

SCHOOL LEVEL

Entrepreneurial thinking and competences and a sense of initiative should be visible and rewarded in school. Many problems at school level could be dealt with in a participatory and maybe entrepreneurial way.

- Example 1: A school has a rather plain playground so they have boxes with games and sports material for the breaks. A teacher was responsible to keep this material together and in good shape and she was desperate because it was a hard job with little satisfaction. So the new headmistress decided to give responsibility to class level teams. They got some starting money and were allowed to buy some new material. At the end of the school year they had to account for successes and losses. (taking responsibility)
- Example 2: There are many school events (parents' day ...) in which lots of people are at school. Allow a class/group to be responsible for the snack bar, and allow others to sell products they have produced in projects - maybe for a social purpose maybe to help finance class projects ...(sense of initiative, seizing opportunities)
- Example 3: Create room for fundraising. Many school activities cost a lot of money or cannot be conducted because some parents cannot afford to finance them. Turn it into a class activity to create ideas on how to raise this money. One school conducted a big karaoke show with pupils having to sell at least five tickets for a small amount of money so they could take part in the contest. Another class organised a "talent market" with every pupil taking part and having an input. Some designed the tickets and posters and invitations, some were organising, some created cocktails and snacks others showed unicycle and dancing and singing acts, others magic tricks or read out their own stories and poems.
- Example 4: A special act of fundraising was put on in a Dutch school. It was called "A Slave for a Day" and involved students of the upper forms who offered services (like washing cars, mowing the lawn, cleaning windows ...) for a fixed price per day. It was connected to learning about slavery in history and today, e.g. the headmaster rented some of them to clean out some old cupboards in the school.

SCHOOL AUTHORITY

Sometimes there is a lot of bureaucracy involved when you want to change little things at school. Help raise awareness that with a sense of initiative small problems had best be resolved where they arise.

COMMUNITY LEVEL

Sometimes there are things in the local community or school surroundings which are seen as a nuisance or a problem but nobody ever takes the initiative or finds the time to do something about it. Make your pupils aware of such things or make an inventory of such problems (see: Context Analysis) and have children create ideas about how to solve them. Prioritize ideas and help children to do the first steps to change (like writing to local politicians about a missing zebra crossing or more important things …)

V.2 SOME TIPS ON COMMUNICATION AND TEAMBUILDING

a) Communication

It might be helpful to realize that in project work, and even more so in entrepreneurial project work, good communication is essential. In the following you will find a list trying to specify what types of communication can and should be used with the intention of maybe widening the scope of actively used communication.

TYPES OF COMMUNICATION TEACHERS WILL ENGAGE IN
- Needs assessment/listening, exploring
- Brainstorming
- Understanding students 'ideas
- Networking
- E-communication
- Persuasive communication
- Negotiating
- Moderating
- Teamwork
- Group management
- Presenting
- Explaining
- Publishing
- (Peer) feedback

It has been found helpful to organize brainstorming or prioritizing processes with the help of De Bono's Method of the "6 Thinking Hats". For more information and worksheets see, e.g. www.inspiration.moonfruit.com

b) Teambuilding

Yedac- Activities require cooperation on all levels, not only students work in teams, also teachers best compile teaching hours and efforts. For schools who have less experience a few ideas on what to keep in mind when working in a team and when guiding students' team activities and processes.

Goals

A team is characterized by working on a certain goal together. It is absolutely important to create a shared understanding of that goal. 'Beginnings decide about the end' is one of the sayings in school development. Often it takes a long (and even tiresome) process to create this shared understanding. However, if it is reached too quickly very often it will turn out that people's understandings are quite different and it will lead to problems.

Time

Teams work best if they have a common time slot. There are teams that happily meet in a cafè in their free time, but it should be the concern of the leader to help create a common time-slot and find a room for regular meetings. If you have a fixed day and hour it will best promote the progress of the common task.

Delegation of Work

Teams work best when they have a range of different qualities of the team members and team tasks are distributed according to interests and talents.

Team Structure

Teams work better when they clarify team tasks: who will coordinate and facilitate team-meetings (agenda, facilitation), who will write minutes, who will watch the time, inform missing team members or non-team-members and who will provide for the social aspect (room setting, snack,…).

Balance between Product – Process - People
Teams work best when there is a balance between the focus on the common product, the process and the people. Neglection (e.g. when there is nobody planning the process of the team meetings to make sure team meetings are productive) or exaggeration of one aspect (when e.g. the focus is only on a good product and there is no attention on individual team members) leads to frustration which could eventually lead to team-members 'disappearing' – especially in an informal project setting at school. It is well worth addressing difficulties before they explode into a conflict.

Conflict Management
Conflicts need to be addressed and to be restricted to the people directly involved. It is adamant to see that everyone's opinion is valued – people always have good reasons for their view on a matter and they say that the conflict is already pushing for a solution. In constructivist thinking looking at someone else's perspective and seeing its individual truth is an effective way of learning. So it is best to welcome conflicts and see them as enrichment rather than a threat.

V.3 GROUPING ACCORDING TO TALENTS

In one of the pilots it was suggested using the approach of Howard Gardner's Multiple Intelligences to group children and to make sure that different abilities are also present in the groups. Besides, it is also added value to reflect about one's talents and abilities. There are many checklists available on the internet, e.g.:

"Multiple Intelligence Checklist" adapted from 7 Kinds of Smart by Thomas Armstrong, copyright © 1993 by Thomas Armstrong. http://www.lkdsb.net/program/elementary/intermediate/di/files/Multiple%20Intelligences%20Checklist.pdf
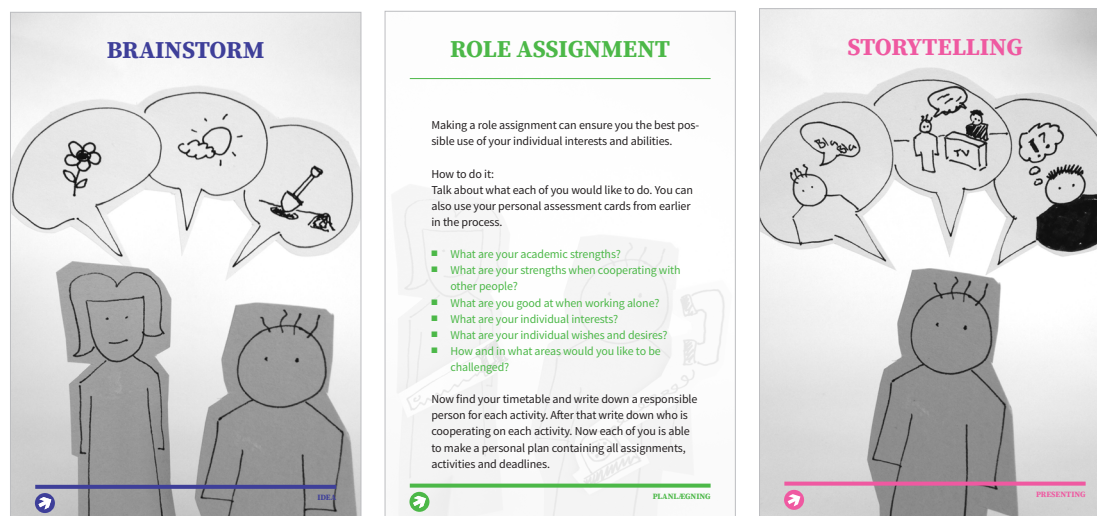
VI. TOOLS

1. METHOD CARDS (SEE: METHOD CARDS)

They are meant to support teachers and pupils in planning individual learning trajectories and facilitating the process. Some of the method cards are meant for teachers only, most of them are intended to support pupils in pursuing their individual projects as independently from teachers as possible. They can just be given to the pupils as a set with the freedom of choice of methods for different stages of the process, or handed out by the teachers when the pupils are just entering a new phase. The method cards are available in sets to be printed out or also in a booklet (see website).

Overview of Method Cards

Teacher Preparation	Theme, Network, Goal
Entrepreneurship workshop	Personal card: Self-assessment, Entrepreneurship Career, Entrepreneurial Competences
Thematic workshop	Method: Desk research, Interview, Observation (Context Analysis)
Idea workshop	Method: Brain storming, Positive/Negative, Inspiration universe
Project workshop-planning	Method: Planning , Timetable, Roles Personal card: Individual learning goals
Production: Concept and prototype	Method: Sketching, Persona, Co-creation, Physical prototype
Presentation	Method: Storytelling, User journey, Film
Evaluation	Method: Did and To Do, Learned and to Learn Personal card: Self-assessment

Examples of Method Cards

BRAINSTORM

ROLE ASSIGNMENT

Making a role assignment can ensure you the best possible use of your individual interests and abilities.

How to do it:
Talk about what each of you would like to do. You can also use your personal assessment cards from earlier in the process.

- What are your academic strengths?
- What are your strengths when cooperating with other people?
- What are you good at when working alone?
- What are your individual interests?
- What are your individual wishes and desires?
- How and in what areas would you like to be challenged?

Now find your timetable and write down a responsible person for each activity. After that write down who is cooperating on each activity. Now each of you is able to make a personal plan containing all assignments, activities and deadlines.

PLANLÆGNING

STORYTELLING

PRESENTING

2. CONTEXT ANALYSIS AS A BASIS FOR INITIATIVES

STEP 1: OVERVIEW OF YOUR REGION

Please, create an overview of your region using the categories mentioned below or other additional categories you may think of. You can do this in the teachers' group first and then include pupils or do it with the pupils from the very start. You may want to focus on some parts only according to the subjects included in the project or go through all steps and use the findings for different projects.

History of the region	■ How did the region become the way it was? ■ What were the historical highlights? ■ What is the region known for?
Natural environment	■ What are the main characteristics of the regional environment? ■ Are there any specific natural structures this region is known for?
Work sectors	■ What are the main work sectors in the region? ■ Which sectors are over/under-developed?
Industry	■ What industries does the region have? ■ What are the main products?
Regional products	■ Is the region known for particular local or regional products? ■ How widely spread is the name/fame of these products?
Monuments/sites	■ What monuments/sites or other historical, or natural resources are present in the region? ■ To what level are they accessible to the public? ■ What role do they play in the region (tourism, culture, awareness, identity etc.)?
Employment	■ What is the level of employment in the region? ■ Which sectors provide what level of employment? ■ Does unemployment affect specific groups (if so: which groups)?
Infrastructure	■ What are significant infrastructural features of the region (canals, airports, highways, bridges, aqueducts, etc.)

Demographics	■ Who are the residents of this region and what demographic changes do we observe? ■ Are there any particular identifiable groups of newcomers?
Cultural events	■ What are the main cultural events in the region?
Social cultural life	■ How do people communicate, what role models do they have, what convictions are dominant? What youth culture is arising?
Sports	■ Which sports are well/ less well developed in the region?
Trends; transitions	■ What are the directions in which the region develops? ■ Is the region or parts of the region in any respect in a state of transition?

STEP 2: SWOT- ANALYSIS TO PRIORITIZE

Given the description you created using the tool above, you now can use the four categories below to identify your priorities. Strengths may be good enough or require further strengthening, weaknesses need to be overcome, opportunities open chances, and threats must be avoided. All four categories thus point in possible directions for initiatives.
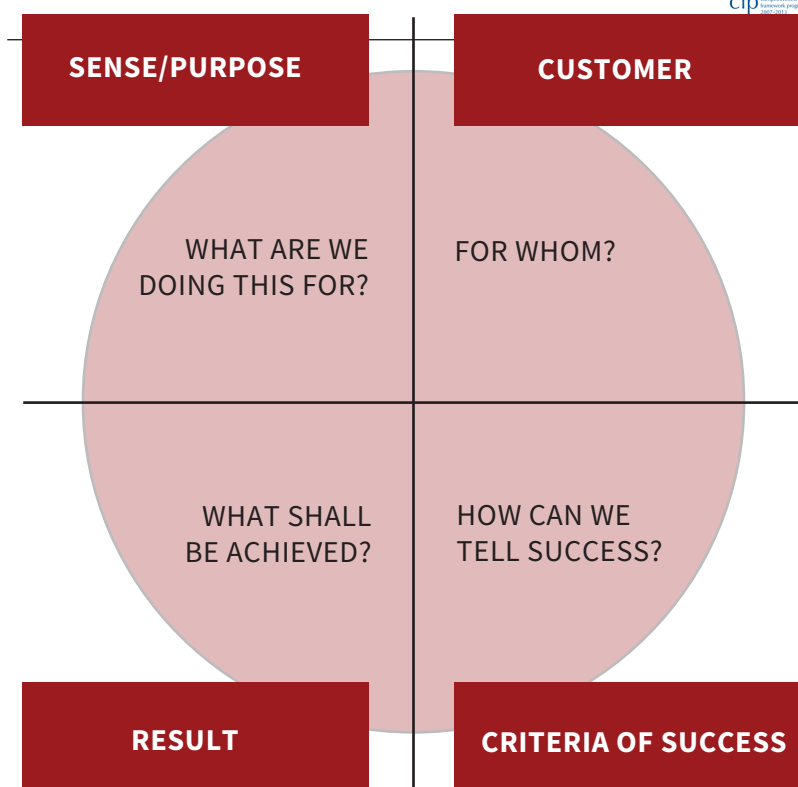
Strengths	Weaknesses
Opportunities	Threats

STEP 3: TOWARDS AN INITIATIVE

Having mapped the region (with tool 1) and analysed the region (with tool 2), you now have reached the phase in which you can identify/invent initiatives that may be the answer to the challenges of your region. This phase no matter how much effort you put into the first two steps using tool 1 and 2, will be a creative challenge. Identifying problems and opportunities is one; inventing solutions is another. Go for it!

3. PROJECT MANAGEMENT TOOL

Target of the project:	Authors:
Fill in the grey fields in to following order: ■ Customers for whom the product/service is designed ■ Sense/purpose ■ Result ■ Criteria of success	

SENSE/PURPOSE	CUSTOMER
WHAT ARE WE DOING THIS FOR?	FOR WHOM?
WHAT SHALL BE ACHIEVED?	HOW CAN WE TELL SUCCESS?
RESULT	CRITERIA OF SUCCESS

VII. ANNEX: YEDAC LEARNING EXAMPLES

VIII. 1. MY PLACE (DK)

"My Place" is an interdisciplinary teaching programme involving the subjects: English, Art and Music. The programme is framing an investigation into the local region in a global perspective with a focus on local changes and possibilities. The keywords are active citizenship and responsibility.

INTRODUCTION

The programme is working with 'Places' in a wide sense with focus on the local and individual favourite places of the pupils. It asks the pupils to explore 'their places' in their local areas: such as their personal places, places connected to leisure, culture or new places which they discovered. The pupils are asked to connect the meaning of the place to a global context and present it to an exchange class from another country.

Before the programme, there is an agreement made with a foreign class to have an exchange.
Relevant local partners are also involved in the project, like local entrepreneurs and businesses, local organisations, cultural institutions etc.
Through this programme pupils will experience their local area in a new way, find new qualities and maybe find things they would like to develop, change or make better.

The programme will invite pupils to reflect, think critically, and production. The products can for example be the production or framing of new tourist spots, tourist brochures or films or websites, blogs seen from a youth perspective, personal or artistic presentations of well-known places.

The programme can be carried out in a feature week, as an interdisciplinary programme, but ideally more time is spent on especially the production phase. The programme is carried out in project groups of 3-5 pupils.
The programme is involving the following themes from the three subjects:

ENGLISH
- Language usage with understanding of the communicative meaning in a given context
- Oral and written language skills
- Knowledge of other cultures

ART
- The composition, effects and communication of pictures
- Communicative use of pictures and photos

MUSIC
- Knowledge about function and effects of soundtracks
- Skills in combining music and pictures or films for communicative purposes

TEACHERS' PLANNING
The teachers plan the programme in a team. They decide on the amount of time to use on the programme and how many lessons they are going to use on each workshop. They then make a plan for the pupils.

Theme: The team discusses how to present the theme for the pupils as a theme connecting their subject to the surrounding world.

Network: The team discusses who they can involve as external partners, and how they can make networks around the programme. They also discuss if there are any experts, who can give subject related input to the project.

Learning goals: The team discusses how each of them are going to work with the entrepreneurial competences and the subject-related learning goals: What materials to use, what content to introduce in the theme workshop and what they expect to present to the pupils in the workshop about skills, knowledge and tools.

PHASE 1: EXPLORE

ENTREPRENEURSHIP WORKSHOP
In this workshop the focus is to create a common understanding of the term entrepreneurship. This understanding functions as a basis for the project.

Talk about "Entrepreneurship globally and locally": Who and what do the pupils know? How do they understand the terms: entrepreneurship in the local area; entrepreneurship as a career; making meaning for others (profit and non-profit) or as an inner driving force?

Talk with the pupils about entrepreneurial competences, and about their purpose. Let the pupils work with self-assessment based on the presented entrepreneurial competences.

Use the method cards:
- Entrepreneurship as a career
- Entrepreneurial competences
- Self-evaluation

Reflection:
Let the pupils talk about their self-assessment in pairs.

THEMATIC WORKSHOP
In this workshop the pupils are introduced to the theme as a part of their surroundings and part of their subjects.

The theme "My Place" is presented together with motivation for the programme. The global perspective is specified in relation to the exchange class (which is already found). All communication in this programme is in English.

The local perspective is presented by the pupils, who are asked to produce a one-minute video about 'Me, My meaning or passions and My place'. The video should include pictures, sound, text and a place. This exercise will make the pupils re-discover their local area, and realise how they experience it and furthermore reflecting it in a global context.

RESEARCH:

The pupils investigate their local area by reinventing it. They use field study, interviews and other methods to get new insight into their own area.

Use these method card as an inspiration for the investigation:
- Desk –research
- Interview
- Observation

REFLECTION:

The groups present for each other what they have found out through their research. This will make them reflect further on the possibilities in the local area.

IDEA WORKSHOP
The purpose of the idea workshop is that the pupils use different techniques to develop ideas for the project they are going to work with.
Assignment formulation:
 ”You are going to present your town or local area and yourself for a specific target group with a multi-modal product, which is creating new meaning (value) to presentations that already exist. Use knowledge and skills from all the three subject matters (English, Art, Music) and find out what your town or local area needs.

The following methods are used for idea development:
- Brainstorm
- Inspiration Universe
- Positive/ negative

REFLECTION:

From all of the ideas of the pupils every group chooses one idea they want to work further on, and every pupil finds some people outside the class to give them feedback on the idea.

PHASE 2: DEVELOP
PLANNING WORKSHOP
In this workshop the pupils make a working plan for the process of turning their idea into a concrete product. The project plan contains an overview over time and roles.

Besides that the pupils decide which learning goals they want to work with on basis of the scheme containing learning goals. (The teacher team has filled out the card with learning goals in advance. The pupils can choose from these goals. If some pupils want to choose other goals, the teacher has to support that since it promotes the motivation of the pupils).

THE PUPILS USE THESE METHOD CARDS:
Planning – methods
- Time table
- Roles
- Individual learning goals

REFLECTION:
- The pupils use sparring from the teacher when making their timetable, roles and when choosing learning goals.

KNOWLEDGE, TOOLS AND SKILLS WORKSHOP
In this workshop the pupils dive into the knowledge they are interested in. They practice the skills they need or want to be good at and they are presented the tools they want to make use of.

The teacher team develops, offers and delivers (if possible with external partners) the workshops the pupils demand. It is important that the teacher in this phase creates a rich learning environment to stimulate the pupils to become as skilled as possible. It is important for the pupils to work so much with the knowledge, tools and skills that they experience new possibilities, new ways of using it or new ways of understanding.

Workshops on demand could be:

ENGLISH
- Language usage with understanding of the communicative meaning in a given context
- Oral and written language skills
- Knowledge of other cultures

ART
- The composition, effects and communication of pictures
- Communicative use of pictures and photos

MUSIC
- Knowledge about function and effects of soundtracks
- Skills in combining music and pictures or films for communicative purposes
- **Art**: Interpretation, understanding and production of images, sound and texts in different media, that is 'selling places'
- **Art**: Visual communication and visual expression of culture
- **Music:** Interaction between music and images (perception, production and sampling)
- **English**: Communication with external partners

REFLECTION:
The teachers give every student a special challenge that will further develop their product.

PRODUCTION WORKSHOP
In this workshop the pupils are going to work on their products, and on their way to the finished product the pupils have to visualize their ideas and turn them into a specific product. The products are going to be tested as part of the production process.

In the development of the product they use these methods. The important thing is that they learn how to visualize their ideas so others are able to see the point of them and understand the message. The following methods can be used to facilitate the process:

PRODUCTION - METHODS
- Sketching
- Persona
- Co-creation
- Prototype

REFLECTION:
- The pupils show their prototype to young people their own age to find out of whether their idea is marketable. The feedback is used to improve the prototype. The investigation can be carried out by inviting the parallel classes or via social media. If social media are used the assignment can be done as homework.
- The pupils/ groups present their idea to local experts or other persons who are able to give a qualified response and feedback, which can be used to improve the prototype even further.
- The pupils evaluate the process continuously with their teacher: Are they following the time schedule? Do they have the knowledge and tools they need? Is the teamwork in the group satisfying? After this evaluation the needed adjustment of plans and available knowledge is made.

The production is completed with a finished product: That can be the production or framing of new tourist spots, tourist brochures or films or websites, blogs seen from a youth perspective, personal or artistic presentations of well-known places.

PHASE 3: DELIVER

PRESENTATION WORKSHOP
In this workshop the pupils have to present ideas and products to the users/ target group. All groups present their products digitally for the exchange class (global perspective) or to invited guests or at local spots (local perspective), by using one of the following methods:

PRESENTATION - METHODS
- Storytelling
- User journey
- Film

REFLECTION:
The groups give each other feedback by emphasizing two good things in the presentations and one element that could be improved.

EVALUATION WORKSHOP
In this workshop the entire program is evaluated, i.e. process, project and product, based on the pupils' learning goals and their first self-assessment (pre-assessment). The evaluation has to be seen in a formative perspective and is supposed to make the pupils able to make new learning – and competence goals.
The pupils evaluate the programme together with their teachers or together with the exchange class by using these methods:

EVALUATION - METHODS
- Did and To Do
- Learned and to Learn
- Self-assessment

REFLECTION:
The pupils talk individually with their teacher about which elements of the programme have provided them with new and important knowledge. The teacher gives feedback on the reflection of the pupil. On that basis they set up new learning goals.

VII.2. TAGS IN THE WORLD (DK)

"Tags in the world" is an interdisciplinary teaching programme involving the subjects: Art, History and Mother tongue. The programme is focusing on story telling. History, literary and visual effects are brought into play in the presentation of an exhibit about the Second World War by the means of street art.

INTRODUCTION
The programme focuses on the marks and tags that have been put in the world, on the stories they are telling and on the way we use stories to communicate about the world. The programme is including both written and visual stories and has a special focus on street art as a way to put tags and marks in the world and a way to tell stories.

THE PROGRAMME IS INVOLVING THE FOLLOWING THEMES FROM THE THREE SUBJECTS:
- History
- The Second World War in this country
- The connection between "the big story" and "the little story"
- Creation and use of stories in history
- Art
- The composition, effects and communication of pictures
- Street art
- Cartoons
- Mother Tongue
- The composition and function of stories
- The use of stories for communicative purposes
- Historic novels

The programme is based on a fictitious case made by the local museum telling the pupils to help the museum presenting the wartime in a creative manner involving the urban surroundings. The programme can be carried out in cooperation with an actual museum, if the school is close to one. But the programme is made in such a way that a fictitious museum is also a possibility. If an actual museum is involved, it would be natural for the pupils to carry out the work in the museum in some of the phases and it would be possible that the museum visits the class especially when the case and the products are presented.

The programme can be carried out in a feature week, but ideally more time is spent on especially the production phase. The programme is carried out in project groups of 3-4 pupils.

Product assignment – a fictitious assignment from a local museum:

> Dear pupils,
> *We are writing you because we need your help, your knowledge and ideas to be able to make an exciting exhibition at our local city museum. We are working on an exhibition about the Second World War for your age group and therefore it is natural to involve you. The exhibition is meant to make children at your age think it is a great experience to visit the museum – and in that way learn more about the history of their town in the light of Second World War: A historical period of time that has made "tags in the world".*
> *We as a museum have ideas about what things we would like to connect to the exhibition – namely "Street art". Adding to that we want elements from the exhibition used for a cartoon. We would like you to make a story about children or young people at your age, street art and wartime: a story, which connects the 'little' personal story with the 'big' story of the Second World War. We would also like that the cartoon can be experienced in the actual city as street art, so the urban surroundings and its historical marks are becoming a part of the exhibition. We think that it would be a fun idea to use the city as part of the exhibition, because in that way, we can also point out the 'stories' that are already part of the city. We would like to use your input to further develop that idea.*
>
> *We are looking forward to cooperating with you in making an exciting exhibition at the museum and in the urban surroundings about the time of the Second World War – its little and big stories – with elements from street art and cartoons.*
> *With kind regards*
> The local museum

TEACHERS' PLANNING

The teachers plan the programme in a team. They decide on the amount of time to use on the programme and how many lessons they are going to use on each workshop. They then make a plan for the pupils.

Theme: The team discuss how to present the theme for the pupils as a theme connecting the three subjects to the surrounding world.

Network: The team discuss who they can involve as external partners – if there are museums or similar institutions that they can cooperate with in the project, if there are other experts or persons they can use for subject-relevant input.

Learning goals: The team discuss how each of them are going to work with the entrepreneurial competences and the subject-related learning goals: What materials to use what content to introduce in the theme workshop and what they expect to present to the pupils in the workshop about skills, knowledge and tools.

PHASE 1: EXPLORE

ENTREPRENEURSHIP WORKSHOP

In this workshop the focus is to create a common understanding of the term entrepreneurship. This understanding functions as a basis for the project.

Talk about "Entrepreneurship globally and locally", who and what the pupils know? How do they understand the terms: Entrepreneurship in the local area; entrepreneurship as a career; making value for others (profit and non-profit) or as an inner driving force?

Talk with the pupils about entrepreneurial competences, and about their purpose. Let the pupils work with self-assessment based on the presented entrepreneurial competences.
Use the method cards:
- Entrepreneurship as career
- Entrepreneurial competences
- Self-evaluation

REFLECTION:

Let the pupils talk about their self-assessment in pairs.

THEMATIC WORKSHOP

In this workshop the pupils are introduced to the theme as a part of their surroundings and part of their subjects.

Teachers from art, history and mother tongue outline the learning goals for the programme (see the introduction above). The teachers can be there in person or make a short film clip, where they introduce the goals for each subject.

Additionally examples on "Tags and Marks in the World" (primarily from Second World War) are presented seen from the different subject-perspectives:
- That could be by bringing in monuments, street art, historical photos, and posters from world war movies, wall paintings, little stories, propaganda.

RESEARCH - METHODS:

Every pupil gathers more knowledge about the things they have become especially interested in using one or more of the following methods. The pupils can also use methods to find out more about museum presentation.

- Desk-research
- Interview
- Observation

REFLECTION:

The groups present for each other what they have found out through their research.

IDEA WORKSHOP

The purpose of the idea workshop is that the pupils use different techniques to develop ideas for the project they are going to work with.

ASSIGNMENT FORMULATION:

The pupils have to present an exhibition about the Second World War by connecting a part of the big history (Second World War) to the little history and convert it into street art and cartoon.

The letter from the museum is read aloud – preferably by an employee from the museum. This can be done by video, if he or she is not able to be there in person.

During the idea-development pupils, teachers and external partners have to cooperate on developing ideas. They have to find out what content they want to work on considering the Second World War (big story) and which fictitious story they want to work with (little story) and in what way they can use street art and cartoon in public space.

As an inspiration for the idea development guests from outside can be invited - people who know something about presentation/dissemination, street art, storytelling, Second World War etc.

The following methods are used for idea development:
- Brainstorm
- Inspiration universe
- Positive/ negative

REFLECTION:
From all of the ideas of the pupils every group chooses one idea, they want to work further on, and every pupil finds some people outside the class to give them feedback on the idea.

PHASE 2: DEVELOP
PLANNING WORKSHOP
In this workshop the pupils make a working plan for the process of turning their idea into a concrete product. The project plan contains an overview of time and roles.

Besides that, the pupils decide which learning goals they want to work with on basis of the scheme containing learning goals. (The teacher has filled out the card with learning goals in advance. The pupils can choose from these goals. If some pupils want to choose other goals, the teacher has to support that since it promotes the motivation of the pupils).
- History
- The Second World War in this country
- The connection between "the big story" and "the little story"
- Creation and use of historic stories
- Art
- The composition, effects and communication of pictures
- Streetart
- Cartoons
- Mother Tongue
- The composition and function of stories
- The use of stories for communicative purposes
- Historic novels

THE PUPILS USE THESE METHOD CARDS:

PLANNING – METHODS
- Time table
- Roles
- Individual learning goals

REFLECTION:
The pupils use coaching from the teacher when making time table, roles and when choosing learning goals.

KNOWLEDGE, TOOLS AND SKILLS WORKSHOP
In this workshop the pupils dive into the knowledge they are interested in. They practice the skills they need or want to be good at and they are presented to the tools, they want to make use of.

The teacher team develops, offer and give (if possible with external partners) the workshops, the pupils demand. It is important that the teacher in this phase creates a rich learning environment to stimulate the pupils to become as skilled as possible. It is important for the pupils to work so much with the knowledge, tools and skills that they experience new possibilities, new ways of using it or new ways of understanding.

The pupils are offered workshops in e.g.
- Cartoon/streetart
- Historical knowledge about the Second World War
- Exercise in making their own little story and a counter story to that
- Use of the model for developing stories
- Historical novels
- Use of IT to make cartoons

The pupils have to choose 3 obligatory workshops that are necessary in relation to their learning goals and product.

REFLECTION:

The teachers give every student a special challenge that will further develop their product.

PRODUCTION WORKSHOP

In this workshop the pupils are going to work with their products, and on their way to the finished product the pupils have to visualize their ideas and turn them into a specific product. The products are going to be tested as part of the production process.

In the development of the product they use these methods. The important thing is that they learn how to visualize their ideas so others are able to see the point of them and understand the message. The following methods can be used to facilitate the process:

PRODUCTION - METHODS

- Sketching
- Persona
- Co-creation
- Prototype

REFLECTION:

- The pupils show their prototype to young people their own age to find out of whether their idea is marketable. The feedback is used to improve the prototype. The investigation can be carried out by inviting in the parallel classes or via social media. If the social media are used the assignment can be done for homework.
- The pupils/ groups present their idea to the museum or other persons who are able to give a qualified response and feedback, which can be used to improve the prototype even further.
- The pupils evaluate the process continuously with their teacher: Are they following the time schedule? Do they have the knowledge and tools they need? Is the teamwork in the group satisfying? After this evaluation the needed adjustment of plans and available knowledge is done.

The production is completed with a finished product: The dissemination of a little and a big story from the Second World War presented as street art and cartoon.

PHASE 3: DELIVER

PRESENTATION WORKSHOP

In this workshop the pupils have to present ideas and products to the users/ target group. All groups present their ideas to invited guests, preferably the museum, by using one of the following methods:

PRESENTATION - METHODS

- Storytelling
- User journey
- Film

REFLECTION:

The groups give each other feedback by emphasizing 2 good things in the presentations and 1 element that could be improved.

EVALUATION WORKSHOP

In this workshop the entire programme is evaluated, that is process, project and product, based on the pupils' learning goals and their first self-assessment (pre-assessment). The evaluation has to be seen in a formative perspective and is supposed to enable the pupils to formulate new learning – and competence goals.

The pupils evaluate the programme together with their teachers by using these methods:

EVALUATION - METHODS

- Did and To Do
- Learned and to Learn
- Self-assessment

REFLECTION:

The pupils talk individually with their teacher about the elements of the programme that have provided them with new and important knowledge. The teacher gives feedback to the reflection of the pupil. On this basis they set up new learning goals.

VII.3. DEMOCRACY AND SUSTAINABILITY (AT)

Subtitle: Learning for Life

Introduction: The school was cooperating with the city administration and its Waste Management Department. The Cooperation was agreed to be on a project basis – with the children not only as learners but partners in a process how to help make everyday life in the city more sustainable. The teachers thought it best fitted into 8th grade (14-year-olds). They formed a cooperation of 4 subjects which gave them about 12 hours a week for two weeks. They organised 2 project days per week.

TEACHER'S PREPARATION - NETWORKS AND CONNECTION TO CURRICULUM

- The teachers had established a contact with the Waste Management Department and have decided to make use of this learning opportunity in an entrepreneurial way. They go for big learning goals and a lot of freedom within this subject matter.
- The learning goal in Biology: Sustainable life on this planet – touching air, water, land, human beings, animals and plants
- In History (understood as a tool to move the project forward): Democracy: majority vote vs. consensus; minority rights; direct vs. representative democracy; decision making processes
- Network: City Council, Recycling and waste management
- Learning goals: In addition to the aforementioned subject goals the teachers introduced the entrepreneurial key competence goals: seizing an opportunity; taking risks; taking responsibility… (see list e.g. in teacher guidelines) as they had to do research on issues of sustainability in their daily lives and focus on every aspect including materials they use and to calculate the cost to the environment not only on a money basis but also on an economical level (ecologic footprint)
- The school head/authorities/teachers are informed about the project and its goals and will be included at some stages. They are also asked to double the money raised by the children.

PHASE 1: EXPLORE

Context Analysis:

The context analysis was done against the background of the possible cooperation with the waste management department and the learning goals "sustainability" and democracy" – two major learning goals for 8 graders in Austria. Within this frame *Mathematics* and *Mother tongue* would cooperate to provide a frame of 12 hours per week for two weeks.

Decision making: The children are introduced to the main ideas of the project, namely to lead a life as much in harmony with the earth as possible and to respect other people's ideas and rights. Also they should deal with topics in an entrepreneurial way. They are asked if they wanted to take part in the project under this heading and as partners of the Waste Management Department.

They would be treated with respect from the very beginning, meaning they would have to take a consensual decision if they wanted to take part or not. If they agreed they would have a lot of freedom and a number of obligations: firstly, all decisions would have to be taken by consensus (principle: democracy), they would have to go out of their comfort zone in some respects (e.g. put in some of their own money) and it would have to be the same amount for everybody (principle: equality).

After the decision of the students the parents are informed and asked for their active support.

ENTREPRENEURSHIP WORKSHOP

The idea of this workshop is to introduce the entrepreneurial competences and to explore their use in society.

The teachers ask the children what they think they can learn in the process. Many subject competences are mentioned, but also some of the entrepreneurial competences (developing ideas…) and "learning to learn". The teachers add the other entrepreneurial competences like "good communication", "teamwork", "taking risks" developing value …. They ask the children if they think these competences are important to have and where and when they could need them or who else needed them. They are asked to find out more about what it means to be entrepreneurial and sustainable and they could do it by desk research or about entrepreneurs/companies. They could do this by asking people, studying advertisements, the internet (method: desk research). The results are discussed and analysed for their practical value for learning.

Then they are asked to fill in the self-assessment so they can judge at the end how much they have acquired during the process. The children were asked to make their first decision. What would they need to make a consensual decision? – The children are introduced to "Consensual decision taking"

INTRODUCTION TO ENTREPRENEURSHIP - METHODS
- Brainstorm
- Desk research: entrepreneurial competences
- Consensual decision taking
- Self-assessment

REFLECTION:
Self-assessment of entrepreneurial and learning to learn competences in a "competence grid"

THEMATIC WORKSHOP
The thematic workshop serves as a first opening of the field of action and gaining an understanding of what can be achieved and what skills can be acquired.

In **Biology** the theme is started by a discussion of the term "sustainable life on earth". (***Method:*** Think-Pair –Share)

Areas of action in sustainable life are then collected in a mindmap on the board. Then the children go on a trip to the waste disposal of the city to learn more about sustainable life.

It is understood that democracy is more the experience and the means/tools with some explanation of concepts. So in History they address the topic of equality, e.g. everyone has equal rights, but not equal means …

Competence ► **Risk taking/ taking people out of their comfort zone:**
Equality: If they are all to contribute the same amount of the money to the realization of the projects they will have to find out what everybody can afford without exposing children who are less well off and still providing means for the project. Every child is asked to write their weekly pocket money anonymously on a sheet of paper. In **Math** they will figure out a process to establish what everybody can put in. Then they take a vote. They elect a "cashier". The money is handed in to a "cashier" who gives them a chip with their name on in return.

METHODS:
- *Think-Pair - Share*
- *Excursion*
- *Discussion*
- *Maths graph*

REFLECTION:
My understanding of sustainability/ equality – in what way has it changed? Exchange in pairs, then groups of four. How do I feel about taking risks?

IDEA WORKSHOP
On the basis of what they have learned about sustainable life the children are asked to develop ideas on how they could make a change in their homes/class/school/daily routines in order to make it more sustainable. The children are asked to produce as many ideas as possible. They are put on white sheets of paper (signed at the back) and put on the floor. The children ask questions to understand the ideas.

Next step: Prioritizing. Which ideas should be further developed in groups? Which are most likely to succeed also in the eyes of the external partner?

The children "vote" by putting their name chip on a sheet of paper. Five groups are formed. Children whose chips were put on ideas that did not find a majority can reconsider their choice and put it on one of the "successful" projects. (Entrepreneurs usually lose their money in such a case)

Common task: 5 projects will be developed by groups of children

INNOVATION - METHODS
- Brainstorming (washings-line)
- Prioritizing (doting with chips)
- Risk analysis de Bono

REFLECTION:
Risk analysis with Thinking Hats of de Bono (see section Tools) taking different perspectives (optimistic, pessimistic, analytic, emotional, creative, structured): Have we chosen the ones with the best perspectives? The most sustainable ones?

PHASE 2: DEVELOP

PLANNING WORKSHOP
The children work in groups and develop their ideas further. They can develop a service/ a product or a policy. In order to achieve their goal they plan the process: describe the product and the way to get there. They set some milestones and a timeline and delegate tasks in the group.

PLANNING – METHODS
- Project management tool: Activity Plan
- Roles
- Interviews

REFLECTION:
Self-reflection: Which of my strengths can I contribute with?
Peer-feedback

KNOWLEDGE, TOOLS AND SKILLS WORKSHOP
These workshops are "on demand". They are supposed to support the topics of the groups and could be further knowledge, or techniques to acquire knowledge or required skills also on a social level, e.g.
- Workshop Waste Management (sponsored by partner): recycling, cost of non-recyclable waste… ;
  Workshop Food; Workshop Mobility
- Interviewing techniques/ analyzing interview material
- Conflict management

REFLECTION:
Plenary: each group tells about their learning progress (Method: Learned and to Learn)

PRODUCTION WORKSHOP
The groups now have to think on how to make a product/communication process that convinces their audience (co-pupils, parents, teachers, project partners from the waste department) to change something in their behaviour/ use different things etc.…

PRODUCTION- METHODS
- Sketching
- Persona
- Prototype

REFLECTION:
Asking for peer and teachers' feedback

PHASE 3: DELIVER

PRESENTATION WORKSHOP

The children will now present their products/ services to a larger audience (company representatives, parents, teachers, head-mistress) who will then take a vote whether to adopt the suggested policy/product/service…. For that purpose children are acquainted with presentation methods in addition to posters and power point presentations which they already know.

PRESENTATION- METHODS
- Storytelling
- Video

REFLECTION:
Teacher feedback, external (entrepreneur?) feedback, peer feedback

EVALUATION WORKSHOP
The evaluation workshop addresses both the process and the product and the value of the cooperation with the external partner. The teachers take part in the exercise as well. The pupils are also asked to give feedback on the teachers' role.

EVALUATION- METHODS
- Learned and to learn
- Self- assessment with the same grid as in the beginning, but with a different colour. They add comments why they think they have acquired a certain competence.

REFLECTION:
What in the process was successful and why? What was not so successful and why? What would we do differently next time?

VII.4. ANIMALS AS ARCHITECTS (AT)

Subtitle: Children develop an exhibition for a Children's Museum

Introduction: The school was seeking cooperation with an external partner and found the local Children's Museum. Cooperation was on a regular basis with children being involved in all the museum's yearly routines, also the planning for the next exhibition. As the topic of the exhibition was "Animals as Architects" the subjects Biology, Art and Handicraft were involved and partly Maths. The children were presented the idea by the museum. The pupils were 13 and they would be working in the contributing subjects for the whole first term with up to 60% lesson time.

TEACHER'S PREPARATION - METHODS
- The teachers develop the contact with the partner and explore the learning opportunities
- They inform school authorities/schoolhead/parents
- They set the timeline and set up the team of teachers who are going to be involved
- They develop the overall learning goals:
- **Biology:** Animals and their homes;
- **Art:** Basic principles of architecture;
- **Handicraft:** Building of prototypes;
- **Maths:** cost calculations
- Network: Children's Museum
- Entrepreneurial earning goals: In addition to the aforementioned subject goals the teachers introduced some key competence goals: seizing an opportunity as the prototype best suited and affordable would be taken into the exhibition; taking risks as they had to invest a lot of work before they knew whether their prototype would be taken on; taking responsibility as they had to do research on safe materials also and to calculate the cost not only on a financial basis but also on an economical level (producing too much waste, or material easily worn out…)

PHASE 1: EXPLORE

CONTEXT ANALYSIS:

The school is offered this cooperation by the museum and the teachers will try to integrate the requirements of the museum into their subject matter and into career orientation which is compulsory in Austria. As the new exhibition will be about animals as architects the subjects will be Biology, Art and Maths. All the other steps will be negotiated between pupils, teachers and the museum.

ENTREPRENEURSHIP WORKSHOP

The children visit the museum and get an overview of what it means to curate an exhibition. They get an idea of what makes an exhibition attractive, the different functions of an exhibition, the role of the guides, the display of information, advertising, a time plan, how to calculate costs (including first set up, daily cleaning, material wear, costs of disposal at the end etc.) They are then asked if they are ready to become partners of the museum in developing a new exhibition and go through all this within the most part of a school year.

The teachers ask the children what they have learned about the different jobs in a museum and what skills and competences are required in them. They are then introduced to the entrepreneurial mindset. For which jobs in and around the museum do you need these qualities? They are then invited to think if they will need and learn them in the process.

What competences do they have already? - The children fill in the self-assessment so they can judge at the end how much they have acquired during the process.

INTRODUCTION TO ENTREPRENEURSHIP - METHODS

- Entrepreneurship as part of careers
- Self-assessment entrepreneurial competences

REFLECTION:

Self-assessment of entrepreneurial and learning to learn competences in a "competence cobweb/grid"

THEMATIC WORKSHOP

The idea of this workshop is to get into the themes of the exhibition, i.d. animals and architecture and get children started in the subject matter. The goal is to research the scope and filter out first ideas.

Children start their first research phase. They start in groups with a brainstorming exercise what they already know about interesting animals' homes. Then they decide to do more desk-research in the library and on the internet to widen the scope.

In Art they address the topic of architecture. The children start with what they already know, the teacher clusters results on the board. Then they discuss the functions of architecture. In a next step they try to compare this to animals' architecture. So they develop criteria for their research of animals' homes.

RESEARCH - METHODS:

- Brainstorming - clustering
- Desk-research
- Criteria
- Observation

REFLECTION:

Children interview each other: What did you learn about the topic in this process? Are you ready for the next step?

IDEA WORKSHOP

The basic function of the idea workshop here is to find promising animals' homes for the exhibition whose possibilities can then be further pursued by groups of children. So every child already introduces an animal home they think interesting with a view to the exhibition. They line out possibilities for the exhibition (an ice bear's cave made from styrofoam that museum visitors can creep into and dig a little deeper…). The children discuss possibilities and are then asked to prioritize: everyone gets 6 points and they can give them all to one possible project, or distribute them to more.

Then they find more activities for the visitors for the chosen ones. (brain storming)

In a next step they do a risk analysis for the chosen projects using de Bono's thinking Hats.

Common task: 5 – 8 prototypes will be developed by groups of children

INNOVATION - METHODS
- Introduction of research results
- Prioritizing (points)
- Enrichment: Brainstorming
- Risk analysis de Bono

REFLECTION:
Risk analysis with Thinking Hats of de Bono taking different perspectives (optimistic, pessimistic, analytic, emotional, creative, structured): Have we chosen the ones with the best perspectives? What are risks for museum visitors, the museum (costs etc.)?

PHASE 2: DEVELOP
PLANNING WORKSHOP
The children work in groups to describe the product and plan the process and develop some milestones (choice of material, size,…) and a timeline and delegate tasks in the group.

PLANNING – METHODS
- Time table
- Roles
- Individual learning goals

REFLECTION:
Self-reflection: Which of my strengths can I contribute?
Peer-feedback

KNOWLEDGE, TOOLS AND SKILLS WORKSHOP
The content of the work shop are determined by the subject matters included and the specific project needs
- Workshop Handicraft: outlining possible materials, safety, wear, cleaning
- Workshop Maths: Cost calculations according to different materials, sizes, material wear for the time of the exhibition (6 months)
- Workshop Art: aesthetic principles

REFLECTION:
Group discussion chaired by one group: Do we believe in our product/plan? Why? Why not?

PRODUCTION WORKSHOP
Now the groups imagine once again their target groups , make a sketch and start building their prototypes.

PRODUCTION- METHODS
- Sketching
- Persona
- Prototype

REFLECTION:
Asking for peer and teachers feedback

PHASE 3: DELIVER

PRESENTATION WORKSHOP

This workshop includes a pre-presentation to teachers to prepare for the final meeting with the museum curators. They have to show their prototype, tell about the possible activities for children in the exhibition and present their cost calculations. At the end their will be a feedback and vote by the museum people.

PRESENTATION- METHODS

- Showing prototype and storytelling

REFLECTION:

Teacher feedback , external feedback, peer feedback on the product

EVALUATION WORKSHOP

The evaluation workshop addresses both the process and the product and the value of the cooperation with the external partner. The teachers take part in the exercise as well.

EVALUATION- METHODS

- Learned and to learn: Here they reflect the whole process from the end as they know now which prototypes were chosen by the museum. What have they done, what could they have done differently?
- Self- assessment with the same cobweb/grid as in the beginning, but with a different colour. They add comments why they think they have acquired a certain competence.

REFLECTION:

What in the process was successful and why? What was not so successful and why? What would we do differently next time?