The Monthly STEM

Student's favourite newspaper **January 2018**

Monthly edition related to the eTwinning project "THE MONTHLY STEM"

https://twinspace.etwinning.net **Follow us**

eTwinning STEM kit Gigo S4A

(Greece, High School of Thermi)

STEM activities provide opportunities for skills development, encouraging children to respond to queries and participate in pedagogical activities on science, mathematics, engineering and technology. It is really impressive to change the involvement and interest shown by children with STEM scientific fields. By applying STEM education through the projects, trainees learn to suspend themselves in the process of solving genuine problems and acquire skills related to the international trend in education as they focus on critical thinking in the working group (co-operation), and have been reported to reduce the knowledge gap between trainees from different countries. The aim of the course is to introduce the practical Robotics with the extraordinary learning of physics, technology, mathematics and engineering (STEM), without theories and unnecessary terminology, and through analytical and problem-solving methods. At the same time, it enables the development of innovation skills, algorithmic & programming standards and team spirit demonstration.Youtube channel

The bed of Fachir

(Romania, Technological High School „Iorgu Vârnav Liteanu" , Ilinca Onofrei, VII)

The bed of Fachir is represented by a very large amount of sharp nails, with the same distance between them. If a person sits on the bed horizontally, that person makes contact with the nails, but he or she feels no pain.We made this experiment at the House of Experiments, in the trip organized by our teacher. The explanation is simple: The pressure is varying inversely proportional based on the surface. Because there are over 1000 nails, the surface is large and the pressure is low, so there is no pain.We used sharp thumbtacks, knives with very small blade to obtain high pressure, without feeling pain. (only light sensations).If we are moving through the desert we prefer "tracked" vehicles because we won't sink in the sands. We prefer large shoulder straps at the backpack because it doesn't hurt.In the winter we are happy to moves with the ski on the snow. Without these the boots would sink deep in the snow.The Egyptian pyramids resisted for centuries because they have a large base foundation.We successively set a notebook, on three different angles, perpendicular on a smooth surface with corn powder (hominy). In this way we

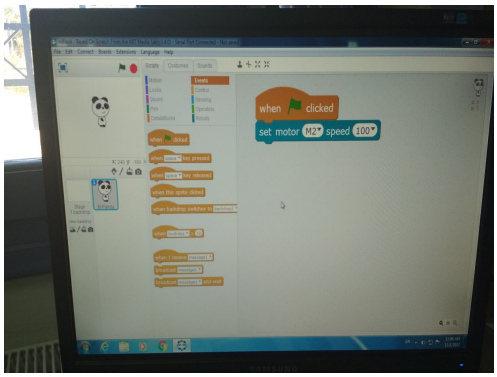
How an m-bot turns using scratch

(Greece, High School of Thermi)

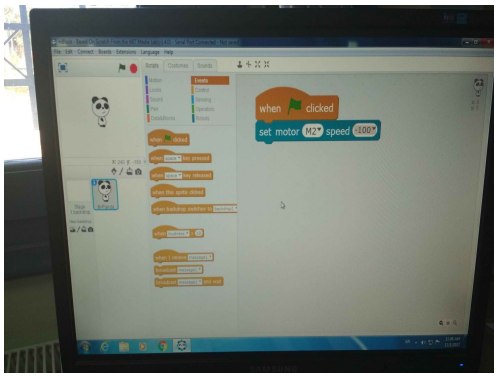
In the following experiment we will observe how an m-bot turns using scratch.

A robot can turn in four ways.

a) By moving one of its two wheels towards the direction we wish.



b) By moving its wheel in the reverse mode.



c) By moving its wheels in the same direction using different speed.

The Miracle Baby

(Daniel Almansa and Alvaro Dominguez - CEIP Jose María de la Fuente - Spain)

A baby of only 28 weeks and 400 grams get survive.

Manushi, a little Indian girl, is called a “miracle baby”. Why? Because Manushi is the smallest baby ever born in the world, and after a difficult beginning of her life, now she is alive. Now we are going to know her story.
Manushi was born by practicing an emergency cesarean section after her mother became very ill and her life was in danger.
She came to the world with only 28 weeks of gestation (the normal gestation period is about 40 weeks, that is, about 9 months). She was born with only 400 grams (the weight in a healthy baby at birth is about 2.5 kilos and above). At birth, she was only 21 centimeters tall (the measure in a healthy baby at birth is about 50 cm on average). At this moment, she was very unlikely that she would survive, but she got to survive and she went out of hospital with seven months of life and with a weight close to 2.4 kilos. However, it is still early to know if it will have any sequels.
A child is considered premature when it is born before it reaches 37 weeks of gestation, and Manushi is an extreme case because she was born with only 28 weeks, less than 7 months. She was a great premature, that is, babies born below 28 weeks and less than a kilo of weight. Within this group, those babies who weigh less than 500 grams are called miracle babies.
The mother suffered dangerously high and uncontrollable blood pressure during her pregnancy, and an ultrasound test revealed that there was very little blood flow to the placenta. Doctors took the decision to perform an emergency cesarean when she was observed exactly the effects of pressure. At the minimum surface, the notebook sank the most in the powder. At the largest surface the footprint of the notebooks can be barely seen.

A foetus with down syndrome and its healthy twin reveal

(Maria Angela López and Alejandra Ocaña - CEIP Jose María de la Fuente - Spain)

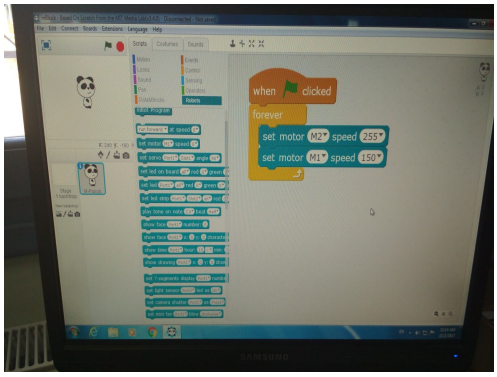
A new study sheds light on how the extra chromosome 21 modifies the balance of the entire genome, thus causing Down syndrome. The scientists compared the expression of genes from a pair of identical monozygotic siblings in which only one of them had trisomy 21, which only happens in one in 385,000 cases.

A new work, published in the latest issue of the journal Nature, has compared the transcriptomes - the way in which genes are expressed - of a pair of identical human twins in which only one of them had Down syndrome.

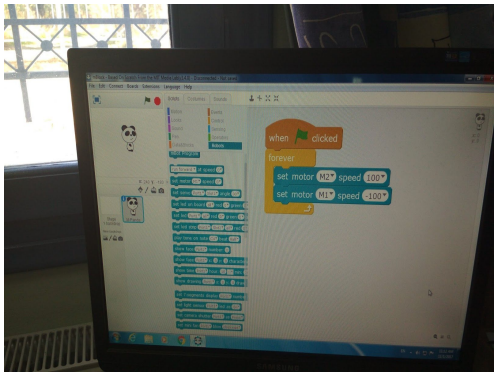
It is very rare that a child has trisomy on chromosome 21 and his monozygotic brother does not; it only happens in one of every 385,000 cases. Before abortion, the parents of the study twins gave their consent so that the scientists could extract cells from both fetuses. Thanks to this, a group of researchers from Spain, Switzerland, Holland and France, led by the University of Geneva (UNIGE), have detected a 'flattening' of the levels of gene expression of the entire genome in the affected fetus. That is, the expression of the genes was altered through each chromosome, not just the 21.

The error in the distribution of chromosome 21 can take place right after the fertilized egg divides into two

To compare the different levels of gene expression between the twins, the researchers used modern



d) By moving the wheels in different direction.



The robot can also turn by combining all the above ways.

We love STEM

The Birth

(Jorge Ruiz - CEIP Jose María de la Fuente - Spain)

Natural or vaginal birth is a physiological process that announces the birth of the child. Is when the baby out of the mother's body. The process usually last between 8 to 12 hours.
Sometimes arrive problem, so it is necessary to perform a cesarean section.

The preparation for the birth is very important for the mother, because she will arrive more confident and calmer to the birth.
The stages during labour are:

1er stage

The signs that indicate that a woman will give birth are: the contraction of the uterus to dilate and the amnion breaks the liquid around the foetus is expelled.

When this happens the mum must go to the hospital very fast. At first the

only 28 weeks pregnant. The girl, whose foot was of the same size of an adult nail, did not breathe at birth (her lungs mature at 34 weeks), but her family decided to try it, so she was connected to an artificial respirator and was in hospital with intensive care. Her skin was as thin as paper and her organs were not completely functional. There was a big risk and Manushi was in danger.
The head of neonatology in the hospital that led the team that saved the girl confesses: "When the baby was born, I was not sure what it could happen. Our team had to try saving this girl, and this was a big challenge. She fought to breathe, so we placed immediately in an artificial respirator to help her little lungs to breathe. Her bowels did not work properly, so she could not feed adequately. All the essential nutrients were received directly by the blood circulation."
After seven weeks of her birth, she was able to digest the milk and began to breathe by herself. Her brain and eyes were developing correctly. During her stay in the hospital, he received multiple blood transfusions.
Finally, all problems were solved, and Manushi got to leave the hospital. Now, she is growing and it is expected that she were a healthy girl.

Caesarean Birth.

(Leny Vizcarra - CEIP Jose María de la Fuente - Spain).

What is a caesarean birth?

A caesarean birth is when a baby is a surgery to deliver a baby through a cut in the mother's tummy and uterus.

Why might I need a caesarean?

· your baby is in the breech position.
· your baby is in transverse position.
· you have twins and the first one is in the breech position.
· your placenta is partly or completely covering the cervix.
· you have had a previous cesarean.

What happens during the operation?

Firstly , you will receive a regional anaesthetic , such as an epidural ,which numbs the lower parts of your body. Then , your tummy will be cleaned , a catheter will be inserted in your bladder and you will

biotechnological tools, such as high-throughput sequencing techniques, in collaboration with several laboratories in Strasbourg, Seattle, Amsterdam and the participation of the Genomic Regulation Center (CRG) in Barcelona.

By comparing the results obtained with data from other investigations, the scientists found that the organization of chromosome 21 correlates with the position of DNA in the nucleus of the cell. Thus, the domains overexpressed in the twin with trisomy correspond to the regions of DNA that are known to be the first to interact with the periphery of the nucleus.
The study shows for the first time that the position of DNA in the nucleus is modified causing changes in gene expression patterns
The UNIGE researchers will continue to investigate the molecular mechanisms involved and how gene expression is related to the phenotypes of Down syndrome.

The Mediterranean diet contributes to longevity

(Greece, High School of Thermi, Panagiotis Bombas)

People who systematically follow the Mediterranean diet are more likely to live longer, according to a new American scientific study. The study found for the first time that this diet is associated with an increased length of telomere (or telomeres) chromosomes, a key biomarker for life expectancy.

contractions are soft, every 10 or 15 minutes; at final are very strong and painful, every 1 or 2 minutes.

2º stage

The mother helps to deliver the baby by pushing hard with her abdominal muscles and the baby is born.

3º stage

The placenta is expelled from the uterus through the vagina. All family will be very happy.

Pregnancy

(Emma Durán and Miranda Delgado- CEIP Jose María de la Fuente - Spain)

Bleeding and spotting of the vagina during pregnancy.Bleeding and spotting in pregnancy do not always mean there is a problem, but they can be a sign of miscarriage or other serious complication. Miscarriage happens when the baby dies in the womb before 20 weeks of pregnancy.

Serious Concerns for Cramps or Colic During Pregnancy. While colic may be common, there are some serious causes of abdominal pain during pregnancy: Ectopic pregnancy -This type of pregnancy occurs when the fertilized egg is implanted outside the uterus..

The delay in menstruation is the earliest sign of a pregnancy, however dozens of other causes can make your rule do not get off on the expected day. In general, few days of menstrual delay can occur even in women with regular menstrual cycle, without that having any clinical relevance.

Bloating or abdominal swelling during pregnancy. Due to the increase of the hormone progesterone during the gestation process the muscular fibers of the intestine relax and the intestinal transit becomes slower which causes swelling, gas and acidity.

need an intravenous line in your arm for fluids and medicines.
The doctor will cut your tummy and uterus and the baby will be delivered through this hole. Then, the doctor will remove the placenta. Finally , the doctor will stitch the cuts. The procedure takes 30 to 40 minutes.

Kinetic energy

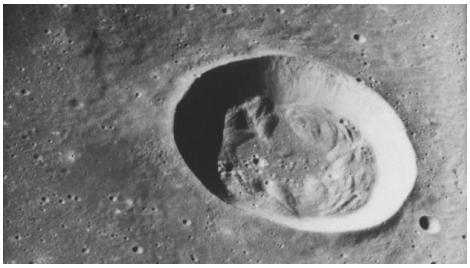
(Matilde Carrão - 9ºD - Escola Pedro Eanes Lobato - Portugal).

Kinetic energy is a type of energy that is related to the movement of bodies.

The kinetic energy is related with the mass and speed of a body. For example, if two objects have the same velocity but different masses, the body with the largest mass will have higher kinetic energy. The kinetic energy, *Ec*, of a moving body can be calculated using the following expression:

$$E_c = \frac{1}{2}mv^2$$

where *m* is its mass (in kg), *v* is it's speed (in m/s). As any other energy, kinetic energy is measured in joule (J).
Meteorite impact craters provide an example of the relation between mass/velocity and kinetic energy.



We demonstrated this in our classes by dropping marbles in a flour filled box.

(click in the picture above for the video)

Researchers at the Harvard University School of Public Health and Brigham and Women's Hospital in Massachusetts, led by Associate Professor Imakulata De Vivos, who published the British Medical Journal's British Medical Journal, analyzed blood samples from approximately 4,700 healthy women and, at the same time, looked at their eating habits.
The analysis showed that women who had Mediterranean diet had longer telomere than others. Telomeres are repetitive portions of DNA located at the ends of the chromosomes (like plastic tips on shoe cords) and gradually - as cells become more and more divided - they get smaller with age.
The faster the telomeres shorten, the faster the aging of an organism is, and the opposite happens when the telomeres are slowly wearing off. Stress, chronic inflammation, obesity and smoking are factors that accelerate the shrinkage of telomeres.
The new research adds to many others that have been done so far and which highlight the multiple benefits of the Mediterranean diet for health, such as reducing the risk of cancer and cancer and, more generally, premature death.
As De Vivos said, "Our findings have shown that healthy eating generally increases the length of telomeres. But the most intense correlation was observed among women who follow the Mediterranean diet. " In fact, even minor changes in diet, in the direction of the Mediterranean diet, seem to have a positive effect on the length of the telomeres.
The Mediterranean diet includes many fruits, vegetables, legumes, olive oil,

MANUFACTURE OF DNA MOLECULES

(3rd Junior High School of Corfu, Greece)

With the high school students of 3rd class we constructed the DNA molecules using drinking straw and colored pegs.
For this construction we follow the step below.

"MATERIALS"

- 4 different color pegs for the 4 nitrogen bases (A-T-G-C); adenine (red color), etc.
- Drinking straws cut into pieces of approximately 1.5 or 2 cm in length, representing the phosphate group and the sugar deoxyribose.
- Plastic binding tape, cut into pieces approximately 1 cm long (the chemical bonds between the two complementary bases)
- Two rectangular bases of hardboard in which we have made two holes.

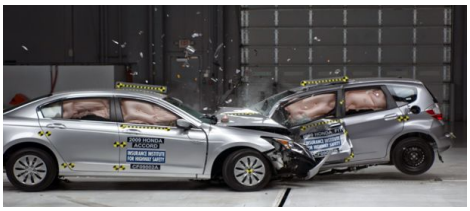
"STEPS"

1st STEP: We start by passing the end of the cable from the hole to the base of the cardboard and fix it by making a knot.

Crushable cars!

(Iris Sacramento - 9°E - Escola Pedro Eanes Lobato - Portugal).

The hoods and trunk of the vehicles are made of deformable materials to increase the collision time, reducing the collision force. Its interior, however, must have a rigid structure to protect the occupants.



The force generated in a collision will be all the greater:

- the greater the speed of the vehicle when it collides;
- the greater the total mass of the vehicle (*eg* the heavier it is).

The expression for the impact force during a collision can derived from Newton's second law:

$$F = m \times a = m \times \frac{v}{\Delta t}$$

where m is the mass (in kg), v is the initial speed (in m/s), and Δt is the collision duration (in s).

A 900 kg car moving at 54 km/h (15 m/s) that stops in 0,1 s generates a impact force of roughly 13 ton!

$$F = 900kg \times \frac{15m/s}{0,1s} = 135000N$$

We must be very careful while driving because any mistake can end in a terrible way.

RAINBOW OF pH

Junior High School of Monte Sant'Angelo-Italy (7th grade class A)

nuts and whole grains, a modest amount of fish and dairy products, few saturated fats, and a regular alcohol consumption, especially red wine along with food.

In an accompanying article in the same medical journal, Professor Peter Nilson of the Swedish University of Lund, points out that Mediterranean diarrhea is now considered the cornerstone - in terms of dietary advice - for the prevention of cardiovascular disease. It also does not rule out that genetic factors inherited are involved in how and how telomere (and consequently life expectancy) react to each person's diet.

Balloon-Magnet

Junior High School of Monte Sant'Angelo-Italy (7th grade class C)

We have studied that the atom is formed by a central nucleus and by electrons that orbit around it. In the nucleus there are the protons (positively charged) and the neutrons (without charge), while the electrons (negatively charged) orbit around the nucleus. The number of electrons is equal to the number of protons, therefore the atom, under normal conditions, is neutral. But if you remove the electrons, the number of protons prevails over that of the electrons and then the atom will be positively charged. An object has a positive electric charge, if it loses electrons, and negative, if it acquires electrons. This process is not visible to the naked eye, but we can demonstrate it through an experiment, which you can do with us.

You need:

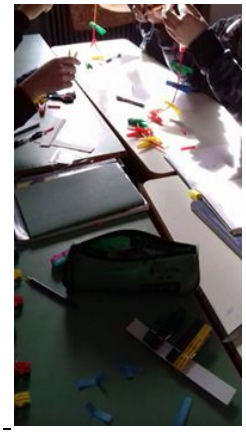
☐ a balloon

☐ a wool scarf

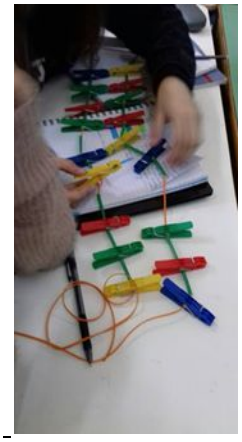
☐ painted-drawn paper handkerchiefs (cut out the image you prefer)

The balloon (plastic) and the paper handkerchief are both formed by a lot of atoms. Rub the balloon on a woolen scarf, after having inflated it, and

2nd STEP: Pass through the cable a piece of plastic drinking straw and then the pegs with the color corresponding to the base of the chain given continue to the last base of the chain. Then secure the cable to the other base cardboard.



3rd STEP: Repeat the 1st and 2nd steps (Caution!!! The bases must be complementary to the bases of the opposite chain).

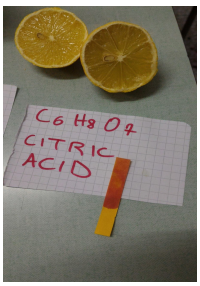


4th STEP: We form pairs between the complementary bases with a piece of thread (chemical bond).

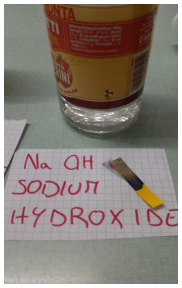
Today we will do a color experiment. We measure the PH of some substances. We cut 6 pieces of "litmus paper" and prepare the acids and bases that we use at home.

Pour on the litmus paper some drops and observe that:

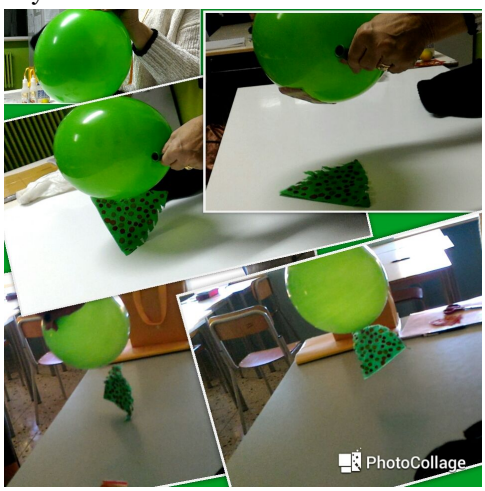
- With the lemon it turns red, in fact it contains citric acid (C6 H8 O7), a weak acid with PH equal to 3.



- With vinegar it turns orange in fact it contains acetic acid (CH3COOH) a weak acid with PH equal to 4.
- With laundry detergent it turns pale green, a weak base with the pH of 8.



approaching it to the little pieces of paper: they are attracted by the balloon. Now you can make them move or dance as you wish.



This happens because when you rub the wool against the balloon, you remove the electrons from the outer shells of the balloon atoms, which are positively charged. Then the balloon with positive charges attracts the electrons of the atoms of the paper by lifting it from the table.

A positively charged body, therefore, is a body that has an excess of protons, and therefore has lost electrons; on the contrary, a negatively charged body is an object that has a number of electrons in excess, therefore it can acquire electrons from another object.

https://phet.colorado.edu/sims/html/balloons-and-static-electricity/latest/balloons-and-static-electricity_it.html

Potential energy?

(Tiago Faria - 9ºA - Escola Pedro Eanes Lobato - Portugal).

5th STEP: Rotate around the axis of the molecule to get the construction of the double helix.

Newton's Third Law

(Jorge Lopes - 9ºB - Escola Pedro Eanes Lobato - Portugal).

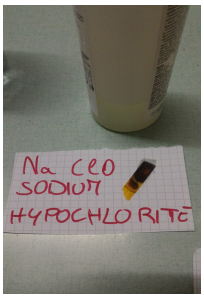
Whenever an object exerts a force on a second object, the second object exerts an equal and opposite force on the first object. These are known as forces of action / reaction.

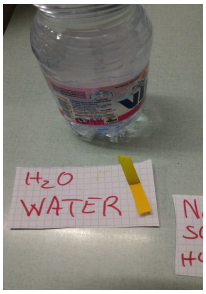
(click in the above picture to watch the video)

A bird flies by the use of its wings. The wings of a bird push the air down.

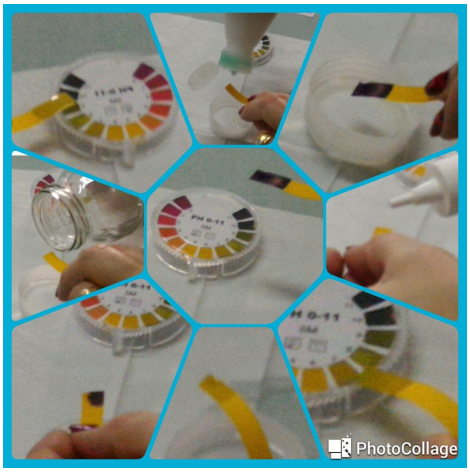
As the forces result from mutual interactions, the air must also push the bird upward. The size of the force in the air is equal to the size of the force in the bird. The direction of force in the air (down) is opposite to the direction of

- With sodium hydroxide (Na OH) it turns a deep blue color, in fact it is a strong base with the PH of 12.
- With the bleach (Na Clo) it turns a lighter blue, it is a strong base with the PH of 10.





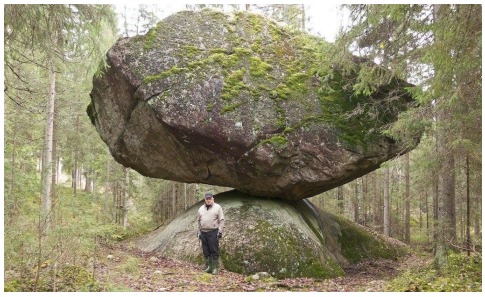
- With water (H2O), it turns very light green, this is neutral, with PH 7.



We measured the pH by comparing the color obtained in the experiment with the colors of the scale shown on the litmus paper box.

pH is a measure of the hydrogen ion concentration of a solution. Solutions with a high concentration of hydrogen ions (H^+) have a low pH and solutions with a low concentrations of H^+ ions have a high pH.

INTERESTING: simulation of pH measurement by UNIVERSITY of COLORADO



Potential energy is the energy that is "stored" in a body and which can give it the ability to perform changes in kinetic energy (or energy associated with motion). Potential energy can manifest itself at any moment in the form of motion. But for the storage of energy to occur, the body must be associated with a physical system, such as weight force or elastic force.

Gravitational potential energy

It consists of the energy of a body that is under the influence of a gravitational field. This type of potential energy is measured by the work done by body weight when going from an initial position to the final.

For example, when picking up a ball and raising it to a certain height from the ground, at this point the object reaches the peak of its potential energy (energy that is stored).

When the ball is released and begins to fall (attracted by gravitational force), the previously stored potential energy is transformed into kinetic energy as the ball gains momentum.

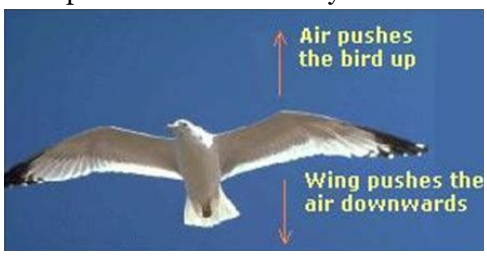
The gravitational potential energy, *Ep*, can be calculated by the expression:

$$E_p = m \times g \times h$$

Where m is the mass (in kg), g is the gravitational acceleration (in m/s^2) and h is the height change (in m).

Elastic potential energy

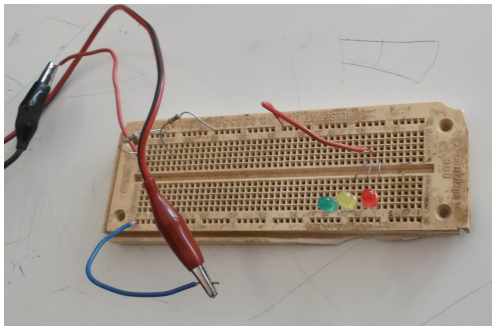
Is that which is stored from the deformation of a spring or elastic, for example. This deformation, when force in the bird (up). For each action, there is an equal (in size) and opposite (in direction) reaction. Action-reaction force pairs enable birds to fly.



Traffic lights on a Breadboard !!

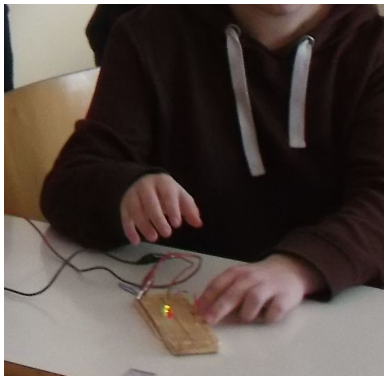
(Junior High School of Xanthi-Greece; 3th grade class,Fedra Samakovidou,Rafayl Sialakis,Georgia Pavlidou,Papadoudis Dimitris, Papadoudis Simeon)

A circuit implemented on a breadboard resembles the principle of operation of traffic lights.



Changing the connection of a single wire we can light a different LED lamp.

Additionally using two resistors connected in parallel, we can operate the LEDs on a greater current which makes them brighter and using the same resistors in series, we can operate the LEDs on a smaller current which makes them dimmer.



How to make super easy slime

(C. Xatzi, G. Chilmi Oglou, G. Tsimplas, M. Tarchanidou, X. Tsatsouli- Junior High School of Xanthi-Greece)

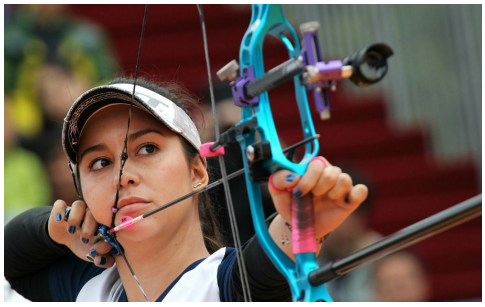
To make super easy slime we need:

- White glue
- Shaving cream
- ½ teaspoon Borax
- 2 tablespoons of water
- Food Colour

In a bowl put the white glue and the water
Mix them together.
Add shaving cream little by little until the mixture is elastic and sticky.

Add the borax and the mixture will transform into slime!

Have fun!!!!
To create twins is the fecundation of an ovum and two spermatozoas , that takes place in the fallopian tubes and released, can generate a movement that will propel a given body.



For example, an arrow when positioned in an bow. When the line that supports the projectile is pulled back, it is charged with elastic potential energy, from the moment the line is released, the energy is transmitted to the moving arrow.

Math through riddles

(1ACT - ITCS " G. Zappa " - Saronno - Italy)

This month we want to propose something different and consider a creative way to work on Maths.
We have found two videos that present mathematical riddles which develop our logical abilities.
The first riddle is titled " The bridge riddle ".
The setting is in a science lab in the mountains and the protagonists are four people who must escape from a group of zombies.
They are an old scientist, his assistant, the janitor of the lab and a boy.
In order to leave the lab safely and not to be caught by the zombies, the four characters must cross a bridge. The zombies are 17 minutes away but the problem is that the four humans have different walking speeds. There are also other limitations to consider.
Here is the first part of the riddle.
Can you solve the riddle and save the four protagonists?
We worked in small groups and we found the solution.
We considered the different speeds of the people and the fact that the fastest ones (the boy and the assistant) have to cross the bridge more times. In fact there is only one lamp with little light

How to grow your own crystals

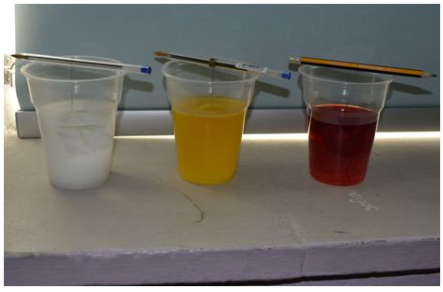
(H. Hatzi Halil, E. Florou, D. Hatzitheofanous, M Tzabazli, R. Chyma, T. Tziobeleki - Junior High School of Xanthi-Greece)

To make borax crystals you need:

- ➔ Borax
- ➔ Water
- ➔ Food coloring
- ➔ Pipe cleaners

Bend and twist a pipe cleaner several times into a rock shape.

Next, find a container slightly larger than your rock shape. It should be able to put it in the container, without having it touch the sides, with enough space that you can completely cover the form with liquid solution.



Dissolve borax in boiling water. Stir in borax until it stops dissolving.
Add food coloring.

Place the pipecleaner shape in the solution.

Twins

(Blanca Céspedes and Irene Fernández - CEIP Jose María de la Fuente - Spain) With the collaboration of Carmen Martín, birth nurse. Thanks Carmen!

To create twins is the fecundation of an ovum and two spermatozoas , that takes place in the fallopian tubes and the spermatozoas and the ova creates a zygote.
During the first two weeks the zygote can divides into two zygotes ,nobody knows how divides the zygote.
The probability to have twins is a 17%.
Each zygote forms his embryo that they are identical,and each embryo have his own amniotic sac, his placenta and his the umbilical cord.
The difference of identical and fraternal twins is that the identical twins can or not have the same amniotic sac, depending if the ovum divides in two, and the fraternal twins is when there is a boy and a girl, that doesn't have the same ADN.

Puberty

(Miguel Fernández and Juan Miguel Llamas - CEIP José María de la Fuente - Spain)
Puberty is the stage of the life when your primary sexual characteristics became functional and your secondary sexual characteristics develops.
Primary sexual characteristics: reproductive organs
Secondary sexual characteristics:
Men have facial hair,a deeper voice more body hair and develops muscles.
Puberty take place between the ages of 10 and 14 in girls and 12 and 16 in boys. However ,these ages differ from person. Puberty also causes emotional changes. Don t hesitate to talk to your parents or a trusted adult about how you feel.
Men also develop penis and women can develop vagina and vulva.
Social relationship are very important and friendships become stronger and make anxiety and confusion.
In your face can appear pimples don.t explote de pimples. To stop this don.t wash your face two times at the day go to the bath 3 times at the day don.t eat to much chocolate everyday.don.t hesitate with your friends especially with your best friends.don.t be scared when blood goes out from your uterus. If you have problems when you are

and the bridge can hold maximum two people at a time.
If you want to see the solution watch here.
Could you solve the riddle? Did you like it?
If you didn't get to the solution yourself, try this one.
The second riddle is titled " The fish riddle ".
This time the setting is the sea.
It happens that a cargo ship has lost some containers with fish at the bottom of the sea. The containers can be rescued by a small submarine that can make only one trip.
Watch the first part of the video:
Part 1
So, as you saw, the sea space to explore is divided into 3 sectors where there are both containers and sharks.
We know that there are a total of 50 organisms between fish and sharks and that the number of containers can't be over 13.
We also know that in sector alpha there are 4 containers and 2 sharks, in sector beta 2 containers and 4 sharks but we don't know how many sharks and containers there are in sector gamma.
One tip: the number of the sharks in each sector is maximum 7.
Can you figure out how to come to the solution? If not, watch here: Part 2
It is actually possible to solve the riddle in another way. We tried to imagine how many fish there might be in each container and made calculations. So we used an empirical method to come to the same solution!

Leave it at least 48 hours for the crystals to grow.

Your crystal is ready!!!

Caesarean Birth

(Nerea Rodriguez and Patricia González - CEIP José María de la Fuente - Spain). With the collaboration of Carmen Martín, birth nurse. Thanks Carmen!
WHAT IS A CESAEREAN LABOUR?
A Cesaerean labour is a surgical procedure in which a foetus is born through an incision in the abdomen and uterus of the mother.
Cesaeran labour may be is necessary if:

- It is a multiple pregnancy(more than one foetus).
- There are complications with the labour, for example, if it does not progress normally.
- The health of the baby is in danger.
- The foetus is too big.
- The baby is in breech presentation, that is to say that it is in an inverted position and the feet come out before the head.
- There are problems with the placenta.

IS IT DIFFERENT THE LACTATION IN WOMEN WHO HAVE BEEN GIVING BIRTH BY CESAERAN SECTION?
In breastfeeding, there isn't much difference between vaginal labour and Cesaeran section. After a Cesaeran section, breast milk will arrive as soon as it is avaible as if it had got a vaginal birth.

in puberty don.t wait, and talk with your parents. The parents and adults especially your fathers can help you. If you don.t wash your face two times at the day, in the face can appear pimples. If you are in puberty is the best time to talk with your parents. and don.t forget to be calm.		