

## **Safety instructions on the topic of health**

Supplement to the general safety instructions

### **Experiments with foods**

Discuss the difference between foods for consumption and foods as “experimentation material.” Explain the rule against eating and drinking during experiments for health reasons. This rule is intended to keep the students from consuming anything that could trigger an allergy or intolerance. Point out to the students that they may taste something only when it is expressly permitted. In such cases, potential intolerances and/or allergies should be clarified beforehand.

In experiments with eggs, there is always the possibility of contact with bacteria (salmonella), feces, and feathers (allergies!). Make sure that the students practice good hygiene. It's better to thoroughly wash the hands too often than too little. The eggs are disposed of in the regular trash like at home. If the eggs have been sitting for some time or if the trash is not going to be emptied promptly, tie the leftover eggs in a bag with a dash of alcohol.

### **Precautions when working with fire**

Obtain a commitment from the students that an adult must always be present in the room when they conduct experiments with burning candles or any form of fire. Also discuss the required conditions for the experiment environment; for example, curtains and writing materials must be removed, and a fireproof surface should always be used. A fire extinguisher or a bucket of water should always be close at hand. Discuss the measures to be taken in case of an emergency and the location of escape routes.

### **Working with tea warmers**

Discuss with the students that the tea warmer must always be placed on a fireproof surface. The tea warmer can become extremely hot and needs several minutes to cool down after the experiment is completed. For this reason, the students should not touch it while conducting the experiment and for some time afterwards. Make sure the students know that it is not possible to tell whether most objects, materials, or substances are hot or cold simply by looking at them.

### **Working with the thermometer**

A conventional thermometer must be handled with particular care. Point this out to the students before they use it. Discuss the fact that thermometers contain fluids which may be harmful to health and that a broken thermometer can easily cut someone.

## **Safety aspects for experiments related to the sense of hearing**

Discuss with the students the fact that the human ear is a very sensitive organ. To prevent hearing impairment, they should conduct the experiments calmly and carefully.

## **Working with acid (vinegar)**

Make sure that the vinegar does not get in the students' eyes. If this should happen, they should immediately rinse their eyes with clean water. Cold running water is usually best for rinsing the eyes.

Only "household vinegar" with an acid content of approx. 5 percent should be used in the experiment. Depending on the producer, vinegar essence can contain up to 30 percent acid and is not suitable for elementary school children. If 5 percent vinegar is not available, the teacher can make an appropriate substitute by diluting one part vinegar essence with five parts water.

## **Working with objects with sharp edges or points**

Scissors and other sharp or pointy objects entail a certain risk of injury. Therefore, it is important for students to master how to safely handle these tools and objects. Demonstrate the correct use of the materials or prepare individual steps of the experiment for the students.