

Title	Making a traditional dessert	Time	2 hours
Subject:		English language/Home Economics/Computer Science/Interdisciplinary	
Aims		<p>General competence¹: Students will learn how to make the traditional Nevzine dessert while applying computational thinking methods</p> <p>Specific competence²: Allowing students to deepen their understanding decomposition, pattern recognition, abstraction, and algorithm design.</p> <p>Aim of the activity: How to create a recipe by using computational thinking skills.</p>	
Key CS elements:		Decomposition; Pattern recognition; Abstraction; Algorithm design.	
Age group :		12-14 year old	
Learning place:	Çetin Şen Science and Art Center	Activity type:	Curricular (for 8th grade students in Türkiye)
Resources:			
<ol style="list-style-type: none"> 1. Websites or apps about food. 2. Computer/ mobile phones with internet access. 			
Learning development:			
<p>Problem definition: Creating the right recipe for the dessert of Nevzine by using computational thinking skills.</p> <p>Introduction</p> <ul style="list-style-type: none"> - Begin by showing the students a picture of Nevzine dessert and ask if anyone has tasted or heard of it. - Introduce Nevzine as a traditional dessert of Kayseri, Türkiye. - Show a video related to the topic. <p>Four Principles of Computational Thinking:</p> <ol style="list-style-type: none"> 1. Decomposition: Breaking down complex steps into smaller, manageable parts. 2. Pattern Recognition: Identifying identifying similarities or patterns within data. 3. Abstraction: Discuss abstraction: focusing on essential details while ignoring unnecessary information 4. Algorithm Design: Creating a step-by-step plan for creating the recipe. 			

I. Decomposition:

1. Activity: Break down the recipe into smaller, manageable steps.
 - Ask students to list the steps involved in making the dessert (e.g., preparing the syrup, mixing the dough, baking).
2. Discussion: Discuss how breaking down tasks helps in both cooking and solving problems in other areas, such as programming.

II. Pattern Recognition

1. Activity: Identify patterns in the process.
 - What common steps are repeated in cooking other desserts (e.g., mixing ingredients, baking, making syrup)?
2. Discussion: Relate these patterns to recognizing patterns in data when solving problems using computational thinking.

III. Abstraction

1. Activity: Focus on the essential steps needed to make the Nevzine, ignoring details like exact measurements for now.
 - What are the core components of the recipe? (Mixing dough, making syrup, combining them)
2. Discussion: Discuss how abstraction helps simplify complex problems by focusing on what is important.

IV. Algorithm design:

1. Activity: Have the students create a step-by-step algorithm for making the Nevzine dessert.

Step 1: Prepare Syrup

- 1.1. Start by placing 1.5 cups of water and 1.5 cups of sugar into a saucepan.
- 1.2. Heat the mixture on medium heat, stirring until the sugar dissolves.
- 1.3. Once it boils, reduce the heat and simmer for 5-6 minutes.
- 1.4. Add 1/4 cup grape molasses to the syrup and stir well.
- 1.5. Remove from heat and *let it cool* to room temperature.

Step 2: Prepare the Dough

- 2.1. In a large mixing bowl, combine 1 cup of tahini, 1 cup of softened butter, and 1 cup of sugar.
- 2.2. Mix until smooth using a spoon or mixer.
- 2.3. Add 1/2 cup grape molasses and 1/2 cup chopped walnuts into the mixture and continue mixing.
- 2.4. Sift in 1 tsp baking powder and gradually add 4 cups of flour while mixing.
- 2.5. Knead the mixture by hand until it forms a smooth, non-sticky dough.

Step 3: Shape the Dough

- 3.1. Preheat the oven to 180°C (350°F).
- 3.2. Transfer the dough to a greased or parchment-lined baking tray.

- 3.3. Press the dough evenly into the tray, ensuring the surface is smooth and level.
- 3.4. Create patterns on the surface using a fork or knife (optional).
- 3.5. Bake in the preheated oven for 30-35 minutes or until golden brown.

Step 4: Finish with Syrup

- 4.1. Once the baked Nevzine is out of the oven, cut it into squares or diamond shapes while still hot.
- 4.2. Pour the cooled syrup evenly over the hot dessert.
- 4.3. Allow the dessert to absorb the syrup completely.

Step 5: Serve

- 5.1. Wait until Nevzine has cooled and absorbed the syrup.
- 5.2. Serve and enjoy!

Conclusion

1. Discussion: Reflect on the process. How did using computational thinking help in understanding and executing the recipe?
2. Real-World Connection: Discuss how computational thinking is not only for computer science but is a useful problem-solving approach in everyday tasks.

Homework/Extension:

- - Have students create an algorithm for another recipe or a simple task they do daily, like getting ready for school.
- - Reflect on how computational thinking could help in other subjects or areas of interest.

Assessment:

Evaluate students based on their participation in group discussions, and the clarity and correctness of the algorithm designed by each group.
A vocabulary quiz related to food and kitchen utensils.

Expected results:

Students will understand how to apply computational thinking principles—decomposition, pattern recognition, abstraction, and algorithm design—to everyday tasks like cooking. They will break down complex recipes into manageable steps, recognize patterns in cooking processes, and create a structured algorithm for making Nevzine dessert. By the end of the lesson, students will appreciate how computational thinking can be applied beyond programming to solve real-world problems effectively. They will also

gain insight into the cultural heritage of Turkey through the Nevzine dessert, fostering a connection between culinary traditions and problem-solving skills.

Notes:

- Students use English language as a communication tool to create the right algorithm to make a traditional dessert. They will also be aware of the importance of computational thinking skills.
- Students will get the ingredients list for creating the recipe (right algorithm).



Ingredients for Nevzine Dessert:

- 2 cups of flour
- 1/2 cup of tahini
- 1/2 cup of crushed walnuts
- 1/2 cup of grape molasses
- 1/2 cup of melted butter
- 1/2 cup of water
- Measuring cups and spoons
- 1 teaspoon of baking powder
- 1 tablespoon of vinegar
- For the syrup: 2 cups of sugar, 1.5 cups of water, and a few drops of lemon juice
- Mixing bowls
- Baking tray
- Oven