

## Didactic Scenario

### 1. Title

The world of living creatures - yeast mushrooms

### 2. Keywords

bread, yeast, protozoa, fungi, traditional

### 3. Basic Information

**STEAM Subject:** Engineering, Science, Social studies

**Typical interaction time with the instructional scenario in teaching hours for in-school work:**  
Engineering-Manufacturing (20 min ), Science (40 min ), Social Studies (20 min )

**General description of the scenario:**

<u>Phases</u>	<u>Stage</u>	<u>Time</u>
Warm-up activity, introduction to the topic	preparation stage	10'
Explanation of the activities and expected results	preparation stage	10'
Presentation of teaching- training content	implementation stage	40'
Evaluation	conclusion-evaluation stage	20'

**Age group:** 10-11 years

### Estimated difficulty level:

Very Easy	Easy	Moderate	Challenging	Very Challenging
		X		

### Teaching resources

**Material:** wheat flour, water, yeast, salt, sugar, microscope

**School infrastructure:** science lab, Internet access, video projector or projection screen, tablets or smartphones

### Additional material from external sources/online tools:

<https://youtu.be/4cve7YsDb5w>

<https://www.youtube.com/watch?v=Ks-tkD-ns>

**Differentiated Instruction for students of differing abilities and learning styles in the same class:** N/A

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## 4. Educational Problem

Students are told to have breakfast before coming to school. As a brainstorming activity teacher asks students ‘What is the relationship between the bread they eat at breakfast and the yeast mushrooms?’ to check their attention to the lesson. In relation to the subject of mushrooms and yeasts, a relationship is established between nutrition and cultural values. Students need to make a traditional bread mostly baked in villages and associate it with their culture.

## 5. Learning Objective (-s)

1. Students will generally remember what they learned about mushrooms;
2. Students will associate what they know as yeast fungi with the making of our cultural bread.
3. Students will improve their skills in science, social studies and engineering. Build your own structures by manipulating objects and creating motions using technological tools when necessary.

## 6. Phases of the Scenario

### Phase 1

**Title:** Warm-up activity, introduction to the topic

Indoor	Outdoor	Mixed
X		

**Phase duration in minutes:** 20'

**Detailed description of the scenario phase:**

Students do a research on yeasts and the fields they are used and create a poster.

**Activity sheets:**

<http://www.bilimegitim.yyu.edu.tr/kf/tomaymnlr/index.htm>

### Phase 2

**Title:** Explanation of the activities and expected results

Indoor	Outdoor	Mixed
X		

**Phase duration in minutes:** 30'

**Detailed description of the scenario phase:**

Students examine the structure of yeast with a microscope and observe the proliferation of yeast and gas outgassing. Associates the smell of yeast with village bread.

**Activity sheets:**

<https://www.youtube.com/watch?v=Ks-tkD-ns>

### Phase 3

**Title:** Presentation of teaching-training content

Indoor	Outdoor	Mixed
X		

**Phase duration in minutes:** 40'

**Detailed description of the scenario phase:**

Students will do their presentation in the classroom.

**Activity sheets:**

<https://www.youtube.com/watch?v=2OoFhjkxgYM>

## 7. Evaluation Methodology

They will answer the following questions using Arloopa :

What is the relationship between yeast mushrooms and our cultural value, village bread?

Tell me something that caught your attention about the fermentation phenomenon?

What was the most interesting step for you when making village bread?

## 8. Additional Resources for the teacher

will learn science concepts such as fermentation and mannas through an interdisciplinary activity where they will be introduced to tessellations and the study of the living world, and will be able to establish the relationship between bread production and leavening.