# (ENG) Coctail Party


**Introduction**

**Step 1 - Motivational Stage**

**Step 2 - Investigational Stage**

**Step 3 - Consolidation Stage**

# Introduction

#Online activity #In-class activity #Experiential learning #Artwork #Teamwork

The pupils will make a juice and a "lego cocktail" and talk about different aggregate states in which a solute can appear. They will also observe changes that occur if we add more or less solvent to the solution. Then, they will look at Claude Monet's series of the Houses of Parliament and discuss how saturation of colours creates different atmospheric effects. Finally, the pupils will work in pairs and try to find more examples of solutions in everyday life.

## Learning Objectives

- [ ] Examine a solution and understand that its visual changes are due to different amounts of solute or solvent
- [ ] Distinguish between the terms solution, solute, solvent and apply them to everyday life

ACTIVITY DETAILS

## Activity Details

### Connection of the activity with Art

painting

## Link to local, national School Curriculum

Solution/Solutions as examples of mixtures and distinguish between solvent and solute

## Equipment required

- lego bricks
- plastic or glass cups
- oil
- juice concentrate (apple, orange, raspberry,...)
- worksheet

## Duration of activity

45 minutes

## Sources

https://eucbeniki.sio.si/kemija8/1232/index.html

Photo credit:
Pic. 1
Claude Monet (1840–1926)
Houses of Parliament, London, 1900–1903
oil, canvas, 81,2 × 92,8 cm
Art Institute of Chicago
Public domain

Pic. 2
Claude Monet (1840–1926)
The Houses of Parliament, sunset, 1903
oil, canvas, 81,3 × 92,5 cm
National Gallery of Art, Washington DC
Public domain

Pic. 3
Claude Monet (1840–1926)
Houses of Parliament, Sun Breaking Through the Fog, 1904
oil, canvas, 81,5 × 92,5 cm
Musée d'Orsay
Public domain

Pic. 4
Claude Monet (1840–1926)
Rouen Cathedral, West Façade, Sunlight, 1892
oil, canvas, 100 x 65 cm
National Gallery of Art, Washington DC
Public domain

Pic. 5
Claude Monet (1840–1926)

Haystacks (Effect of Snow and Sun), 1891
oil, canvas, 65,4 x 92,1 cm
Metropolitan Museum of Art, New York City
Public domain

Pic. 6
Spatula
Public domain

Pic. 7
Rihard Jakopič (1869–1943)
Križanke in Autumn, 1909
oil, canvas, 101 x 71 cm
National gallery of Slovenia, Ljubljana
Copyright: National gallery of Slovenia

# Step 1 - Motivational Stage

Show the pupils two cups of water. Tell them you will try to mix it with two different substances. One will be oil and the other a juice concentrate. Ask the pupils what they think will happen. Pour the oil in one cup and concentrate in the other. Oil will not mix but the concentrate will. Tell the pupils you will be talking about the substances that mix with each other to make solutions.

# Step 2 - Investigational Stage

## STUDENTS' TASKS

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### Task 1

Each pupil makes a juice (could be apple, orange or raspberry juice) and a "cocktail" made out of lego bricks.

Ask them:

*"In what aggregate states can solutes appear?"*

- **Answer: liquid - juice concentrate; solid - lego bricks; gas - fizzy drinks containing CO2**

*"How does the amount of solute affect the look of the solution? What happens with colour and sweetness of the juice if we add little water or a lot of it?"*

The pupils try adding more concentrate or more water to their juice and describe what they see / taste.

*"Can all solutes be dissolved by water?"*

- **Answer: no, lego bricks, for example, cannot**

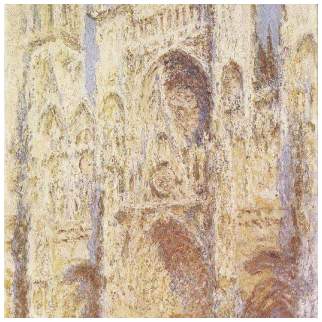
# Task 2

Talk about Claude Monet and the Impressionists.

Monet was a member of the Impressionist movement that developed in France in the 1860s. The artists wanted to portray brief moments in life. They were interested in optical effects, changes of light or changes of seasons. The painting usually took place outside, "en plein air" and the artists would use tools such as a spatula.

Picture 6

During his lifetime, Monet painted several series in which he studied light effects in different seasons and parts of the day. Among his famous series is the Rouen cathedral (pic. 4) and Haystacks (pic. 5).



Picture 4

Picture5

Between 1899 and 1905, Monet made several visits to London. During these trips, he made a series **depicting the Houses of Parliament.**

Compare three paintings of the series. (pic. 1, pic. 2 and pic 3.). The pupils should pay attention to the saturation of colours.

Picture 1

Picture2

Picture3

*"What kind of effects did the artist try to portray?"*

- **Answer: fog, light of the morning / evening sun, rain, warm / cold weather**

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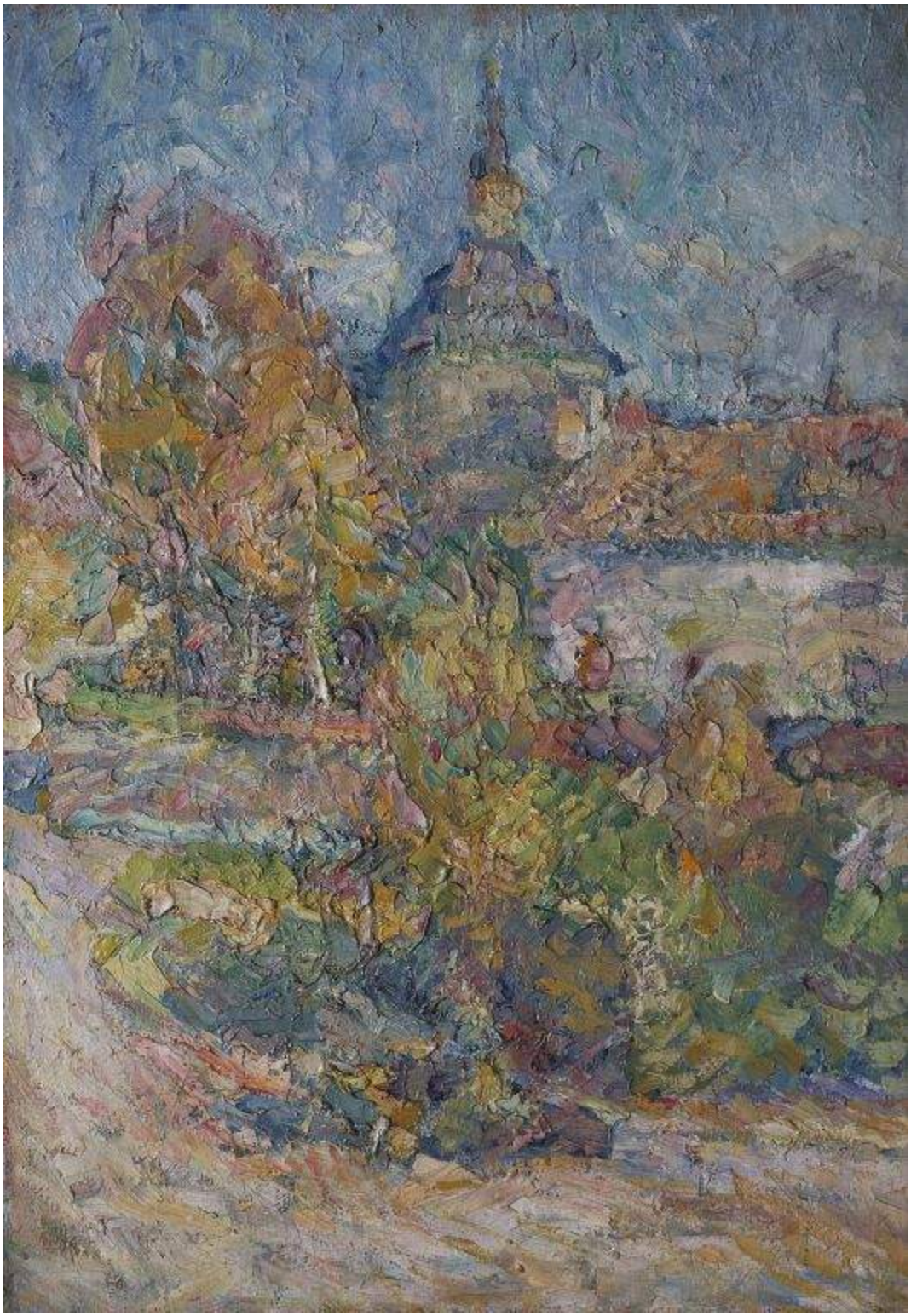
## Task 3

Divide the pupils in pairs. They must think of other solutions we can find in everyday life, for example chocolate milk, coffee, tea, sweet tea and complete the worksheet. The pupils have to write down a solution and which solvent and solute are necessary to make it. (For example: Orange juice (solution) can be made using orange juice concentrate (solute) and water (solvent). An example is given on the worksheet as initial help. The pupils present their work and discuss possible changes to the colour and taste of the solutions.

# Step 3 - Consolidation Stage

Show pupils a painting by the slovenian painter Rihard Jakopič (pic. 7).



Tell them it represents a church in Ljubljana, which the painter could see from his window. He painted the building during different parts of the day as well as in different seasons.

Ask the pupils to study the painting. Let them guess in which season it was made (answer: autumn), what tools did Jakopič use (answer: a spatula). Are the colours saturated? Was the day clear or foggy? (answer: clear)

## End of the activity

EXIT