FOOD FOR THOUGHT

A tool to include Global Citizenship Education in day-to-day teaching

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Preface

This publication encompasses a selection of educational tools and learning units developed by **EAThink2015**, a project co-funded by the European Union to foster the concept of global learning within schools in Austria, Burkina Faso, Croatia, Cyprus, France, Hungary, Italy, Malta, Poland, Portugal, Romania, Senegal, Slovenia and Spain (Basque Country).

The project was launched in 2015 (European Year of Development) with the objective of enhancing the critical understanding of European students and teachers, and encouraging their active engagement in global development challenges, focusing on sustainable food systems and smallholder farming. The implementing partners – which included development NGOs, civil society organisations, associations of local authorities and major foundations – worked with European youths, and with educational professionals and institutions, promoting the adoption of learner-centred and experiential global education (GE) patterns in mainstream education. The focus was on concrete practices and models that contribute towards sustainable development, aiming at the set-up of multidisciplinary GE 'itineraries' that could be adopted in European primary and secondary schools. This included workshops for students, tutoring of teachers, exchange visits at European and international level, school competitions and awards, school-led communication campaigns, public exhibitions, experiential learning activities, the setting up of school gardens, training sessions on social media and web tools, community-involvement initiatives, and the development of educational apps.

Approximately 2500 European teachers were involved in the project during the first 2 years, of whom more than 1200 participated in an ongoing idea-sharing forum over the 2 years. These teachers exchanged their views and classroom experiences in relation to new global issues and citizenship skills to be included in their teaching objectives, and on the renewal and innovation of educational tools in this respect. Finally, all these efforts and reflections resulted in the compilation and development (through a process of revision, adaptation, testing) a series of global learning units (GLUs). Whilst covering a variety of topics, issues and approaches, the GLUs are all intended to be new, multidisciplinary, flexible and adaptive tools for global citizenship education (GCE) focused on food-related issues.

This toolkit includes a selection from the rich and diverse pool of tools and materials developed at national and European level through the project partnership. You may source all the available materials and additional information about the **EAThink2015** project on www.eathink2015.org

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The EAThink2015 approach: nurturing active citizens through global citizenship education

This toolkit seeks to support **primary and secondary school teachers** in including global citizenship education (GCE) methodologies and food-related issues in their daily educational planning. The toolkit offers a source of inspiration to these teachers, based on the experiences and insights of their colleagues in 14 countries.

The following pages are the result of a two-year **collaborative process involving teachers of participating countries**, in which pilot proposals where further developed and enriched through ideas, feedback and innovative methods offered by participating teachers. Despite the focus on the formal-education context, the output could be used as a **stimulus** to inspire the creation of further educational modules, adapting the proposed activities to different ages, topics and contexts. It could also be considered as a precious tool for GCE practitioners and educators.

The learning modules or units proposed aim at developing students' **critical understanding** of global challenges but also seek to encourage their active engagement for fairer food systems through **individual and collective behavioural changes**.

The units address global challenges through a **multidisciplinary approach**: sustainable food systems, the right to food, global interdependence and the relevant Sustainable Development Goals (SDGs) are covered in educational units lasting at least two hours and involving different school subjects. GCE is not conceived here as an extracurricular discipline: the tools provided in the toolkit are intended to support teachers in **integrating** its perspectives, issues and methodologies in their regular teaching, towards broadening the educational experience in schools.

The toolkit adopts a **learner-centred approach**, considering youth as a key player in the learning process, and relies especially on knowledge-sharing dynamics and mutual learning. The use of **interactive and participatory methodologies** is encouraged at different levels, and should include guided discussions, community surveys, role play, dynamic debates and simulation games.

A key feature of the EAThink learning units is the emphasis on **experiential learning**. In fact, most of the learning processes start from a concrete experience linked to food-related issues, often requiring that students interact with external players, such as organisations and establishments involved in alternative food systems, or with the local community through workshops, **field visits** but also through independent homework.

An excellent framework for experiential learning is the **school garden**, with a number

of the units being linked to 'standard' school gardens, box gardens, public gardens. These gardens are used as multidisciplinary learning spaces but also as tools to strengthen social and relational competencies in young people. As suggested in several units, school gardens are also the focal point for several examples of events or campaigns entailing **community involvement**, where the school triggers local awareness-raising actions on alternative food systems, encouraging youth participation and **active citizenship**.

The EAThink project also seeks to foster **active youth involvement** through the use of **web-journalism tools**. Students are encouraged to report on school activities, field visits, research, and local best practices of sustainable agriculture through the EAThink blog and social media. This element could be added to the proposed learning units.

This toolkit is the result of the efforts of a number of educators at national level, and brought together by the EAThink partner in Malta. Similar toolkits have been compiled and published in the other 11 participating countries, according to the respective local priorities and experiences. The 12 toolkits are all available on: www.eathink2015.org

In addition to the learning units, the EAThink project also promotes media education and active participation through **easily replicable initiatives**, such as a thematic photo competition, a social-advertising video contest, and an interactive exhibition on key food-related issues and paradoxes. As with the toolkits published in all participating countries, all the materials related to the above-mentioned multi-media initiatives are available on www.eathink2015.org

A closer look at the set-up of the EAThink toolkit

The toolkit provides basic information and tips on how to implement multidisciplinary **global learning units** or GLUs with students. More detailed instruction for complex activities and further supporting material and resources (questionnaire, presentations, evaluation grids, handouts) are available in the 'Global Learning Units' section of the EAThink2015 website.

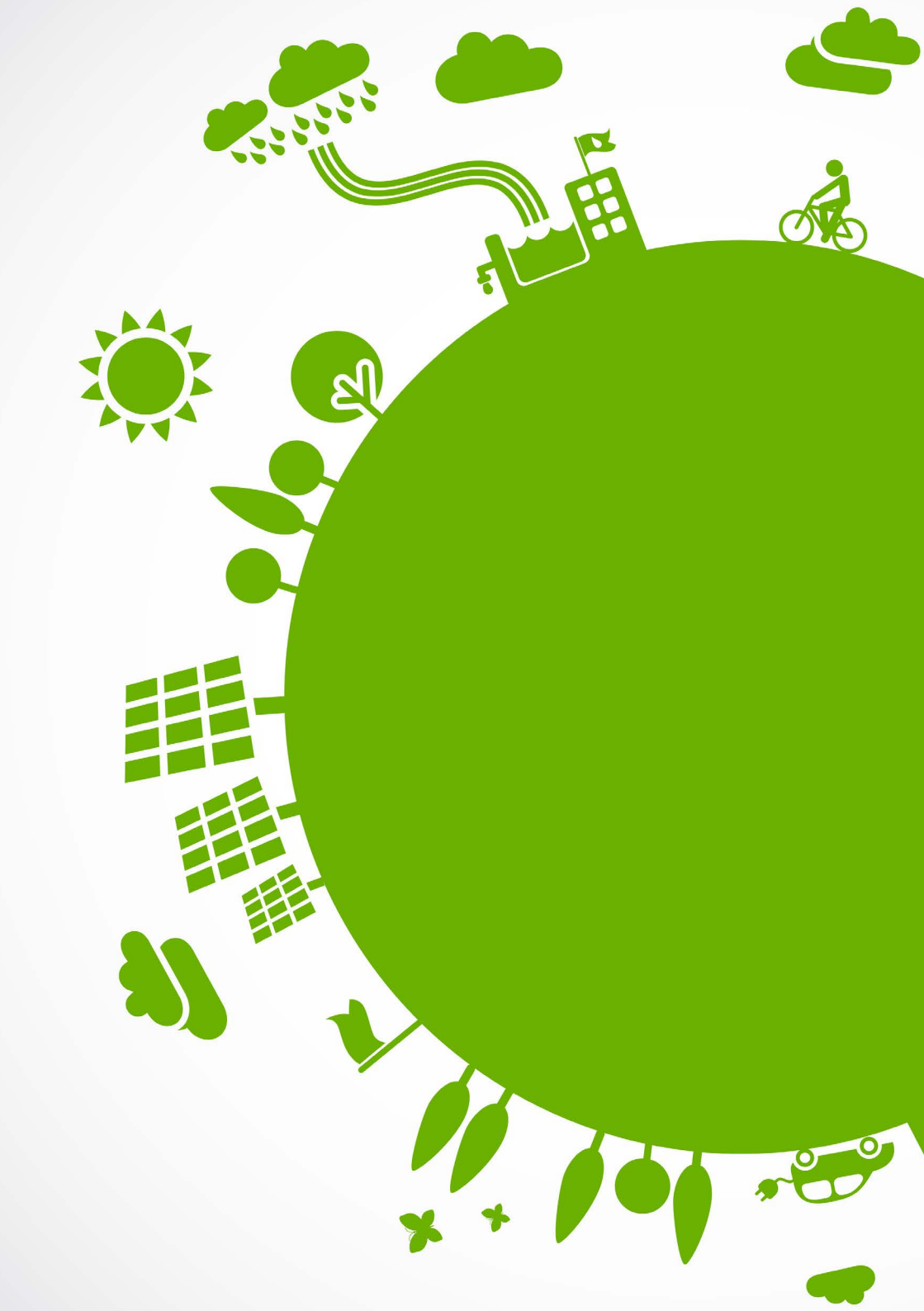
Each unit is linked to a selection of food-related topics linked to the relevant **SDGs**, to facilitate an educational-planning approach that would be consistent with the post-2015 scenario[1].

Taking into account the variety of skills and competences frameworks in the different countries, a brief list of the key **competences required** is provided in each unit.

[1] In 2000, the United Nations launched an agenda for sustainable development based on a set of 8 goals to be achieved by 2015 – the Millennium Development Goals (MDGs). Although there has been an improvement in some of the areas covered by the MDGs, the UN felt the need to review the goals and keep trying to achieve them. The review has led to the identification of the 17 Sustainable Development Goals (SDGs) launched in New York, on 24 September 2015 during the UN Sustainable Development Summit.

The **age groups** specified in the GLUs are an indication as to the level of the relative supporting resources accompanying the respective lesson plans. However, teachers are encouraged to adapt and apply the units also to other age groups, as deemed appropriate.

Finally, the toolkit proposes a range of **evaluation and assessment tools**, which could be used, coupled with a flexible approach, to assess knowledge, skills and changes in attitude resulting from the proposed global learning units.



Changing the path of an all-consuming modernity: prioritising sustainability

Alessio Surian

Networking around a (Sustainable Development) Goal

At its core, the **EAThink2015 - Eat Local, Think Global** initiative is about food for thought – thinking that sparks action and activities that promote more just and equitable trade relations and consumer practices. In fact, these three dimensions run as a common thread along the educational units that are being shared through this project. They are the result of a collaboration between 14 countries: Austria, Burkina Faso, Cyprus, Croatia, France, Hungary, Italy, Malta, Poland, Portugal, Romania, Senegal, Slovenia, Spain (Basque Country).

Few topics are as universally understood as food in illustrating how our world looks polarised, divided, and unjust: while 800 million persons are suffering hunger daily, wealthy countries are wasting more food than ever before. Political and financial interests concerning food and agriculture are threatening the rights of farmers and consumers. These interests are increasing the negative impact of food production and certain consumer choices on the environment and our health.

The Sustainable Development Goals (SDGs) as established by the United Nations, list under Goal 2 three crucial and interrelated objectives to be achieved by 2030. These targets are: ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture.
This entails ensuring all-year-round access for all – in particular the poor and persons in vulnerable situations, including infants – to safe, nutritious and sufficient food.

Primarily, the above translates into supporting the agricultural productivity and the incomes of small-scale food producers, particularly women, indigenous peoples, and small-scale farmers and fishers). This implies ensuring that they are given conditions that grant them equal access to land, other productive resources, knowledge, financial services, markets, and opportunities for added value agriculture and non-farm employment. This focus on sustainable food-production systems and resilient small-scale agricultural practices highlights the common interest of maintaining ecosystems, strengthening the territorial capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and progressively improving land and soil quality. It requires measures to ensure a more just and proper functioning of food commodity markets and their derivatives, and to allow food producers easy and timely access to market information, including on food reserves, in order to help limit or mitigate the possible impact of food-price volatility.

An essential cross-curricular topic

Organisations promoting learning about global issues (Forghani-Arani et al., 2013) tend to focus on food as a cross-curricular topic, which has the potential for being used as a means or topic through which to teach standard school subjects, but also as means to introduce the topic of active citizenship. In practical terms, the topic of food could be used as a tool to teach maths but also as a tool to explain complex concepts like 'globalisation' to children.

Relevant educational materials were produced as a result of the 1988 European Campaign on North-South Interdependence and Solidarity, which ended with a European conference involving parliamentarians and non-governmental organisations, which was held in Madrid in June 1988. This resulted in the Madrid Appeal, promoting a dynamic dialogue between North and South[1] in a spirit of respect for democracy and human dignity, in order to allow all the world's inhabitants to work towards sustainability and fairer living conditions.

Food and agriculture have a strong educational potential in terms of drawing attention to global interdependence. In the eighties, this was understood by European fair-trade organisations that introduced in their shops fair-trade agricultural products, such as tea and coffee. More food products followed, such as dried fruit, bananas, cocoa and chocolate, sugar, fruit juices, rice, spices and nuts. In 1992, the sales-value ratio of 80% handicrafts to 20% agricultural goods was the norm in fair-trade shops; by 2002, hand-crafted items amounted to 25%, while food products reached 69%. Most importantly, fair trade and global-learning activities began to raise awareness about the way consumer choices concerning eating and food might have a dramatic impact upon local, national and international policies. Such awareness is crucial at a time when food demand around the world is shifting from basic food commodities (i.e. cereals and rice) to higher-added-value products, (i.e. meat, fish, fruit, vegetables, fats and oils) wielding a huge impact on sustainability. The increase in the demand for dairy and meat is leading to a surge in the demand for, and prices of, cereals – as well as the land required to cultivate the crops. Meat production is particularly taxing in terms of energy, cereal and water. In fact, nearly half of the world's cereal crops today are being used for animal feed.

The International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT) provides one amongst many examples to reflect upon. It was developed by the International Food Policy Research Institute (IFPRI) to ensure global food supply, food demand, and food security by the year 2020 and for posterity. It is a partial equilibrium agricultural model for crop and livestock commodities[2].

Results from IMPACT show the potential beneficial effect that would be felt worldwide if diets in high-income countries were to move away from meat and cereal-feed-intensive goods towards other food options, thereby relieving pressures on targeted markets and

better distributing price pressure. Releasing grains from livestock production systems by reducing the demand for meat will have a greater impact in reducing malnutrition, than promoting the consumption of healthy foods like nutrient-laden pulses, fruit, and vegetables in developing countries.

Among the global-learning projects supported by the European Commission, educational projects focusing on food are often considered as 'best practice'. One example would be activities to raise awareness about the process of production, distribution and consumption of agricultural products in Poland and in the developing South, carried out in co-operation with networks of European organic farmers (Rajacic et al., 2010: p. 96).

Institutional support

Bourn (2014: p.14) observes that:

> *In a number of countries the use of the term 'global education' or 'global learning' has been an indicator that the government ministry responsible for development and the leading NGOs recognise the value of connections between development and broader societal agendas, particularly in relation to cultural understanding, issues of immigration, the impact of globalisation.*

As noted in the DEAR[3] Study (Rajacic et al., 2010: p. 8), although there have been various stimuli coming from the EU for the inclusion of global learning in national curricula, these have been largely informal and there is scope for improving the level of collaboration among the players involved in drafting and implementing national strategies. The EAThink project provides an excellent opportunity for such collaboration and for promoting concrete steps towards moving global learning from a position of ad hoc or informal, one-off educational projects to a well-defined cross-curricular element to bridge teaching and learning about active citizenship, integrated into key subject areas such as language, history, geography, physical education and STEM (science, technology, engineering and mathematics).

[1] These two terms refer to the geopolitical North and South divide, which is as follows: 'North. includes North America, Western Europe, developed parts of Asia, as well as Australia and New Zealand. Whereas 'South' includes Africa, Central and South America, developing Asia and the Middle East.

[2] IMPACT is an economic model that takes into consideration only part of the market in order to retain the equilibrium. In this case, the model takes into consideration only the agricultural markets at national and international level. The model allows an in depth analysis of the changing environmental, biophysical, and socioeconomic trends.

[3] DEAR (Development Education and Awareness Raising) is a programme that has the aim of raising awareness amongst EU citizens about development issues. The referenced study has been produced in order to improve the general approach of the programme, and to align it to the priorities of the respective Member States.

The EAThink work carried out in **Malta** is particularly encouraging from an institutional perspective, as the process of creating the educational materials implied close collaboration with the Ministry of Education and Employment. To ensure coherence with the Maltese national curriculum framework, learning outcome framework, and assessment standards, the EAThink learning units were developed in collaboration with a team of Maltese teachers, and were further reviewed by the Assistant Director at the Department of Curriculum Management and the Educational Officer for Education for Sustainable Development.

In **Romania**, the good relationship with the Ministry of Education facilitated the work of the project partner APSD-Agenda 21 in approaching and accessing the Romanian network of public schools. At regional level, APSD-Agenda 21 worked with the Regional School Inspectorates. The latter assigned one inspector to be responsible for the implementation of the project in the schools. The project managers and the educational tutor had regular meetings with the inspectors to monitor the progress of the project and to plan follow-up activities.

In **Austria**, the local Südwind partner built good relations with representatives of the Ministry of Education (in particular, the departments responsible for international relations, and for citizenship education respectively), with school administration (LSR, SSR Vienna) bodies and with teacher-training centres (e.g. pedagogical universities in Vorarlberg, Upper Austria and Vienna). All these institutions were involved in supporting the implementation of the EAThink project in Austria.

A wealth of learning units

- Which is the right season for each fruit and vegetable?
- Is there a food crisis in the world?
- What do passwords and nutrients have in common?
- Why is eating different varieties and species so important for our health?
- How can we waste less and improve our consumption patterns?
- How do you encourage people to move from a competitive economic pattern to a co-operative environment?

The food-related EAThink global learning units (GLUs) address the above questions and many more equally challenging and vital questions.

Throughout the EAThink project, European teachers in primary and secondary schools contributed towards the development of these GLUs and were asked to test them. The educational materials are meant to provide multidisciplinary and experiential learning modules that are closely linked to the respective curricula. While a common format ensures a shared teaching-learning approach, the units cover a wide variety of topics, according to local priorities.

Educational activities prove effective in introducing schoolchildren to core issues linked to food, such as organic farming, and local production and consumption. In some cases, the drafting involved the collaboration with networks that promote active citizenship in addressing agriculture and food issues, and with research institutes such as IFREMER. An example is the unit developed in France by URGENCI on the basis of the maximum sustainable fishing yield, which is the maximum amount of fish within particular species that could be caught over a given time frame, according to the established environmental conditions for that same period of time. IFREMER supports fisheries in calculating this figure, thus contributing towards raising awareness about the situation.

Access to food is often a key topic that is used for educational activities, wherever they are taking place – be it in Dakar or Nicosia. While browsing through the project activities, it becomes clear that experiential learning and role-play educational activities work better towards explaining the socioeconomic and environmental conditions that have an impact on food and agriculture. These activities tend to better motivate children to take action and to develop critical thinking through dialogue and debate.

Some thoughts from students and teachers

Peer learning and mutual support among schoolchildren are encouraged in many activities as a core educational component. This materialised through the ability of the students who participated in the testing phase of the project to dialogue with each other and to express their views about the project.

Two observations by Italian teachers who participated in the project are particularly telling. A teacher from Gorgonzola, near Milan, commented that, in working with EAThink learning units, **the students increased their knowledge and developed their critical-thinking skills**.

The Gorgonzola students' feedback about the project was consistent with the teacher's view. They reported that the educational activities contributed towards developing **an understanding concerning why we should be aware about the food we buy**, an attitude that goes hand in hand with a comment made by another student who pointed out that the lessons were an eye-opener towards **not getting fooled by adverts any more**. These observations flow well into another student's suggestion to **extend such educational projects to everybody: to older as well as to younger pupils**.

Students especially appreciate peer learning in dealing with these issues. As another student from Milan pointed out, **working in small groups was a good thing.** This comment ties up well with the feedback provided by a Milanese teacher, who observed that when engaging in with EAThink activities, students **were able to learn new knowledge in a pleasant and effortless way**.

An aspect worth considering is the fact that such activities affect the very day-to-day life of students, triggering significant unlearning experience. In fact, a student from Segrate claimed that **this project will help improve our eating and lifestyle choices**.

Common challenges towards transformative competences

This wealth of learning units introduces the reader to a variety of perspectives and critical issues on food sovereignty and sustainability. The question that arises is how schools could follow up such opportunity for awareness-raising in terms of the active citizenship dimension of these global-learning activities.

Which skills would be instrumental in "question[ing] modernity" (Andreotti, 2010) and to support a significant leap forward in promoting citizenship initiatives towards justice and sustainability?
While this specific aspect is not specifically addressed by these units, it seems fitting to quote here five skill clusters suggested by the Global Campaign for Education (GCfE) at the workshop held in Johannesburg, South Africa in April 2015 (Surian, 2016):

1. Sharing narratives
2. Sharing relational commitment
3. Sharing structure
4. Sharing strategies
5. Sharing actions.

The introduction of these five skill clusters might provide a reference framework for building follow-up work based on the project's learning units.

1. Sharing narratives

A core message put forward by the GCfE is:

> *Stories draw on our emotions and show our values in action, helping us feel what matters, rather than just thinking about or telling others what matters. Because stories allow us to express our values not as abstract principles, but as lived experience, they have the power to move others.*

This means that the basis for organising could be found in shared values expressed as public narratives – ways to trigger the motivation that constitutes the necessary precondition for acting for change. The GCfE identifies three story dimensions, namely:

1. The "story of self" – how each of us contributes to the values of our community;
2. The "story of us" or what calls us to promote collective leadership; and
3. The "story of now" – addressing the challenges that demand present action.

As also pointed out in the GCfE:

> *By learning how to tell a public narrative that bridges the self, us, and now, organisers enhance their own efficacy and create trust and solidarity within their campaign, equipping them to engage others far more effectively.*

2. Sharing relational commitment

A second area of skills concerns the ability to acknowledge that organising social change is based on relationships and creating mutual commitments to work together. This perspective prioritises collaboration and learning how to recast our individual interests as common interests. It is also a matter of acknowledging the role of one-on-one and small-group meetings in creating relationships based on trust, with a view to laying the foundation for active citizens' genuine commitment, enhancing commitments to their community, and not merely to an idea or task.

3. Sharing structure

Effective team building and shared leadership are at the essence of a third area of skills, which focuses on a shared structure instrumental for effective local co-ordination. The team building and shared leadership aspects take into account the channelling of local action into nationwide, region-wide and even global objectives. Shared leadership and shared structure provide the right setting for activists to tackle challenging tasks. Key team challenges include: meeting the expectations of target audiences and beneficiaries; how become more effective in reaching various objectives; and enhancing the personal development of individuals within the team.

According to the GCfE, team members should strive to ensure five conditions that lead to effectiveness, namely: 1) real team (bonded, stable and interdependent); 2) engaging direction (clear, consequential and challenging); 3) enabling structure (work that is interdependent), 4) clear group norms; and 5) a diverse team pooling the necessary skills and talents.

4. Sharing strategy

While being based on broad values, active citizenship also entails learning how to focus on a clear, pre-established strategic objective, i.e. how to turn values into action and creative deliberation.

5. Sharing (measurable) action

The GCfE recommends establishing what is expected from 'active citizenship' in a way that is clearly defined, measurable, and specific. This is to ensure transparent progress that could be evaluated, accountable, and a strategy based on experience. Examples of measuring tools include: establishing the number of volunteers recruited for an activity, amount of funds raised for any given cause, the number of persons attending rallies or

signing petitions, the extent of the public's influence on the passing of certain legislation, etc. Two key features of this process are: 1) regular reporting of progress to goal in order to encourage feedback, learning, and adaptation; 2) training to fine-tune the skills required for carrying out the programme.

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The global education framework in Malta

What is global education (GE)?

The Maastricht Declaration on Global Education in Europe (2003) defined global education as:

> *Education that opens people's eyes and minds to the realities of the world, and awakens them to bring about a world of greater justice, equity and human rights for all. GE is understood to encompass Development Education, Human Rights Education, Education for Sustainability, Education for Peace and Conflict Prevention and Intercultural Education; being the global dimensions of Education for Citizenship.*

In summary, according to Hicks[1], the term 'global education' is used internationally to refer to a form of education that seeks to:

- encourage people to understand the links between their own lives and those of others all over the world;
- increase understanding of the economic, cultural, political and environmental influences that shape our lives;
- develop the skills, attitudes and values that enable people to work together to bring about change and take control of their own lives;
- work towards achieving a more just and sustainable world, in which power and resources are more equitably shared.

Global education in Malta

There is currently no policy in Malta that addresses global education (GE) specifically. A number of policies refer to similar concepts which overlap or reflect GE principles as set out above. However, there is no holistic approach or specific guidance for teachers on how to implement the GE agenda within the curriculum. Moreover, research conducted by SKOP[2] in 2014 revealed a lack of concrete commitment from institutions to the implementation of GE, and confusion across different sectors and individuals concerned as to what GE actually covered. This was compounded by a lack of adequate awareness, training opportunities and resources. Since then, GE in Malta has been growing recently in both the formal and non-formal education sector. This advancement has been in part due to the commitment of individual educators, NGOs and agencies. Initiatives within the school system that could be classed as GE include: EkoSkola, Global Education Week,

[1] http://www.unesco.org/education/tlsf/mods/theme_c/popups/mod18t05s02.html

[2] SKOP is the national platform of Maltese non-governmental organisations working in the field of international development co-operation, humanitarian aid and global education (also referred to as NGDOs).

The World Children's Prize for the Rights of the Child, the British Council Connecting Classrooms Project and Schools2Communities. A further internal study found more intent to structure the education policy framework in line with GE principles and take a more strategic approach. This intent has resulted in policy development across different ministries, which increasingly recognises the importance of the principles of GE.

The policy framework in Malta

Official Development Assistance (ODA) Policy (2014)
Ministry of Foreign Affairs and Trade Promotion (MFTP)

Development education is mentioned within the Maltese Official Development Assistance policy as a priority, and that Malta would strive to "allocate a specific yearly budget for NGDO activities dealing with their own capacity-building as well as local development education, awareness-raising and international project implementation". There is, at present, neither any evident funding from this ministry being allocated specifically to development education, nor is there any person or team within the MFTP currently tasked with promoting GE. However, the MFTP has actively supported the implementation of the development education project run by SKOP, which is being implemented within the framework of the European Presidency in 2017. This collaboration demonstrates MFTP's recognition of the importance of the GE approach.

(This document is available at: http://bit.ly/odamalta)

A National Curriculum Framework for All (2012)
Ministry for Education and Employment (MEDE)

In the Maltese context, there is no specific formal education policy framework dedicated to or mentioning GE. The closest terminology used by MEDE in this respect is the phrase "educating for sustainable development". The review of the above-mentioned Maltese National Curriculum framework (NCF) outlines the basics of the national curriculum, including 6 cross-curricular themes dubbed as "21st century skills". Education for sustainable development (ESD) is one of the cross-curricular themes. The Government of Malta adopts Briguglio and Pace's definition of ESD, which reads as: the "environmental, economic and social aspects of sustainable development [related to] the preservation of […] nature, eradication of poverty and removal of social injustices". [3]

This is closely aligned with the holistic approach to sustainable development (economic, social and environmental) but misses the notion of shared responsibility and active citizenship that GE carries. However, this is indicated as an important aspect of the framework. The NCF identifies helping **children to regard social justice and solidarity**

as key values in the development of Maltese society as one of its aims. The term 'responsible citizenship' is used a number of times as a key element within the NCF that is to be duly cultivated.

In the NCF document, ESD is given prominence as a means to enable learners to develop the knowledge, skills, attitudes and values required to become active participants (be it individually and collectively) in decision-making processes at local and global levels, intended to improve the quality of life of present and future generations.

By mainstreaming ESD across the curriculum, MEDE aims to create "Learners who are engaged citizens who secure social justice in constantly changing local, regional and global realities[4]." This illustrates that the Government acknowledges ESD as an element of GE. Indeed, the ESD concept aims to ensure that learners:

- respect diversity and value difference: children discover similarities and differences around them through their engagement with different cultures and languages;
- develop intercultural competence and appreciate their heritage within the Mediterranean, European and global contexts, developing attitudes and skills that conducive to intercultural understanding;
- work towards strengthening social cohesion and ensuring social justice: appreciating diversity and difference, whilst concentrating on similarities, promoting tolerance and the ability to recognise ways in which a community could work towards a more socially cohesive society. [5]

(This document is available at: http://bit.ly/ncfmalta)

Nurturing a Sustainable Society: A National Strategy for Education for Sustainable Development in Malta (2016) – a consultation document
Ministry for Education and Employment (MEDE)| Ministry for Sustainable Development, the Environment and Climate Change (MSDEC)

In spring 2016, MEDE and the MSDEC launched the above-mentioned consultation document. However, the results of this have yet to be published, along with the strategy itself. The said document considers education for sustainable development (ESD) as an essential component in a nation's efforts to achieve sustainability because it empowers citizens – irrespective of age, gender, ethnic group, beliefs or walk of life – to become active participants in ensuring a good quality of life based on respect and care for the community.

[3] Briguglio, L. and Pace, P.J. (2004), *Education for Sustainable Development in Malta,* p.1, available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.522.6527&rep=rep1&type=pdf
[4] Ministry for Education and Employment (2012), *A National Curriculum Framework for all*, p. 52
[5] Ministry for Education and Employment (2012), *A National Curriculum Framework for all*, p. 52

This is achieved by helping citizens to change mind-sets that result in unsustainable behaviour and practices through critical reflection, the exploration of alternative lifestyles and choices, good governance and wise management of resources.

(This document is available at: http://bit.ly/esdstrategy)

National Youth Policy Towards 2020: A shared vision for the future of young people (2015)
Parliamentary Secretariat for Research, Innovation, Youth and Sport, within the Ministry for Education and Employment (MEDE)

Although this is not a formal educational policy, this document plays an important role in looking at GE in the broader sense of education and lifelong learning, as well as non-formal learning. The vision of this youth policy is that:

> *Young people should be respected, valued and listened to and be supported and encouraged in building fulfilling personal and social relationships and in developing their innate abilities and talents for the benefit of themselves, their communities and society.*

Through different means, the policy seeks to encourage active citizenship and shared responsibility, which is in line with values related to GE.

Across the documents published by MEDE and the Parliamentary Secretariat for Youth and Sport, there is clear indication of the implicit recognition of the need for active, responsible, and engaged citizenship. This, coupled with the idea that ESD should be present across the curriculum indicates a willingness and a move towards instituting GE within the mainstream curriculum. However, whilst the policy framework appears to be in place, there is little evidence or examples of its concrete implementation or a curriculum development to ensure it has actually been adopted.

(This document is available at: http://bit.ly/youthpol)

The way forward

The above-mentioned policies contribute towards laying the foundations for the adoption of GE and ESD practices in Maltese schools. However, more concrete direction and tools are necessary to equip teachers with the means to ensure GE, which in the current framework is manifested through the education for sustainable development policy, is truly mainstreamed across the education system. The existing policy needs to be backed up by the training of teachers and the creation of specialism within this field.

The EAThink toolkit is precisely intended as a resource for teachers who would like

to put some of the elements of an ESD curriculum into practice through a variety of topics related to food, (un)sustainability and alternative practices. The toolkit provides lesson plans and activities catering for different ages to assist teachers in spreading global citizenship education to as wide and varied an audience as possible.

Adapted from Fricke H.-J., Gathercole C. and Skinner A (2015), Monitoring Education for Global Citizenship: A Contribution to Debate. Brussels: DEEEP

Knowledge and understanding on Global Learning:

Social justice and equity	Fairness between groups	Inequalities within and between societies	Causes of poverty	Understanding of global debate
	Causes and effects of inequality	Basic rights and responsibilities	Different views on eradication of inequalities	
Globalisation and interdipendence	Trade between countries	Awareness of interdependency	Power relationship North/South world economic and political systems	Complexity of the global issues
	Fair trade	Awareness of our political system and others	Ethical consumerism/ consumption	
Sustainable development	Relationship between people and environment	Different views of economic and social developments - locally and globally	Global imperative of sustainable development	Understanding of key issues of sustainable development
	Awareness of finite resources	Understanding the concepts of possible and preferable futures	Lifestyles for a sustainable world	
Diversity	Contribution of different cultures, values and beliefst o our lives	Nature of prejudice and ways to combat it	Understanding of issues of diversity	Deeper understanding of different cultures and societies

Skills and competences on Global Learning

Critical thinking	Detecting bias, stereotypes and opinions	Media litteracy	Critical analysis information	Handling contentious and complex issues
	Assessing different viewpoints	Making informed decision	Making ethical decisions	Dealing with complexity and dilemmas
Ability to argue effectively	Finding and selecting evidence	Learning to develop/change position through reasoned argument	Arguing rationally and persuasively from informed position	Political litteracy
	Beginning to present a reasoned case	Participation in relevant societal and political processes	Connect local and global context & experiences	
Cooperation and conflict resolution	Accepting and acting on group decision	negotiation	compromising	mediation

Values and attitudes on Global Learning

Empathy and sense of common humanity	Sense of importance of individual worth	Open-mindedness		
Commitment to social justice and equity	Growing interest in world events	Concern for injustice and inequality	Commitment to social justice and equity	Commitment to the eradication of poverty
	Sense of justice	Willingness to take action against inequality	Integrity	Solidarity
Concern for the environment and to sustainable development	Sense of responsibility for the environment and the use of resources	Concern about the effect of our lifestyles on people and the environment	Concern for the future of the planet and future generations	Committment to sustainable development
Belief that people can make a difference	Belief that things can be better and that individuals can make a difference	Willingness to take a stand on global issues	Willingness to work toward a more equitable future	Role as Global Citizen
Respect for people and things	Making choices and recognizing the consequences of choices	Growing ability to take care of things	Following a personal lifestyle for a sustainable world	
Ability to challenge injustice and inequalities	Recognizing and learning about alternatives to mainstream	Starting to challenge viewpoints which perpetuate inequalities	Selecting appropriate action to take against inequality	Campaigning for a more just and equitable world

Evaluation form for students

The following is an evaluation tool that has been developed by a teacher and can be used to collect feedback from the students. Please feel free to amend the text to make it appropriate to the age group of your students.

Rate from 1 (low) to 5 (high) - To what extent does the lesson...

Explain the key organizing concepts of the topic	1	2	3	4	5
Help you appreciate the relevance and importance of the subject matter	1	2	3	4	5
Help you to draw conclusions justified by the information provided	1	2	3	4	5
Enable you to think more clearly on the subject	1	2	3	4	5
Enable you to think more deeply on the subject	1	2	3	4	5
Enable you to think more logically on the subject	1	2	3	4	5
Enable you to think more fairly on the subject	1	2	3	4	5
Instigate you to ask further questions on the subject	1	2	3	4	5
Help you to think from different point of views, including views which you generally tend to disagree with	1	2	3	4	5
Encourages you to think critically on the subject	1	2	3	4	5

CHAPTER 1
Food and Individual Behaviour

Don't Litter our World – Age 6- 7	31
Food Waste – Age 8-11	39
Composting Garden – Age 8-12	49
Ecological Footprint – Age 10-13	57
I Buy Responsibly – Age 16-19	63

All the teaching tools/resources related to the lesson plans are available in OR accessible through the Resources section in the Kopin website – www.kopin.org – or directly through this link: www.kopin.org/food-for-thought/

GLU 1.1 Don't litter our world!

Author	Kopin
Country	Malta
Age group	6 - 7 years
Subjects	Science | Literacy
Duration	2 lessons (60 and 50 minutes, respectively)
Topics	▪ Waste of resources ▪ Ecosystems ▪ Responsible consumption
SDGs	SDG 12: Responsible production and consumption SDG 14: Life below water SDG 15: Life on land

Competences required

- Communication skills and knowledge of English
- Learning to learn
- Social and civic skills
- A sense of initiative

Learning objectives

- To understand the danger of litter to the ecosystem, wildlife, humans and the planet at large.
- To become aware that everyone could take an active role in reducing litter and avoiding the waste of resources.

Materials and equipment

- Interactive whiteboard, or projector and screen with speakers
- Cardboard, glue, scissors, markers, clean waste items

Teaching tools

- Video clips: *Litter Awareness* | *Carbon Footprint* | *Landfill Harmonic Orchestra*
- Slideshow: "Litter around the world"
- Pictures of litter items
- Booklet: *King Wastealot's Picnic*

Questions to discuss

- What is litter?
- Which problems could litter cause?
- What could we do to reduce litter?
- How long does it take for litter to decompose?
- How could we reduce the amount of waste we generate?
- What can be composted and recycled, and how could we recycle creatively?

Suggested evaluation tools

- Homework

Additional resources

- "Plastic waste: Ecological and Human Health Impacts", EU Commission, 2011
- 'Green organics bin' infographics
- For tips on how to manage recyclable and organic waste, visit: www.wasteservmalta.com

GLU 1.1 Lesson plans

GLU 1.1 Lesson Plan 1 (50 minutes)

Materials and equipment

- Interactive whiteboard, or projector and screen with speakers.

Teaching tools

- Video clip: *Litter Awareness*
- Pictures of litter items

Questions to discuss

- What is litter?
- What problems could litter cause?
- What could we do to reduce litter?

Suggested evaluation tools

- **Homework:** Once at home, pupils should ask their relatives to keep a list of waste items thrown away over the course of 3 to 4 days. The pupils are to list those items that they think could be recycled by being disposed of in the green/grey bags.

- **Homework:** The pupils should be asked to bring with them for the next lesson clean waste items, such as empty packets of crisps and other snacks, bottle caps, paper cups, etc., to be used in the project work activity.

Activities

Time	Activity description	Additional tips
5 min	The teacher asks the children how they would define **litter**. Next, to explain that litter is rubbish left in the wrong place; people may throw litter out, or it could blow out of a bin or landfill sites and end up anywhere. Litter is dangerous to both people and animals. To show the *Litter Awareness* clip to make it easier for the children to understand.	
20 min	Set of pictures: "Packaging, food and litter" Students could suggest the names of some litter items they could think of. After that, pictures of common packaging and other items related to food purchase and consumption are to be shown to the students: a plastic bottle, a plastic bag, disposable cups and cutlery, snacks wrappings, cans. The pupils will be asked to identify how these items are used and in which contexts (e.g. plastic cutlery would be used during parties, etc.) A second series of pictures shows the same items as litter, polluting the environment. Students will be asked what they think the effects of the littering will be for each situation (e.g. what happens to the turtle that would eat the plastic bag).	

15 min	Discussion: **What could we do to reduce the amount of rubbish we produce and, therefore, the risk of litter?** The teacher asks the pupils for solutions specifically related to the items shown previously in the slideshow. Highlight how the choice of the products we consume, and not only the disposal of rubbish, could increase the generation of rubbish and litter – food nowadays comes with a lot of packaging. After the discussion, the pupils are shown pictures of possible solutions to litter (e.g. reusable bags, water bottles, recycling stations, etc.), and are advised to avoid items that are disposable and cause pollution. Further discussion: ▪ Have you ever used these items? ▪ Do you know which items could be recycled?	
10 min	Group activity: The pupils are asked to discuss possible ways of persuading people to recycle, properly dispose of rubbish, and use more sustainable options. The group comes up with 2 or 3 catchy slogans that will be used in the project work activity in/after Lesson 2. The teacher should first briefly discuss the slogan with the pupils from the point of view of its effectiveness as a form of communication (e.g. What makes a good and punchy slogan? How does it differ from other genres of writing? What type of words / adjectives / nouns would be best?)	Optional: **i)** The teacher could offer the pupils with a pre determined word bank from which they could select their vocabulary. **ii)** A second slogan could be developed by the pupils individually, thus giving the teacher grounds to assess their skills and competences in using words to achieve a particular effect in their writing.

GLU 1.1 Lesson Plan 2 (60 minutes)

Materials and equipment

- Interactive whiteboard or projector and screen with speakers
- Cardboard, glue, scissors, markers, clean waste items

Teaching tools

- Booklet: *King Wastealot's Picnic*
- Video clips: *Carbon Footprint* | *Landfill Harmonic Orchestra*
- Slideshow: "Litter around the World"

Questions to discuss

- How long does it take for litter to decompose?
- How could we reduce the amount of waste we generate?
- What could be composted and recycled, and how could we recycle creatively?

Suggested evaluation tools

- **Homework:** Once at home, the pupils again ask their relatives to keep a list of waste items (including packaging, food scraps, etc.) thrown away over the course of 3 to 4 days. The students will have to list those items that they think can go in the organic bin.

Activities

Time	Activity description	Additional tips
5 min	The teacher briefly goes through what was done during Lesson 1 and asks the pupils to recap what they had learnt about litter and its effects.	

10 min	The teacher reads the *King Wastealot's Picnic* story to the children. This highlights some of the issues around litter, and it should lead to interesting discussions about the problems of dropping litter. The teacher could ask the children questions such as: ▪ Who can remember how long it takes for a banana skin or apple core to decompose? or ▪ How long does it take for plastic yoghurt pots and crisp packets to decompose? Reflect on food packaging and the alternative options mentioned during Lesson 1.	<u>Optional:</u> The students could carry out an investigation involving two pots of soil, A and B. In pot A, a banana skin is buried, while the soil in pot B houses an empty plastic packet. Unearth after a week to check decomposition progress.
5 min	The teacher shows the *Carbon Footprint* video clip to reinforce the idea that it takes very long for non-biodegradable litter to decompose, with huge effects on the environment and ecosystems – plants, animals, habitats, etc.	
10 min	<u>Slideshow:</u> "Litter around the world" Make the children aware that here, in Malta, rubbish is collected almost every day, but this is not the case in some other countries. After the presentation, the teacher starts a group discussion with the pupils, asking the following questions: ▪ What could be done to **reduce** the amount of rubbish we produce? ▪ What could be recycled? ▪ What can go in the organic/compost bin[1]? ▪ How could we **recycle** our rubbish in a creative way? Suggestions from the pupils could be listed on the whiteboard and the teacher can take note for future possible project work with the class.	

[1] To check what could go into the organic bin, see: http://www.kesab.asn.au/fsc/schools/students/green-organics-bin/

10 min	Show the *Landfill Harmonic Orchestra* video clip to show the students creative ways to recycle litter, connecting the topic with different realities abroad. Discuss with the students what they think about the story shown in the video.	
20 min	Project work: The teacher, following the students' suggestions from Lesson 1, writes catchy slogans on cardboards in large block letters (e.g. 'Don't be a litterbug', 'Keep our planet clean', etc.). In groups, the pupils cut up their items of waste and stick these pieces to the letters. They should end up with a colourful message about litter (actually made from litter) to display in class and present during school assembly.	

GLU 1.2 Food waste

Author	Miriam Consiglio | Kopin
Country	Malta
Age group	8 - 11 years
Subjects	English | Science | Social studies
Duration	2 lessons (60 minutes each) + extra time for hands-on activities
Topics	▪ Food waste ▪ Sustainable use of resources ▪ Composting ▪ Ecosystems
SDGs	SDG 2: Zero hunger SDG 12: Sustainable consumption and production SDG 13: Climate action

Competences required

- Communication skills and knowledge of English
- Social and civic skills
- A sense of initiative
- The ability to work in groups

Learning objectives

- To create awareness about food waste: how it happens, how it could be avoided, and why it is important for a sustainable future.
- To show that some parts of food we usually throw away could also be eaten.
- To launch a composting project.
- To avoid disposable packaging.

Materials and equipment

- Interactive whiteboard, or any other video / photo-screening equipment
- Videos
- Material to create posters/charts (e.g. flipchart sheets, crayons)
- Compost bin
- Plastic bag containing a carrot, part of a broccoli, an apple, a potato and a banana
- Fruit/vegetable peeler(s) and/or knife (strictly to be handled by the teacher only).
- Compostable food scraps, which students are asked in advance to bring from home (they can be collected in the days before the activity and then be brought to school at the day of the activity). Students should be asked to conduct research (internet, ask family, friends) about which food waste could be composted. The teacher could also provide the students with one or more pictures about composting.

Teaching tools

- Video clips: *The Food Waste Education Solution* | *Wastebuster Investigates Food Waste*
- Pictures about composting

Questions to discuss

- What type of food do you bring with you to school?
- Do you usually eat all of your lunch?
- What do you do with the food you don´t eat?
- How is food wasted in school, at home and in other places?
- How could we reduce food waste?
- What is the meaning of expiry dates?
- Which parts of fruit and vegetables are edible, and which are not?
- What is the function of a compost bin and the compost itself?
- Why is disposable packaging an environmental problem?

Evaluation tools suggested

- **Homework (essay):** What could you and your family do to reduce food waste?
- **Homework:** to design (using drawing, collage, computer or other means) a poster about how to reduce food waste.
- **Class discussion:** Name what you have learnt about food waste which you found most interesting during today's lesson.
- **Homework (essay):** Describe the life of an apple, from tree to compost.
- **Homework:** to design (using drawing, collage, computer or other means) a poster about what could be composted and how.
- **Class discussion:** Name what you have learnt about food waste and composting which you found most interesting during today's lesson.

GLU 1.2 Lesson plans

GLU 1.2 Lesson Plan 1 (60 minutes)

Learning objectives

- To explore the wide range of eating customs that exist, with a focus on breakfast.
- To learn how to follow a recipe.
- How to spot similarities and differences.
- To develop an inquisitive mind and welcoming new experiences offered by different cultures.

Materials and equipment

- Interactive whiteboard or video / photo screening equipment.
- Videos
- Material for creating posters/charts (e.g. flipchart sheets, crayons).

Teaching tools

- Video clips: *The Food Waste Education Solution | Wastebuster Investigates Food Waste*

Questions to discuss

- What lunch do you bring with you to school?
- Do you usually eat all of your lunch?
- What do you do with the food you don´t eat?
- In which ways is food wasted in school, at home and in other places?
- How could we reduce food waste?
- What is the meaning of expiry dates?

Suggested evaluation tools

- **Homework (essay):** What can you and your family do to reduce food waste?
- **Homework:** To design (using drawing, collage, computer or other means) a poster that informs viewers about how they can reduce food waste.
- **Class discussion:** Name what you have learnt about food waste which you found most interesting during today's lesson.

Activities

Time	Activity description
10 min	Class discussion: • What type of food do you usually bring with you to school? • Do you usually eat all of your lunch? If not, what are the reasons? • What do you do with the food you don't eat? Students are then invited to design a questionnaire about lunches brought to school. As a project, the questionnaire will be distributed to all school students; the data could then be collected and analysed, and the findings could be presented during a public address.
10 min	In groups, students think of ways as to how food gets wasted: at home, at school, and in other places. Results of the discussion are reported to the class.
7 min	First screening of the clip entitled, *The Food Waste Education Solution*. In groups, the students try to identify the main points emphasised in the video.
5 min	Second screening of the above-mentioned clip until 1:22. The teacher asks the questions, to which the students must give 'true/false' answers: ▪ People eat fruit and vegetables, no matter the appearance. ▪ We waste or throw away 40% of our food. ▪ People believe that food is cheap, so they buy too much of it. ▪ Portion sizes are too small.
5 min	Question: What can we do? Watch second part of clip for the second time (could be stopped at 2:03). Groups are given a few minutes to try to remember all the tips given. Points are awarded to the group with the most correct answers.
5 min	Question: In what other ways could we reduce food waste? Pupils try to think of other ideas, and then watch the clip, *Wastebuster Investigates Food Waste*. The main ideas are discussed, with the keywords being written on the board.

5 min	Discussion: What is the meaning of expiry dates? Food does not expire on the expiry date indicate on the label but a couple of days later. Exercise: How could you tell that food is not good anymore? Give some examples, such as: smelling the food, checking for mould, tasting a little bit to see if it is still good to eat.
3 min	Question: Is it only food we are wasting when we throw away food? (The discussion should bring out the point that we are also wasting water used in food production, and fuel used to transport food.)
10 min	Conclusion: Posters are produced in groups, with pictures and slogans, in order to make the rest of the school aware of food waste.

GLU 1.2 Lesson Plan 2
(60 mins + extra time for additional activity)

Learning objectives

To become aware that:

- some parts of food that we usually throw away could also be eaten;
- what cannot be eaten and raw fruit and vegetables could be turned into compost;
- disposable packaging should be avoided.

Materials and equipment

- Interactive whiteboard or video / photo screening equipment
- Videos
- Compost bin
- Plastic bag containing a carrot, a piece of broccoli, a celery stick, an apple, a potato and a banana
- Fruit/vegetable peeler(s) and/or knife (**strictly to be handled by the teacher only**).
- Compostable food scraps – the teacher will request the students in advance to bring from home (they could be collected in the days before the activity and then be brought to school at the day of the activity). Students should be asked to conduct research (internet, ask family, friends) concerning which food waste can be composted. The teacher can also provide the students with one or more pictures.

Teaching tools

- Pictures about composting

Questions to discuss

- Which parts of fruit and vegetables are edible, and which are not?
- What is the function of a compost bin and the compost itself?
- Why is disposable packaging an environmental problem?

Suggested evaluation tools

- **Homework (essay):** Describe the life of an apple, from tree to compost.
- **Homework:** to design (using drawing, collage, computer or other means) a poster about what could be composted and how.
- **Class discussion:** Name what you have you found most interesting about food waste and composting from what you've learnt during today's lesson.

Activities

Time	Activity description	Additional tips
10 min	Introduction: Show a plastic bag containing a carrot, a piece of broccoli, a stick of celery, an apple, a potato and a banana. One by one, discuss which parts of the above fruit and vegetables could be eaten, and which parts are to be thrown away. This should be a hands-on activity with teacher and/or students peeling the items, or preparing them for cooking or consumption. As a follow up, the students could create labels distinguishing between bulbs, tubers, roots and fruit. Secondly, they could create labels identifying which section of the fruit or vegetable comprises the main edible part, e.g.: broccoli → florets / blossom; carrot → root; celery → stem and leaves, and so on.	Optional: There could be a further investigation entailing the students' growing their own crops from leftovers – carrot tops could be sown to grow new carrots; potato shoots could be broken off the vegetable and re-sown; similarly, the inner seed pulp of tomatoes, which is often discarded. The students could be encouraged to take the initiative to grow and consume home produce, where possible, thus contributing towards reducing food miles on some of the fruit and vegetables they consume.
10 min	This activity involves a pile of edible food and a pile of waste. Teacher shows that the pile of 'waste' is relatively large. Question: Should we throw it away? Is there a solution?	Optional: The students could carry out some class/lab research on the benefits of composting food scraps.

10 min	Discussion: The students should become aware that: ▪ Carrots don't need to be peeled, while the leafy tops of carrots could be used in salads if fresh – otherwise they could be given to pets, such as rabbits or guinea pigs. ▪ Broccoli stems could be eaten as well; if tough, they could be used in soups, as stock. ▪ Apples don't need to be peeled, and the core (which we often throw away) still contains lots of edible parts. ▪ Potatoes don't need to be peeled. They could be scrubbed well and then cooked and eaten with the peel on.[1] ▪ What about banana peel?	
5 min	The teacher points back at the fruit and vegetables, and shows that nothing will be thrown away. Parts will be eaten, whereas others will be composted. The teacher then points out that there is something left: **the plastic bag**, and proceeds to explain that disposable packaging is a huge environmental problem and that packed lunches should be brought to school in reusable containers, rather than disposable bags. The children are given the task to notice and list how much disposable packaging is thrown away in their households during one week. This could lead to further activities about waste management.	

[1] Vitamins and other important nutrients in fruits and vegetables that have an edible peel are directly under the peel. For instance, the peel of apples and pears has seven times as many vitamins as the pulp. Therefore, removing the peel means that the healthiest parts are being discarded.

25 min	<u>Hands-on activity:</u> For this activity, the children will bring food scraps from home to make compost. These are then being composted in the school's compost bin. During the activity, the teacher discusses with the students the benefits of composting, such as: ▪ It could be used as fertiliser ▪ It improves the soil (builds up nutrients) ▪ It is good for the environment (doesn´t pollute the water and doesn´t harm insects and other animals living in the soil, as chemical fertiliser does). The teacher should also encourage the students to set up a compost bin at home (if they have room for it).	

GLU 1.3 Composting garden

Author	Sanja Albaneže (Rikard Katalinić Jeretov Elementary School (Opatija) | Association Žmergo (Opatija)
Country	Croatia
Age group	8 - 14 years
Subjects	Science | Social studies | Biology | Chemistry
Duration	2 lessons (45 minutes each) + possibility of continuation of composting throughout entire school year
Topics	▪ Education to choice / critical consumption ▪ Composting / gardening ▪ Food waste ▪ Water ▪ Sustainable agriculture ▪ Food environmental impact ▪ Discovering the food chain
SDGs	SDG 2: Zero hunger

Competences required

- Communication skills
- Numerical skills and basic abilities in science and technology
- Learning to learn
- Social and civic skills
- A sense of initiative and entrepreneurship
- Cultural awareness and expression

Learning objectives

- To develop an awareness about the environment, and a sense of responsibility for a healthy and a cleaner environment.
- To emphasise the importance of organic fruits and vegetables for our health, and the impact of sustainable food production on the environment.
- To learn what composting is, how to compost properly (i.e. which organic matter can be composted and what type of waste is not suitable for composting).
- To raise awareness of the problems caused by food waste in households.
- To become familiar with saving money and resources in the household, towards reducing waste.
- To learn which type of waste is valuable resource, and how to manage it more effectively.

Methodologies

- Interactive game
- Hands-on activities.

Materials and equipment

- DIY poster with illustration or a drawing of a simple composting bin with empty layers.
- Tools for composting, wooden boards and tools for making DIY composting bin.
- A poster with a drawing of a simple compost heap.
- About 20 cards, each with a simple illustration of a drawing of organic waste for composting, 10 sample cards with drawings of inorganic waste from other categories of waste (e.g. glass cup, pen, socks, tin, etc.)
- PC and projector
- Wooden boards, nails, a hammer and/or a shop-bought composter

Teaching tools

- Video tutorial for home composting[1]

[1] The original video is in Croatian: *Video priručnik za kućno kompostiranje* – written by: Cvijeta Biščević; produced by: Zelena akcija) (available at: https://www.youtube.com/watch?v=t_1HL9H1cnA). It is possible to find similar resources in English by searching the words 'home composting tutorial'. Please make sure to select the resource that is best-suited to the target age group.

Questions to discuss

- How does composting help reduce waste and pollution of the environment?
- How could every individual help renew and enrich the soil and its quality?
- Could we, ourselves, help reduce food waste? In what ways?
- Could we compost without having a garden, for instance in spaces such as a small apartment, or on a balcony?
- What could we do with the result of composting (humus) if we do not have a garden in which to use it?

Suggested evaluation tools

- **Practical assignment:** An experiential learning activity in the school garden or school backyard and active participation and contribution of a school caretaker or a volunteering parent.
- **Games** as described in the Lesson Plans.

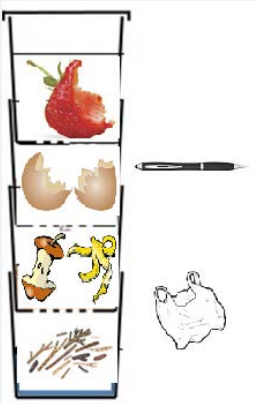
GLU 1.3 Lesson plans

GLU 1.3 Lesson Plan 1 (45 minutes)

Activities

Time	Activity description	Additional tips
10 min	Start the lesson with introductory conversation about food waste in our homes, and food-waste management in the various households. Continue with discussion about the waste mentioned, and what could be reused, upcycled, or recycled (following an explanation of each of these terms). Explain where this waste goes, how it affects the environment and introduce the main topic: composting as an intelligent way of managing resources.	Let students list and name types of waste specific to their household. Motivate them to think of ways to reuse, upcycle listed waste. Ask if some of them compost organic in their homes or have some relevant experience in this respect.

10 min	Through a basic slideshow, outline organic waste, types of organic waste, and which are suitable for composting; explain the process in short, divide green and brown components and show the tools needed for the process of composting, possible types of composting bins and possible places where these could be placed (backyard, garden, balcony, under the kitchen sink). Evaluation Game: Each student receives three cards of various waste items, some of which are to put in the composter, and some are not. One by one, students stick a card to the corresponding poster, displaying different types of waste (e.g. electrical, compost, old batteries, pharmaceutical, paper, plastic, household waste, etc.).	Adapt the slideshow to the students' age and their previous knowledge. Whenever possible, use real items instead of the presentation, to enable the students to touch them, smell and feel them firsthand.
5 min	Divide the class into small groups each having the same number of students (e.g. 25 students will form 5 groups of 5 students). You can make the process a bit more 'fun' by doing this short game: Each group should form a circle facing the middle and propose a number of seasonal and local fruit and vegetables (number depending on the number of the students in the group). Teacher and students decide which of the chosen fruit and vegetables will be used in the activity, and the order in which they will be called out. Each student pronounces one of the items in the agreed order. Once the members of a group have each called out the vegetable/fruit according to the list, the next group goes through the list in turn (for example, carrots, onion, garlic, broccoli, cauliflower, carrots, onion, garlic, and so on). The students are then regrouped according to the vegetable/fruit they called out. Each new group sits at one separate school desk.	Ask the students to propose ingredients. Give priority to seasonal and local ingredients.

20 min	<u>Competition in teams:</u> Building a compost pile. Hang up an illustration/drawing or poster of a simple compost pile divided into levels (green and brown layers) on a board. On the school desk in front of the drawing or poster lay out cards with drawings of various items from different types of waste (face down, so that the students can't see what is on the cards). One by one from each group they come to the illustration of a simple composting bin with empty layers. Their task is to pull out one of the cards on the desk (i.e. with a drawing of an organic item – green or brown – or another type of waste (glass, plastic, etc.) The students are to start filling the mock bin from the bottom: first the small branches (brown layer), then the green one (e.g. lettuce); and then again a brown layer (e.g. dry leaves), a green one (e.g. apple scrap) and so on. Each group gets 1 point for choosing the right items to place into the mock bin in the correct order, or which items are not to be added to the 'bin'. This game could be played for as many rounds as desired.	 If there is time or resources, the winning team can receive a symbolic award for being 'composting heroes'.

GLU 1.3 Lesson Plan 2 (45 minutes)

Activities

Time	Activity description	Additional tips
	For this lesson, the students should create a (real) compost bin to be placed in the school garden or in the immediate school surroundings. Once the compost bin is set up correctly, prepare a bed of twigs at the bottom; then place prepared organic waste from the school kitchen or waste brought by the students from home.	In this activity, the class could seek the help of the school caretaker and/or volunteering parent. If there are no proper conditions (no school garden), a shop-bought compost bin could be used; the teacher and students would decide together where to set it up on the school premises or school surroundings.
10 min	Discussion: What could we feed into our composter? With what could we feed our school garden? This discussion helps remind the students what they could put in the bin during the school day, taking care of it (organising teams of student and assignments). In addition, students plan what could be done with the resulting humus from this school composting exercise. Some ideas: fertiliser for a school garden, donating it to a local urban garden, or to neighbours, kindergartens, etc.	Suggested game to foster the discussion: Students stand in a circle and pass a small ball to each other. Each of them who catches the ball must say one food/ organic matter that can be composted, then throws the ball to someone else and so on, until all students mention at least one organic item that could be composted.

5 min	To conclude, all students participate in the final (evaluation) game. Students should stand around the composter. One by one, a student or a teacher calls out a food item or other items. If they think that it could be composted they squat or kneel, and if they think it cannot be composted, the students remain standing up.	Students who remain standing up even if the item that has been called out is good for composting should explain why do they think is not good for composting and vice versa, in order to repeat one more time what can and what cannot be composted.

GLU 1.4 Ecological Footprint

Author	CARDET
Country	Cyprus
Age group	10 - 13 years
Subjects	environmental studies | health education | language
Duration	4 lessons (40 minutes each)
Topics	▪ Critical consumption ▪ Water ▪ Food environmental impact
SDGs	SDG 7: Affordable and clean energy SDG 11: Sustainable cities and communities SDG 12: Responsible consumption and production SDG 13: Climate action SDG 14: Life below water SDG 15: Life on land

Competences required

- Communication skills
- Learning to learn
- Social and civic skills
- Cultural awareness and expression

Learning objectives

This unit will enable the students to:

- become aware about the limited capacity of our planet to provide natural resources;
- understand the extent of our footprint on the planet, as a direct consequence of our daily routines and activities;
- know the definition and usefulness of the ecological footprint as a means to measure natural resources and our consumption of these resources;
- discover the relation between the ecological footprint, the environment and the welfare of humans;
- take a critical stand against the current consumerism practices that increase the ecological

Methodologies

- Debate and classroom discussions
- Group work
- Student presentations
- Use of video and simulation programmes, peer-to-peer teaching
- Encouraging self-reflection

Materials and equipment

- A computer for the teacher
- A computer for each students' group
- Projector
- Internet access

Teaching tools

- Worksheets: "Introduction to Ecological Footprint" | "Dealing with the Problem"
- Slideshows: "The Ecological Footprint" | "The Ecological Footprint of Milk"
    - Video clips (optional):
    - *The Age of Stupid – Consumerism* (1:38 minutes) – available on YouTube
    - *The Ecological Footprint Explained* (1:20 minutes) – available on YouTube

Questions to discuss

- What are natural resources and what is their importance for humans?
- What is the ecological footprint?
- Which dangers are revealed by the ecological footprint for humans and the environment?
- How could the problem be addressed?

Suggested evaluation tools

- Questionnaires to be filled in by the students: one before the 4 sessions, and another at the end of the unit.

Additional resources

- World Wide Fund for Nature (WWF) www.wwf.org
- "Find your Ecological Footprint" on the WWF website
- "Ecological Footprint Quiz" on the Earth Day website
- Global Footprint Network
- World Wide Fund for Nature (WWF) www.wwf.org

GLU 1.4 Lesson plans

GLU 1.4 Lesson Plan 1 (40 minutes)

Activities

Time	Activity description	Additional tips
5 min	To establish existing knowledge of the students on the topic, the teacher distributes a questionnaire to be filled in at the beginning of the first lesson.	It is up to the teacher to decide whether students will write their name on questionnaire.
5 min	Introduction: The teacher asks the students to explain what they know about consumerism.	Optional: To screen the 'Consumerism' video clip.
15 min	Students study two short passages, which present a problem related to the ecological footprint, i.e. the demand of humans for natural resources is higher than what the planet can provide.	Short discussion on the term 'natural resources'. The students answer questions (perhaps as homework).
15 mins	The teacher shows the "The Ecological Footprint" slideshow (10 slides) to the students, adding any relevant comments. The students would be encouraged to take notes on key points regarding the significance of the ecological footprint.	Optional: To screen the The Ecological Footprint Explained video clip.

GLU 1.4 Lesson Plan 2 (40 minutes)

Activities

Time	Activity description	Additional tips
10 mins	The teacher explains the main features of the ecological footprint (EF): ▪ What it is. ▪ Its size and how it is calculated. ▪ How it compares with biocapacity. ▪ Its current and future status. It is important that the students understand the significance of the ecological footprint in relation to sustainable development.	Adjust the types of information on EF to be searched, i.e. calculation method, unit of measure, etc., to the students' age.
15 mins	The teacher shows the students the "The Ecological Footprint of Milk" slideshow, which outlines the EF of milk. The students then fill in the relevant worksheet ('Introduction to Ecological Footprint').	The students should be able to apply the milk example in the presentation in general assumptions, i.e. that every product/ service leaves behind an EF.
15 mins	The teacher asks the students to choose another product or food, and to trace its EF as was done for the EF of milk. Three kinds of food are recommended (namely: strawberries, cheese and canned tuna) but the students could choose any other items they want.	The exercise may be conducted in groups.

GLU 1.4 Lesson Plan 3 (40 minutes)

Activities

Time	Activity description	Additional tips
15 mins	This lesson addresses the **ecological footprint** (EF) in the world and in the European Union (EU). The teacher explains that the EF is measured in hectares, and it is often expressed in number of planets, e.g.: Biocapacity is 1.7 hectares and the EF is 2.7 hectares. Therefore, since the EF is about 50% larger than the biocapacity, 1.5 planets would be needed in order to cover our needs.	The numbers relating to biocapacity and EF differ significantly from source to source/research.
10 mins	The teacher presents graphs about the EF of each EU member state for the students to analyse. As explained above, the EF is expressed in terms of number of planets.	Students make correlations between the EF and people's lifestyles in each country.
15 mins	This part of the lesson is about the EF of different countries. The students are encouraged to visit certain websites (as indicated by the teacher) to look up graphs on EF and biocapacity in different countries around the world. The teacher should help students recall what EF and biocapacity are.	If there are not enough computers, the task may be conducted through a class presentation on 3 or 4 countries.

GLU 1.4 Lesson Plan 4 (40 minutes)

Activities

Time	Activity description	Additional tips
15 mins	This lesson covers the ecological footprint (EF) of the individual or a family. The students are encouraged to visit certain websites (as indicated by the teacher) to gather information to be able to answer the questionnaire in order to calculate their EF and that of their family. The following is the recommended website for this task: http://footprint.wwf.org.uk/ (English)	If there are not enough computers, the task may be conducted through a class presentation. Students could calculate the EF of other family members at home.
20 mins	Students discuss and take notes on practical ways to reduce the EF, focusing on daily diet, electrical energy, water, emissions and waste, transport, forests.	The suggestions are announced and discussed.
5 mins	In conclusion, the teacher asks the students to fill in a (second) questionnaire – this time to establish what the students have learnt from this GLU.	

GLU 1.5 I buy responsibly and don't waste

Author	Magdalena Klarenbach | Emilia Ślimko
Country	Poland
Age group	16 - 19 years
Subjects	Geography | Social Sciences | Natural Sciences | Ethics | Maths | Foreign Language
Duration	2 lessons (60 minutes each)
Topics	▪ Education to choice / critical consumption ▪ Composting and gardening ▪ Food waste ▪ Water ▪ Sustainable agriculture ▪ Food miles ▪ Food traditions ▪ Food environmental impact ▪ Discovering the food chain
SDGs	SDG 2: Zero hunger SDG 3: Good health and well-being SDG 11: Sustainable cities and communities SDG 12: Responsible consumption and production

Competences required

- Communication skills and knowledge of English
- Social and civic skills
- A sense of initiative and entrepreneurship
- Cultural awareness and expression

Learning objectives

- To get to know the scale, causes and consequences of food waste locally and around the world, and relate this issue to one's life.
- To discuss possible solutions to the problem of the waste of food.
- To understand the concept of responsible consumption.
- To learn about different styles of consumption.

Methodologies

- Discussion
- Screening of TED presentation
- Role play / simulation

Materials and equipment

- Computer
- Projector
- Flip chart or whiteboard

Teaching tools

- TED presentation: *The global food waste scandal* (14:08 minutes)
- Worksheets Nos. 1 and 2
- Evaluation questionnaire

Questions to discuss

In the brief discussion draw attention to the problem of food waste in the context of responsible consumption – how a responsible consumer deals with the excess food, leftovers or waste. Emphasize also that saving food means saving resources.

Suggested evaluation tools

Students should fill in the above-mentioned evaluation questionnaire.

GLU 1.5 Lesson plans

GLU 1.5 Lesson Plan 1 (60 minutes)

Activities

Time	Activity description	Additional tips
60 mins	Introduction: Provide the students with basic facts about food waste, e.g. how much food is wasted in your country and around the world. With the students in pairs, groups or as a whole class, ask them to think about and answer the following questions: ▪ Which food products do we waste most often? ▪ Which other resources are wasted when we throw away food? ▪ What are the causes of food waste? ▪ What are the consequences of food waste? ▪ How could we prevent wasting food in everyday life? Write down the students' answers on a board or flip chart. Then, screen the TED presentation entitled, The global food waste scandal. Continue the discussion. Ask the students what they find especially interesting in the TED presentation, and discuss these issues in more detail.	For the first question, draw attention to the resources needed in food production, such as water, energy, human labour, etc.

GLU 1.5 Lesson Plan 2 (60 minutes)

Activities

Time	Activity description	Additional tips
60 mins	Announce that, during this lesson, you will play a role-play game called, "Tell me what you eat and I will tell you who you are". Explain that, during the game, the students are supposed to play roles as described on the worksheets. They will play characters that have different eating styles, which is also reflected in their respective lifestyles. Students choose their roles from Worksheet 1 (one role per student), while a copy of Worksheet 2 is handed out to each student. Allow students a few moments to familiarise themselves with their roles, and to match the information from the role description with the scheme from Worksheet 2. Let students move freely around the classroom. The students should be encouraged to discuss their roles with each other. When the game is over, discuss the following questions with the students: In your opinion which of the characters in the game eats in the way that is least harmful to the environment? Which of the characters represent/s the model of responsible consumption? What does responsible consumption/being a responsible consumer mean? Is it easy or difficult to be a responsible consumer?	If needed, before starting the game briefly explain each component of the food system as presented in Worksheet 2.

CHAPTER 2
Food and the Planet

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All the teaching tools/resources related to the lesson plans are available in OR accessible through the Resources section in the Kopin website – www.kopin.org – or directly through this link: www.kopin.org/food-for-thought/

GLU 2.1 Let's learn about our carbon footprint!

Author	Kopin
Country	Malta
Age group	7 - 9 years
Subjects	science | literacy
Duration	2 lessons (45 minutes each)
Topics	▪ Sustainable use of resources ▪ Carbon footprint
SDGs	SDG 12: Sustainable consumption and production SDG 13: Climate action

Competences required

- Communication skills
- Numerical skills and basic competences in science and technology
- Learning to learn

Learning objectives

- To understand what a carbon footprint is and how it is created.
- To learn how to reduce our carbon footprint.

Materials and equipment

- Interactive whiteboard or PC/laptop, projector and speakers
- A1 paper
- Newspapers or magazines
- Tape
- Scissors

Teaching tools

- Video clips: *Carbon Footprints* | *Save Our World*
- Carbon footprint stickers
- Carbon footprint fact sheet
- Quiz
- 'Go Green' action cards – a card-matching game (to print number of copies depending on the size of groups you will be setting up in the class and then cut out)
- 'Green Foot' handout (to print number of copies according to the number of students in the class).

Questions to discuss

- What does the term 'carbon footprint' mean?
- What causes this footprint?
- What could you do to decrease your own carbon footprint?
- What could we do as a class to decrease our carbon footprint?
- What could we do as a school to decrease our carbon footprint?
- Why is our carbon footprint (i.e. of children in Malta) larger than that of children who are living in less developed countries?

Suggested evaluation tools

- **Class discussion:** What is the most interesting thing you have learnt about the carbon footprint today?
- **Homework:** Create a poster aimed at the students' families, using computer, collage, paints or other, informing them about the carbon footprint and what they can do to keep it small. Ask the students to bring the poster to school and also report on the families' reactions.
- **Homework:** Think of one concrete action you can do to decrease your own carbon footprint. Then implement it for one week. After that week, write an essay about your experience.

GLU 2.1 Lesson plans

GLU 2.1 Lesson Plan 1 (45 minutes)

Materials and equipment

- Interactive whiteboard or PC/laptop, projector and speakers
- A1 paper
- Tape

Teaching tools

- Video clips: *Carbon Footprints* | *Save Our World*
- Carbon footprint stickers
- Carbon footprint fact sheet
- Quiz
- Carbon footprint fact sheet

Questions to discuss

- What is a carbon footprint?
- What causes this footprint?

Suggested evaluation tools

- **Class discussion:** What is the most interesting thing you have learnt aboutthe carbon footprint today?
- **Homework:** Create a poster aimed at the students' families, using computer, collage, paints or other, informing them about the carbon footprint and what they can do to keep it small. Ask the students to bring the poster to school and also report on the families' reactions.

Activities

Note: Prior to the lesson print out the carbon footprint stickers and attach them to some of the objects in your classroom that that are powered by electricity.

Time	Activity description	Additional tips
20 mins	Open the lesson with this question: What, do you think, are all these footprints around the class? Ask a pupil to go and fetch one of the footprints stickers and to read out what it says ('carbon footprint'). Then ask the children: Does anyone know what 'carbon footprint' means, and what makes the footprint? After listening to the children's answers, show them the Carbon Footprints video clip to explain that our carbon footprint is the amount of carbon dioxide (or CO_2) generated by the things we use. CO_2 emissions might come from day-to-day sources, such as driving a car, or from large scale emissions, such as forest fires. Discuss the video and elicit from the children what creates a carbon footprint. Write the children's answers on the board. Explain that our carbon footprints add to global warming. Then, write the following question on the board: **How could we reduce our carbon footprint?** This will encourage the children to think of ways how to reduce emissions. Write the children's suggestions on the board and then show them the Save Our World video clip. This video explains what we could do to reduce emissions. Refer to the children's suggestions that were written on the board, if any of them are mentioned in the clip.	

15 mins	After the video, ask the children: Where else around the classroom or school could we put a carbon footprint sticker? Allow a few children to stick these footprints accordingly. Ask the children to think about a day in their lives and what activities they usually do that increase their carbon footprint. Give them a sticky note or a small paper and ask them to write some of their activities. Then, draw an outline of a footprint on a board or an A1 paper and ask them to read what they have written to their classmates and to stick the small paper on the footprint.	If possible, you could also extend this part of the lesson to outside the classroom, but identifying items around the school.
10 mins	Conclude the lesson with a quiz about the carbon footprint, and distribute the 'carbon footprint fact sheet' handout to provide the pupils with further information about the topic.	

Extension of Homework Activities:
Explain to the children that the carbon footprint varies significantly around the world, from one country to another. Encourage them to do more research about this issue. They should present their research as a slideshow, poster, booklet or display to be presented to the rest of the class.

GLU 2.1 Lesson Plan 2 (45 minutes)

Materials and equipment

- Newspapers or magazines
- Tape
- Scissors

Teaching tools

- 'Go Green' action cards, a card-matching game – to print number of copies depending on the size of groups you will be setting up in the class and then cut out)
- 'Green Foot' handout - to print number of copies according to the number of students in the class).

Questions to discuss

- What could you do to decrease your own carbon footprint?
- What could we do as a class to decrease our carbon footprint?
- What could we do as a school to decrease our carbon footprint?
- Why is our carbon footprint (i.e. of children in Malta) bigger than that of children who are living in less developed countries?

Suggested evaluation tools

- **Class discussion:** What is the most interesting thing you have learnt about the carbon footprint today?
- **Homework:** Think of one concrete action you could do to decrease your own carbon footprint. Then implement it for one week. After that week, write an essay about your experience.

Activities

Time	Activity description	Additional tips
10 mins	Start the lesson by explaining to the students that children in less developed countries have a smaller carbon footprint than that of children in Malta. Discuss with the students the reasons for this (e.g. level and type of consumption, use of car) and encourage them to come up with suggestions of reducing their own footprint without having to stop using modern technology. Emphasise that there are many things we could all do to help protect the environment and reduce our carbon footprint and that, by working together, we could make a big difference. Write down the pupils' suggestions on the whiteboard.	
15 mins	Organise the class into groups and distribute one set of the 'Go Green' action cards to each group. In playing this matching game, the children will learn about specific ways how to reduce their carbon footprint.	Learners could identify cards that can be related to classroom life. A copy of these could then be distributed to all the classes, to be hung in a prominent spot and followed on a daily basis for school action.

20 mins	Ask the children to think of some concrete actions they would like to carry out to reduce their carbon footprint. Distribute the 'Green Foot' handout and ask the children to write down their intended actions in the handout. Use the paper feet (instead of leaves) to make a display of a tree, and call it the "Go Green and Join the Team Tree". The trunk could be made out of newspapers or magazines. The tree could be displayed on the school board to demonstrate how small actions among individuals could make a big difference for our environment. Let the pupils prepare a joint presentation to promote the initiative to the whole school. Every child should be given the opportunity to talk for a few seconds at least – the teacher could assess pupils individually on their public-speaking skills.	The writing strategy to be used could take the form of a numbered list, wherein the sentences start as a command. The teacher could then assess students individually on the competence of writing a list.

GLU 2.2 Food and Water

Author	Kopin
Country	Malta
Age group	8 - 11 years
Subjects	English | Geography | Science | Social Studies
Duration	2 lessons (50 minutes each) + extra time for supplementary activities
Topics	▪ Water footprint ▪ Sustainable use of resources ▪ Right to food/water
SDGs	SDG 2: Zero hunger SDG 6: Clean water and sanitation SDG 12: Sustainable consumption and production

Competences required

- Communication skills and knowledge of English
- The ability to work in a team
- Social and civic skills
- Listening skills
- Cultural awareness and expression
- Interpreting pictures

Learning objectives

To create awareness about:

- the link between food and water, emphasising that all food comes from living things, and that all living things need water;
- the importance of water in our life;
- the fact that water is precious, so we must conserve it;
- where our water comes from;
- the effects of drought – including food shortage and even death;
- water as a right
- unequal access to water.

Materials and equipment

- Interactive whiteboard or any other video/photo-screening equipment
- Material to create posters or charts (e.g., flipchart paper, crayons)
- Pens/pencils and paper
- Computer/s to create presentations

Teaching tools

- Video clips: *"Water: who needs it?"* | *"WATER our most precious resource"*
- Pictures/photos
- Information on the Water Services Corporation (WSC) Reverse Osmosis Plant

Questions to discuss

- What would our world be like without water?
- In what ways do we use water around the home?
- What is water used for in different industries (farming, tourism, manufacturing, etc.)?
- Which foods need most water in the production process?
- Where does water come from?
- How could we avoid wasting water?
- Why should we conserve water and how can we do so?

Suggested evaluation tools

- **Class discussion:** Name what you have learnt about water during today's lesson that you found most interesting.
- **Class quiz:** Name five goods starting with the letters W A, T, E, R (1 letter per item) that need water to be produced. Visualise the answers on a poster, on the computer or the interactive whiteboard.
- **Follow-up session (group work):** Request students to formulate proposals for saving water, which they would then present to the school management team.
- **Homework (essay):** List five ways as to how you could avoid using too much water, based on a normal day in your life.
- **Homework (essay):** Imagine a day in your life without water. Describe your experience.

GLU 2.2 Lesson plans

GLU 2.2 Lesson Plan 1 (50 minutes)

Learning objectives

- To learn about the link between food and water.
- To understand that all food comes from living things, and that all living things need water.

Materials and equipment

- Interactive whiteboard or other video / photo screening equipment
- Pens/pencils and paper

Teaching tools

- Video clip: *Water: who needs it?*
- Pictures/photos

Questions to discuss

- What would our world be like without water?
- In what ways do we use water around the home?
- What is water used for in different industries (farming, tourism manufacturing, etc.)?

Suggested evaluation tools

- **Class discussion:** Name what you have learnt about water that you found most interesting during today's lesson
- **Class quiz:** Name five goods starting with the letters W, A, T, E, R (1 letter per item) that need water to be produced. Visualise the answers on a poster, on the computer or the interactive whiteboard.
- **Homework (essay):** Imagine a day in your life without water. Describe your experience.

Activities

Time	Activity description	Additional tips
10 mins	Introduction: The teacher asks the children to close their eyes and to imagine that they are on a picnic with their friends, on a sunny spring day. They are in a wooded area (e.g. Buskett) and can see trees, grass, flowers, a small stream. They can hear birds and insects. They are also having a snack (bread, fruit, biscuits) and drinking (water, juice, lemonade) and enjoying themselves. Suddenly some aliens come along, and they decide to steal all the water from our planet. What will happen? Will anything change? Pupils open their eyes and discuss what will change. Is it only the stream?	
10 mins	The class watches the *Water – Who needs it?* video clip until 2:00. The video is discussed, especially highlighting the fact that all animals and plants need water to live. Pictures that can help to highlight this are available online. The link between plants, animals and humans should be emphasised: we eat animals and plants, all animals eat either plants and/or other animals, and all these living things need water, so we cannot survive without water.	
7 mins	The video is watched for a second time (until 2:00). Before watching, the teacher tells the pupils to look out for anything they might find strange or incomprehensible. After watching, the pupils discuss what they do not understand (probably about the body shrinking, and about not even having non-living things such as bicycles without water). Teacher says that answers to these will be found later.	

5 mins	The teacher asks the pupils to work in groups and to list how and when they use water at home. Then video is resumed from 3:23 until 3:50.	
5 mins	The teacher asks pupils to think of other ways in which water is used outside the home (agriculture, industry, cleaning of public spaces, etc.). Resume video at 3:50 until 5:02. Discuss the uses of water (e.g. farming, food processing, transporting food and other items; to manufacture cars and to produce fuel).	
13 mins	Conclusion: Resume the video clip until 5:51. In groups, the pupils should draw up a list of uses of water, especially those related to food.	Ask the pupils to find related pictures and bring them to school for the next lesson. Charts could then be produced related to uses of water.
	Hands-on Experiment As science could help explain a number of points that could arise from such a lesson, a seed-sowing investigation (as shown in the video) could be carried out with the children at some point in advance, before the lesson. This would help them examine the role of water in their investigation. The introductory time of this lesson could be used to take measurements of the differently watered plants, draw graphs representing their data, and using their data to draw conclusions about the importance of water for living organisms. This activity could be conducted in small groups, enabling learners to engage in discursive argumentation before disclosure.	The teacher could take the opportunity to assess skills such as: measurement, representing data in graphs and drawing conclusions from data on an individual basis.

GLU 2.2 Lesson Plan 2 (50 minutes)

Learning objectives

This lesson should create awareness about:

- the importance of water in our lives;
- the fact that water is precious so we must conserve it;
- where our water comes from;
- the effects of drought, including food shortage and even death;
- water as a right;
- unequal access to water.

Materials and equipment

- Interactive whiteboard or other video / photo screening equipment
- Material to create posters/charts (e.g., flipchart paper, crayons)
- Pens/pencils and paper
- Computer/s to create presentations
- Preferable: internet access (to access the Water Services Corporation's website)

Teaching tools

- Video clip: *WATER: our most precious resource*
- Pictures
- Information on the Water Services Corporation (WSC) Reverse Osmosis Plant

Questions to discuss

- Which foods need most water in production?
- Where does water come from?
- How could we avoid wasting water?
- Why should we conserve water and how could we do so?

Suggested evaluation tools

- **Class discussion:** Name what you have learnt about water during today's lesson that you found most interesting.
- **Follow-up session (group work):** Request students to formulate proposals for saving water, which they would then present to the school management team.
- **Homework (essay):** List five ways as to how you could avoid using too much water, based on a normal day in your life.

Activities

Time	Activity description	Additional tips
5 mins	The teacher asks questions about the previous lesson, e.g.: Why do we need water? How do we use water?	
10 mins	In preparation for later discussion, the students are sent around the school to perform some ordinary 'water' or 'washing' tasks in groups of about 4 (one task per group). The 'washing' tasks would require the students collecting the water used and measuring the amount used. Students are to report back to class where they take note of all water wastage in millilitres and plot a chart. This enables students to work collaboratively, practice inquiry and investigative skills, observational skills, data collection, and reporting valid results based on observations and calculations. Subsequently they are presented with the display picture below. It is only then that students see full relevance in the chart. <u>Discussion:</u> Which foods need most water in the production process? The teacher allows the pupils to guess for a while, then displays this diagram:  <u>Note:</u> to highlight that meat-related foods require much more water.	Ideas for the tasks: to wash a cup with soap and water; to wash hands with soap and water; to wash some fruit with water; or to measure and calculate the capacity of a regular flushing cistern.

8 mins	The teacher writes the word resource on the interactive whiteboard (IWB). The students are to try and formulate a definition. Discuss water as a precious resource. Then, the teacher shows the *WATER: our most precious resource* video clip to the class.	If the students are already familiar with the word, the teacher could write it in a scrambled way, as a puzzle for the students to solve.
7 mins	Discussion: Where does water come from? The teacher then reminds pupils of the lesson about the water cycle, showing a picture of the cycle. However, in some countries, such as Malta, there is not enough rainwater/groundwater, so we use sea water. To proceed to a brief explanation of desalination by reverse osmosis. Pictures of the plants can be shown and eventually, the teacher could show the relevant information on the WSC website during the lesson.	It would be advisable to first explain to the students what groundwater is, and optionally to explore issues related to groundwater in Malta further. In the absence of internet access, a PDF print-out could be handed out and read together.
5 mins	The teacher shows pictures of drought: parched land, starving livestock, dried crops, people in search of water or migrating, and asks these questions: What can you see? What do these pictures have in common? Why does this happen? Elicit that, in such a situation, if there is no water there is no food. Plants and animals die, humans can't live there, so they have to migrate in search of water sources. Water is a right – people in dry regions (and this could also include Malta) suffer injustice and inequality. Lack of (clean) water leads to poverty, disease, displacement, even death.	

15 mins	Display the logo of the 'Catch the Drop' campaign. Ask the students if they are familiar with it and what it means. Elicit ways in which we could conserve water and why we should do so. <u>Group work:</u> The students prepare charts and presentations in groups. Half the groups focus on the uses of water, using the pictures they have brought from home. The other half of the class focuses on water conservation and how not to waste water, creating slogans and posters.	This activity could be linked to the Maltese 'Catch the Drop' campaign in schools.

GLU 2.3 Sharks

Author	Kopin
Country	Malta
Age group	9 - 11 years
Subjects	Environmental Studies | Social Studies
Duration	2 lessons (50 and 60 minutes, respectively)
Topics	• Ecosystems • Responsible consumption
SDGs	SDG 14: Life below water

Competences required

- Communication skills
- Learning to learn
- Social and civic skills
- A sense of initiative
- Cultural awareness and expression

Learning objectives

- To learn about sharks, and understand the importance of biodiversity and how it is linked to the food chain.
- To show that animals in a habitat are interdependent – animals depend on other animals.
- To learn that the extinction of an animal causes the ecosystem to lose its balance.
- To understand the importance of food chains for the preservation of species and biodiversity of the planet, in order that students learn how to make ethical choices and combat stereotypes

Materials and equipment

- PC/laptop
- Interactive whiteboard or projector
- Strips of paper (to represent very small fish)

Teaching tools

- Slideshows: "Sharks and Overfishing" | "Shark Myths"
- Handouts: "Food Chain" | "Shark Challenge"
- Shark Game to facilitate understanding on the food chain
- Video clips: *Sharkwater* (documentary film trailer) | *Interview with Rob Stewart, the writer and director of Sharkwater*

Questions to discuss

- Is the marine ecosystem threatened by humans?
- How is the topic of sharks related to overfishing?
- In what ways could we help preserve biodiversity?
- What is the food chain?
- What is overfishing?
- What happens if you remove sharks from the food chain?

Suggested evaluation tools

- **Classwork:** 'Food Chain' and 'Shark Challenge' handouts.

Additional resources

- "Quickfish Guide" , available on www.fish4tomorrow.com
- Facts about sharks on www.sharktrust.org
- "Why do we need to protect Biodiversity?", available at: http://bit.ly/ECbiodiversity

GLU 2.3 Lesson plans

GLU 2.3 Lesson Plan 1 (50 minutes)

Learning objectives

- To learn facts about sharks, the importance of biodiversity and link to the food chain.
- To learn that animals in a habitat are interdependent – animals depend on other animals.
- To understand the relationship between overfishing and biodiversity.
- To understand the importance of food chains for the preservation of species and biodiversity of the planet in order that students learn how to make ethical choices and combat stereotypes.

Materials and equipment

- Laptop
- Projector
- Strips of paper (to represent very small fish)
- One printed copy of the 'Food Chain' handout per student

Teaching tools

- Slideshow: "Sharks"
- Handout: 'Food Chain'
- Food Chain Game

Questions to discuss

- What is the food chain?
- What is overfishing?
- What happens if you remove the shark from the food chain?

Suggested evaluation tools

- **Homework:** Encourage the students to do further research on the topic of overfishing
- They should present their research in the form of a slideshow, poster or booklet

Activities

Time	Activity description	Additional tips
10 mins	Start the lesson by asking the students to look up a few words or phrases related to sharks independently on class computers. This eventually leads to debate / presentation of facts found.	These and phrases related to shark fishing and finning could be taken from the presentation.
10 mins	Show the students the "Sharks" slideshow to explain to them why sharks are very important. As top predators, they fulfil a key role in maintaining the balance of the ocean by keeping populations of other fish in proper proportion for their ecosystem. Sharks also prey on the weakest species, as well as the sick and the old specimens. This allows the largest, strongest and healthiest fish to reproduce and prevent the spread of disease, providing healthy ecosystems. However, their life history strategy of slow growth, late maturity and few offspring makes them extremely vulnerable to exploitation.	Let students go through the slideshow by themselves, giving them the task to figure out the food chain independently and assess them individually.

20 mins	Game: Explain to the students that they will play a game that shows a food chain and what would happen if shark populations decrease. The game should be played in an open space, like a yard or a hall, and it simulates predator/prey relationships. **Step 1:** Three students will be the sharks, and the rest of the students will be squid and other fish commonly eaten by the sharks (e.g. mackerel or tuna). **Step 2:** Lay out the pre-cut strips of paper (around 200 pieces) to represent very small fish commonly eaten by the shark's prey. **Step 3:** Explain that the shark's prey will walk around the open space collecting (consuming) as many small fish, as they can use only one hand and picking up just one at a time. They are to put the collected 'fish' into an envelope. The sharks will also walk around and they have to tag and escort their prey to the sides of the yard/hall as a sign that they have been eaten by a shark. The above 3 steps constitute 1 session, which should last about 45 seconds. Repeat the session 3 times, with the students playing session 1 with three sharks, session 2 with two sharks and session 3 with only 1 shark. Before each session, ask the students: • How many fish/squid do they predict the shark/s will catch? • How many small fish do they predict the shark's prey will catch? After each session take note of the number of fish/squid eaten by the sharks and the number of small fish eaten by the sharks' prey.	

	Make sure that, after this game, the students understand that with less sharks in the ecosystem there will be more squid, tuna and mackerel; less sharks means they don't need as many squid/ fish to feed on, and that more squid, tuna and mackerel means less small fish, because they will be eaten by the squid, tuna and mackerel. Also emphasise that sharks are being killed for their fins, for shark-fin soup – a dish that has been assumed cultural value but is not important for human survival or health. When sharks are overfished, the marine ecosystem loses its balance.	
10 mins	Conclude the lesson by giving the students the 'Food Chain' handout, and ask them to read the news article and explain what happens if you remove the shark from the chain.	

GLU 2.3 Lesson Plan 2 (60 minutes)

Materials and equipment

- Laptop with internet access
- Projector or interactive whiteboard
- A1-sized paper or flipchart sheets and felt-tip colours

Teaching tools

- Slideshow: "Shark Myths"
- Handout: "Shark Challenge"
- Video clip: *Sharkwater (documentary film trailer)*
- Video clip: *Interview with Rob Stewart*

Questions to discuss

- What could be done to protect fish and their natural habitat?
- Why is it important to preserve marine life?
- If the sea is not protected, what happens to us?

Suggested evaluation tools

- **Classwork (in groups):** 'Shark Challenge' handout

Activities

Time	Activity description	Additional tips
10 mins	Start the lesson by mentioning the documentary film, *Sharkwater*, and showing the trailer to the students. Then explain that, when Rob Stewart (who filmed and directed the film) was asked what he hoped people would learn from his film, he replied: *I hoped they would view sharks differently. They're not dangerous. They're not mindless killers. They don't eat people.* Show the students an interview with Rob Stewart.	

40 mins	Research shark presence in Malta on the class computers, using the following questions to guide you: ▪ Do Maltese waters host sharks? ▪ If so, which type of sharks live there? ▪ What size? ▪ Are they fished to be sold as food? ▪ Has anyone in Malta ever been attacked by sharks? ▪ Are the sharks that are mostly familiar to us the only sharks that exist? ▪ Aren't there other types of sharks, for instance: manta rays, hammerheads, blue sharks, bluntnose sixgill sharks, broadnose sevengill sharks, tiger sharks, sting rays, angel sharks, shark catfish, dogfish sharks? ▪ Do we have a shark conservation centre in Malta? ▪ Where is it located? ▪ Would you consider paying a visit? After the research session, show the students the "Shark Myths" slideshow, and discuss these in the light of what has been seen and read previously. Ask the children to design a poster to raise awareness about the importance of sharks. They could either show how sharks, as top predators, play a crucial role in the oceans, or explain one or more shark myths.	For the poster task, the students could be divided into groups, each focusing on a different part of the final poster. The poster task could also be given to the students as an individual HW assignment.
10 mins	To conclude the lesson, organise the class in groups and give each group a copy of the 'Shark Challenge' handout. They would read a number of statements about sharks and answer true or false.	

CHAPTER 3
Food and Society

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All the teaching tools/resources related to the lesson plans are available in OR accessible through the Resources section in the Kopin website – www.kopin.org – or directly through this link: www.kopin.org/food-for-thought/

GLU 3.1 Is there a food crisis in the world?

Author	Petcu Laura Grațiela | APSD-Agenda 21
Country	Romania
Age group	12 - 14 years
Subjects	Geography | Environmental Studies | ICT
Duration	5 lessons (total of 8 hours)
Topics	• Education towards better choices and critical consumption • Composting / gardening • Food waste • Sustainable agriculture • Food miles • Food environmental impact
SDGs	SDG 12: Responsible production and consumption

Competences required

- Communication skills
- Social and civic skills
- A sense of initiative and entrepreneurship
- Cultural awareness and expression

Learning objectives

- To become aware of the limited land and soil resources of our planet, and correlate this with the global demographic growth.
- To be able to identify the challenges of humankind in ensuring that food is available in an equitable manner for everyone.
- To be able to list at least three ways of supporting the environmentand sustainable development through individual / group actions and activities, for the future of the community.
- To learn about food choices offered by non-conventional foods.

Methodologies

- Group work
- Guided discussions and brainstorming
- Online research
- Mapping and drawing
- Field visits
- Demonstration about composting, possibly to be held outside

GLU 3.1 Lesson plans

Materials and equipment

- Computer/laptop, video projectorMarkers, poster colours, paint brushes, felt-tip pens
- Staplers, glue, scissors
- Cardboard, polystyrene sheets
- boots, shovels, plastic containers with a small flap (to be able to take out the compost)
- Sand and gravel, wooden boards or twigs, fertiliser pellets, green branches or chopped dry
- wood, green plants without seeds or roots, vegetables, fruit/vegetable peel, worms (e.g.earthworms or brandlings).

Teaching tools

- Short quiz: "Understanding key definitions of hunger"
- Online article: "2016 World hunger and poverty facts and statistics"

Questions to discuss

- Do you think there are countries or regions around the world that do not use some of their resources to the full because they do not know their benefits and uses?
- In your opinion, which environmental factors contribute to the development and growth of the population?
- In your country, are you witnessing a migration phenomenon of people going from urban to rural areas? Why do you think this is happening / not happening?
- Which of these issues do you think is the more important: a) regarding sources of energy, or b) food crises?
- What measures should be taken in modern production processes and technologies to safeguard our health?
- Which are the effects of the current food production system on the global sustainability of the environment? What tools are there to combat the negative effects?
- What differentiates locally grown products using compost, and those we find in supermarkets?
- How do you appreciate the taste, colour, smell, shape and nutritional value of products grown locally using compost?

Suggested evaluation tools

- At the end of all activities, students will be asked to present a short report about what they have learnt through this GLU.
- Optionally, a small exhibition of non-conventional food products could be organised.
- Self-assessment questionnaires or compiling a class diary could also be useful evaluation tools.

Additional resources

- http://www.fao.org
- www.worldhunger.org

GLU 3.1 Lesson Plan 1 (100 minutes)

Activities

Time	Activity description	Additional tips
100 mins	**A check-up of our planet.** The students are divided into seven groups, and each group receives the task to collect information about a particular continent, including at least: its surface area; population density; level of soil resources; available agricultural land; specific agricultural crops; current problems of the population in that continent. The teacher asks each group to create a small map of the continent they researched, using the information gathered. After creating the map, each group presents the findings in no longer than 5 minutes. The teacher briefly presents the strong connection between food and the growth of the global population, encouraging the students to make connections themselves on the effect that the differences between continents have had throughout the years, focusing on the following guiding questions: ▪ Do you think there are countries or regions around the world that do not use some of their resources to the full because they do not know their benefits and uses? ▪ In your opinion, which environmental factors contribute to the development and growth of the population? ▪ Which of these issues do you think is the more important: a) regarding sources of energy, or b) food crises?	Be prepared to answer students' questions and guide them during the research phase. If the students do not have the possibility to use their phones, tablets or computers to search for information online, the teacher should make sure to provide enough articles and books for them to use in this phase. One idea for the discussion phase could be to split them into small groups or to organise buzz groups.

GLU 3.1 Lesson Plan 2 (40 minutes)

Activities

Time	Activity description	Additional tips
40 mins	**A planet of three 'worlds'.** This activity will start with the introduction of a study published by FAO in 2003, which concluded that there are three different 'worlds', with respect to food, as follows: ▪ The first is made up of about 1000 million people, for whom access to food is not a concern (2500 kcal/day/person) and which coincides more or less with the developed countries. ▪ The second one covers more than 1000 million people (1/4 of these being children) who live on less than $1 per day, and who suffer from malnutrition (less than 1480 kcal/day/person). ▪ The third is an in-between category covering about 4000 million people who live in countries where the market economy does not function to the desired levels, but which have the willingness to develop and implement the most adequate agricultural practices.	The teacher could use a more recent study (if available) but should make sure to highlight the differences around the world in in terms of access to food. The focus here is on the distribution of resources and ways to combat undernourishment.

Next, the teacher gives the students the "Understanding key definitions of hunger" quiz. The students will be given about 3 minutes to answer the quiz individually – they will not be required to share their answers with the class, because they will assess their own answers by reading an article. Each student receives one copy of the article entitled, "2016 World hunger and poverty facts and statistics" and reads it. Through the guided-discussion technique, the students are encouraged to analyse the text and explain the main challenges the world is facing:

- The discrepancy between the real nutritional needs of the population and available food / food providers or suppliers.
- The impact of agriculture on the level of employment of populations from rural areas, etc.
- The consequences of modern agriculture-related production technologies and the food industry on the health of humans and animals
- The effects of the production system on the global sustainability of the environment.

Next, the students are encouraged to think of possible solutions guided by the following questions:

- What measures should be taken in modern production processes and technologies to safeguard our health?
- Which are the effects of the current food production system on the global sustainability of the environment? What tools are there to combat the negative effects?
- To conclude, the teacher introduces the UN Zero Hunger Challenge (https://www.un.org/zerohunger/) and invites the students to explore the campaign, its videos and the ideas for action.

GLU 3.1 Lesson Plan 3 (100 minutes)

Activities

Time	Activity description	Additional tips
100 mins	**How can we compost biodegradable waste in our homes?** This theoretical-practical activity helps students understand which is the biodegradable waste in their homes, and how and when it could be composted. The teacher explains the tools/materials needed, how to build the composting container, what could be put into the container and what cannot be composted. <u>What you need:</u> A plastic container with a small flap to take out the compost, sand and gravel, wooden boards, twigs or something to set the limits of the area where the biodegradable waste will be deposited. <u>How to build the composting container:</u> ▪ Make a hole in the top, base and walls of the container for ventilation. ▪ Place 3 layers of sand and gravel at the bottom of the container for draining of liquids. ▪ Place wooden boards or twigs on top of the sand or gravel. ▪ In the case of a plastic container, it is necessary to fix a small door on the container right above the sand/gravel layer, where the wooden boards / twigs are placed.	Should a field visit not be possible, the live demonstration could be done on a small scale in the classroom, using a small composting box or a bucket. 

- Earthworms or brandlings could be added to the plastic container if it is fully isolated, and it is not positioned directly on the ground. This is in order to speed up the composting process.

What can we add in the composting container: fertiliser pellets, green branches or chopped dry wood, green plants without seeds or roots, vegetables, fruit/vegetable peel, vegetables, fruit, egg shells.

What should not be added to the composting container:

Cat/dog excrement, bones, oils, fats, seeds and plants with roots.

Ideally, the students would be taken to visit a few farms in their area, and use the information received in order to prepare a compost box. They will be guided to place the box preferably directly on the ground, over a layer of branches, twigs and leaves. They will learn how to take out the compost using the small flap or door fitted at the bottom of the box.

During the activity, the students will also discuss aspects such as:

- In what way/s are agricultural products we grow ourselves with compost different from what we find in the supermarkets.
- What do they think about the taste, the colour,
- the smell, the shape and the nutrient content
- of products grown in this way.

GLU 3.1 Lesson Plan 4 (120 minutes)

Activities

Time	Activity description	Additional tips
120 mins	**Managing fertiliser** During this session, the students will be informed on the importance of effectively managing compost and other types of fertiliser, such as garden mould, fluid and semi-fluid waste. ▪ **Compost:** this is obtained through the fermentation of varied organic waste to which mineral substances (ash, chalk, etc.) are often added. Gathered in a pile, these leftovers are watered from time to time in order to favour the fermentation process. Compost could be used on all agricultural crops in quantities of 15-25 tons per hectare. ▪ **Garden mould:** this is the result of the fermentation of garbage. It is a very efficient natural fertiliser, used mainly for the production of vegetables, in greenhouses and in fields. ▪ **Semi-liquid and liquid waste:** this is collected from chicken factories or septic tanks; it has a very high content of phosphorus and contains about 15% dry substance. In order to be used, one needs to remove any solid matter. When used during the vegetation stage, it has a rapid action ensuring the plant's needs with extremely favourable effects on growth.	Should a field visit not be possible, the live demonstration could be done on a small scale in the classroom, using a small composting box or a bucket.

	The students will also find out information about different types of wastewater. They will visit several farms in their village/town and will see why it is important to manage fertiliser effectively, and to acquire practical skills on manually spreading compost and other types of fertiliser.	

GLU 3.1 Lesson Plan 5 (120 minutes)

Activities

Time	Activity description	Additional tips
120 mins	**Non-conventional food products.** The teacher explains that besides growing food that offers conventional proteins, it is also necessary to evaluate the possibility of producing 'non-conventional' sources of protein, such as fibrous remains, fodder crops or microbial saprophytes (bacteria, fungi, yeasts and algae). During the activity the students, will learn more about 'leaf proteins', microscopic algae and spirulina. ▪ **Leaf Proteins:** fibrous waste coming from a number of crops is easy to be preserved and often represents valuable food for herbivores. This is why there is growing interest in the possibility of extracting edible proteins from fodder and leaves which represent by-products of other forms of agriculture, such as sugar beet, potato, peas, kohlrabi and Indian hemp. ▪ **Microscopic algae:** these represent an unconventional source of protein, as they form their cell substance through the photosynthesis of carbon dioxide and a solution of nutritive salts. Their protein content is quite high (over 50%) and have the advantage of a lower content of nucleic acid, because of the fact that their growth rate is slightly lower than that of bacteria and yeasts.	

	▪ **Spirulina:** a blue-greenish alga, it is the species that was the subject of the most intense studies for production on large scale. It made part of the traditional diet of the inhabitants of some areas in Mexico and Chad. The dried alga contains approximately 63% protein, 2-3% fats and 16-18% carbohydrates. Its cellulose is extremely low, which makes it more digestible. Note: In order to grow microscopic algae, two methods were proposed: in the open air with natural light or in a closed space with natural or artificial light. By far the first method seems to be more promising and it is therefore the methods being studied at the moment. The main technological problems are related to the distribution of carbon dioxide, shaking crops to get satisfying light, harvesting the algae and maintaining an optimal temperature level for the algae to grow. As a conclusion to the session, the students could be asked to create a short leaflet with the information they gathered on the sources of food and other aspects that they found useful and interesting. The leaflet could be entitled, "Healthy food for everybody".	

GLU 3.2 Poverty and Food Insecurity

Author	Kopin
Country	Malta
Age group	12 - 15 years
Subjects	Social Studies | Social Sciences | Economics
Duration	2 lessons (50 minutes each)
Topics	▪ Access to food ▪ Food production and consumption ▪ Right to food
SDGs	SDG 1: No poverty SDG 2: Zero hunger

Competences required

- Communication skills
- IT skills
- Learning to learn
- Social and civic skills
- A sense of initiative and entrepreneurship
- Cultural awareness and expression
- Numerical skills and basic competence in science and technology

Learning objectives

- To increase awareness about the multidimensional aspects of poverty and social exclusion.
- To gain better understanding of the importance of adopting ethical and sustainable lifestyle choices and food-consumption patterns.
- To enhance understanding of how poverty and food insecurity impacts health and quality of life.
- To learn about the various strategies that exist on a global, European and local level for combatting poverty and social exclusion.
- To enhance understanding about the cost of living and how this impacts food insecurity.

- To develop a better understanding of the role played by global institutions and economic processes in relation to poverty levels and food insecurity.
- To develop relevant skills and knowledge for calculating the financial cost of food, reducing food wastage, and eating healthily on a tight budget.

Materials and equipment

- Laptop with internet access
- Interactive whiteboard or projector
- Speakers for the screening of video clips

Teaching tools

- Slideshows: "Reflections for Action" | "The Hidden Cost of Food"
- Class activities:
    - Workshop questionnaire: "Zero Hunger Reflection"
    - Class activity: "The cost of food"
- Homework: "The 5 Euros Challenge"
- Video clips: *Global Food Security: Commitment to Action* | *Global Goals* | *The True Cost of Food*

Questions to discuss

- What is food security and why is it important?
- What role does the Post-2015 Development Agenda (i.e. the Sustainable Development Goals or SDGs) play?
- What can I do to make the world food system fairer and less exploitative?
- Is unhealthy, processed food truly cheaper or does is it more expensive in the long run?
- How hard is it to make the right choice without having to spend too much?

Suggested evaluation tools

- **Homework:** "The 5 Euros Challenge"

Additional resources

- The UN Food and Agriculture Organisation (FAO) website: http://www.fao.org/home/en/
- The World Food Programme (WFP) website: http://www1.wfp.org/
  Is Cheap Food Really Cheap? The Hidden Costs of Industrial Food, available at: http://bit.ly/HiddenCostFood
- Ellen Gustafson, "True Costs of So-called Cheap Food", available at: http://bit.ly/EGustafson
- Take a Step for Fair trade – video clip explaining **fair trade**, available on YouTube

GLU 3.2 Lesson plans

GLU 3.2 Lesson Plan 1 (50 minutes)

Learning objectives

- To promote more awareness on the multidimensional aspects of poverty and social exclusion.
- To gain better understanding of the importance of adopting ethical and sustainable lifestyle choices and food-consumption patterns.
- To enhance the understanding of how poverty and food insecurity impacts health and quality of life.
- To learn about the various strategies that exist on a global, European and local level for combatting poverty and social exclusion.

Materials and equipment

- Laptop with internet access
- Speakers to play videos
- Interactive whiteboard or projector

Teaching tools

- Slideshow: "Reflections for Action"
- Workshop questionnaire: "Zero Hunger Reflection"
- Videos: Global Food Security: *Commitment to Action* | Global Goals

Questions to discuss

- What is food security and why is it important?
- What role does the Post-2015 Development Agenda (i.e. the Sustainable Development Goals or SDGs) play?
- What can I do to make the world food system fairer and less exploitative?

Additional resources

- The State of Food Security and Nutrition in the World Report, available on the UN Food and Agriculture Organisation (FAO) website
- "Food security analysis", available on the World Food Programme (WFP) website
- Resource centre of the Sustainable Development Goals website: http://bit.ly/SDGsWhatCanIdo

Activities

Time	Activity description
10 mins	Introductory class activity: Workshop questionnaire: "Zero Hunger Reflection"
10 mins	Screening of the Global Food Security: Commitment to Action video clip, embedded in the "Reflections for Action" slideshow
15 mins	Class activity: simulation / role-play game: "The Story of Food" Students will be given roles representing the interests and viewpoints of different key players involved in the food chain. This is to enable the students to gain insight into food security, and to come up with important conclusions related to this topic. The teacher will provide information from the above-mentioned slideshow ("Reflections for Action") related to the role of these different players, including: ▪ directors of multinational companies; ▪ farmers from a majority world / developing nation (some fair trade, some not); ▪ drivers of refrigerated trucks; ▪ workers in a food processing plant; ▪ consumers from around the world. The students will then be encouraged to examine how they (in terms of their respective roles) fit into the story of food, and assess if the present situation (from the perspective of their role) is fostering food security or insecurity. As a conclusion, students will be encouraged to come up with practical suggestions for a better and more sustainable future in terms of food security.

15 mins	The teacher shows the slideshow "Reflections for Action" to the class, focusing on the following issues: ▪ The Sustainable Development Goals (SDGs) – to show the Global Goals video clip ▪ Focus on SDG 2 (Zero hunger) and the right to food ▪ Food security and sovereignty ▪ Food production ▪ Personal choices and our role as consumers

GLU 3.2 Lesson Plan 2 (50 minutes)

Learning objectives

- To enhance understanding of the cost of living and how this is linked to food insecurity.
- To develop a better understanding of the role played by global institutions and economic processes in relation to poverty levels and food insecurity.
- To develop relevant skills and knowledge for calculating the financial cost (as well as other costs) of food, reducing food wastage and making responsible choices.

Materials and equipment

- Laptop with internet access
- Speaker for video screening
- Interactive whiteboard or projector

Teaching tools

- Slideshow: "The Hidden Cost of Food"
- Class activity: the 'Cost of food' handout
- Homework: "The 5 Euros Challenge"
- Video clips *The True Cost of Food*

Questions to discuss

- Is unhealthy, processed food truly cheaper, or is it more expensive in the long run?
- How hard is it to make the right choices without having to spend too much?

Suggested evaluation tools

- **Homework:** "The 5 Euros Challenge"

Additional Resources

- Is Cheap Food Really Cheap? The Hidden Costs of Industrial Food, available at: http://bit.ly/HiddenCostFood
- Ellen Gustafson, "True Costs of So-called Cheap Food", available at: http://bit.ly/EGustafson
- Take a Step for Fairtrade – video clip explaining fair trade, available on YouTube

Activities

Time	Activity description
10 mins	Introductory class activity about the cost of food, using the 'Cost of Food' handout. Students could also use the class computers to conduct a brief research to discover the cost of similar items among households around the world.
10 mins	Reflections and the sharing of experiences arising from the above activity.
15 mins	The teacher presents the "The Hidden Cost of Food" slideshow, focusing primarily on the following aspects in relation to the hidden cost of food: ▪ Environmental costs ▪ Economic costs ▪ The cost on the quality of life of humans and animals ▪ Health costs It is important to share with the students that, although unhealthy and highly processed food may be cheaper, it is not as nutritious and filling. Hence, we often need to buy more of it. Food that is high in nutrients and complex carbohydrates will make us feel full for longer, so we don't need to eat so much of it. This means that eating healthy food is actually also good for your pocket in the long run.
15 mins	Screening of the educational video entitled, *The True Cost of Food*, which is approximately 15 minutes long.
10 mins	The teacher makes some relevant concluding remarks about the session, and explains the home assignment "The 5 Euros Challenge" to be carried out by the students.

GLU 3.3 Food and gender: the links

Author	Kopin
Country	Malta
Age group	12 - 15 years
Subjects	Social Studies | Social Sciences
Duration	2 lessons (60 minutes each) - Project Work (flexible time frame)
Topics	▪ Access to food ▪ Food production and consumption ▪ Equity
SDGs	SDG 2: Zero hunger SDG 5: Gender equality

Competences required

- Communication skills
- Social and civic skills
- Cultural awareness and expression

Learning objectives

- To promote awareness and combat gender stereotypes in relation to food production and consumption.
- To enhance the understanding of how gender roles are socially constructed.
- To raise awareness about perceptions of gender in relation to food production around the world.
- To become more aware and critical of gender inequalities in accessing food resources, and challenge assumptions or preconceived views.

Materials and equipment

- Laptop or PC
- Interactive whiteboard or projector with speakers

Teaching tools

- Video clips: *Always #LikeAGirl* | *#HatchKids Discuss Male Gender Stereotypes* |*A day in the life of a smallholder woman farmer*
- Slideshows: "Gender Roles and Food" | "Women Farmers Around the World"
- Class activity template: discussion about gender roles and food
- Students' questionnaire

Questions to discuss

- What are gender roles?
- How would you define your own gender?
- What factors influence your own definition of a person's gender?
- How is gender related to food preparation and consumption?
- How is gender related to food production?
- How do gender roles affect the possibilities concerning access food and resources?
- What is the role of women farmers in the world's food production?
- Do gender stereotypes differ from one culture to another?

Suggested evaluation tools

- Homework
- Project work
- Students' questionnaire

Additional resources

- Laptop or PC
- Interactive whiteboard or projector with speakers

GLU 3.3 Lesson plans

GLU 3.3 Lesson Plan 1 (60 minutes)

Learning objectives

- To promote awareness and combat gender stereotypes in relation to food production and consumption.
- To enhance the understanding of how gender roles are socially constructed.

Materials and equipment

- Laptop or PC
- Interactive whiteboard or projector with speakers
- Printed class-activity template

Teaching tools

- Video clips: *Always #LikeAGirl | #HatchKids Discuss Male Gender Stereotypes*
- Slideshow: "Gender Roles and Food"
  Class activity template: discussion about gender roles and food

Questions to discuss

- What are gender roles?
- How would you define your own gender?
- What factors influence your own definition of a person's gender?
- How is gender related to food preparation and consumption?

Suggested Evaluation Tools

- **Homework:** Students are asked to interview a number of relatives and/or friends – both male and female, possibly from different age groups – regarding their usual role in relation to food at home (e.g. Who does the shopping? Who cooks?). Interviews should be recorded or jotted down for later qualitative/quantitative data analysis – data collected could be used to create and present visual representations in class.

Activities

Time	Activity description	Additional tips
5 mins	Brainstorming session and class discussion – to be based on the following questions: ▪ What are gender roles? ▪ What distinguishes men from women? ▪ How do their roles in a traditional society differ? ▪ Why do you think traditional societal systems created these stereotypes? ▪ Do you think that any of these stereotypes are unfair? ▪ Do you think these stereotypes are still valid nowadays? ▪ Could it be that some stereotypical mannerisms in males and females depend on physical / personality characteristics that cannot be avoided?	Should a field visit not be possible, the live demonstration could be done on a small scale in the classroom, using a small composting box or a bucket.
15 mins	Screening of the two video clips – *Always #LikeAGirl* and *#HatchKids Discuss Male Gender Stereotypes* – followed by a discussion. The students will be asked to reflect about the stereotypes mentioned in the videos (and others that might arise in the discussion) and on whether they consider certain stereotypes to be true or false. They will also be asked to consider whether such stereotypical roles are mainly biologically or socially determined, in order to help them realise whether they themselves might be projecting these stereotypes through their behaviour and actions.	

15 mins	The teacher delivers the "Gender Roles and Food" slideshow, followed by a class discussion.	
20 mins	Class activity using the Class Activity Template provided. Each student is asked to write down their answers on the following on a piece of paper: ▪ How they are personally involved in the cultivation, production, processing, presentation and consumption of food? ▪ What is their favourite food/drink, and why? ▪ What they dislike eating/drinking the most and why? Students are then asked to place their pieces of paper in a container. Each student will be asked to pick one of these papers at random and to take it in turns to read the note to the whole class. On the basis of the information read, the student is then asked to state whether, in their opinion, the writer of the note is male or female and to justify the rationale for their decision. Upon completion of this exercise, students are then asked to explain whether their role was cited correctly or not.	For same-sex classes, the teacher will assign roles dividing the class into two, without revealing who are the 'girls' and the 'boys' – this could be done by making students pick a piece of paper with the role written on it from a jar.
5 mins	Concluding remarks by teacher and class discussion based on the following question: *How could one combat gender stereotypes and rigid social roles in relation to food production, processing, presentation and consumption?*	

GLU 3.3 Lesson Plan 2 (60 minutes)

Learning objectives

- To raise awareness about perceptions of gender in relation to food production around the world.
- To become more aware and critical of gender inequalities in accessing food resources and challenge assumptions or preconceived views.

Materials and equipment

- Laptop or PC
- Interactive whiteboard or projector with speakers

Teaching tools

- Video clip: *A day in the life of a smallholder woman farmer*
- Slideshow: "Women Farmers Around the World"

Questions to discuss

- How is gender related to food production?
- How do gender roles affect the possibilities to access food and resources?
- What is the role of women farmers in the world's food production?
- Do gender stereotypes differ from one culture to another?

Suggested Evaluation Tools

- **Project work (in groups):** Research regarding the current situation regarding the farmers in Malta and Gozo, and the extent of the presence of women in this sector.
- *Students' questionnaire*

Activities

Time	Activity description	Additional tips
10 mins	Introductory activity: Students are given 2 minutes to draw a farmer on a piece of paper – adding as many details as they like. Once the 2 minutes are up, the students are asked to show the drawings, and to discuss these with reference to aspects such as: • Are the drawings depicting male or female farmers? At which ratio? • Are the farmers depicted from different ethnical backgrounds? The teacher then explains that the aim of the exercise was to address stereotypes with regard to the category of farmers, who are the actors responsible for the production of the majority of food resources in the world. Small-scale family farms are responsible for the production of 80% of food around the world. On average, women constitute 43% of the agricultural labour force in developing countries. Before passing on to the next activity, the teacher asks whether students think that men and women have the same opportunities in accessing food resources in Malta and in other countries.	
15 mins	The teacher delivers the "Female farmers around the world" slideshow, to address the following topics: women's role in farming and food production around the world, and the gender gap in accessing food resources	

20 mins	<u>Group discussion:</u> Students are divided into groups and asked to discuss the following questions: ▪ In your opinion, why is it that women experience more difficulties in accessing resources related to food production in some parts of the world? Is this the case in Malta? ▪ In view of the previous presentation, how has your perception of gender stereotypes and food production changed, if at all? What other aspects have emerged, in your opinion? Each group will then present their conclusions to the class.	
10 mins	Screening of the video entitled, *A day in the life of a smallholder woman farmer.* Students are then asked to list all the issues and difficulties they believe are being faced by farmers around the world, and then add specific issues smallholder women farmers are more likely to face than men (e.g. depending on the culture and values, women might be expected to take care of the house besides carrying out the work in the fields, etc.)	For same-sex classes, the teacher will assign roles dividing the class into two, without revealing who are the 'girls' and the 'boys' – this could be done by making students pick a piece of paper with the role written on it from a jar.
5 mins	Wrap up the discussion on the themes addressed in GLU 3.3 and the different aspects analysed in the 2 lesson plans.	

Project Work	As an idea for a project work, students could be divided into different groups and asked to get in touch with assigned farmers' cooperatives in Malta, to understand the extent of women's presence in the agricultural sector in Malta and Gozo, as well as their roles within the cooperatives. The project work could be carried out focusing in particular on women's presence and role in local food enterprises and all types of food-processing entities.	This project could be carried out over a longer time frame, and could be used as a form of assessment.

CHAPTER 4
Food in the Global Network

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All the teaching tools/resources related to the lesson plans are available in OR accessible through the Resources section in the Kopin website – www.kopin.org – or directly through this link: www.kopin.org/food-for-thought/

GLU 4.1 Where does our food come from?

Author	Kopin
Country	Malta
Age group	8 - 11 years
Subjects	English | Social Studies | Social Sciences
Duration	2 lessons (60 minutes each) + 1 session of project work (20 mins)
Topics	▪ Local food systems ▪ Responsible consumption ▪ Access to food
SDGs	SDG 2: Zero hunger SDG 12: Responsible consumption and production SDG 13: Climate action SDG 15: Life on land

Competences required

- Communication skills and knowledge of English
- Social and civic skills
- A sense of initiative
- Cultural awareness and expression
- The ability to work in groups

Learning objectives

- To instil in the students the importance of local food systems.
- To raise awareness on farming processes and sources of food.

Materials and equipment

- Interactive whiteboard or projector and screen with speakers
- Cardboard, coloured pens and pictures of food (from home) to make posters

Teaching tools

- Videos: *Field to Fork* series: 4 episodes
- Pictures: Set of stills from Field to Fork
- Images of food, plants, animals

Questions to Discuss

- Homework
- Project work (optional)

Additional resources

- Articles:
    - "Local and Regional Food Systems"
    - "Buying local: how it boosts the economy"
- Food miles online calculator: http://www.foodmiles.com/

GLU 4.1 Lesson plans

GLU 4.1 Lesson Plan 1 (60 minutes)

Materials and equipment

- Interactive whiteboard or projector and screen with speakers

Questions to discuss

- Where does our food come from?
- Why is it important to pay attention to food miles?
- What are the advantages of food that is grown (and produced) locally?

Suggested evaluation tools

- **Homework:** Students to discuss with relatives at home on the topic of the lesson, and to report back during the next lesson.

Activities

Time	Activity description	Additional tips
5 mins	Introduction: to set the scene, the teacher shows the first of the photos from the *Field to Fork* set of stills on the screen, and accompanies the pictures with the following words: Imagine you were out cycling with your friend. You go far away to a place where you have never been, and all you see around you are fields. You hit a wall and both bikes break down. There is nobody around and you don't have a phone. What would your thoughts be? What would you do? The students would then have to briefly discuss different possibilities.	

10 mins	The teacher shows Episode 1 of the *Field to Fork* series up to the point before the children meet the farmer (0:34). The first scene is then discussed (guiding questions: **What are the children worried about? and What is going to happen now, in your opinion?)** After the discussion, Episode 1 is shown in full. The teacher then asks a number of 'yes/no' questions to check basic comprehension: • The children are hurt. • The children are worried. • The children are scared of the farmer. • The children are scared of starving. (Why?) • The children find food. (The students are to mention 2 kinds of food seen in the video.)	
5 mins	Episode 1 is shown for a second time. The teacher projects the pictures on a board. The students are asked to put them in the right order according to the story. They are then asked to predict what they think will happen in Episode 2.	
10 mins	The teacher screens Episode 2 ("Food Miles"). Before watching the video, the students are asked to work in groups, each drawing up a list of the animals and the food items they have noted while watching the clip. After watching the video, results are discussed and points are awarded to each group accordingly.	The list should include: chicken, eggs, sheep, peas, potatoes, carrots, meat and bacon. The teacher should ensure that the students know where the different foods come from, and that all our food comes from plants or animals.

10 mins	The teacher writes the terms '**local food**'[1] and '**food miles**'[2] on the board, and tells the class to look out for them while they watch the video for the second time. These terms are then discussed, and the definitions are written on the board by the students.	
10 mins	<u>Listening comprehension:</u> What does the girl's mother buy? What are the disadvantages?	The relevant part of the video is shown again if necessary.
10 mins	Class discussion: What should we do? Guiding questions: ▪ Where does our food come from? ▪ Why is it important to pay attention to food miles? ▪ What are the advantages of food that is grown (and produced) locally?	
HW	The discussion should continue at home. The children are to ask relatives which foods come from Malta and which come from abroad. Each one takes notes, so that the discussion could be resumed in the next lesson, based on the students' findings from their respective discussions at home). The students should also bring pictures of food in order to produce charts about local food and imported food.	Catchy slogans should be included in the charts to be produced during Lesson 2. The students could carry out the homework task individually or in groups

[1] Local food: food that is grown closer to the area of residence of consumers or, in the case of Malta, 'local' would also refer to food that is grown in the same country.
[2] Food miles: the distance that food has to travel from the point of production to the consumers.

GLU 4.1 Lesson Plan 2 (60 minutes)

Materials and equipment

- Interactive whiteboard or projector and screen with speakers
- Cardboard, coloured pens and pictures of food (provided by the students) to make posters

Teaching tools

- Video clips: *Field to Fork* series: 4 episodes
- Images of food, plants, animals

Questions to discuss

- Where does our food come from?
- Why is it important to pay attention to food miles?
- What are the advantages of food that is grown (and produced) locally?

Suggested Evaluation Tools

- Homework
- Project work (optional)

Activities

Time	Activity description	Additional tips
5 mins	Introduction: The teacher asks the students to put their packed lunches on their desks. In groups, the children discuss each item, answering the questions: ▪ Which animal/plant does it come from? ▪ Is it local or foreign? ▪ The teacher highlights the fact that each item could consist of several components (e.g. a sandwich consists of bread, butter, cheese, etc.) ▪ Each group reports its conclusions to the entire class.	
10 mins	The teacher asks about the homework assigned at the end of Lesson 1. Then, the children are asked what they remember from the story of the previous lesson. Here, the teacher should seek to elicit the terms '**local food**' and '**food miles**'. Discussion: Why is it good to buy local food? The teacher should seek to elicit the term '**local economy**'[1], and explain how buying local food helps the local economy[2].	

[1] 'Local economy' refers to the production, distribution or trade, and consumption of limited goods and services by different agents, in a given geographical location, circulation of money and goods (e.g. food)
[2] For further information, visit: http://content.time.com/time/business/article/0,8599,1903632,00.html

10 mins	Screening of Episode 3 ("Economy") from the *Field to Work* series, following which the teacher asks questions such as: • Is the farmer happy when people buy local food? Why? • Is it only the farmer who benefits when we buy locally? Who else benefits from this?	Here, the teacher should explain how this chain works, and how all the community will benefit.
10 mins	Second screening of Episode 3, this time focusing on the images showing economical interdependency. This is then discussed briefly.	
5 mins	Before showing them Episode 4 – "Health and well-being" – the teacher asks the students to list the animals and food(s) mentioned in this clip. The teacher checks the students' lists at the end of the clip.	This task could be done in groups or individually.
10 mins	Second screening of Episode 4. The teacher prepares the students for the role-play activity after the clip by ensuring that they to pay attention to what the farmer says. <u>Role play:</u> A pupil is chosen from each group to speak from the point of view of a local farmer, explaining why local produce is good.	For this activity, the groups could be the same as at the beginning of the lesson or new groups.
5 mins	<u>Game – scrambled words:</u> The teacher writes '**<u>Local food</u>**' on the interactive whiteboard or normal board, with the words **economy**, **environment**, **fresh** and **healthy** in a list underneath. These words should be in scrambled spelling for the students to solve: • COYMENO • RONIVTENIM • HERFS • THELAY	

5 mins	Game – matching foods to their origin: The teacher shows pictures of a number of food items on the interactive whiteboard, and the students should match them to the pictures showing different sources. Bread — Wheat Cheese — Cow/sheep Ice-cream — Cow/sheep Sausage — Pig Peas — Pea plant with pods Apple juice — Apple tree Chocolate — Cocoa plant	
20 mins	Project work in class: Making charts with slogans about **local food**. In their groups, the students use the pictures of food they brought from home to produce charts about local food and imported food. The charts should also include catchy slogans. The various charts should be exhibited in a school hallway and/or presented during school assembly. The students could also prepare short presentations for such events, in order to ▪ share their work with other classes during school assembly or within class exchanges; ▪ present the work to parents and other guests during open days at school.	
HW	The students should research chocolate production and distribution covering, among other elements, the following information: ▪ Which countries produce cocoa? ▪ What journey does chocolate take, and how long does the final product take to reach Malta/Europe?	

GLU 4.2 Food Around the World

Author	Kopin
Country	Malta
Age group	8 - 11 years
Subjects	English | Social Studies | Science
Duration	2 lessons (50 and 60 minutes, respectively) + extra time for supplementary activities
Topics	▪ Responsible consumption ▪ Equity ▪ Diversity ▪ Access to food
SDGs	SDG 2: Zero hunger SDG 10: Reduced inequalities

Competences required

- Communication skills and knowledge of English
- Sequential thinking
- Social and civic skills
- Cultural awareness and expression
- A sense of initiative
- Listening skills
- The ability to work in groups
- Observing pictures and commenting on them
- Identifying similarities and differences
- The ability to work in groups

Learning objectives

- To become interested in, and be open to, new experiences involving different cultures.
- To explore the wide range of eating customs around the world.
- To become aware that our diet is influenced by our environment and economic
- situation.
- To start thinking critically about the nutritional value of food.

- To become aware about how our food choices affect the environment in terms of carbon footprint.

Materials and equipment

- Interactive whiteboard, whiteboard, flipchart or other screening and writing equipment / material
- Flipchart sheets or A2 cardboard + markers (to create posters)
- Pictures or photos of items of food and drink, requested by the teacher in advance and brought by the students from home (to create posters)

Teaching tools

- Video clip: *What Does the World Eat for Breakfast*
- Photos and pictures: "The Eatwell Plate" | "Hungry Planet: What the World Eats" (set of images in slideshow format)
- Other resources: "Syrian Breakfast – Tumblr.com" | "Typical Syrian Breakfast"

Questions/Points to Discuss

- What do you eat for breakfast?
- What do people in other parts of the world eat for breakfast?
- What kind of food does your family buy/consume most often or in greater quantities?
- Were you aware of the diversity of eating habits around the world?
- What kind of food does your family buy/consumes most often or in greater quantities?
- Diversity of eating habits around the world.
- Which foods are healthy? What does a healthy diet involve?
- What are the disadvantages of packaged food?

Suggested evaluation tools

- **Home assignment:** Invite students to prepare one of the breakfast dishes they have learnt about – with the help of their parent(s) or guardian(s) – and to bring it to school or show photos of the preparation and final product to the class.
- **Class discussion:** What is the most interesting thing you have learnt today? What is the most interesting thing you have learnt about food today?
- **Homework (essay):** What would your favourite breakfast look like?
- **Homework (essay):** In your opinion, which is the world's most interesting dish, and why?

GLU 4.2 Lesson plans

GLU 4.2 Lesson Plan 1 (50 minutes)

Learning Objectives

- To explore the wide range of eating customs around the world (with a focus on breakfast).
- To learn how to follow a recipe.
- To become interested in, and be open to, new experiences involving different cultures.

Materials and Equipment

- Interactive whiteboard, whiteboard, flipchart or other screening and writing equipment / material

Teaching Tools

- Video clip: *What Does the World Eat for Breakfast*
- Photos and pictures: "The Eatwell Plate" | "Hungry Planet: What the World Eats" (set of images in slideshow format)
- Other resources: "Syrian Breakfast – Tumblr.com" | "Typical Syrian Breakfast"

Questions to Discuss

- What do you eat for breakfast?
- What do people in other parts of the world eat for breakfast?
- What kind of food does your family buy/consume most often, or in greater quantities?
- Were you aware about the diversity of eating habits around the world?

Suggested evaluation tools

- **Home assignment:** research and making a foreign breakfast (with the help of an adult).

Activities

Time	Activity description	Additional tips
5 mins	Introduction: ▪ The teacher asks the students what they usually eat for breakfast. ▪ The answers could be jotted down individually on little cards – these will then form the basis for a chart that the class would put together, following the teacher's instructions.	
5 mins	Development: The teacher shows the *What does the world eat for breakfast?* video clip and asks for some comments after the first viewing.	Suggested guiding questions: Any breakfast they would like to try? Anything that looks strange to them?
15 mins	Second screening of the clip. At this point, the teacher should also elicit/highlight that different cultures have a number of basic ingredients in common: cereals, fruit and vegetables, meat, fish or cheese, fats, and water. The video could then be used as a basis for introducing the food pyramid, and to reflect on this.	A picture of the Eatwell Plate could be used, here.

5 mins	The teacher asks the students: ▪ Why is it that almost all breakfasts include a grain-based item or an item found at the lower level of the pyramid? ▪ What is so special about these food items? Do they have some special properties? ▪ The students could carry out a 'starch spotting' investigation, based on what they remember from the clip.	
20 mins	The teacher takes the items mentioned in the clip that are found at the lower pyramid level in one batch, and creates another batch with other food items, such as fruit and vegetables (excluding bananas). The teacher then proceeds to drop liquid iodine solution on all the food items for the class to observe any changes in colour. Starchy foods (found at the lower pyramid level) will turn black because iodine reacts with starch. So, the obvious question is: **Why do most people stack up on starch at breakfast?** (The reason is that starch is perceived to be filling, and that it provides us with enough subsistence and energy until lunchtime). Students take note and record their observations from the experiment. This part of the lesson could be developed into a research question for independent learning about the choice of starchy food for breakfast in different cultures.	

HW	Following some further research into the food eaten at breakfast around the world, the students are to make an 'international' breakfast at home (with the help of an adult) and present their research findings and experience of a foreign breakfast at the next lesson.	
Activity (extra)	**A Syrian breakfast** This activity should ideally be carried out with a Syrian parent or cultural mediator. Pictures of the typical Syrian breakfast are shown and explained in class, the meal is discussed, including nutritional value, using the Eatwell Plate or the Healthy Food Plate The students are then divided into group and each group will bring a number of the ingredients to school to make the breakfast as a class effort.	Parents or pupils from other classes could be invited to this activity. For added inspiration, to consult these pages: 1) http://www.orangeblossomwater.net/index.php/2009/11/10/typical-syrian-breakfast/ 2) https://www.tumblr.com/search/syrian%20breakfast

GLU 4.2 Lesson Plan 2 (60 minutes)

Learning objectives

- To explore the wide range of eating customs around the world.
- To become aware of different family sizes.
- To become aware that diet is influenced by our environment and economic situation.
- To start thinking critically about the nutritional value of food.
- To become aware about how our food choices affect the environment in terms of carbon footprint.

Materials and equipment

- Interactive whiteboard, PC + projector, or print-out of pictures
- Flipchart sheets or A2 cardboard + markers (to create posters)
- Pictures / photos of food and drink, requested by the teacher in advance and brought by the students from home, (to create posters)

Teaching tools

- Photos and pictures: "The Eatwell Plate" | "Hungry Planet: What the World Eats" (set of images in slideshow format)

Questions/points to discuss

- What kind of food does your family buy/consume most often, or in greater quantities?
- Diversity of eating customs around the world.
- Which foods are healthy? What does a healthy diet involve?
- What are the disadvantages of packaged or pre-packed food?

Suggested evaluation tools

- **Class discussion:** What is the most interesting thing you have learnt about food today?
- **Homework (essay):** In your opinion, which is the world's most interesting dish, and why?

Activities

Time	Activity description
20 mins	As an introduction to this lesson, the teacher asks the students to take a few minutes to write down what their family consumes (in weight or units) over a typical week. They would then compare their findings and take averages to come up with a consumption bar chart that represents typical local consumption. The students review the food pyramid once again as a form of group / individual assessment for pyramid skills acquired in the previous lesson. They will have an empty food pyramid into which they are to place pictures of different food items.
15 mins	The pictures from the "Hungry Planet: What the World Eats" slideshow are shown (projected or as print-outs) to the class, and discussed from the point of view of a healthy diet, using the food pyramid or the healthy food plate diagram (the Eatwell Plate) for support. The teacher should highlight the fact that most countries import and export food: this is trade. Nevertheless, people living in developing countries tend to eat more local food. At this point, it could be pointed out that the specific diets originate from the products a country or region is able to produce by itself. If production is low, food needs to be imported (consider discussing: food miles, packaging). Wealthy countries are more able to import food from all over the world (food miles) while poor countries are often confined to what they can plant and produce themselves or locally. As part of the discussion, the teacher encourages some research in class at the computer lab or at home about **staple foods**. In addition, research can also provide insight on the advantage and disadvantage of pre-packed foods.
5 mins	In groups, the students discuss which picture is closest to their eating customs at home. Their conclusions could then be discussed in class.

5 mins	The teacher asks about the disadvantages of packaged / pre-packed foods. Possible answers to be elicited from the class are: ▪ It is not fresh. ▪ It is not local (does not help the local economy). ▪ It generates more waste. ▪ It is often less healthy, it contains lots of hidden sugars, salt and artificial ingredients. ▪ It has a larger carbon footprint, due to the significant number of food miles required to deliver it (in some cases).
15 mins	Each group creates a poster with the pictures of food and drinks brought from home, as requested by the teacher in advance. The groups should focus on the difference between fresh and packaged food. Slogans could be added, focusing on a preference for fresh food, based on reasons mentioned during the above discussion. The children from different cultural backgrounds could present the typical eating customs followed by their respective cultures, maybe with the help of a parent.

GLU 4.3 Food and Multinationals

Author	KOPIN
Country	Malta
Age group	11 - 14 years
Subjects	Home Economics | Geography | Environmental Studies
Duration	2 lessons (50 minutes each)
Topics	▪ Sustainable use of resources ▪ Fair trade
SDGs	SDG 2: Zero hunger SDG 8: Decent work and economic growth SDG 12: Responsible consumption and production

Competences required

- Critical-analysis skills
- The ability to source and select evidence
- The ability to link the local context with the global contexts
- A sense of initiative and entrepreneurship
- Learning to learn
- Social and civic skills
- Cultural awareness and expression

Learning objectives

- To discover the impact of multinational corporations (MNCs) on the production of food.
- To learn about the exploitation of resources and farm workers by large multinational companies.
- To understand the concept and benefits of fair trade in food production.
- To understand the role of MNCs within the wider processes of globalisation.
- To start appreciating the importance of global citizenship.
- To learn about global interdependence and the food industry.

Materials and equipment

- Interactive whiteboard or projector
- Whiteboard or flipchart
- Laptop or PC with speakers
- Printed copies of a SWOT analysis template per group

Teaching tools

- Slideshows: "Food and Multinationals" | "Globalisation and the food industry"
- Video clip: *Top 10 Companies That Control The World's Food Supply*
- SWOT analysis template

Questions to discuss

- What are multinational corporations (MNCs)?
- What are the advantages and disadvantages of MNCs?
- What is fair trade?
- What are the benefits of fair trade? How does it contribute towards more rights in food production and on the market?
- What is understood by the term 'globalisation'?
- What is the impact of food MNCs on global citizenship?
- Do food MNCs hinder or encourage global interdependence?

Suggested evaluation tools

- SWOT analysis (using the SWOT Analysis Worksheet)

Additional resources

- "Drawing a Mind Map from Start to Finish", available at: http://bit.ly/MindMap101
- Globalisation explained for GCSE level, available at: http://bit.ly/GCSEglobalisation


FAIRTRADE
FAIRTRADE

GLU 4.3 Lesson plans

GLU 4.3 Lesson Plan 1 (50 minutes)

Learning objectives

- To learn about global interdependence and the food industry.
- To become aware about the exploitation of resources and farm workers by large multinational companies.
- To understand the concept of fair trade, and the role it plays vis-à-vis food and MNCs.

Teaching tools

- Slideshow: "Food and Multinationals"
- Video clips focusing on MNCs and fair trade

Materials and equipment

- Interactive whiteboard or projector
- Laptop or PC with speakers
- Whiteboard (to draw the mind map)

Questions to discuss

- What are the advantages and disadvantages of MNCs?
- What is fair trade?
- What are the benefits of fair trade? How does it contribute towards more rights in food production and on the market?

Activities

Time	Activity description	Additional tips
20 mins	The lesson starts with the question: **What are multinational corporations (MCNs)?** The students are then given the opportunity to look up the information themselves (through teacher-guided sources, at the computer lab, on class computers, etc.) collect notes and then prepare a class presentation. <u>Concept mapping:</u> After showing the PowerPoint presentation until Slide 6 ("Nationality of Multinationals"), students should be given the opportunity to brainstorm and come up with examples of MNCs. The teacher draws a mind map on the whiteboard, grouping different MNCs together, according to their area of specialisation (e.g. food, clothing, etc.) Then the teacher resumes the above-mentioned Slideshow pointing out that the focus will be on the MNCs that are involved with food, and the impact of their operations. This part of the lesson should also include the showing of the video clip entitled, *The Top 10 Companies That Control the World's Food Supply* (duration approx. 12 minutes). <u>Pros and cons:</u> The slideshow will also focus on food production, processing and marketing by MNCs. The teacher then explains that MNCs pose a challenge to the food industry, and that there are both the benefits and setbacks to this. This will be shown by presenting these benefits and disadvantages.	The introduction could also be complemented by, or based on, the PowerPoint presentation entitled "What are the advantages and disadvantages of MNCs?"

10 mins	Next, the teacher introduces to the students the idea that many of negative aspects caused by buying products supplied by MNCs could be mitigated or avoided by supporting fair trade products. **Questions to be asked to the class:** ▪ What is fair trade? ▪ How does it contribute towards more rights in food production and on the market?	The students could conduct some research on fair trade concepts in groups beforehand, possibly using class computers, and discussing their findings together.
10 mins	<u>Brainstorming session:</u> The teacher asks the students what comes to mind with the term '**fair trade**', and what they understand by it. The students will be given some time to think about this, following which the teacher starts taking answers. These are then written down on the whiteboard by the teacher or some of the students themselves.	
20 mins	Once the various views have been shared, the teacher resumes the "What are the advantages and disadvantages of MNCs?" slideshow (from Slide 14); this part includes a video clip that offers a thorough explanation of this concept. Next, the teacher refers again to the answers given on the whiteboard and asks the students whether there are some answers that should be removed or new ones to be added that might better define what is meant by 'fair trade'.	

GLU 4.3 Lesson Plan 2 (50 minutes)

Learning objectives

- To understand the role of MNCs within the wider processes of globalisation.
- To start appreciating the importance of global citizenship.
- To learn about global interdependence and the food industry.

Materials and equipment

- Whiteboard (to take note of the ideas from the brainstorming session)
- Interactive whiteboard or projector
- PC or laptop
- 1 printed copy per group of a SWOT analysis template

Teaching Tools

- PowerPoint presentation: "Globalisation and the Food Industry"
- SWOT analysis template

Questions to discuss

- What is understood by the term 'globalisation'?
- How do food MNCs contribute towards this?
- What is the impact of food MNCs on global citizenship?
- Do food MNCs hinder or encourage global interdependence?

Suggested evaluation tools

- **Classwork (in groups):** SWOT analysis

Additional Resources

- Globalisation explained for GCSE level, available at: http://bit.ly/GCSEglobalisation

Activities

Time	Activity description	Additional tips
20 mins	What is understood by the term 'globalisation'? What is the role of multinational corporations (MNCs) in this process? Brainstorming session: The teacher divides the class into groups and asks the students to write down what they understand by the term 'globalisation'. They could write sentences in point form or as a paragraph. The teacher then introduces the role that MNCs play within a global society, through the slideshow "Globalisation and the Food Industry". Next, the groups are given some more time to go over their written points to check whether they would like to change their answers or add to them. The teacher then starts to take answers from the groups and writes them down on the whiteboard (alternatively, a student from each group could write one answer from his/her group).	The brainstorming session could be preceded by a research exercise on globalisation carried out either at home or in class. Optionally, the teacher could create a template or table on the whiteboard with different categories, and to encourage the students to write their answers in the right categories. Examples of categories: • Labour • Environment • Culture

15 mins	Debate: The teacher introduces the following debate topic: **Do food MNCs contribute positively or negatively towards globalisation and is globalisation in this context a good thing?** Then, the teacher divides the class into two by either assigning the points of view to each of the two groups, or allowing the students to decide which group would like to argue in favour or against. The students should then sit together. Ideally, the two groups should be balanced. Moreover, they should be given time to come up with ideas to sustain their argument. Next, someone from one side begins the debate by stating their group's point of view, and someone from the other side should respond by stating and defending the opposite point of view. After the debate, the teacher opens the floor to comments that question or expand on the issues that were raised. Rules – for instance, that disagreements are allowed but name-calling and interruptions are not – should be set before the start if the debate. The debate should last about 10 minutes, to allow time for further comments.	The teacher (as a moderator) could ask provocative questions but never express judgement at any point as students may hesitate to put forward their thoughts.

15 mins	SWOT (strengths, weaknesses, opportunities, threats) analysis: The teacher divides the class into smaller groups, and provides each group with a print-out of a SWOT table. The teacher explains this task/ᵃctivity, whereby the students in each group should analyse the information given during the lesson and identify the SWOTs posed by food MNCs on global interdependence. After being given some time to analyse and write down their points in each section, the teacher asks each group for their feedback about what they have included in the respective sections. Once the answers have been noted, the teacher asks the students whether they agree with all the answers, and students should be given the opportunity to explain their choice of answer.	Ideally, the teacher would have drawn the table on the whiteboard or the interactive whiteboard, in order to write down the students' answers.

GLU 4.4 Seeds – basic concepts and trading

Author	Institute for Sustainable Development
Country	Slovenia
Age group	11 - 17 years
Subjects	Natural Sciences | Geography | Biology
Duration	2 lessons (45 minutes each) + complementary activities in class
Topics	▪ Seeds ▪ Right to food ▪ Sustainable agriculture ▪ GMOs
SDGs	SDG 2: Zero hunger

Competences required

- Communication skills and knowledge of English
- Social and civic skills
- Cultural awareness and expression

Learning objectives

- To become aware about the importance of seeds from the perspective of nutrition, self-sufficiency and trade.
- To understand that climate and soil conditions vary around the world, and become aware that respective plants and crops are 'designed' to grow in these diverse conditions.
- To learn to recognise the labels on seed packages, and to know what they mean.
- To be able to distinguish between organic, indigenous, treated, hybrid and genetically modified seeds.
- To learn which kinds of seeds are most appropriate for self-sufficiency in food.
- To become aware of the role of large multinational companies in the production of seeds; to learn about the consequences of farmers' dependency on an annual purchase of those seeds and consequently about the problem of global trade in seeds.
- To become aware of the global consequences of purchasing hybrid or GM seeds.

- To recognise that they, as students and active citizens, could promote the sustainable development of the planet.

Recommended methodologies

- Use of educational video clips
- Group work
- Brainstorming
- Comprehension and summary (of article)
- Mind map / creating mind-map posters

Materials and equipment

- Lesson 1
  - Students bring seed packages which they found at home
  - 2 soaked bean seeds per student

- Lesson 2
  - Computer with internet access

Teaching tools and additional resources

- Seed packets: how to interpret the information on seed packets (pdf)
- Wikipedia articles about: **seeds**, **hybrids (biology)**, **seed treatment**, **GMOs**
- Annex 3c. Indigenous varieties (pdf).
- Video clip: Bitter seeds trailer available on YouTube
- Video clip: M*onsanto Indian Farmer Suicide* available on YouTube
- The value of the global seeds market:
- "5 things to know about GMOs", The Wall Street Journal, available at http://bit.ly/5thingsGMOs
- "Global Commercial Seed Market", available at http://bit.ly/SeedMarket
- The world's top 10 seeds companies: who owns Nature?", available at: http://bit.ly/Top10SeedCompanies
- Arche Noah webpage in English: https://www.arche-noah.at/english
- Organic Agriculture and Food Security, Dossier IFOAM
- Organic Agriculture, Environment and Food Security, UN Food and Agriculture Organization
- How to make a concept / mind map: http://bit.ly/MindMap101

Questions to discuss

- Lesson 1
    - What is a seed, and why is it important?
    - Are the conditions for germination of seeds and food production adequate everywhere on our planet?
    - Can the same seeds be sown anywhere on the planet?
    - Does it matter what kind of seeds (hybrid, GM, organic, indigenous) we sow?

- Lesson 2
    - Why do corporations produce seeds that require additional chemical protection and thus contribute to the pollution of environment?
    - Why do farmers purchase seeds that they cannot, or are not allowed to, reproduce by themselves (hybrids, GMs)?
    - How important is the self-sufficiency of a country with seeds – so-called 'seed independence'?
    - What can we, as individuals, do on a local and global level?

Suggested evaluation tools

Classwork:

- The students should draw a mind map of all the terms they have learnt regarding to the seed trade, including a description of the consequences. They should also draw themselves as active citizens and link up with terms of activities that they could/would undertake in order to achieve fairness in sustainable development.
- The students can write and explain which seeds (hybrid, treated, organic, GM, indigenous) they would select for sowing or planting in a home garden or the school garden.

GLU 4.4 Lesson plans

Note: In guiding the students through the learning process offered by this GLU, the teacher should always keep in mind sustainable development, independency from corporations and fair trade. Students should realise that:

a) they could be active citizens on a local and global scale, especially if they, as consumers, choose organic food;

b) producers of organic food need organic seed;

c) in purchasing organic food we directly support cultivation of organic and indigenous seeds, which leads to a more sustainable development of planet and better life quality for all of us.

GLU 4.4 Lesson Plan 1 (45 minutes)

Materials and equipment

- Students bring seed packages which they found at home
- 2 soaked bean seeds per student

Questions to discuss

- What is a seed and why is it important?
- Are the conditions for germination of seeds and food production equally adequate everywhere on the planet?
- Can the same seeds be sown anywhere on the planet?
- Does it matter which kind of seeds (hybrid, GM, organic, indigenous) we sow?

Activities

Time	Activity description	Additional tips
5 mins	The teacher opens the lesson with questions such as: ▪ What is a seed? ▪ How is it composed? ▪ What is the function of a germ (eg. wheatgerm) or spore? ▪ What is the reserve food material for? ▪ What is seed shell for? This is followed by an explanation of the importance of seeds. The students are then encouraged to find the nswers with the help of beans, which are in themselves a type of seed. They should peel and halve the bean, find the germ, reserve food material (cotyledon or seed leaf) and seed shell.	

10 mins	Class discussion: The teacher asks the following question: ▪ What are conditions **for seed germination**? ▪ Are they equally present across the planet? The students are to list all the places they think are not suitable for germination and plant growth, and justify their decision. The discussion then proceeds to the following 2 topics: ▪ What is the **role of seeds** and why are they so important? (Guide the students to reach the following conclusions: ▪ Reproduction of plants. ▪ Food for people and animals.) ▪ Is this the only way through which plants **reproduce**? (To explain to the students that vegetative reproduction is a form of asexual plant reproduction. This occurs in or through tubers (e.g. potatoes), tendrils (e.g. strawberries), cuttings (e.g. blackberries). However, it is less often compared to seed reproduction.)	

25 mins	The students lay out on a table or desk the seed packets that they brought from home, whilst the teacher presents at least 3 different types of seed packets: e.g. organic, hybrid and indigenous seeds. **Important note:** If one of the students brings **treated seeds**, the teacher must prohibit opening the packet, and explain why such seeds are harmful to the environment. The students are then encouraged to explore the information on the seed packets: sowing and harvesting time, sowing distance, exploration date, germination, has it been chemically treated, method of seed production (organic, hybrid or indigenous seed). The teacher then explains two additional terms: **genetically modified seed** and **plant breeding**, pointing out that seeds are 'alive'.	For this part of the lesson, it would be a good idea to keep a copy of the following close at hand, in order to refer to them as necessary: • the 'Seed packets' pdf • the 'Explanation of terms' pdf • the 'Indigenous varieties' pdf
5 mins	As a conclusion to the lesson, the students select seeds appropriate for the school garden, and save them in a dry and dark place until it would be the right time for planting them. Packets of home-grown seeds should provide the following information: plant and variety, year of production and for how many years this seed variety has been producing a yield (of plants) .	

GLU 4.4 Lesson Plan 2 (45 minutes)

Materials and equipment

- Computer with internet access

Questions to discuss

- Why do corporations produce seeds that require additional chemical protection and thus contribute to the pollution of environment?
- Why do farmers purchase seeds which they can't or are not allowed to reproduce by themselves (hybrids, GMs)?
- How important is the self-sufficiency of a country with seeds – so-called 'seed independence'?
- What can we do as individuals on local and global level?

Activities

Time	Activity description	Additional tips
7 mins	Screening of the following video clips (in the order shown below): ▪ *Bitter seeds* film trailer: ▪ *Monsanto Indian Farmer Suicide*:	This lesson should focus in particular on the aspects concerning the seed trade.
8 mins	Discussion about the content of the clips with students. Some guiding questions: ▪ Why is it that so many farmers in India commit suicide? ▪ Why does a multinational company such as Monsanto have such large interest in selling their seeds in India? ▪ (The teacher should seek to elicits the students' views.) ▪ What kind of seeds did Monsanto sell to the farmers? ▪ (Answer: Seeds without reproductive ability.)	

5 mins	**OPTION 2:** The teacher presents the information about the range of Monsanto products (available at: https://monsanto.com/products/brands/). The teacher should highlight which other items this large seed company sells to farmers besides seeds, and how the company benefits financially from the sale of all these products. The teacher should also encourage the students to think about the role of a farmer (from the perspective of their dependence on multinational companies). Following this brief explanation, the teacher explains to the students that the global seed market was worth 35 billion dollars in 2014, and that it is expected to reach 74 billion dollars by 2021. At this point, the teacher could display the webpage about the distribution of seed-trading profit of multinational companies: "Global Commercial Seed Market" (see the 'Teaching tools and additional resources' section above).	For this part of the lesson, it would be a good idea to keep a copy of the following close at hand, in order to refer to them as necessary: • the 'Seed packets' pdf • the 'Explanation of terms' pdf • the 'Indigenous varieties' pdf
5 mins	The teacher distributes printed copies of the "EU Seed Law" article, available at: http://bit.ly/EUseedLaw The students should be allowed some time to read through the article and highlight the essential facts related to seed trade.	
8 mins	The students should then analyse the article in pairs, following which they would discuss the topic as a class.	For this activity, the teacher should encourage the students to think critically.

8 mins	The teacher writes the students' findings and conclusions on the board. The class then discusses solutions on a local and global scale. The teacher should highlight the fact that in the majority of countries it is still possible to choose seeds to be able to grow a wide variety of plants. Emphasis should be placed on paying special attention to opt for seeds of indigenous species and to try and grow our own plants/crops.	
4 mins	To conclude the lesson, the teacher should introduce the Austrian organisation, **Arche Noah**, as an example of good practices, briefly explaining the purpose and activities of this organisation.	Optionally, the teacher could visit the Arche Noah website during the lesson: https://www.arche-noah.at/english

GLU 4.4 Complimentary Activities (45 minutes)

Activities

Time	Activity description	Additional tips
45 mins	Instruction to the students: • Draw a mind map of all terms you have learnt regarding the seed trade, including a description of the consequences. Depict yourselves as active citizens and link up with terms of activities that you could or would undertake in order to achieve fairness in sustainable development. • Write down and explain which seeds (hybrid, treated, organic, GM, indigenous) you would select for sowing or planting in a home garden or the school garden.	These activities could also be used for evaluation purposes. Moreover,the posters they create could be placed in a visible location in the school, to raise awareness among their fellow students.

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PARLIAMENTARY SECRETARY FOR YOUTH, SPORT AND VOLUNTARY ORGANISATIONS

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The European Union is made up of 28 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement of 50 years, they have built a zone of stability, democracy and sustainable development whilst maintaining cultural diversity, tolerance and indicidual freedoms.

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