**List of Experiments for Presentations: SIW2 Smell/Taste**

(n= number of participants, N = number of groups = n/3)

Material:

* Masking tape
* 20 plastic pipettes
* 16 small bowls e.g. bottom part of PET bottle or drinking glasses
* 8 small plastic bowls with lid
* N magnifier
* N torchlights
* Felt pen
* Battery acid or sulphuric acid
* Lemon juice from fresh lemon in a colourless drinking glass
* Strong black tea in a colourless drinking glass
* Tap water in a colourless drinking glass
* Various eatable and drinkable food and drinks, what is available on the market

Exp 1: **Smell test** (In groups of 2)

Preparation:

1. Put 8 different odorants in small plastic bowls on wads of cotton wool: E.g. orange, garlic, onion, mint oil, vinegar, flowers etc. (What is available on the local market)

2. Put a short masking tape strip on each bowl with an individual number.

3. Make a list of the odorants corresponding to the numbers on the bowls.

4. Spread out the bowls on a table.

Experiment:

1. Organize the groups: Test person, guide

2. The test person closes his eyes, maybe uses a blindfold

3. The guide has a protocol sheet and takes one after the other bowl, opens the lid and holds the bowl beneath the test person's noise. No discussions, do not listen to others.

4. The test person has to guess, which odorant he smells.

5. The guide writes it down on the protocol sheet.

6. After testing all odorants, the test person can open his eyes and together they correct the answers on the protocol sheet and can smell again the odorants.

Exp 2: **Explore tongue and palate** (In groups of 3)

1. One student sticks out his tongue.

2. The other student with torchlight and magnifier explores the tongue. Find the papilla on the tongue.

3. Explore with the forefinger the own palate and imagine the space of the nasal cavity above it.

Exp 3: **Taste test** (In groups of 3)

Preparation:

1. Put 8 different drinkable liquids in drinking glasses: E.g. mango juice, lemon juice, coke, vinegar, Tibetan tea, salt water, sugar water, milk etc. (What is available on the local market)

2. Put a short masking tape strip on each glass with an individual number.

3. Make a list of the liquids corresponding to the numbers on the bowls.

4. Spread out the glasses on a table and put 2 pipettes into each glass. Write the glass number also on the pipettes with a felt pen.

Experiment:

1. Organize the groups: Test person, experimenter

2. The test person closes his eyes, maybe uses a blindfold.

3. The test person puts a clip on his nose, so he cannot smell.

4. The guide has a protocol sheet and takes with the pipette successively from each glass few drops and let the drops fall on the tongue of the test person. No discussions; do not listen to others.

5. The test person has to guess, which liquid he tastes.

6. The guide writes it down on the protocol sheet.

7. The test person removes the clip from his nose and they repeat step 4. to 6.

6. After testing all liquids twice, the test person can open his eyes and together they correct the answers on the protocol sheet and can check again the liquids.

Demo Exp 4: **Iron nail and acid**

1. Put a blank iron nail into a test tube.

2. Add some acid (e.g. battery acid) into the test tube.

3. Observe the reaction.

Demo Exp 5: **Black tea and lemon**

1. Prepare strong black tea

2. Prepare some lemon juice from fresh lemon

3. Put some black tea in a colourless drinking glass

4. Put same tap water in a colourless drinking glass

6. Measure with Litmus paper the degree of acidity of tea, lemon juice and tap water

4. Add some drops of lemon juice to the tea

5. Observe the change and measure with Litmus paper again the degree of acidity

Exp 6: **pH of different liquids** (In groups of 2)

Preparation:

1. Put 8 different liquids in glasses: E.g. mint oil, vinegar, coke, lemon juice, battery acid etc. (What is available on the local market)

2. Put a short masking tape strip on each glass and write down its content.

3. Spread out the glasses on a table.

Experiment:

1. Organize in groups of two students

2. Each group gets some Litmus strips

3. Measure the pH of each liquid

4. Compare the results with other groups