TEACHER'S PAGE

THIS IS THE PLACE IN WHICH WE'LL FIND MANY INTERESTING LINKS TO LEARN A BIT OF SCIENCE. ALONG THE COURSE, WE ARE GOING TO WORK DIFFERENT PAGES, VIDEOS, EXERCISES OR SONGS, AS WE GO FORWARD.

▪ **Unit 1: "Matter. Properties of matter. Mixtures"**

PROPERTIES OF MATTER

- This is a [link](http://schools.bcsd.com/fremont/5th_sci__matter_properties_of_matter.htm) related to matter and its properties

Here we have an excellent video about mass, volume and the relationship between them, called **density** , like you already know:

[**http://studyjams.scholastic.com/studyjams/jams/science/matter/properties-of-matter.htm**](http://studyjams.scholastic.com/studyjams/jams/science/matter/properties-of-matter.htm)

Now, take a listen. Can you guess each state of matter?

<http://www.youtube.com/watch?v=Bn3v_LUVIOI>

MIXTURES

Let's work the following links:

- [Mixture Basics](http://www.chem4kids.com/files/matter_mixture.html)

- [Solutions and mixtures](http://www.chem4kids.com/files/matter_solution.html)

- [Study Jams. Mixtures Video](http://studyjams.scholastic.com/studyjams/jams/science/matter/mixtures.htm)

SEPARATING MIXTURES

[Explanation of the main separating methods](http://www.eschooltoday.com/science/elements-mixtures-compounds/separation-of-mixtures.html)

VIDEOS: [video one](https://www.youtube.com/watch?v=JeaxMKPM8Z8) [video two](https://www.youtube.com/watch?v=L7ZQ0o1Gp5Y) [video three](https://www.youtube.com/watch?v=dq00mFj_nx0)

▪ **Unit 2: "States of matter and changes of state"**

**STATES OF MATTER AND CHANGES OF STATE:**

Notes:

- Solid.- Solid matter *maintains its own shape* and has a *fixed volume.* Molecules are *very close* together and bonds are *strong*.

- Liquid .- Liquid matter *does not maintain its own shape* but it has a *fixed volume.* Molecules are *close* together but bonds are *weak.*

- Gas.- Gases *take the shape and whole volume of their container.* Molecules are *not attached* to each other.

Solid Liquid = Fusion

Liquid Gas = Vaporisation

Gas Liquid = Condensation

Liquid Solid = Solidification

Solid Gas = Sublimation

Gas  Solid = Inverse Sublimation

 SUMMARY OF THE STATES OF MATTER and some of their properties, check out this video again.
<http://www.youtube.com/watch?v=k7Vdf8CuppI>

 See what happens to the molecules when you increase the temperature.

<http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks3/science/changing_matter/index.htm>

 Which ice cube will melt faster? What does this mean about the material's conductivity?

<http://www.youtube.com/watch?v=ZoyVTEHhpxw>

 Now, try to memorize this next song about the properties of matter! It starts at 0:45.
<http://www.youtube.com/watch?v=uJOGy0dgmUU>

 Here's a song to help you remember the first 10 elements of the periodic table. Good luck!
<http://www.youtube.com/watch?v=uJGrwWOWt3Q>

 This is another cool song about the elements! Find out what sand and chalk are made of.

<http://www.youtube.com/watch?v=d0zION8xjbM>

 Songs to learn:

<http://dotsub.com/media/cbb3a388-a3e3-4990-bca4-65325522f78c/embed/>Click on DotSub on the bottom to see the the subtitles.

<http://www.youtube.com/watch?v=Bn3v_LUVIOI>

<http://www.youtube.com/watch?v=uJGrwWOWt3Q>

**ATOMS :**

Notes:

- All matter is made up of atoms!

- A molecule is formed from a group of atoms.

- An atom is made up of protons, neutrons, and electrons.

- Matter is either a pure substance or a mixture.

Pure substances:

- Elements – substance made from the same atom ex. oxygen, carbon

- Compounds – substance made from different atoms ex. salt, sugar, water

- Mixtures:

- Homogeneous – mixtures where you cannot identify the components ex. lemonade, sea water

- Heterogeneous – mixtures where you can identify each component ex. salad, cereal.

 Videos:

At 8:00 minutes, our crazy scientist, **Bill Nye**, shows us the difference between atoms and molecules using letters and words for examples.

**PART 1** about 12:30 minutes. Proportions, size and other properties of atoms are described.

<http://www.youtube.com/watch?v=AYBw2Ye0gYY>

**PART 2** about 9:30 minutes. Differences among atoms, Periodic Table, and a bit of molecules. It can be shown up to the middle.

<http://www.youtube.com/watch?v=VmoZ4IG0lhQ>

At 1:06 minutes, the crazy scientist makes several molecules using different elements. \*Question: What is water made of?\* If you don't remember, look at the periodic table in the workbook.

<http://www.youtube.com/watch?v=Ls5e6t8DNZs>

The Atoms Family ***singing*** about how small atoms are. They look so happy! ;-)

<http://www.youtube.com/watch?v=D-iPPwDAk1Q>

All matter is made up of atoms and molecules. Here you can see the difference between solids, liquids, and gases.

<http://www.youtube.com/watch?v=k7Vdf8CuppI>

Finally, a fun example of changing states of matter, featuring GLASS! What state of matter is glass? Is it a solid, liquid, or gas?

<http://www.youtube.com/watch?v=HAPc6JH85pM>

▪ **Unit 5: "Motion and velocity"**

Let's see what is motion in this link:

<http://www.physics4kids.com/files/motion_intro.html>

Difference between velocity and speed:

<http://www.scienceforkidsclub.com/velocity.html>

<http://www.physicstutorials.org/home/mechanics/1d-kinematics/speed-velocity-average-and-instantaneous-speed-and-velocity>

Laws of motion:

<http://www.dkfindout.com/uk/science/forces-and-motion/laws-motion/>

Let's see the following .swf links to study some *Motion Diagrams*:

<http://glencoe.com/sec/science/physics/ppp_09/animation/Chapter%203/Velocity-Time%20Graphs.swf>

<https://emedia.rmit.edu.au/learninglab/sites/default/files/Motion_Graphs%20of%20Motion.pdf>

RECURSOS EN ESPAÑOL

**UNIDAD 2**

- [CAMBIOS DE ESTADO DE LA MATERIA (recurso en español)](http://recursostic.educacion.es/multidisciplinar/itfor/web/sites/default/files/recursos/cambiosdeestadodelamateria/html/recursos_tic.html)

**UNIDAD 3**

- [LA ENERGÍA (recurso en español)](http://recursostic.educacion.es/secundaria/edad/2esobiologia/2quincena1/2q1_index.htm)

- [EJERCICIOS DE ENERGÍA CINÉTICA Y POTENCIAL](http://www.raizcuadrada.es/index.php/energia-2o-eso-ejercicios/)

- [ANIMACIONES DE ENERGÍAS RENOVABLES Y NO RENOVABLES](http://cienciasnaturales.es/ANIMACIONESGEOLOGIA.swf)