ONLINE INSTRUMENTS AND USEFUL SITES WITH CHEMISTRY AND PHYSICS RESOURCES

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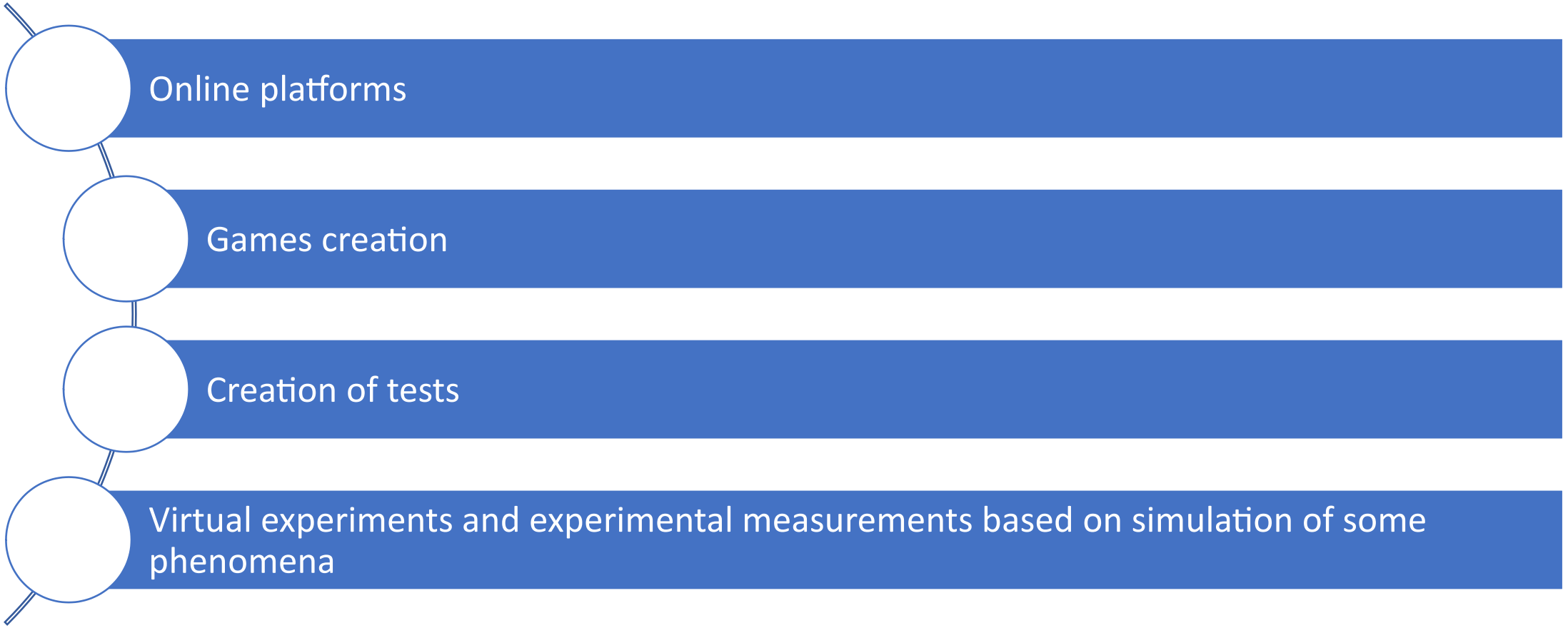
Colegiul Național ”Preparandia – Dimitrie Țichindeal” Arad - România

Online instruments and sites with chemistry and physics resources



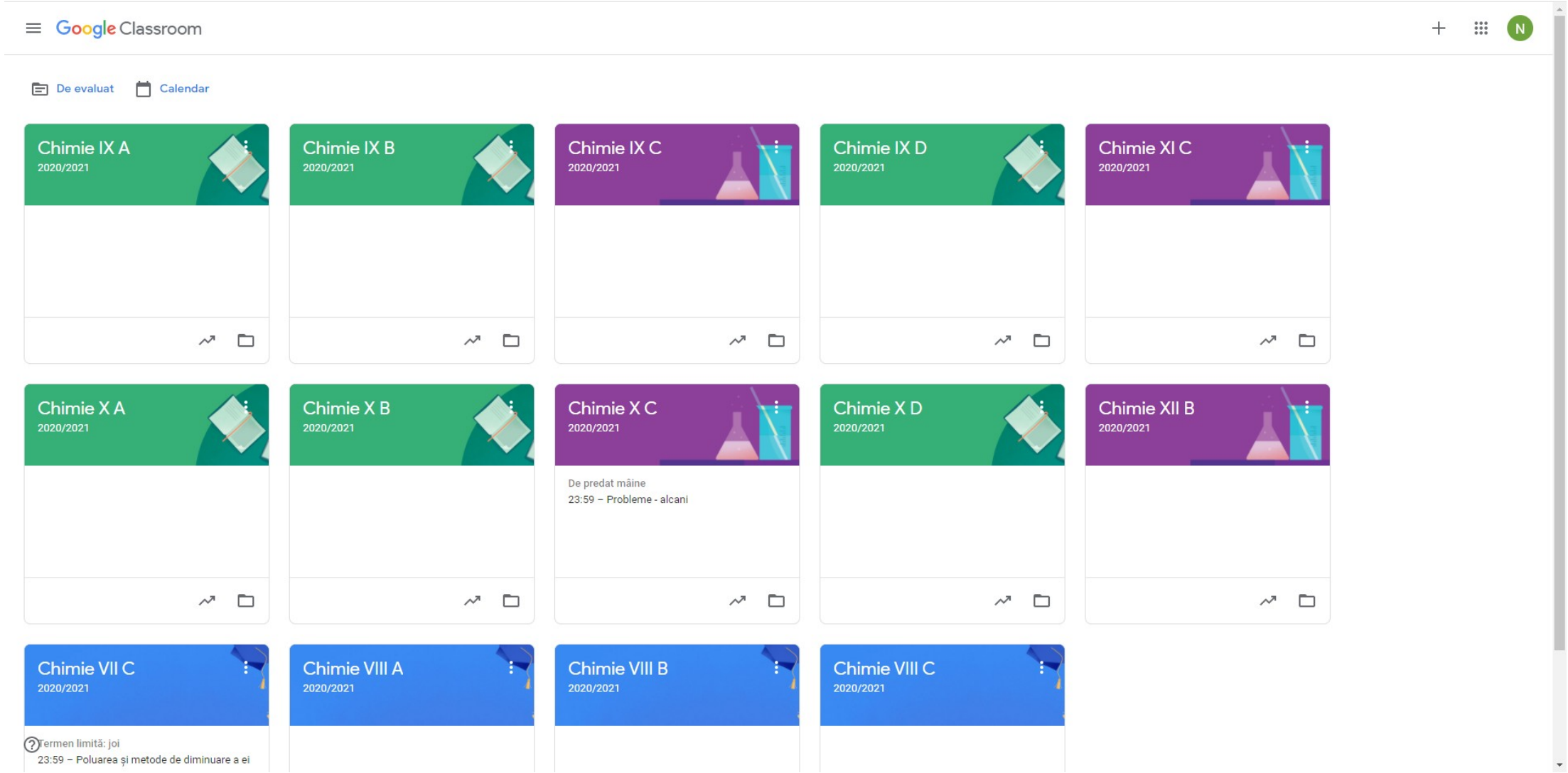
Platforme online

- **Google Classroom**
- **Zoom App**
- **Microsoft Teams**
- **Easyclass**
- **Edmodo**
- Kinderpedia, Digitaliada, myKoolio, Kidibot, Ask

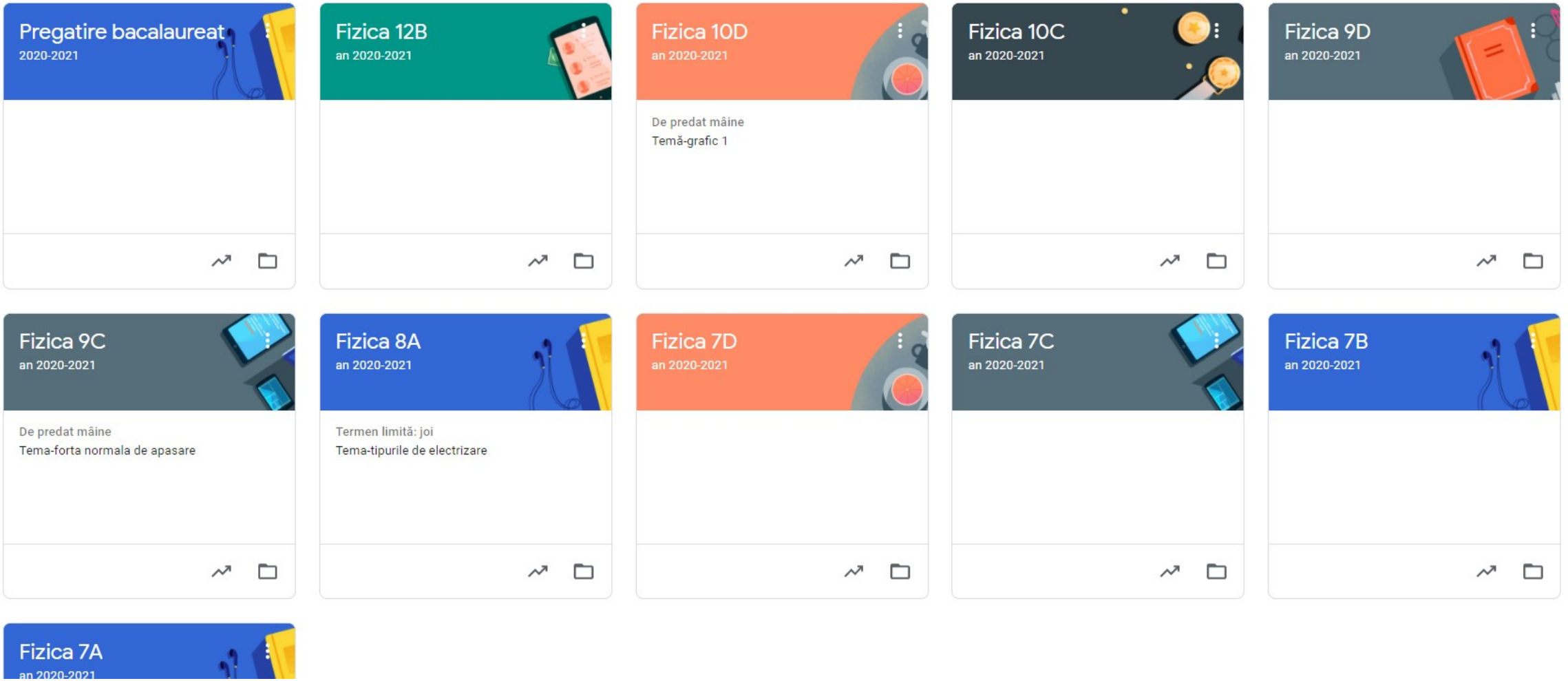
Google Classroom

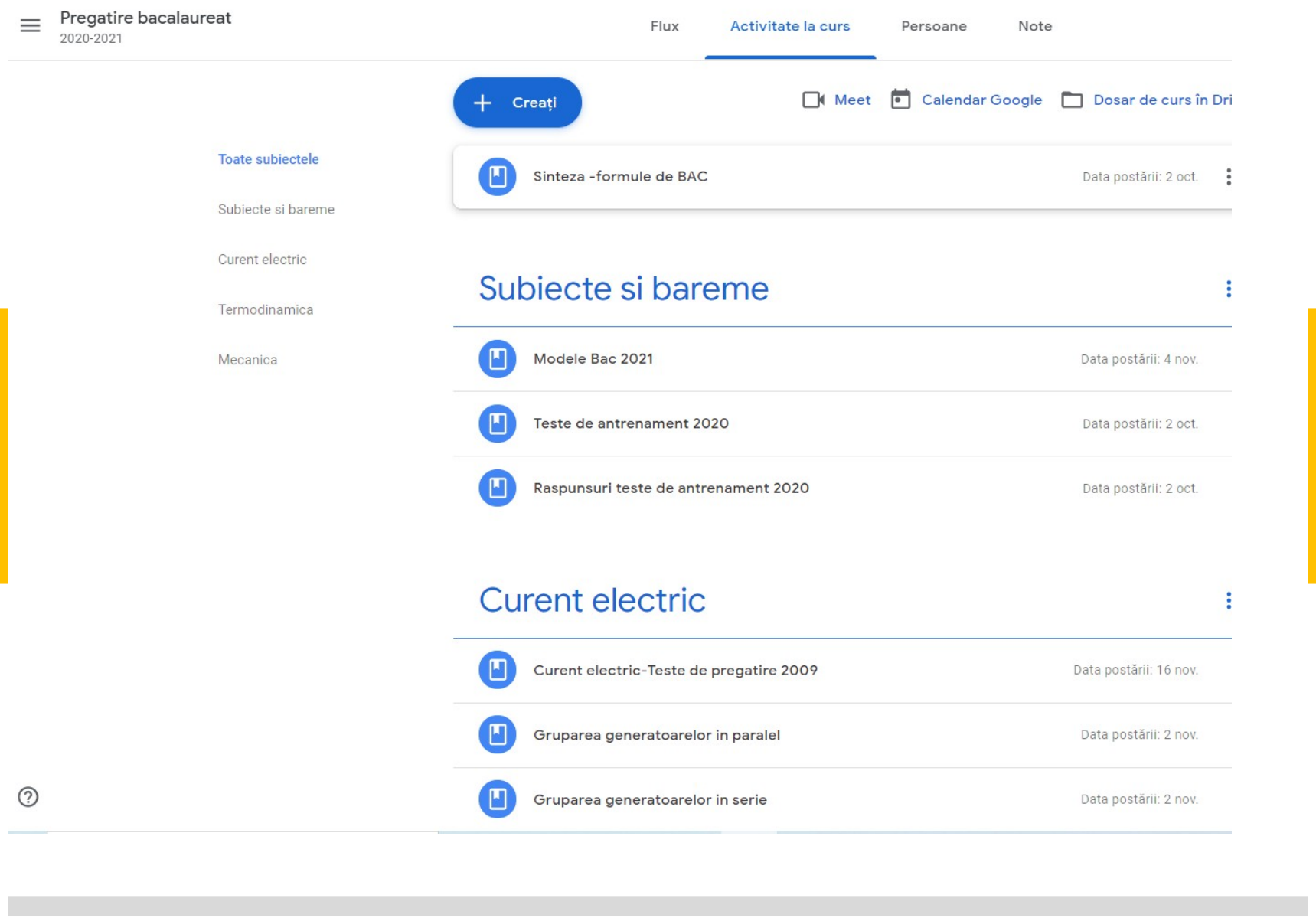
- It is one of the platforms recommended by the Ministry of National Education
- It offers the possibility to both teachers and students to upload materials and post various announcements
- It offers the possibility for the teachers to asses and give marks to the students
- It offers the Google Meet extention for online classes

Google Classroom- chimie



Google Classroom- fizică





Google Classroom-fizică

Fizica 8A
an 2020-2021

Flux | Activitate la curs | Persoane | Note

Creați

Calendar Google | Dosar de curs în Drive

Toate subiectele

Fenomene electrice ...

Fenomene termice

Manualul -Editura Art — Ultima editare: 30 oct.

Manual-Editura Litera — Ultima editare: 26 oct.

Fenomene electrice si magnetice

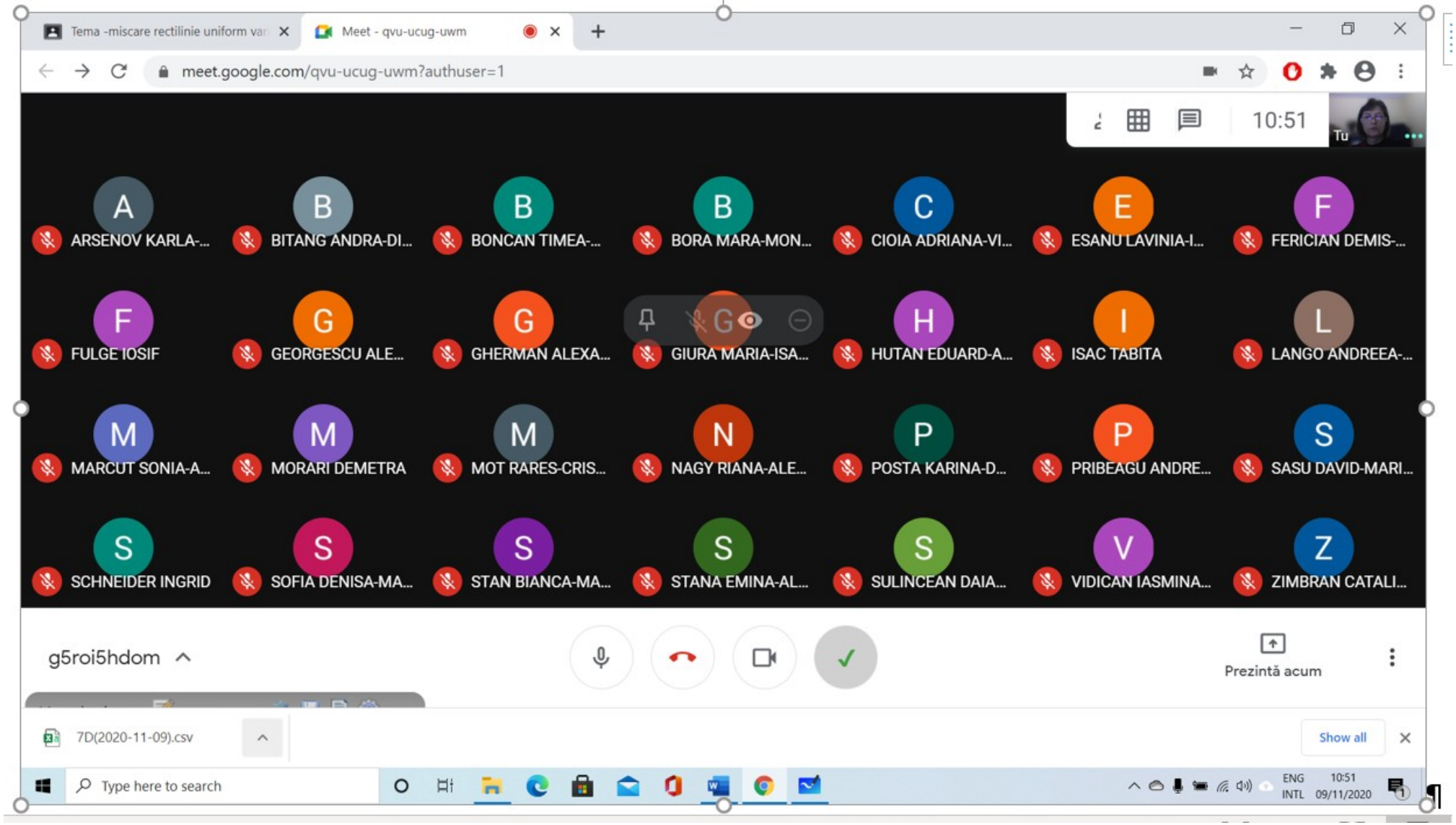
Tema-tipurile de electrizare — Termen limită: Mâine

Tema 8 Electrizarea și sarcina electrică — Termen limită: 25 nov.

Fenomene termice

Rezolvare test-fenomene termice — Data postării: 20 nov.

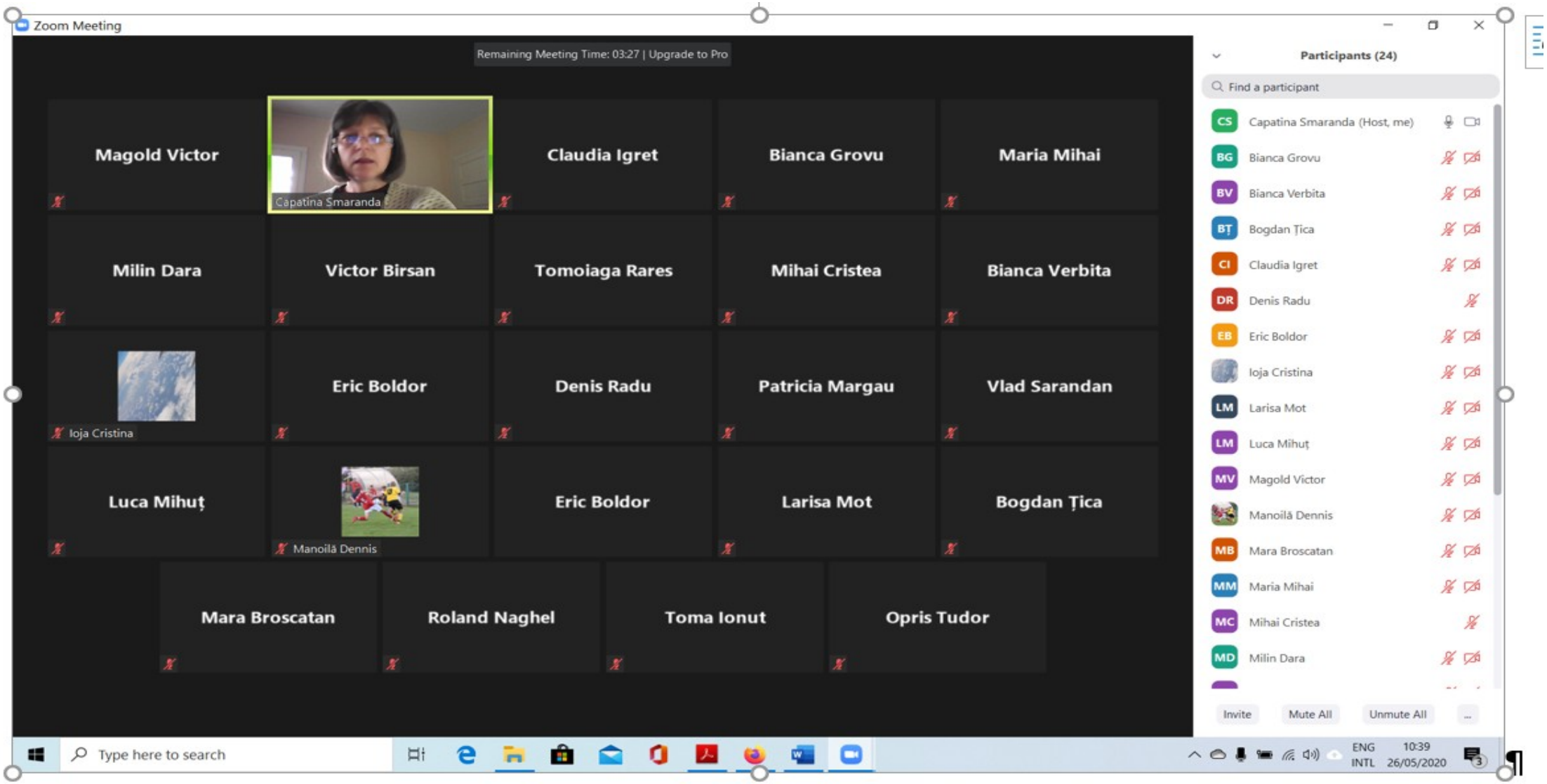
Google Meet 9D-FIZICĂ



Aplicația Zoom

- It is used for real time communication
- It has a free of charge variant that allows participants up to 500 within a limited time period of 40 minutes
- There is the possibility to interact in real time
- It also allows the creation of an interactive virtual board

Clasa 9C Aplicația Zoom

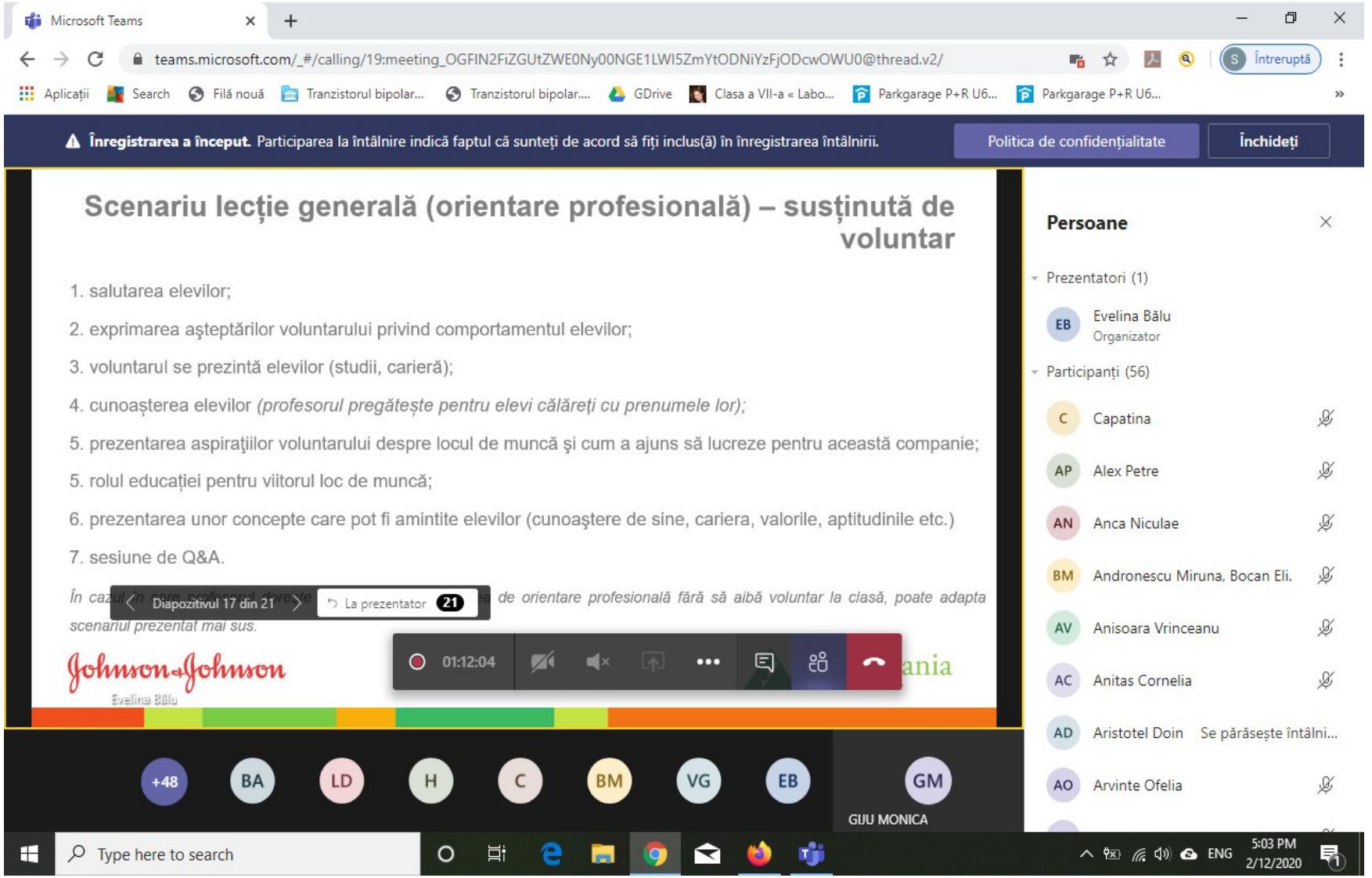


Microsoft Teams

- The platform benefits from a space of work on chat
- The teachers can share didactic materials and can post announcements
- The classes can be divided in smaller groups so that they can work on various projects.
- The teachers can create, share and asses students' homework

International proiect ”**Junior Achievement**”

Microsoft Teams



Edmodo

- The platform allows both classes and learning activities
- It allows parents to participate, thus facilitating efficient communication among the three parts: teachers, students and parents
- The teachers can create, share and asses tests and homework

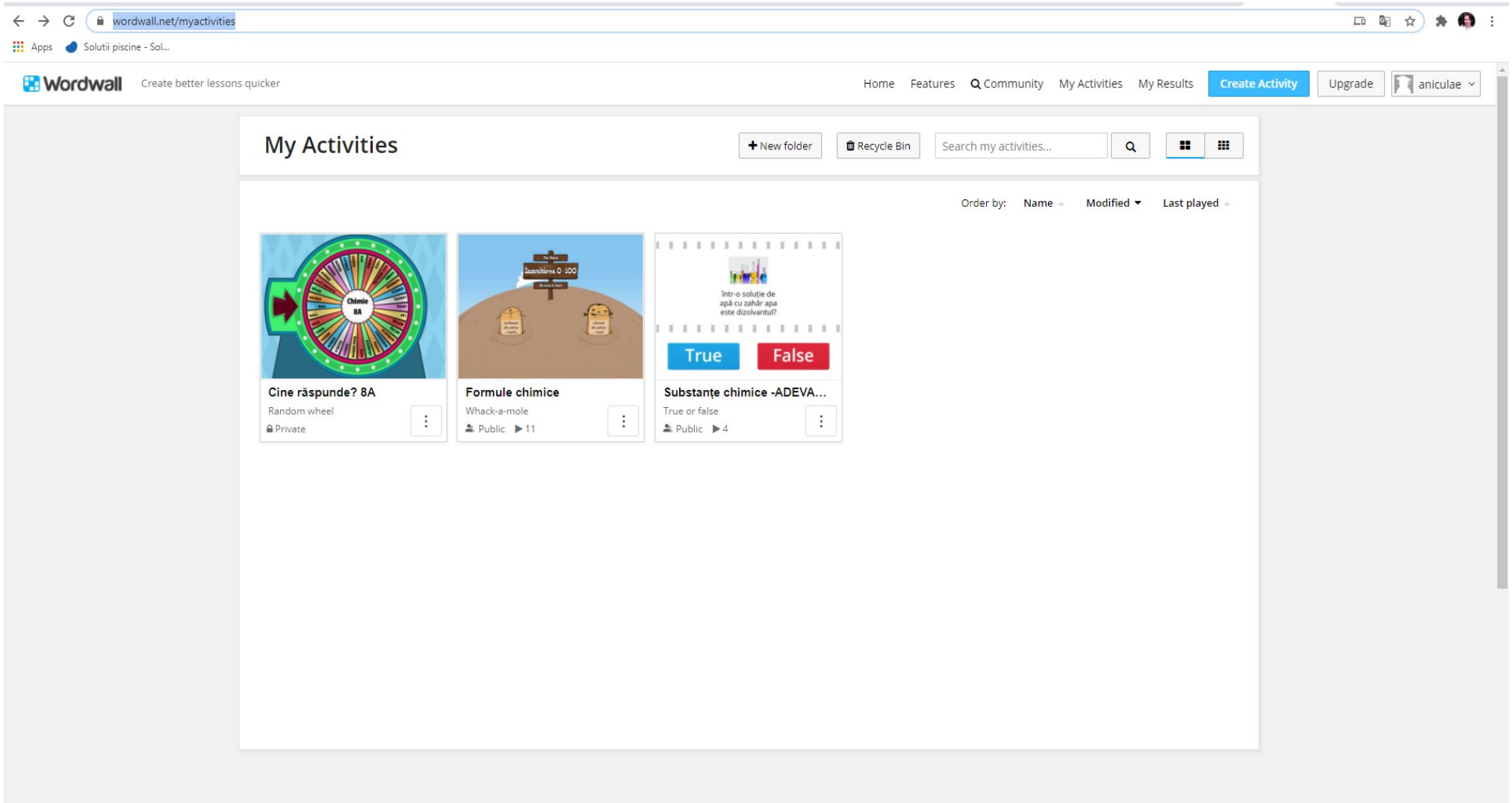
Easyclass

- Este pe lista cu platforme educaționale online pentru elevi recomandată de MEN
- Platforma permite gestionarea claselor și a activităților de învățare
- Oferă profesorilor posibilitatea de a transmite teme și de a le reaminti de evenimente esențiale precum predarea temelor sau apropierea unor teste
- Elevii pot posta, la rândul lor, materiale sau pot discuta pe marginea temelor de la clasă

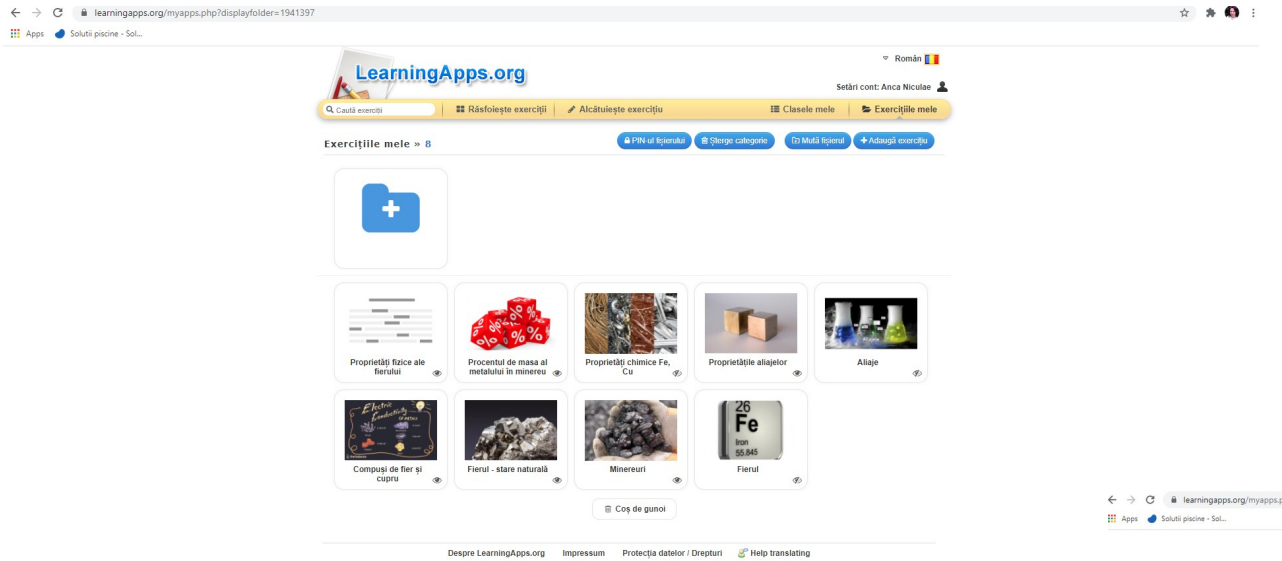
Creare de jocuri

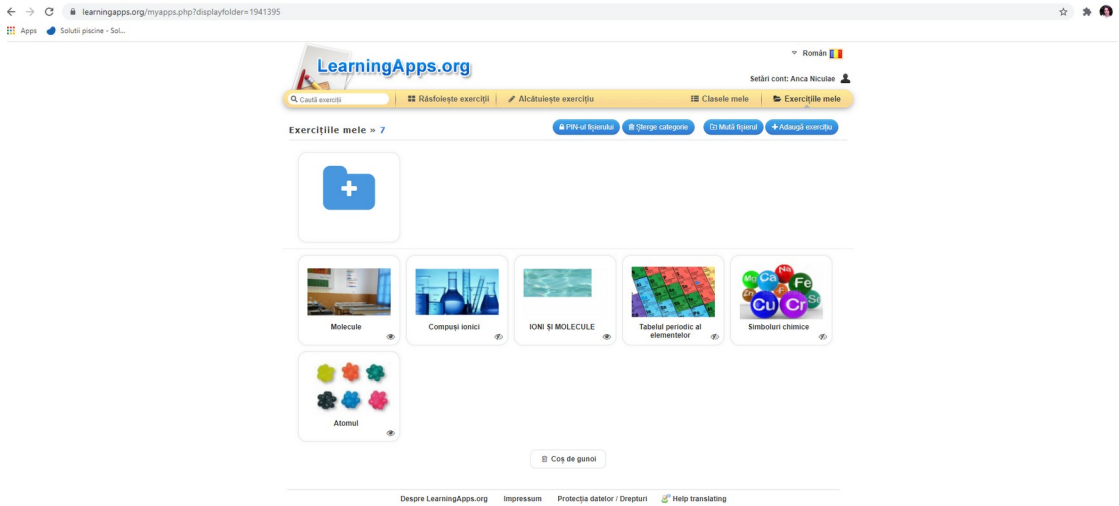
https://wordwall.net/
https://learningapps.org/createApp.php
https://kahoot.com/
https://www.purposegames.com/
https://crosswordlabs.com/
http://www.crickweb.co.uk/

https://wordwall.net/
https://wordwall.net/myactivities

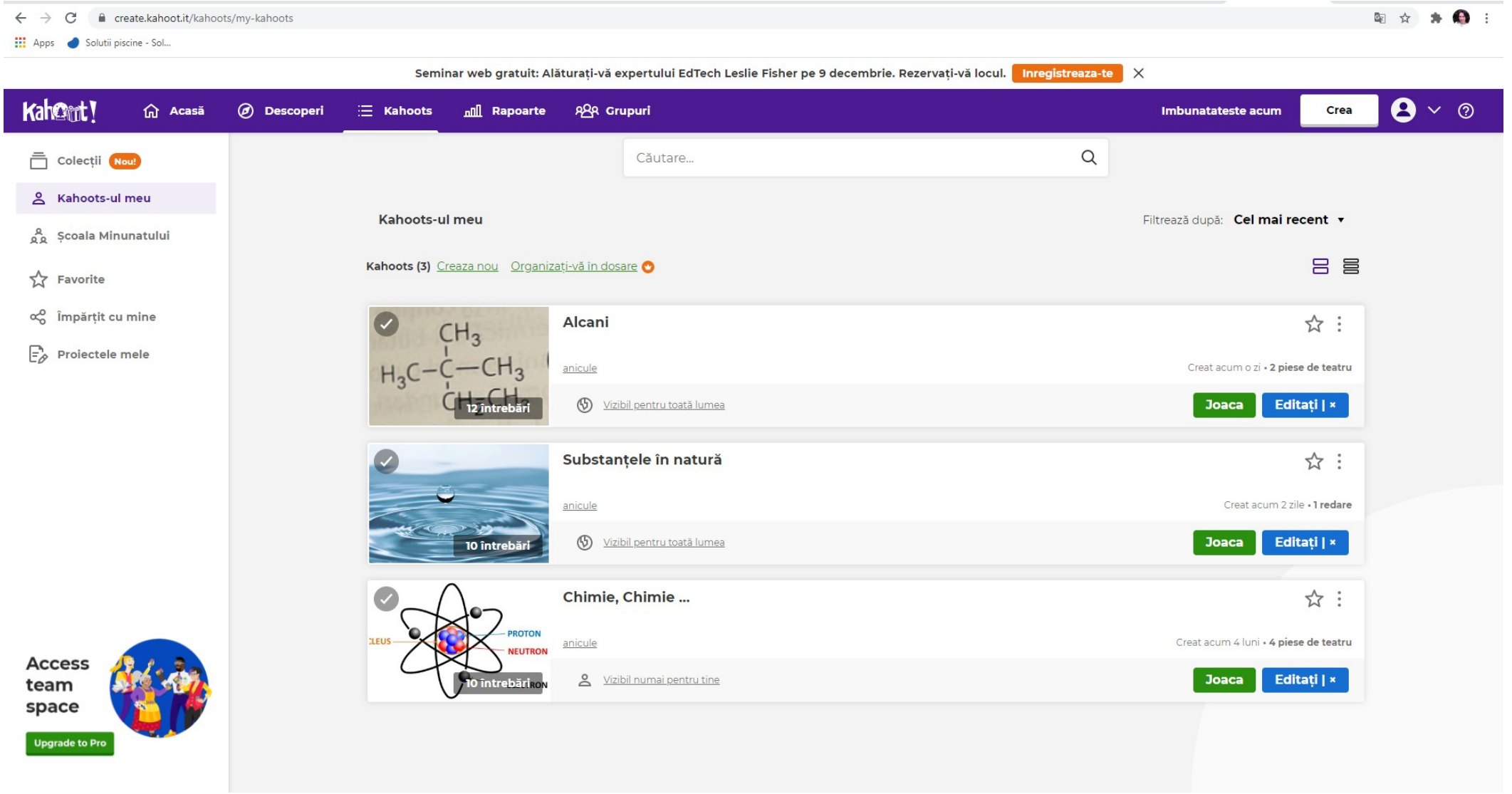


https://learningapps.org/createApp.php
https://learningapps.org/myapps.php

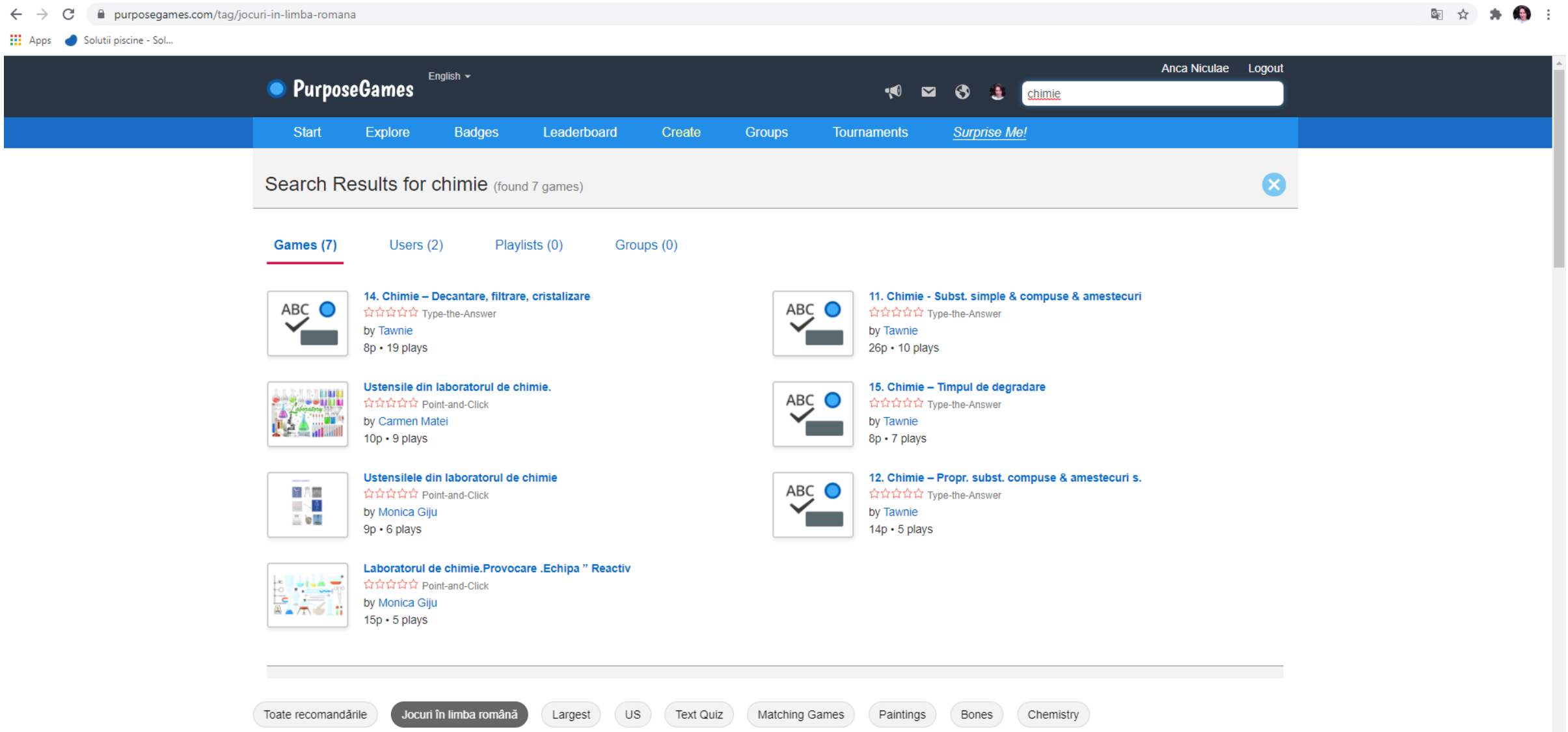




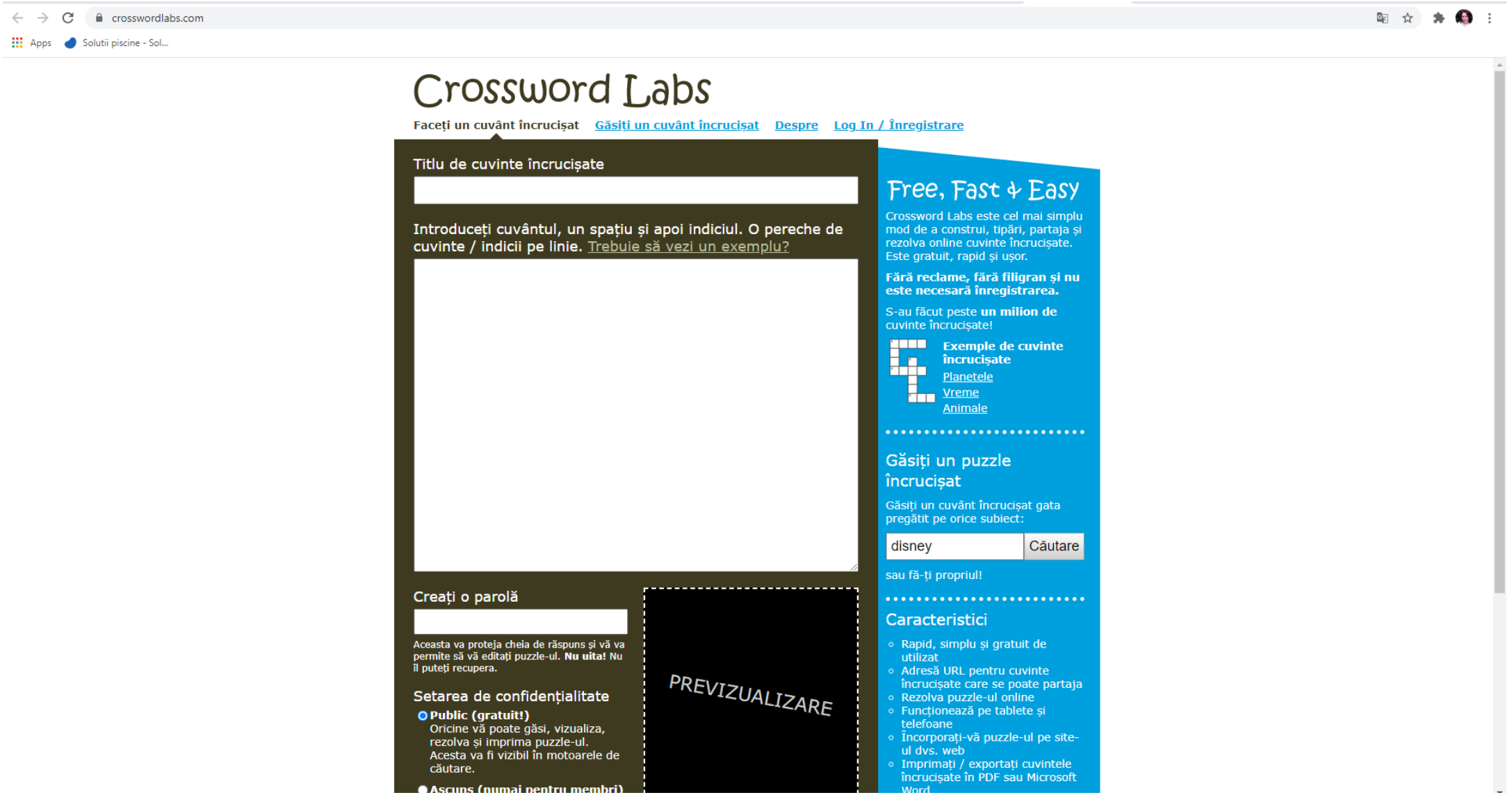
https://kahoot.com/
https://create.kahoot.it/kahoots/my-kahoots



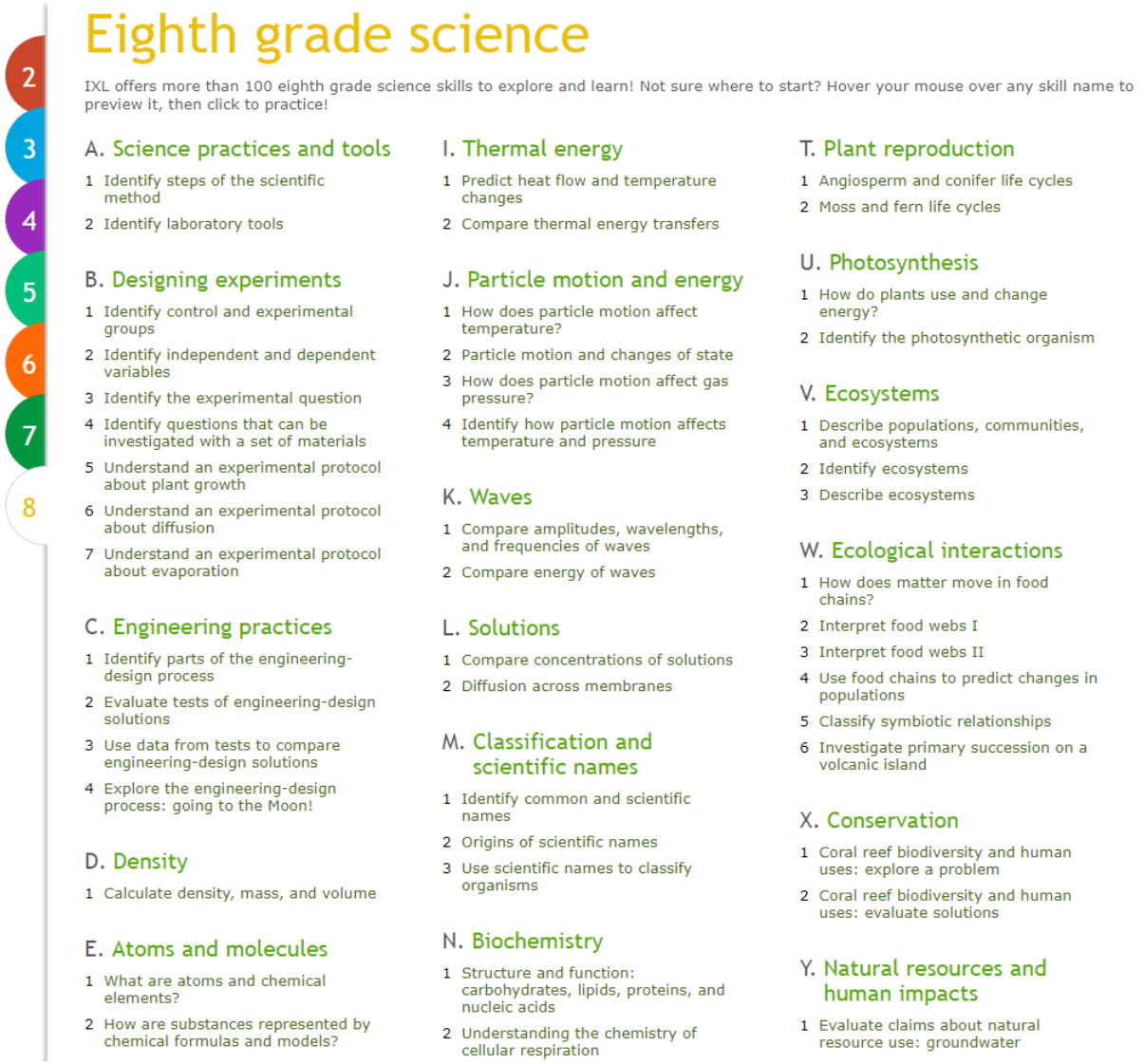
https://www.purposegames.com/



https://crosswordlabs.com/



http://www.crickweb.co.uk/
https://www.ixl.com/science/grade-8



2 3 4 5 6 7 8

Eighth grade science

IXL offers more than 100 eighth grade science skills to explore and learn! Not sure where to start? Hover your mouse over any skill name to preview it, then click to practice!

A. Science practices and tools

1 Identify steps of the scientific method
2 Identify laboratory tools

B. Designing experiments

1 Identify control and experimental groups
2 Identify independent and dependent variables
3 Identify the experimental question
4 Identify questions that can be investigated with a set of materials
5 Understand an experimental protocol about plant growth
6 Understand an experimental protocol about diffusion
7 Understand an experimental protocol about evaporation

C. Engineering practices

1 Identify parts of the engineering-design process
2 Evaluate tests of engineering-design solutions
3 Use data from tests to compare engineering-design solutions
4 Explore the engineering-design process: going to the Moon!

D. Density

1 Calculate density, mass, and volume

E. Atoms and molecules

1 What are atoms and chemical elements?
2 How are substances represented by chemical formulas and models?

I. Thermal energy

1 Predict heat flow and temperature changes
2 Compare thermal energy transfers

J. Particle motion and energy

1 How does particle motion affect temperature?
2 Particle motion and changes of state
3 How does particle motion affect gas pressure?
4 Identify how particle motion affects temperature and pressure

K. Waves

1 Compare amplitudes, wavelengths, and frequencies of waves
2 Compare energy of waves

L. Solutions

1 Compare concentrations of solutions
2 Diffusion across membranes

M. Classification and scientific names

1 Identify common and scientific names
2 Origins of scientific names
3 Use scientific names to classify organisms

N. Biochemistry

1 Structure and function: carbohydrates, lipids, proteins, and nucleic acids
2 Understanding the chemistry of cellular respiration

T. Plant reproduction

1 Angiosperm and conifer life cycles
2 Moss and fern life cycles

U. Photosynthesis

1 How do plants use and change energy?
2 Identify the photosynthetic organism

V. Ecosystems

1 Describe populations, communities, and ecosystems
2 Identify ecosystems
3 Describe ecosystems

W. Ecological interactions

1 How does matter move in food chains?
2 Interpret food webs I
3 Interpret food webs II
4 Use food chains to predict changes in populations
5 Classify symbiotic relationships
6 Investigate primary succession on a volcanic island

X. Conservation

1 Coral reef biodiversity and human uses: explore a problem
2 Coral reef biodiversity and human uses: evaluate solutions

Y. Natural resources and human impacts

1 Evaluate claims about natural resource use: groundwater

http://www.crickweb.co.uk/
https://www.ixl.com/science/grade-7

2 3 4 5 6 7 8

Seventh grade science

IXL offers more than 100 seventh grade science skills to explore and learn! Not sure where to start? Hover your mouse over any skill name to preview it, then click to practice!

A. Science practices and tools

1 Identify steps of the scientific method
2 Identify laboratory tools

B. Designing experiments

1 Identify control and experimental groups
2 Identify independent and dependent variables
3 Identify the experimental question
4 Identify questions that can be investigated with a set of materials
5 Understand an experimental protocol about plant growth
6 Understand an experimental protocol about diffusion
7 Understand an experimental protocol about evaporation

C. Engineering practices

1 Identify parts of the engineering-design process
2 Evaluate tests of engineering-design solutions
3 Use data from tests to compare engineering-design solutions
4 Explore the engineering-design process: going to the Moon!

D. Density

1 Calculate density, mass, and volume

E. Atoms and molecules

1 What are atoms and chemical elements?
2 How are substances represented by chemical formulas and models?

J. Particle motion and energy

1 How does particle motion affect temperature?
2 Particle motion and changes of state
3 How does particle motion affect gas pressure?
4 Identify how particle motion affects temperature and pressure

K. Waves

1 Compare amplitudes, wavelengths, and frequencies of waves
2 Compare energy of waves

L. Solutions

1 Compare concentrations of solutions
2 Diffusion across membranes

M. Classification and scientific names

1 Identify common and scientific names
2 Origins of scientific names
3 Use scientific names to classify organisms

N. Biochemistry

1 Structure and function: carbohydrates, lipids, proteins, and nucleic acids
2 Understanding the chemistry of cellular respiration

O. Cells

1 Understanding cells
2 Identify functions of plant cell parts

U. Photosynthesis

1 How do plants use and change energy?
2 Identify the photosynthetic organism

V. Ecosystems

1 Describe populations, communities, and ecosystems
2 Identify ecosystems
3 Describe ecosystems

W. Ecological interactions

1 How does matter move in food chains?
2 Interpret food webs I
3 Interpret food webs II
4 Use food chains to predict changes in populations
5 Classify symbiotic relationships
6 Investigate primary succession on a volcanic island

X. Conservation

1 Coral reef biodiversity and human uses: explore a problem
2 Coral reef biodiversity and human uses: evaluate solutions

Y. Natural resources and human impacts

1 Evaluate claims about natural resource use: groundwater
2 Evaluate claims about natural resource use: fossil fuels

Z. Rocks and minerals

Tests creation

https://quizizz.com/
https://www.proprofs.com/
http://www.triventy.com/
https://www.quizalize.com/
https://quizwhizzer.com/
https://asq.ro/
https://www.mentimeter.com/
https://testmoz.com/
https://knowt.io/
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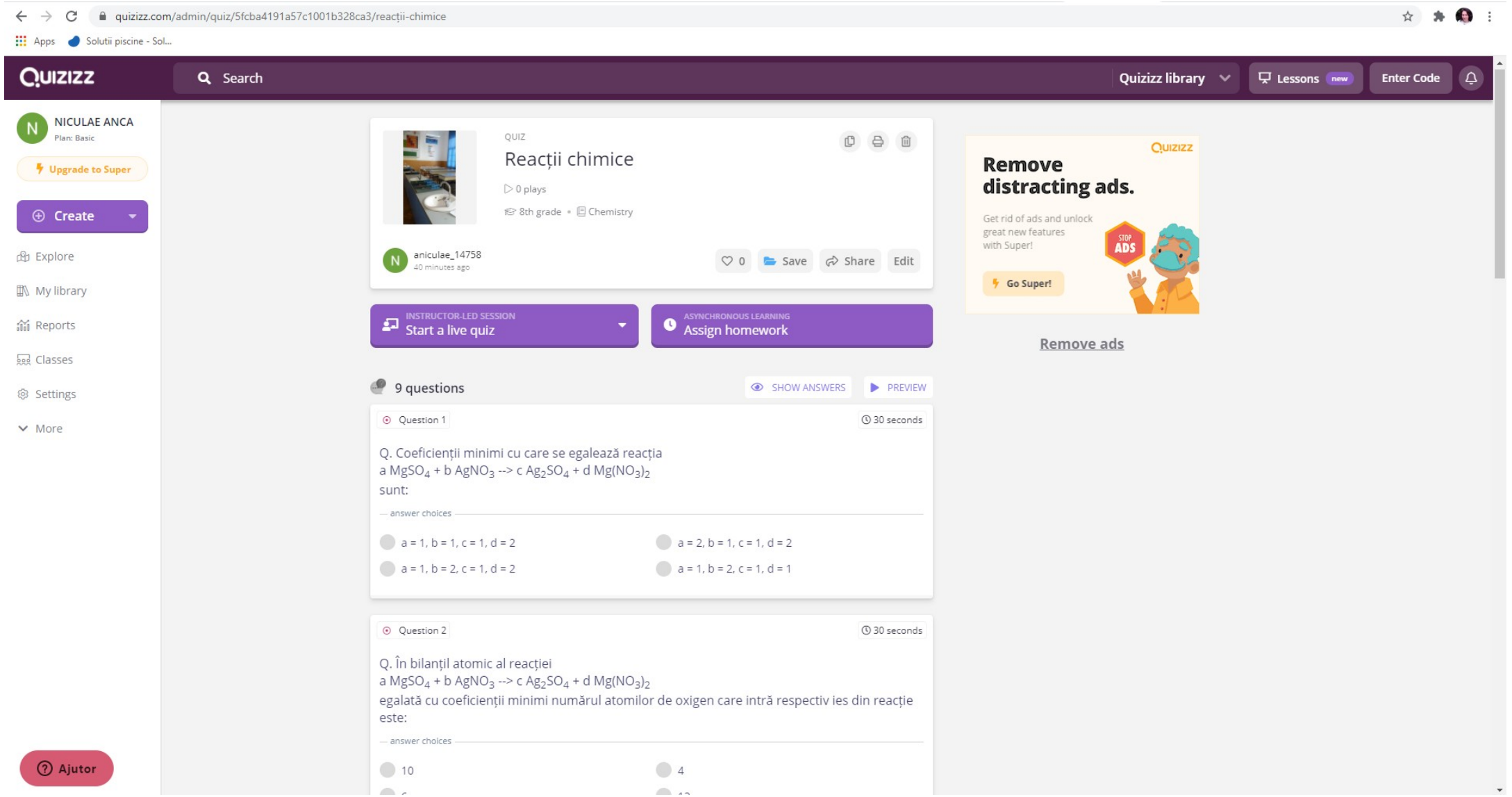
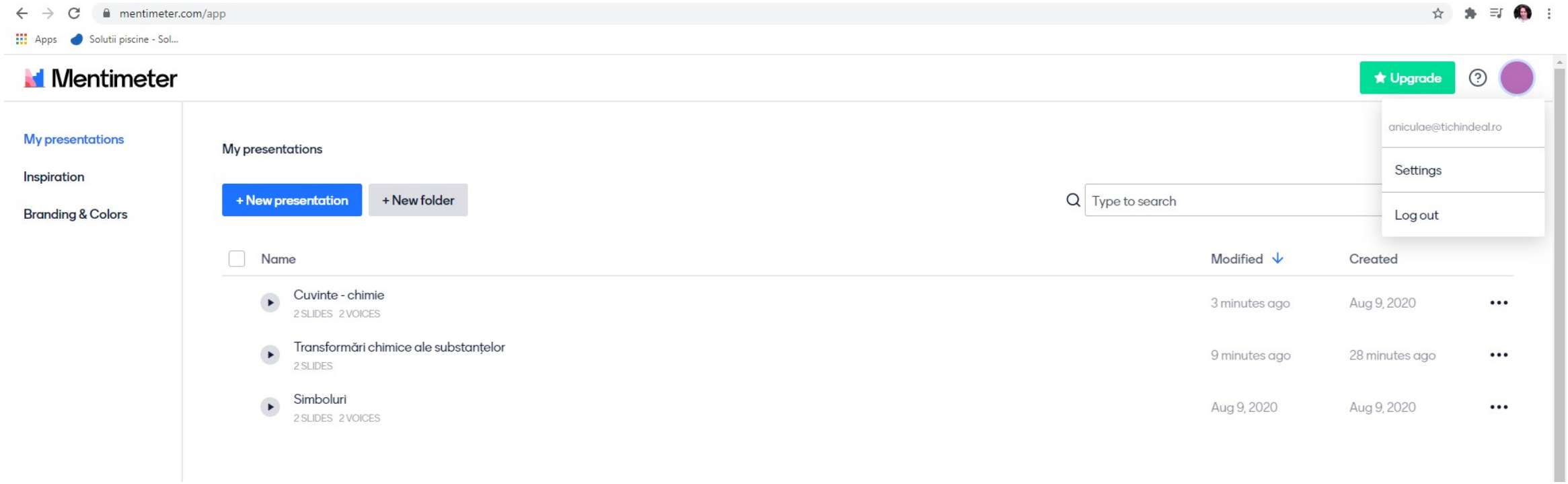


https://www.mentimeter.com/app



Experimentele virtuale

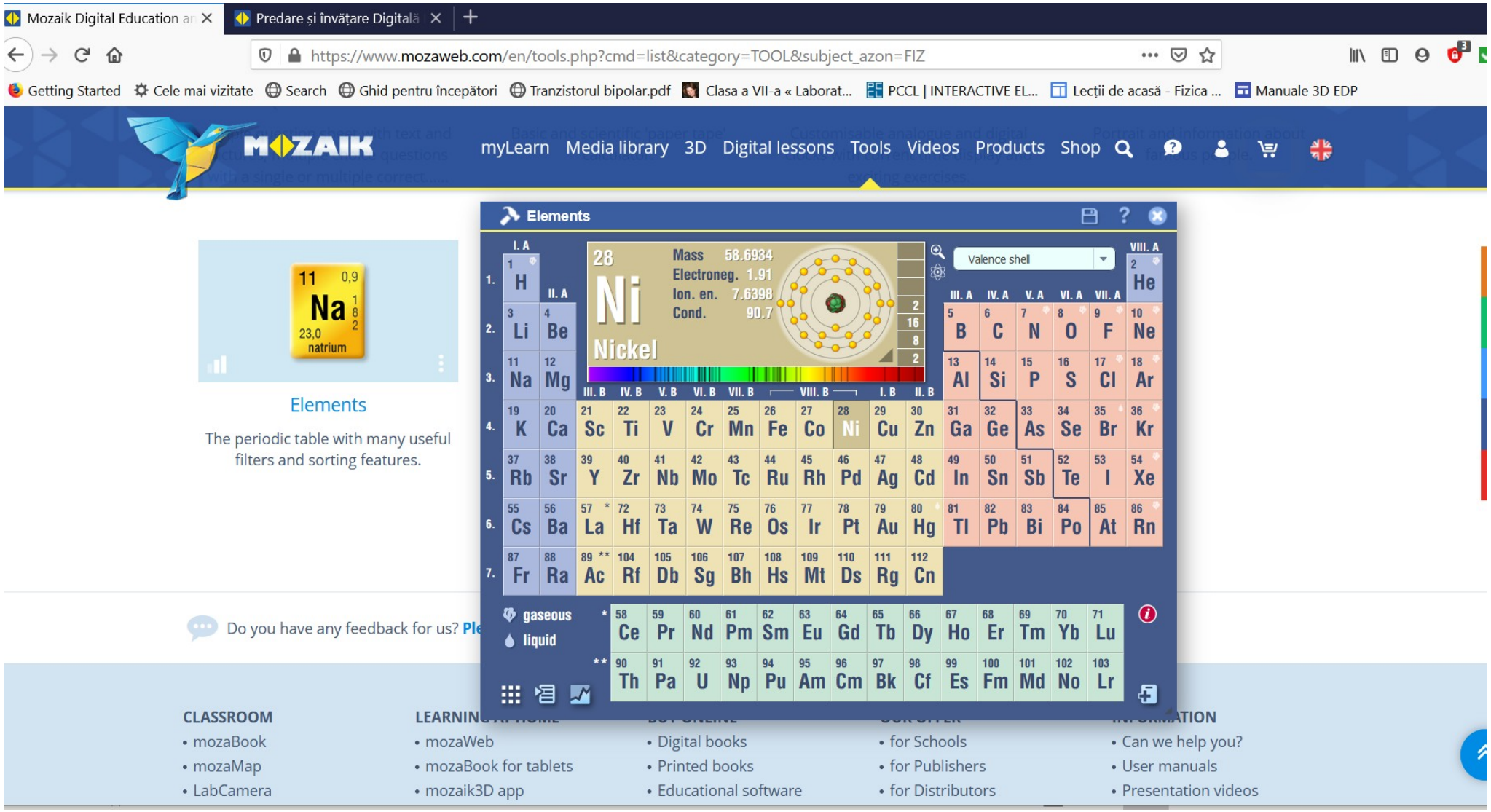
- The students can experiment any real situation, no matter the complexity degree or no matter how dangerous it could be. The simulations can be repeated until the science phenomenon is completely understood. Very important we can also talk about experiments that cannot be done in the school laboratory or those which were made under clasiical conditions.

- Different physics and chemistry measurements can be undergone, using simulation of the experiment or its modelation.

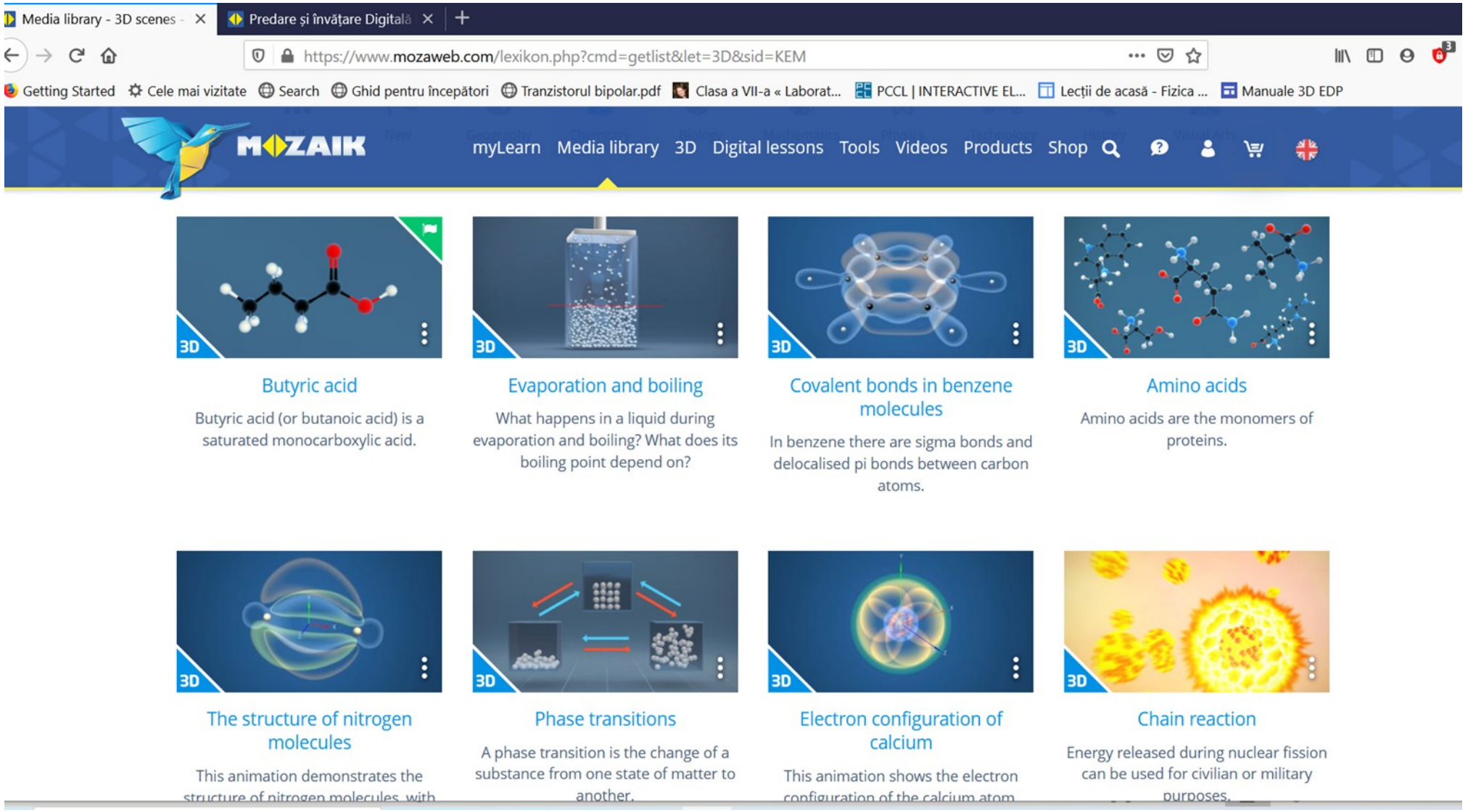
Experimentele virtuale

https://www.mozaweb.com
https://www.exploratorium.edu
http://galileoandeinstein.physics.virginia.edu
https://www.walter-fendt.de
http://www.physics-chemistry-interactive-flash-animation.com
https://www.vascak.cz
https://faraday.physics.utoronto.ca
https://iwant2study.org

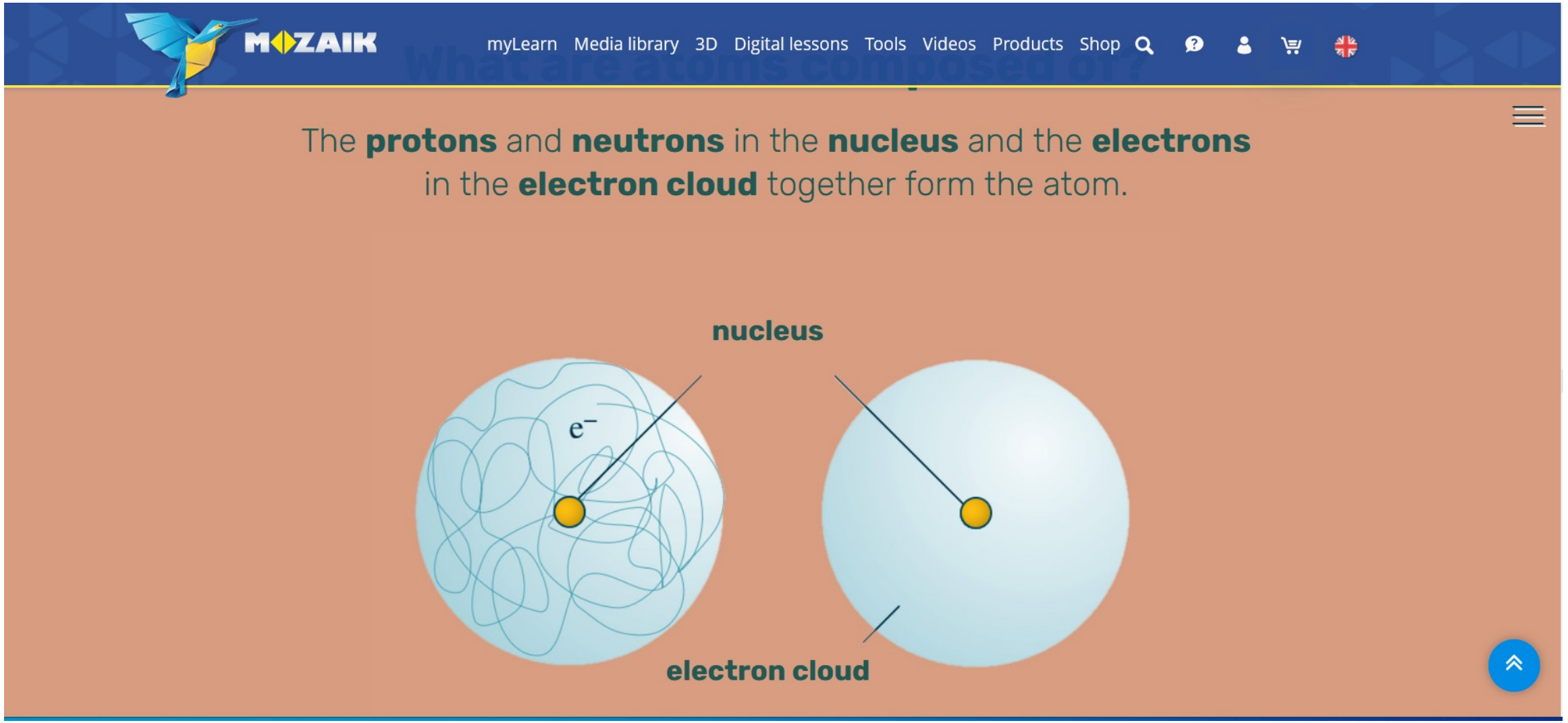
https://www.mozaweb.com/en/- Chemistry



https://www.mozaweb.com/en/- Chemistry



https://www.mozaweb.com/en/



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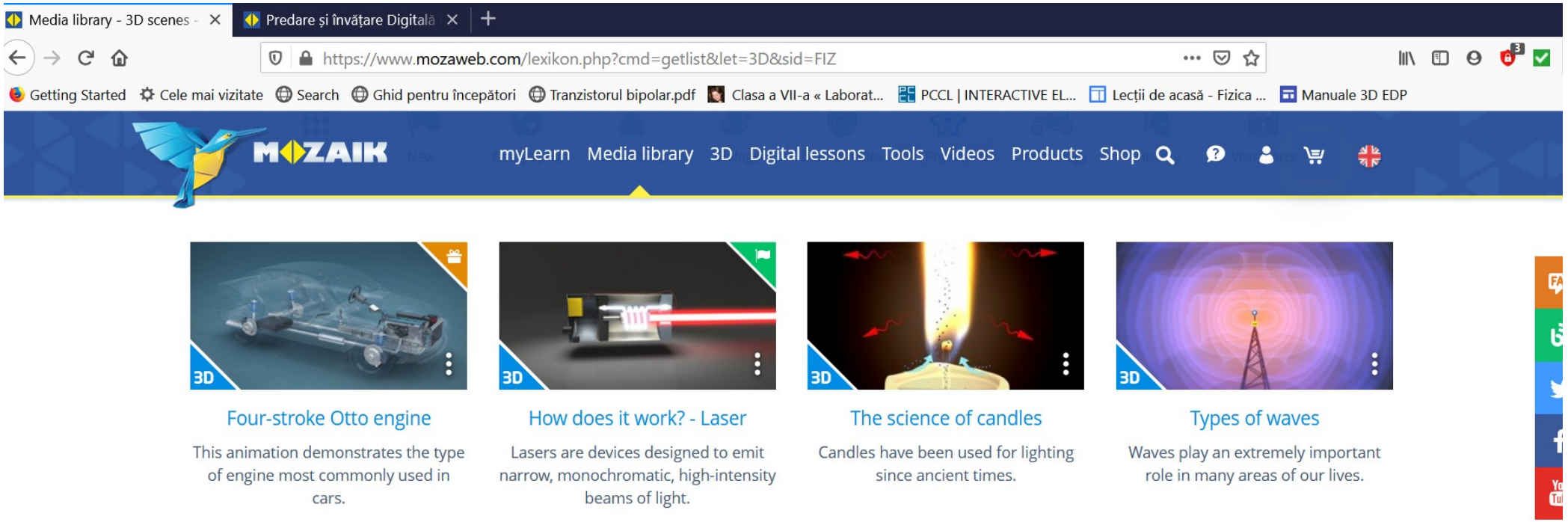

https://www.exploratorium.edu/explore

exploratorium.edu/snacks/saltwater-pentacell

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Saltwater Pentacell

Explore current events in electrochemistry.

Make your own battery! Create five simple cells from aluminum foil, copper wire, and saltwater, and connect them in series. Together, they produce enough voltage to light an LED.

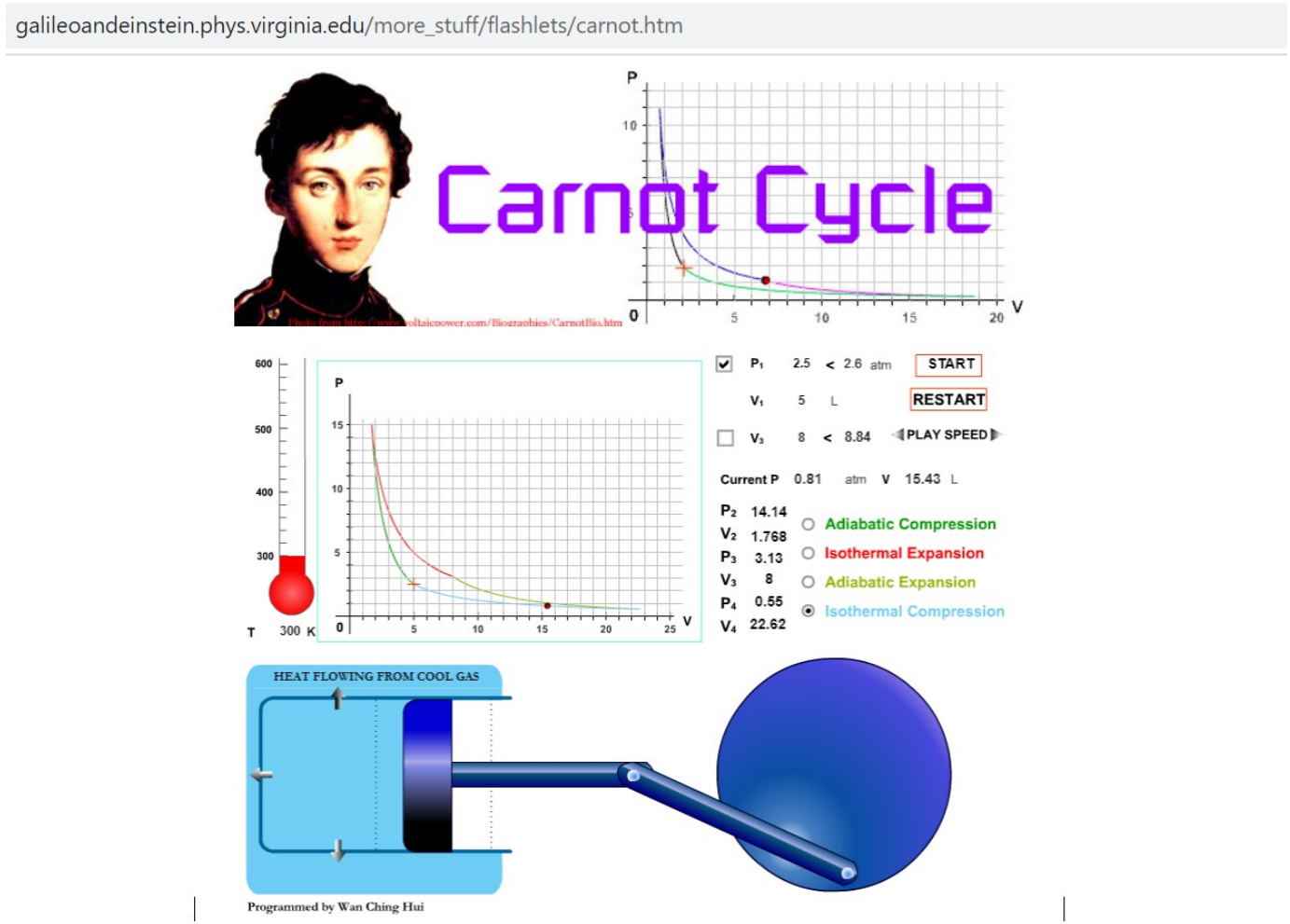
Grade Bands: 3-5 6-8 9-12

Subject: Chemistry: Materials & Matter, Combining Matter · Physics: Electricity & Magnetism, Energy

Keywords: battery electrode electrochemistry ion electron current voltage salt aluminum foil copper

http://galileoandeinstein.physics.virginia.edu/more_stuff/flashlets/home.htm

Flash animations to make learning physics easier



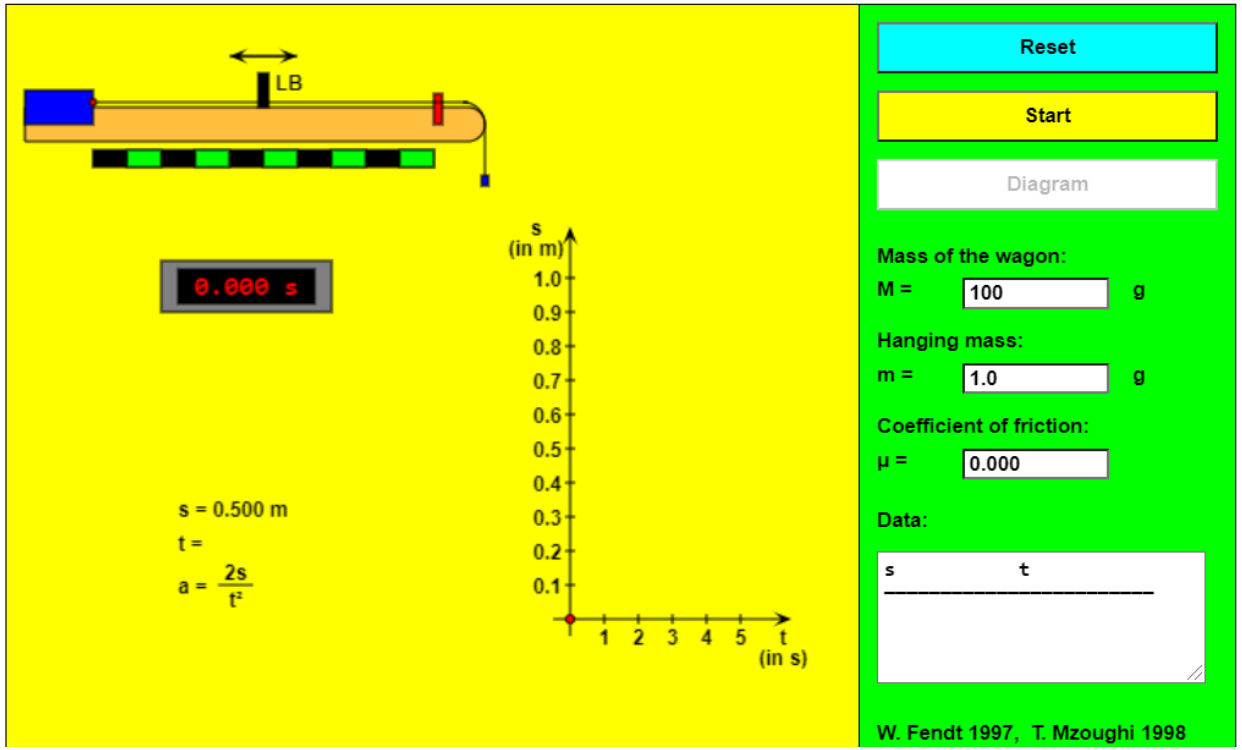
https://www.walter-fendt.de -Apps on Physics

Newton's Second Law Experiment

This HTML5 app simulates an air track glider setup, as it is used for experiments on constant acceleration motion. A gravitational acceleration of 9.81 m/s^2 was presupposed.

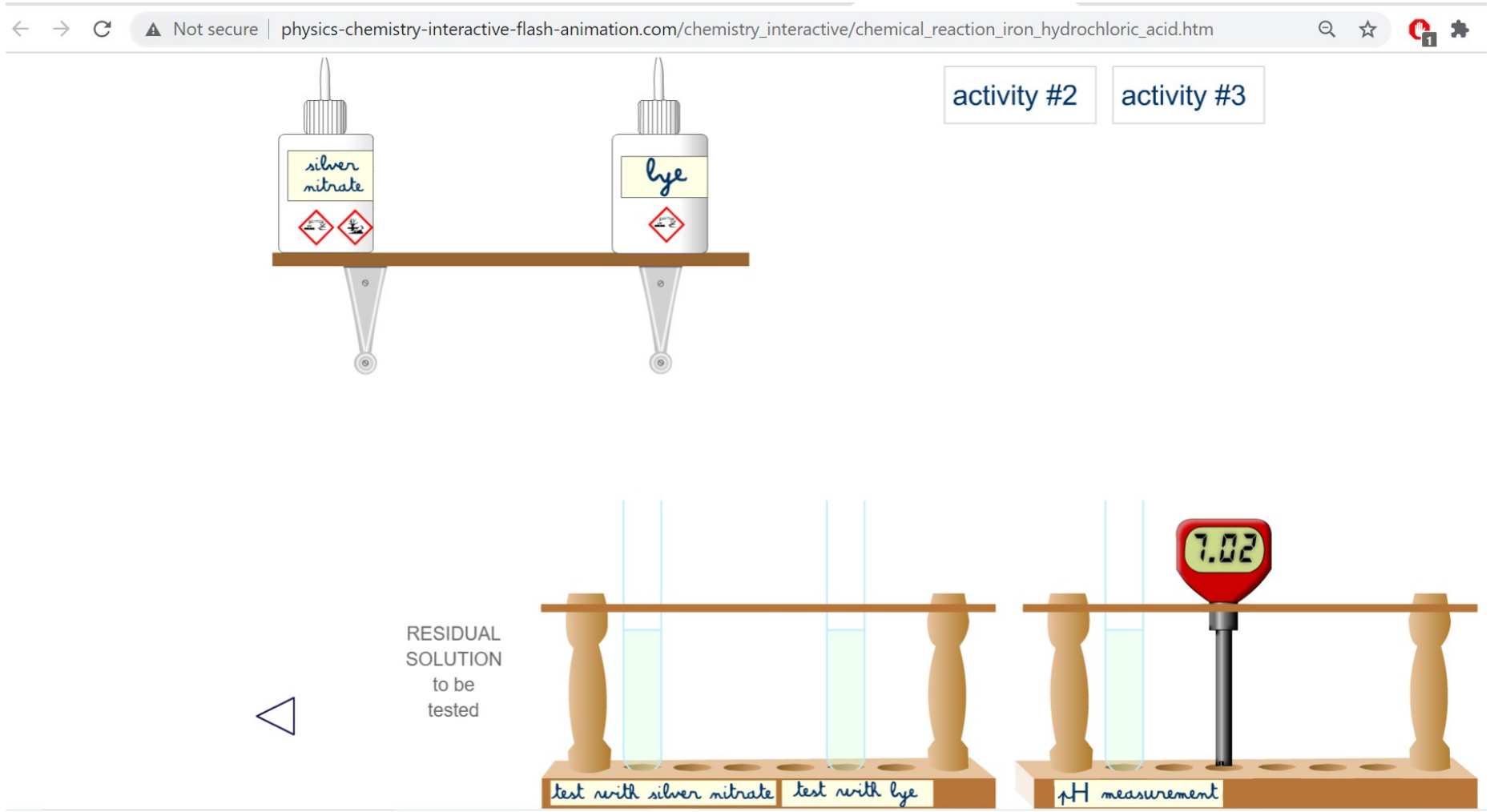
The mass of the wagon, the value of the hanging mass and the coefficient of friction (within certain limits) can be changed.

For one measurement you have to adjust the measuring distance (from the initial position to the light barrier LB, accuracy 5 mm) with pressed mouse button and to read the corresponding time (digital display, accuracy 1 ms). During the movement a red point in the t-s-diagram (time - displacement) indicates the present time and the covered distance. As soon as the measurement of time is finished, the pair of measured values will be marked on the diagram. After a mouse click on the "Record data" button the data will be registered on the list.

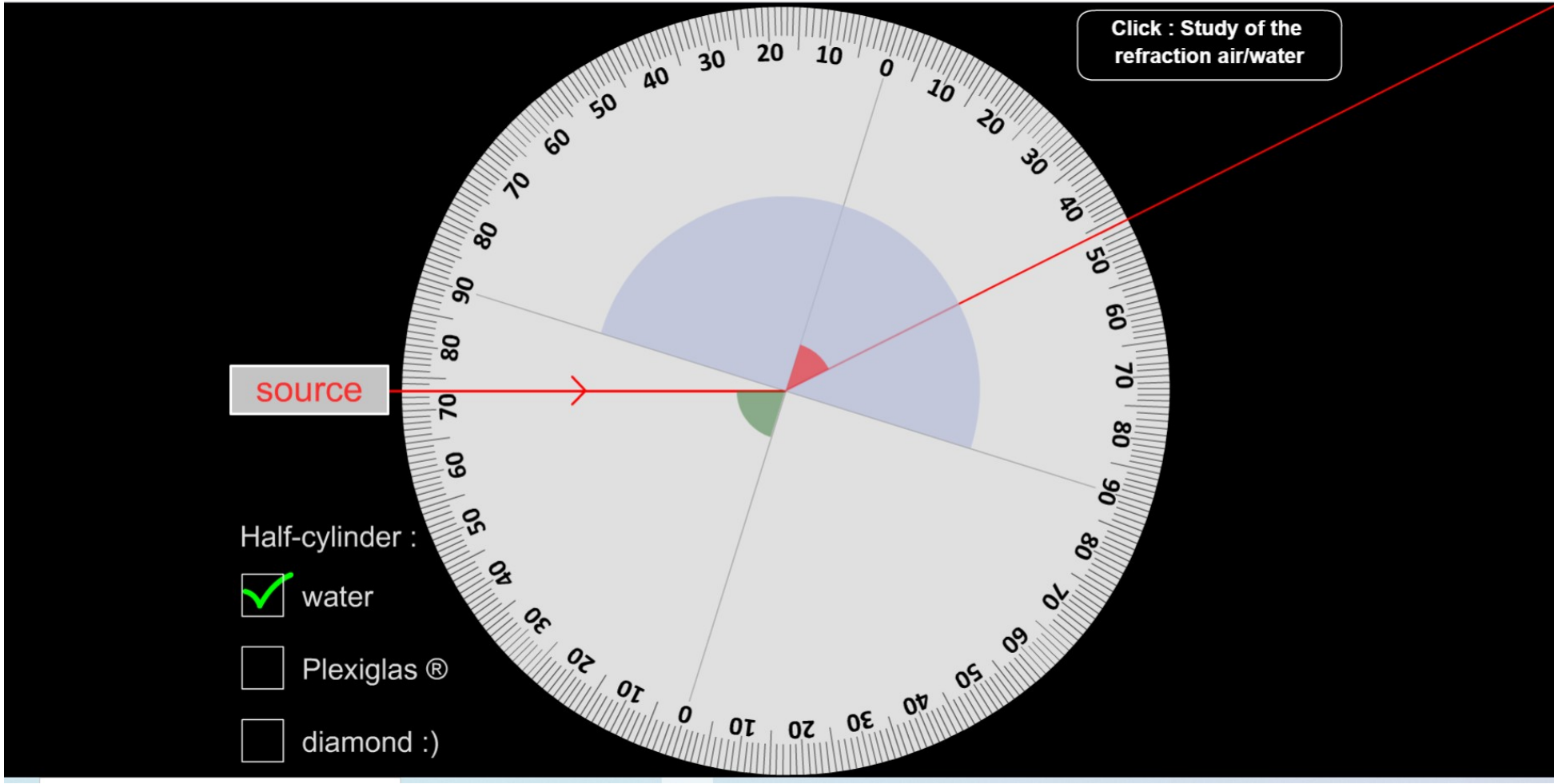


http://www.physics-chemistry-interactive-flash-animation.com/

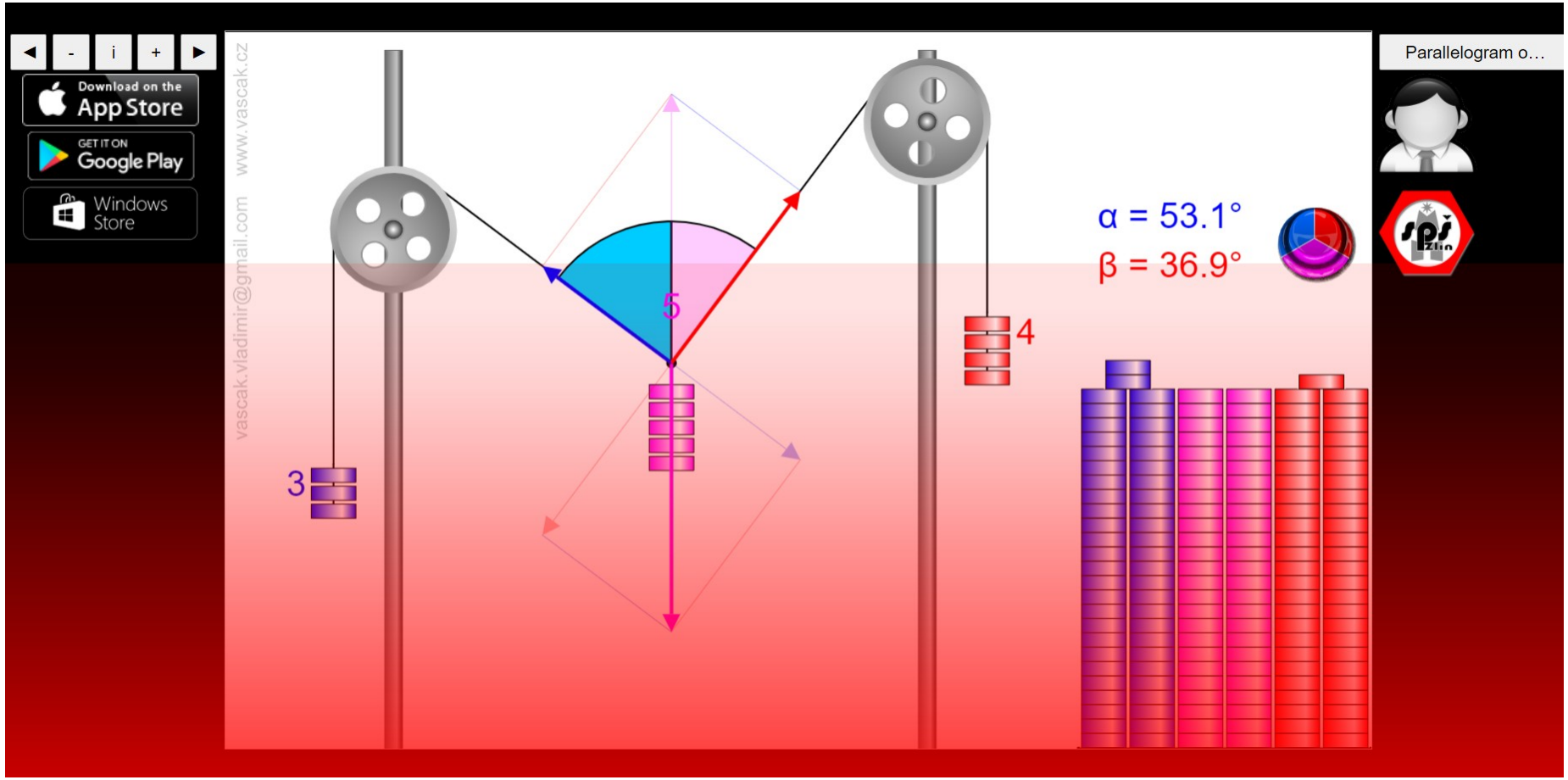
Flash animations and interactive exercises



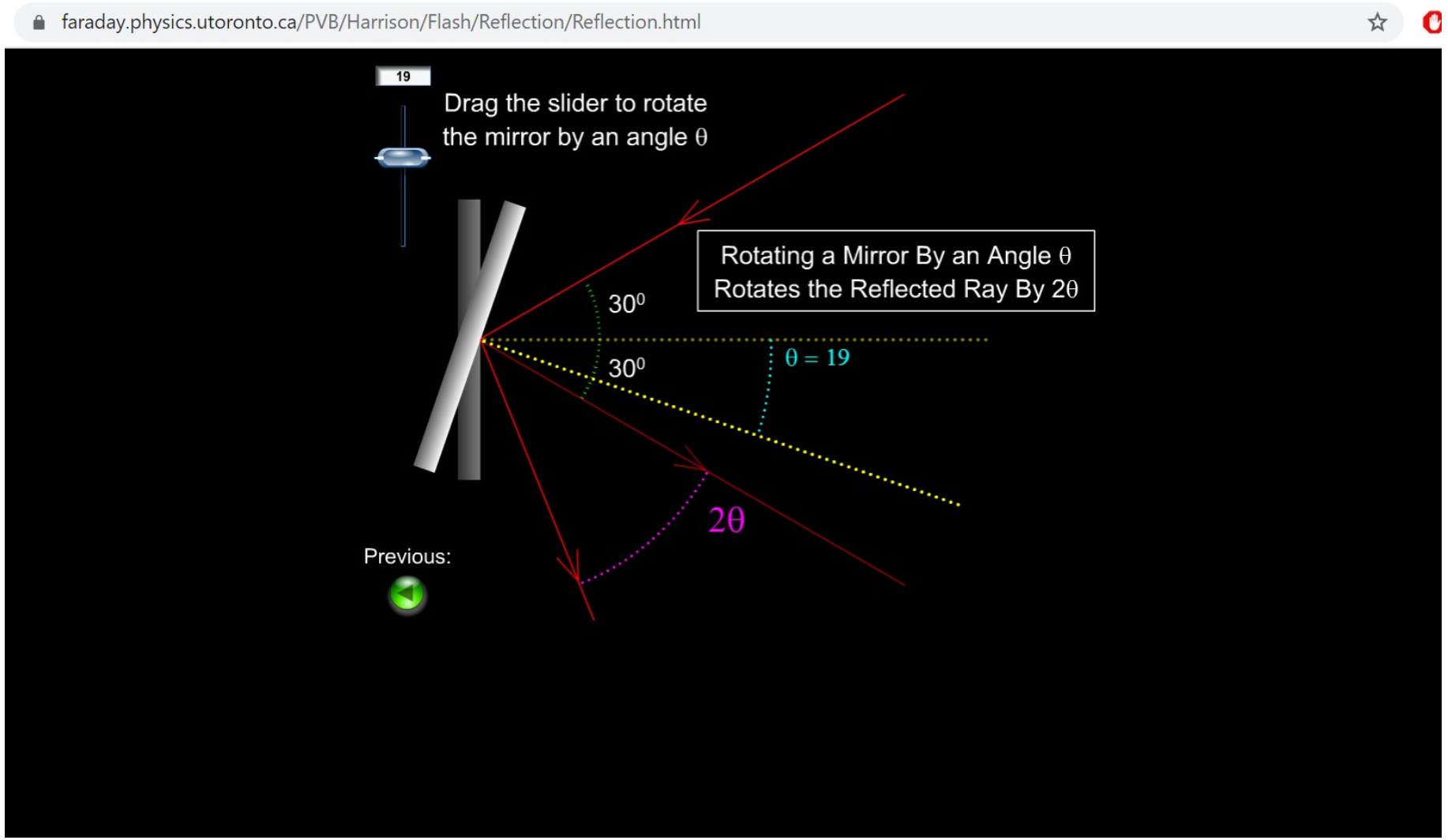
http://www.physics-chemistry-interactive-flash-animation.com/



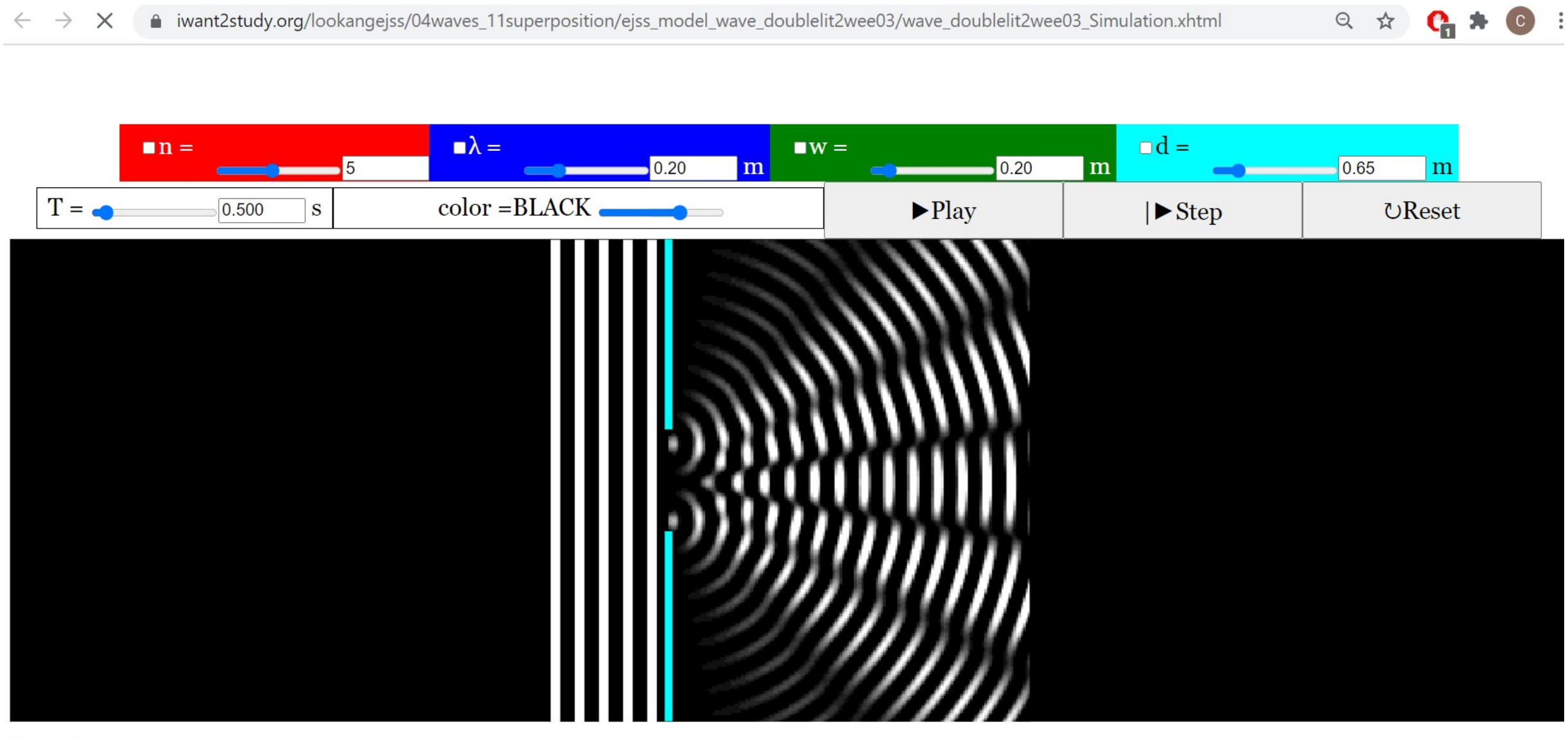
https://www.vascak.cz/physicsanimations.php?l=en



https://faraday.physics.utoronto.ca/PVB/Harrison/Flash/Reflection/Reflection.html



https://iwant2study.org/ospsg/index.php/interactive-resources/physics



Thank You For Listening