

“What is in season in your region?”

Intervention C1: Seasonality	Preparation time	Requirements	Duration
<p>Confrontation of the own buying behavior with the products of M3 A “favorite dish”. Investigation of seasonality and regionality.</p> <p>Task 1: Analysis of the current situation Field: regional grocery store Study: Seasonality and regionality of the fruit and vegetable assortment</p> <p>Writing an “Open letter” addressed to the management of the grocery stores with the topic “regionality” and “seasonality”.</p> <p>Receiving information on the topics “seasonality” and “seasonality and climate change”.</p> <p>Lead an interview with farmers in the region. Topics: Change of vegetation, identification of the current weather situation, weather-related problems in fruit and vegetable cultivation, alternative planting possibilities for the future.</p> <p>Processing the interview in the method “world-café”. Presentation of the results in plenum.</p> <p>Analysis of individual cultivation alternatives and their needs in the region. Collection of the results in a padlet.</p> <p>Reflection of the individual learning process with the help of a learning diary.</p>	120 Min	★★★★★	8 TU
	Competence-oriented learning outcome:		
	<p>AB1.6.1.B I can take regional, ecological and climatic conditions into account when producing agricultural products and assign production possibilities to specific areas. AB1.1.1.B I can show the climatic conditions at my own location. LW1.4.1.A I can name regional special cultures and explain their significance. SPK2.2.1.B I can prepare a conversation in a structured way.</p>		
	Aim of the teaching sequence in the module:		
	<p>The students can deal with the topics seasonality and regionality and can generate future strategies.</p>		
	Learning outcome		
	<p>List of the current situation, Open Letter, Interview and resulting poster, Padlet, Learning diary entry</p>		
Required materials/media:			
<p>Suitable premises, standard presentation material, Seasonal calendar, packing of the goods, worksheet: table, worksheet: questionnaire</p>			

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Phase	Duration in min	Social-setting	Materials/ Media	Methodical-didactical notes / implementation
Confrontation	50	GW, PL	Packaging, Season Calendar	Students will be confronted with their own buying behavior by examining the products from M3 A “favorite dish” for seasonality and regionality. 🗨️ 👥
Reconstruction	165	IW, GW, PL	WS: Tabell	After the confrontation the students should solve task 1. In this task they have to analyze the current fruit and vegetable assortment of a regional grocery store. In form of an Open Letter they give away their suggestions, views and attitudes on the topic of regionality and seasonality in the regional grocery store. The Open Letter is addressed to the management of the grocery store. 🔍 🗨️ 🗨️ ✍️
Intervention	55	IW, PL	WS: Questionnaire	Students receive information on the topics “seasonality” and “changes in seasonality caused by climate change”. The teacher focuses on new, previously unconsidered aspects. Also the students focus on these aspects throughout the interviews. 🗨️ 🗨️
Interaction	90	GA	Placate, Pens	The interview got processed by using the method “world-café”. There the students summarize their findings and compare them with each other. By changing their perspective, they gain a broader point of view. After all, they present their results in front of the class. 🗨️ 👥
Deconstruction	50	EW or GW	PC, Internet	Then the students deal with one individual alternative planting possibility and their need in the region. The outcome can be used for their own farms. Here a Conclusion to the phase “reconstruction” takes place. 👥 🗨️
Reflection	20	PL	Padlet, learning diary	Finally the outcome will be discussed together. The students reflect their own learning growth with the help of a learning diary. 🗨️ 📖

IW: Individual work; PL: Plenum, GW: Group work;

Planning of a systemic learning activity on local sustainable food systems

Element **C1 Intervention - Seasonality**

Topic **“What is in season in your Region?”**



Name(s) **Anna Eder, Theresa Priller**

Hochschule für Agrar- und Umweltpädagogik

Angermayergasse 1

1130 Wien



Learning activity plan






1 Learning Module




1.1 Overview



Element/Topic	"What is in season in your Region?" Element C
Curricula/Competences	agricultural school
Learning objectives	<p>AB1.6.1.B I can take regional, ecological and climatic conditions into account when producing agricultural products and assign production possibilities to specific areas.</p> <p>AB1.1.1.B I can show the climatic conditions at my own location.</p> <p>LW1.4.1.A I can name regional special cultures and explain their significance.</p> <p>SPK2.2.1.B I can prepare a conversation in a structured way.</p>
Learning outcomes / Competences of professional subject-related learning	<p>I can ...</p> <ul style="list-style-type: none"> • ... describe the fruit and vegetable range of a regional grocery store. • ... define the seasonality and regionality of the products and recognize the resulting problem by myself. • ... explain terms and definitions of seasonality and regionality. • ... sort and expose information by impact. • ... find alternative planting possibilities for my region. • ... discuss alternative planting options and determine the actual need for these options in my region.
Learning outcomes / Competences of the methodical, social and personal area	<p>I can ...</p> <ul style="list-style-type: none"> • ... rethink my buying behavior. • ... interview somebody. • ... sum up and explain the most important information from the interview. • ... form and explain my own opinion. • ... I can prepare a conversation in a structured way. • ... develop and justify solutions for problems. • ... reflect my own learning progress with the help of a learning diary.
Schedule	8 Units of Learning – 400 Minutes (plus 30 Minutes Homework)



1.2 Learning activity planning

Phase in Module (GP)	When? Guideline	What for? Learning objectives, partial competences	What? Detailed learning steps incl. technical questions/explanations/contents	How? Methodical procedure; learning outcomes learning materials	Who with whom? Social learning Role of teacher	What with? Media, Equipment Resources
Confrontation	10 min	Students can rethink their buying behavior.	<p>The teacher brings the packing of the goods (from M3 A "favorite dish") to the class. The students analyze the packing of the goods.</p> <ul style="list-style-type: none"> • Where are they from? • Did you care about the regionality of the product? • Why did you buy these specific product? 	Analyzing the products	Teamwork with 4 Students per Team	<p>packing of the goods</p>  <p>Questions are on the board or teacher ask them</p>
	10 min		The teacher writes down the outcome of this round of questions and discusses the outcome with the students.	Collection on the board	Teacher = keeper of the minutes	Board
	15 min		Afterwards the students order the packing of the goods by seasonality. They begin to sort them by themselves without help (staple 1: in season; staple 2: out of season). After this they check their results with a season calendar.	before-after-comparison	Teamwork with 4 Students per Team	Season-Calendar
	15 min		The teacher chats with the students about the current assortment of fruits and vegetables in grocery stores. In addition they are speaking about the buying behavior of their region.	Discussion forum	Plenum	

Reconstruction	10 min	Students can describe the fruit and vegetable range of their regional grocery store.	The teacher explains Task 1. Task 1 is designed for working in Teams. Therefore the students are divided into groups of five. In these groups the students have to check the fruit and vegetable range of the regional grocery store. Furthermore they write down the regionality and seasonality of the offered products.	List of the current situation	Teamwork	 worksheet –  table
	75 min	Students can define the seasonality and regionality of the products and recognize the resulting problem by themselves.	All these happens during the lesson.	Students examines the regionality and seasonality of the products.	Plenum	
	15 min		All students have to be back in class 15 minutes before the lesson ends. So the teacher can discuss the worksheets together with the students.	Meeting time		
	50 min	Students can form and explain their own opinions.	Students should form their own opinion based on the critical discussion and the fact check. They should express their opinion in an open letter addressed to the management of the grocery stores.	Open Letter	Single Work	
	15 min		The Open Letter will be checked by the teacher for grammar and spelling. The students have the opportunity to correct their mistakes. They can collect extra Points, if they do the correction. Only the revised letters are sent out to the management of the grocery stores.			
			Individual letters can be present by the students.			
Intervention	15 min	Students can explain terms and definitions of seasonality and regionality.	Students receive information on seasonality and changes in seasonality due to climate changes. The teacher focuses on new, previously unconsidered aspects. Also the students focus on these aspects throughout the interviews.	Teacher lecture	Plenum	

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	10 min ~ 30 min (Homework)	Students can interview a farmer.	The teacher explains the requirements for the interview. The students interview farmers from the region. They ask questions about changes in the vegetation, the current weather conditions, the weather-related problems (for example drought in spring) and the effects of these problems on the currently growing crops. On top, they discover alternative planting possibilities for the specific region.	Interview	Single work	 Questionnaire
Interaction	50 min 40 min	Students can sum up and explain the most important information from their interviews. Students can find alternative planting possibilities for their region. Students can develop and justify solutions for problems.	The intervention will be processed in the Method "World-Café". There the students exchange and compare their results of the interviews. They deal with following topics: Climate changes, current climate conditions, weather-related problems, alternative planting possibilities. Subsequently, the results will be used to discuss new approaches and solutions. The findings of the discussion will be presented to the class.	World-Café List of the discussion points Presentation	Teamwork Plenum	 Placards, Pens 

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Deconstruction	50 min	Students can discuss alternative planting options and determine the actual need for these options in their region.	The teacher put back the results into a frame, where they get a more general meaning. Therefore the students deal with individual alternative planting possibilities. They determine the actual offer of the individual alternative planting possibility in the region. Furthermore they determine the amount of them, that must be available for meeting the demand.	independent research Connection to the "Reconstruction"	Single Work	 Internet, PC 

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Reflection	20 min	Students reflect their own learning progresses with the help of a learning diary.	<p>The outcome of the deconstruction are collected on a Padlet and reflected together.</p> <p>Impulse questions:</p> <ul style="list-style-type: none"> • How does the actual assortment of the alternative planting products look like (origin)? • How are the gaps in demand filled? • Which products could be obtained from the region? • What does all of this mean for you as a consumer? <p>In the end, the students reflect their own learning progress. Therefore they use their learning diary.</p> <p>Questions for reflection:</p> <ul style="list-style-type: none"> • What knowledge have you gained? • How has this project changed your view? • Which of these information can we apply? What information can we share with others? • Did new questions appear? If yes, which questions should we work on in the near future? 	<p>Plenum</p> <p>learning diary</p>	<p>Moderator</p> <p>Self-reflection</p>	<p> Internet, PC</p> <p></p>

1.3 Sources:

Writing an Open Letter:

- <https://www.mindmybusinessnyc.com/how-to-write-the-open-letter/>
- <http://www.letterexpert.co.uk/how-write-open-letter.html>

Information about Green Pedagogic:

- <https://www.haup.ac.at/publikation/green-pedagogy-from-theoretical-basics-to-practical-sustainable-learning-activities/>

Season Calendar:

- <https://www.zipmec.com/de/saison-fur-obst-und-gemuseanbauen.html>

Changes of seasonality as a result of changes in the climate:

- <http://www.zamg.ac.at/histalp/download/abstract/Boehm-2008b-F.pdf>
- <https://www.zamg.ac.at/cms/de/klima/informationsportal-klimawandel/klimafolgen/pflanzen-und-tierwelt>

food pyramid:

- <https://www.hsph.harvard.edu/nutritionsource/healthy-eating-pyramid/>

Alternative planting options:

- https://organicriskmanagement.umn.edu/sites/organicriskmanagement.umn.edu/files/alternative_crops.pdf
- <https://www.nal.usda.gov/afsic/list-alternative-crops-and-enterprises-small-farm-diversification>

Articles about sustainability in grocery stores:

- <https://energysavingtrust.org.uk/can-supermarkets-be-sustainability-superstars/>
- <https://www.greenmatters.com/p/grocery-stores-sustainability>
- <https://smallfarms.cornell.edu/2014/10/grocery-stores-are-key-to-expanding-local-food-systems/>
- <https://www.minnpost.com/economic-vitality-in-greater-minnesota/2018/09/beyond-farmers-markets-helping-small-growers-get-fresh-produce-into-grocery-stores/>

2 Annex to the learning activity plan

2.1 Medias

Link to the Padlet-Website:

- <https://de.padlet.com/>

Name: _____

worksheet - table

date:

grocery store:

group members:

fresh vegetables			
name	place of origin	season in the region	particularities

Which types of vegetables or fruits have the highest amount in the assortment?

Describe and assess the range of fresh vegetables in your own words.

What peculiarities did you notice?

Name: _____

questionnaire – regional producers

Ask a local fruit or vegetable producer.

1. producer (name, address):
2. products / cultures:
3. size of the producer:
4. How satisfied are you with your current culture?
5. What are the weather-related problems for your current culture?
6. In your opinion, how has the climate or weather situation changed in the last years?
7. Which alternative plants or crops could be grown due to climate change?
8. How do you want to design your future production?

Basic considerations about teaching and learning

3 Didactical analysis

3.1 Pre-knowledge/pre-concepts/pre-experience

Students can write an open letter.

Students can work by themselves as well as in groups.

Students can accept the opinions of others.

Students are familiar with the Method "World-Café".

Students have basic knowledge about the production of various agricultural products.

Students own a learning diary.

3.2 Didactical and methodological considerations

3.2.1 Importance of the educational content for the learners

Consumers and the trade are correlative. If the consumer strongly demands a product, it remains in the assortment. Therefore consumers have to demand regional and seasonal products. Only this way we can generate a higher value for the region.

The students are consumers but in few cases also producers. Therefore it is more important than ever, that the students have knowledge about regionality and seasonality as well as the knowledge about how to increase the value in their region or their own farm.

3.2.2 Didactic Reduction / Didactic Focus

Didactic reduction is essential for the students understanding. In this way teaching content can be absorbed, processed and stored. Therefore we prepared these lessons in a way that the students can easily understand the topic, but still acquire sufficient professional expertise.

As an example one didactic reduction takes place in the examination of the food packaging, because they are analysing their own habits. Another reduction happens during the interview, for that the students can pick one farmer instead of many. So the amount of data is reduced.

The main point of these lessons is to empower the students to buy regional and seasonal food. Moreover, the students should identify cultivation alternatives for the region that are accustomed to future climatic conditions. To get to this point the students should recognize the concrete problem, question their own habits, form their own opinion and find real solutions for the problem. In the best case scenario the students will change their habits and take action.

During this whole process it is important to not overtax the students. Therefore the teachers should guide and accompanied them.

3.2.3 Aspects of individualization and differentiation

Individualization already takes place in the confrontation, as the students question their own buying behaviour. But also in the next steps the individual student stays on focus. For example in the examination of the fruit and vegetable assortment, at writing an open letter or at leading an interview.

The students question their own concepts, form their own opinions and also present their opinions. These actions hopefully promotes an individual process, which leads to a sensitization of the topic.

Differentiation should be contained in the whole planning. For example, the students can choose the grocery store to be examined, adapt the questionnaire with their own questions and choose the depth of elaboration by themselves. During discussions, the students can express their own opinions to the class. Whereby it is important that everyone gets the chance to say something. So the teacher has to carefully lead these discussions.

3.2.4 Performance review, result assurance, assessment

The success check results from...

- ... the observation of the students and the cooperation from the students (max. 10 Points)
- ... task 1 (max. 2 Points)
- ... the Open Letter and the volunteered Correction of it (max. 5 Points)
- ... the interview (max. 5 Points)
- ... the cooperation during the Method "World-Café" (max. 4 Points)
- ... the Padlet (max. 2 Points)
- ... the reflection through their learning diary (max. 2 Points)

In total, a maximum of 30 Points can be achieved.

3.2.5 How is personal learning progress reflected and documented?

The students reflect their own behaviour but also of others, especially by writing the open Letter. This letter is also the documentation of the learning progress up to now. The next clear reflection takes place in the Method "World-Café". There the knowledge is collected and discussed in the group. New aspects and new opinions are considered. During the presentation the students can present their learning progress. Also the Padlet contains a reflection of the whole process. There the teacher gives impulses to start the reflecting process and to help the students reflect their personal gained knowledge.