**LESSON PLAN**

**8. Biodiversity: Land – Focus on Grains and seeds**

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| **Lesson** **aim:** | | The aim of the lesson is to introduce the concept of biodiversity when sourcing grains and seeds | **Learning objectives:** | • Understand the need for greater crop diversity  • Identify the different types of grains and flours.  • Introduce strategies and techniques to modify recipes considering gluten content.  • Evaluate the physical characteristics of the modified recipes before and after cooking. | | | | | |
| **Week No:** |  | | **Date:** | | **Time:** | | **.00** | **Duration:** | **minutes** |
| **Subject Tutor:** |  | | | | **Numbers in class:** |  | | **Room:** |  |
| **Topic of lesson**  (link to SOW): |  | | | | **Venue:** |  | | **Themes embedded** | **Health & Safety**  **Equality & diversity**  **Functional skills**  **Positive Challenge & stretch**  **Sustainability** |

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| **Content – link to qualification specifications** | **Teaching, Learning and Assessment Activities** | **Embedded**  **Elements** | **Resources** |
| As per SOW | **Start (including recap, objectives, key questions, links to previous lesson, lively starter activity)**  **Icebreaker:** How often do you eat bread a week? Do you prefer white or brown bread? Have you ever tried a bread not made from wheat flour? Did you like it?  **Starter activity**- from your own experience determine the different types of grains tasted in general and in the form of bread  ***(about 15-20 minutes)***  **Main (including teacher exposition, active learning, mini plenaries and checks on learning)**  **Activity 1:**   * Tutor explain the learning outcomes * Explanation of the importance of biodiversity of grains and gluten in bread * Divide class in to 4 groups (A, B, C, & D) * Tutor demonstrates pizza dough recipe with 100% flour * Group-A Produce recipe with 50% ancient grain substitute * Group-B produce recipe with 50% ancient grain substitute * Group-C produce recipe with 50% ancient grain substitute * Group-C produce recipe with 50% ancient grain substitute * Tutor will provide list of substitutes- see handout * Taste evaluation * Closing checks- kitchen   ***(about 3 hours max)***  **Mini plenary:**  Write 3 sentences on what you have learnt so far and share with your neighbour.  **Activity 2: Product evaluation**   * Students to analyse and evaluate the end products and discuss any impact of recipe modification and how to compensate. (Can use grid in extra resources below). Compare your results among the groups and produce conclusions as to the preferred product   **End (including summary of session/plenary, learning checks, bridge to next session)**   * Tutor to check results and recap key points * Student to complete objective sheets/ learning log etc… | **FSM**  **E&D**  **S**  **FSE**  **E&D**  **FSE**  **H& S** | Theory presentation – Biodiversity: Land (PowerPoint)  Pizza recipe (using different grains) (PDF)  Product evaluation and grain substitute handouts (in Extra Resources below)  Knorr Future 50 Foods Report  Link to Chefs’ Manifesto Action 1. [**INGREDIENTS GROWN WITH RESPECT FOR THE EARTH & ITS OCEANS**](http://www.sdg2advocacyhub.org/actions/ActionPlanArea1)**and 8.** [**NUTRITIOUS FOOD THAT IS ACCESSIBLE & AFFORDABLE FOR ALL**](http://www.sdg2advocacyhub.org/actions/ActionPlanArea8) |
| **SMART Learning Objectives** |
| **All learners will be able to:**  **Most learners will be able to:**  **Stretch & challenge learners will be able to:** |

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| **Evaluation of lesson:** | **Make notes on how it could be improved:** |

**Teaching Tips**

*“This was an all-round great lesson, with a clear connection between the theory and the practical session.*

*The key was the students making the dough themselves - they really wanted to get good results from the different flours they were testing.*

*The look on their faces when they tried different grains, their reaction to the different flavours, was great. It was eye-opening for the students that different grains can be used to create desirable products. It really surprised them.*

*This helped to demonstrate the links between biodiversity in crops and the value - and fun - of variety in resulting foods.”* UWL Lecturer

**EXTRA RESOURCES**

**Activity 1 – Ancient grain substitutes**

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| Pizza | Modification to pizza base (dough) |
| Demonstration | Standard recipe; 100% wheat flour |
| Recipe A | Modified recipe: 50% barley flour |
| Recipe B | Modified recipe: 50% quinoa flour |
| Recipe C | Modified recipe: 50% spelt flour |
| Recipe D | Modified recipe: 50% oat flour |

**Activity 2 – Product evaluation**

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| **Grains** | **Products** |
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