

CLASS 16



BEST POEM

How to build up
VOCABULARY

ROBOTICS

IDIOMS
and their origin

ENGLISH
speaking countries

the origin of
ENGLISH WORDS

TIPS FROM
our graduates

The Editor's Intro

Dear readers and friends,

Welcome to the fourth issue of our CLASS16. This is a magazine dedicated to helping English learners improve their language skills and fluency. We have prepared a variety of sharp-witted articles, tips, and resources to support you on your language-learning journey.

This magazine is designed to show you the way through the everyday challenges of adolescence. Whether you are an intermediate or advanced learner, our main goal is to inspire and give you a chance to achieve your language-learning goals.

So, sit back and enjoy the amazing content we have created just for you and set out on the journey through the pages of our magazine.

R. Košťal

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INFORMATION AND NETWORK TECHNOLOGIES

The graduate of our school in the field Information and network technologies theoretically and practically masters the principles of construction, structure and operation of computer HW, programming in C++, C# and JAVA languages, open-source programming, security of data transmission and processing, concepts of networking and their security. Our graduates are able to design and implement integrated ICT solutions, perform professional management and troubleshoot complex ICT applications.

Network academy students have the opportunity to participate in a high-quality learning process, online learning materials and assignments, trained instructors, hands-on lab exercises, and a learning process that allows interactive communication with the instructor. The Cisco Networking Academy program is a platform for obtaining an internationally recognized certificate of expertise in the design, construction and management of computer networks.

After successfully completing your studies with the Matura exam, you have the opportunity to continue your education and specialization at the university, e.g. at STU - Faculty of Electrical Engineering and Informatics, Faculty of Informatics and Information Technology Network Academic Program - Cisco Networking Academy is a comprehensive professional-oriented training program that enables the acquisition of knowledge in the field of information technology in 165 countries around the world.



Since 1999, CISCO academies have gained an important position in Slovakia in the field of vocational education and, from the point of view of training specialists in the field of IT and networks, their irreplaceable place.

Network academy students have the opportunity to participate in a high-quality learning process, online learning materials and assignments, trained instructors, hands-on lab exercises, and a learning process that allows interactive communication with the instructor. The Cisco Networking Academy program is a platform for obtaining an internationally recognized certificate of expertise in the design, construction and management of computer networks.

The local Cisco SPŠE Hálava Academy was founded in 2001 and has already prepared hundreds of successful graduates.

ROBOTICS

New way to create life? (Batteries not included)

Welcome to the brave new world of robotics, where the line between creating life and assembling electronics blurs, provided you've got enough AAA batteries. Let's dive into the heart of robotics, a field where mathematics, programming, and engineering meet to not just mimic life but to craft machines that could someday ask us for a day off.

It's all in the numbers:

If robots had a dating profile, under hobbies, they'd probably list "long walks on the beach, following precise mathematical algorithms to avoid getting sand in my circuits." That's right, the grace with which robots execute tasks, from flipping pancakes to exploring Mars, is all thanks to mathematics. For instance, trigonometry helps robots understand where their arm is when reaching for that pancake, ensuring it lands on your plate and not on the ceiling.

Let's dive into a classic robotics math problem: The Robot Arm Reach Problem. Imagine you're programming a robotic arm to grab a soda can placed 30 cm away from its base. The arm has two segments: the upper arm and the forearm, each 15 cm long. How can the robot position its joints so the hand reaches the soda can?

This is where trigonometry and the laws of cosines come into play. To calculate the angles at which each joint should be positioned, we use the formula:

$$c^2 = a^2 + b^2 - 2ab \cos(C)$$

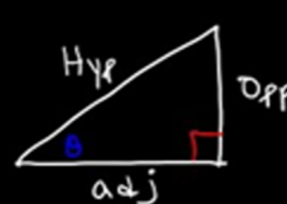
Where:

c is the distance to the soda can (30 cm),

a and b are the lengths of the arm segments (15 cm each),

C is the angle we need to find for the joint to properly extend.

Basic Trigonometry



$\sin \theta = \frac{\text{Opp}}{\text{Hyp}}$

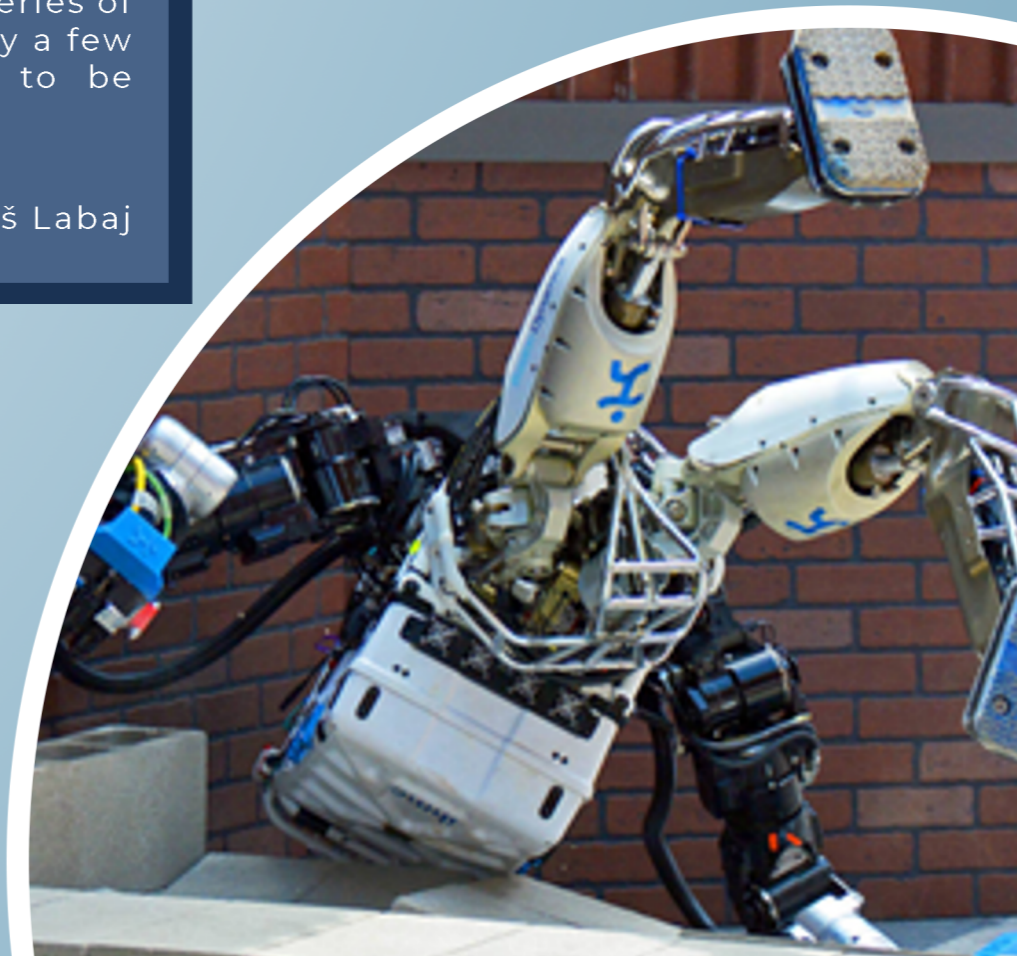
$\cos \theta = \frac{\text{Adj}}{\text{Hyp}}$

$\tan \theta = \frac{\text{Opp}}{\text{Adj}}$

SOH CAH TOA

Math in robotics is like the script for a blockbuster movie; every move, every action is meticulously planned to ensure the story unfolds seamlessly. And just like in the movies, sometimes robots have bloopers, misjudging distances or tripping over unseen obstacles. These moments remind us that behind every flawless robot is a series of trials, errors, and probably a few math problems waiting to be solved.

Author: Matúš Labaj



Tips From Our Graduates

We offer you some useful tips from our graduates
how to pass final exams with flying colours:

1

Don't start revising a week before the exams. Start slowly revising from the start of the school year.

(Plamen)

2

Study on your own, not only in school.

(Hugo)

3

Don't be afraid to ask for help. Ask your classmates, or your teachers if you don't understand something.

(Plamen)

4

Take breaks, if you learn for 5 hours straight, your studying performance decreases over time. Try to get some fresh air, or a quick music break every 30 minutes or so.

(Patrik)

5

Don't make enemies of your teachers.

(Matej)

6

Allocate your time wisely by prioritizing questions based on their difficulty and point value. Don't get stuck on a single question; if you're unsure, skip it and return later. Also, keep an eye on the clock to ensure you have sufficient time to review your answers before the test ends.

(Kristián)

Don't push yourself too much because burn out can be dangerous for your progress.

(Tomáš)

7

Try to learn as much as you can in class. Less thing to learn in your free time

(Plamen)

8

Minimize short term entertainment content on social media.

(Adrián)

9

Don't over-exhaust yourself. You can't learn anything without the energy for it

(Plamen)

10

Learn over time Instead of cramming everything at the end. You will likely not have time for all of it if you procrastinate.

(Peter)

11

Try not to learn everything in one day, split the topics between multiple days.

(Patrik)

12

We need to be active and curious. Do not just focus on what is taught in school but expand your knowledge and interests beyond school. Read books, articles, blogs or news. Watch science documentaries, or art film

(Marcel)

13

Have luck.

(Peter)

14

Idioms and their origins

1. To be the bee's knees

meaning: to be or consider oneself superior to others in some way

When bees climb inside the cup of a flower, pollen sticks to their bodies. The bees then carefully comb this off and transfer it to pollen sacks on their back legs. Some authorities believe that the expression refers to the delicate way bees bend their knees as they perform this operation.

Rees, however, makes a strong case for an alternative theory. He argues that, although there has long been a preoccupation with bees and their knees, which has given rise to a variety of expressions over the last two hundred years or so, the phrase under discussion here only dates back as far as the 1920s when it was coined as an amusing rhyme. He points to the importance of rhyme, assonance and alliteration in the origins of many expressions and a vogue in the twenties for combining features of the body or articles of clothing with parts of animals, to bizarre effect. Thus we also find the cat's miaow, the cat's pyjamas, the eel's heel, the elephant's instep, and many more.



2. Down in the dumps

meaning: depressed, low, dejected

Such a very evocative phrase seems to call for a pleasing etymology. Instead, dumps is no more than a borrowing from Northern European languages. Swedish has dumpin, 'melancholy'; Dutch has dompig, 'damp or hazy'; and German has dumpf, meaning 'gloomy, damp' - all depressing stuff.

Nevertheless, the usage is old. People have certainly been in the dumps since the early sixteenth century and perhaps even earlier. A ballad thought to have been composed by Richard Sheale about 1475 has the line:

'I wail, As one in doleful dumps.' Singing the blues is not a twentieth-century malady. "What heapes of heaunesse, hathe of late fallen amonge vs alreadye, with whiche some of our poore familiee bee fallen in suche dumps". (SIR THOMAS MORE. A Dialogue of Comforte against Tribulation. 1534.)

"Mildred was in the dumps. She felt heavy and tired and she wasn't interested in anything." (JOHN STEINBECK, The Wayward Bus, 1942).



3. To be as sick as a parrot

meaning:

Aphra Benn amongst others in the seventeenth and eighteenth centuries used 'melancholy as a (sick) parrot*. In the early 1970s several people fell seriously ill with a disease known as psittacosis or parrot fever which was common amongst cage birds and can be caught by man. Given the widespread use of the phrase in sporting contexts, could it be that it was coined then by an imaginative footballer called upon to describe his disappointment after losing a vital game? It was about fifty years too early to be as sick as a parrot, but Chapman did manage to communicate his disgust so effectively that two of his players never again kicked a ball for the club.

The average footballer faced with the stock inquiry: 'How did you feel when you had an open goal and missed?' mumbles the stock reply: felt sick as a parrot.' The caricature hasn't always been that far from the truth, but Lineker is refreshingly different: modest and articulate. (COBUILD CORPUS, BBC World Service, 1989)



4. To bite the bullet

meaning: to show courage in facing a difficult or unpleasant situation

On the battlefields of the last century, wounded men, operated on without the benefits of pain-killing drugs and anaesthetics, were encouraged to bite on a bullet to help them forget their intense pain.

Taking a long term view of personal computing, Apple is also following new technology directions in speech and character recognition, speech synthesis and artificial intelligence to make Macs easier to use. But all of these enhancements will require more power. To follow these initiatives, Apple has had to bite the bullet and move to a high-performance RISC technology, even though it is incompatible with current Motorola 680X0 CISC devices. (MACUSER, May 1, 1992.)



The Origin of English words

STREET

a Latin loan (9th century)

The Romans spoke Latin. So, later, did the missionaries that arrived in Britain. As a result, quite a few words of Latin origin came into English in its early years. Street, from Latin *strata*, was one of the first. We find it in the earliest Old English manuscripts, written as *stræt* – the *æ* letter representing a long vowel sound a bit like the *a* in modern English *dare*. When the Anglo-Saxons arrived in Britain, they found that the Romans had already built a network of long, straight, paved roads to supplement the many paths which dated from prehistoric times. They used the Germanic word *weg* ('way') to describe these ancient tracks, which had emerged over time through repeated usage, as in *hrycgweg* ('ridgeway'). They used the Latin word to describe the Roman innovations – streets. The names of the four major Roman highways reflect this difference. Watling Street (from London to near Shrewsbury) and Ermine Street (from London to the Humber) were Roman roads. Icknield Way (from Gloucestershire to south Yorkshire) was prehistoric. What we now call the Fosse Way – a Roman road running between Leicester and Axminster – seems to go against this distinction, until we realise that it was originally known as Fosse Street. The name Fosse Way dates only from the 15th century. Over 500 words came into English from Latin during the earliest period of Old English.

We can never be sure exactly when they arrived. Some would have been picked up by the Celtic-speaking Britons during the Roman occupation and become familiar to the first Germanic settlers. Some would have been brought over from the continent of Europe in the Anglo-Saxon boats. And the Latin-speaking monks would certainly have added to the number. The new words expressed a wide range of notions. There were words for plants and animals, food and drink, household objects, coins, clothing, settlements and building materials, as well as to do with military, legal, medical and commercial matters. Candle and kettle, cup and kitchen, cat and dragon, are all originally Latin words. So are butter, cheese, sack, wall, mile and wine. Words from Latin continued to come into English throughout the Anglo-Saxon period, but they changed their character. The teaching of the Church had to be communicated to the people, so new vocabulary was needed to express the new concepts, personnel and organisational procedures. Words such as altar, creed, deacon, school and philosopher arrived. So did grammar. Meanwhile, street was developing its own meanings and uses. We find several old idioms, such as *by sty* and *by street* or *by street and stile*. If something happened 'by sty and by street', it was happening 'everywhere'. Another medieval idiom was to *wend one's street*, meaning 'to go one's own way'. And if you took the street, it meant you were setting out on a journey. These all died out in the 1500s.

But new uses were arriving. In the 16th century the street came to be used for the money-market area of London. In the 18th century we find it referring to a locale for prostitution (on the street) as well as a description of the average person (the man on the street). In the 19th century, on the street developed the meaning of 'homeless'. And the word continued to grow. Streetwise arrived in the 1940s. To be street – in tune with urban subculture – in the 1970s. It was followed by street credibility, soon shortened to street cred. In the 1990s street became a term for a type of skateboarding. So what happened to the original meaning of street? For a long time it was used as part of a description of the highway, as in Broad Street and Mill Street. Even today British English keeps the definite article in front of some of these names: we say I was shopping in the High Street, not ... in High Street. Eventually other criteria were used, such as the name of an important person (Wellington Street) or occupation (Brewer Street). American English went in for numerals and letters: M Street, 32nd Street. Today, virtually any word in the language can be used along with street. In 2009 a new road in Wincanton, Somerset, was named after a location in a Terry Pratchett Disc-world novel: Peach Pie Street.

BONE-HOUSE

a word-painting (10th century)

What comes into your mind when you hear the word bone-house? It sounds like a building where someone has put a number of bones – animal bones, perhaps. Or maybe human. I once visited an ancient monastery church in Belgium, and in the crypt, on shelf after shelf, were the skulls of innumerable generations of monks. That felt like a bone-house. But whichever way you look at it, bone-houses are for the dead. Charnel-houses, we would call them these days – from the Latin word for ‘flesh’, *carnis*. Flesh-houses. The Anglo-Saxons used the word. *Ban-hus* (pronounced ‘bahn-hoos’) it was then. But they used it to talk about something very different: the human body while still alive. It paints a wonderful picture. That’s what we all are, at the end of the day. Bone-houses.

Evidently the picture was an appealing one, for the poets coined several words for the same idea. They also describe the body as a ‘bone-hall’ (*bansele*, pronounced ‘bahn-selluh’), a ‘bone-vessel’ (*ban-fæt*, ‘bahn-fat’), a ‘bone-dwelling’ (*ban-cofa*, ‘bahn-cohvuh’) and a ‘bone-enclosure’ (*ban-loca*, ‘bahn-lockuh’). The human mind, or spirit, was a *banhuses weard* – ‘guardian, or ward, of the bone-house’. This sort of vivid description is found throughout Anglo-Saxon poetry. It’s one of the earliest signs of an impulse to create figures of speech in English literature. It was an impulse that extended well beyond English, for similar word creations appear in the early poetry of other Germanic languages, such as the Viking tongue, Old Norse. But the Anglo-Saxon poets really took it to heart.

There are over a thousand such descriptions in the great Old English saga *Beowulf*. The coinages are called kennings, a word adapted from the Old Icelandic language. Kenning is from the verb *kenna*, ‘to know’, and it captures the idea that these coinages have a meaning that is more insightful than can be expressed by a single word. Ken is still used as a verb in Scots English and in some northern dialects of England. And we still hear it as a noun in the phrase *beyond our ken*. The poets loved kennings, because they were opportunities to vary their descriptions when they told long stories of heroes and battles. Stories of this kind repeatedly refer to the same kinds of events, such as a battle, or a banquet or an army crossing the sea. We can easily imagine how a story could get boring if the storyteller said ‘And he crossed the sea in a boat’ a third, fourth or tenth time. How much more appealing would be fresh, vivid descriptions – especially ones that would suit the rhythm of the verse and echo the sounds of other words in his lines. So, what could a ship be? A wave floater, sea goer, sea-house or sea steed. And the sea? A seal bath, fish home, swan road or whale way. Anything could be described using a kenning. A woman is a peace-weaver, a traveller is an earth-walker, a sword is a wolf of wounds, the sun is a sky candle, the sky is the curtain of the gods, blood is battle sweat or battle icicle. There are hundreds more. Kennings don’t seem to have been much used outside of poetry, and they fell out of use after the Anglo-Saxon period.

But the same poetic impulse lies behind many compound words. We hear it still when a scientist is described as an egghead, or a criminal as a lawbreaker or a boxer as a prize-fighter. But we don’t seem to take the same joy in creating vivid alternative descriptions as the Anglo-Saxons did. Perhaps we should. Imagine a football sports commentary, for example, in which the commentators used kennings. They’d be talking about net-aimers and ball-strikers and perhaps, when things got exciting, score-cuddles, card-offs and ref-haters. Am I misremembering, or have I sometimes heard the occasional off-the-cuff kenning in a commentary? If so, without realising it, the bone-house is tapping into a tradition that is a thousand years old.

Source:

The Story of English in 100 Words
By David Crystal, 2011

Author: Daniel Hornáček

How To Build Up Your Vocabulary

Vocabulary is the key to communication. Without it you can't communicate well. But how can you learn all those important words and expressions? And which ones should you focus on (there are more than 200,000 words in English!)? Wouldn't it be easy if you could just learn the 3,000 most commonly used words and that would be it? Well, there are about 3,000 words that are extremely common. You could sit down and learn them. In fact, it would probably help. Certainly, for Beginner and Elementary learners, focussing on these high-frequency words is key to developing language rapidly and effectively. And from these 3,000, you can learn many thousands more.

Take the word "rain", for example. From this high-frequency word, you can make lots of other words: "rainbow, raincoat, rainfall, rainforest, rainwater" and "rainstorm". And you could probably guess the meaning of all these words if you saw them in context. As well as that, there are several derivatives that can be formed from root words. For example, from the high-frequency root word "destroy", you can create a noun "destruction" and an adjective "destructive"; and from "discover" you can get two nouns "discovery" and "discoverer". So, once you know the meaning of all the high-frequency root words, you can understand the meaning of their derivatives or associated words (compound nouns, etc.).

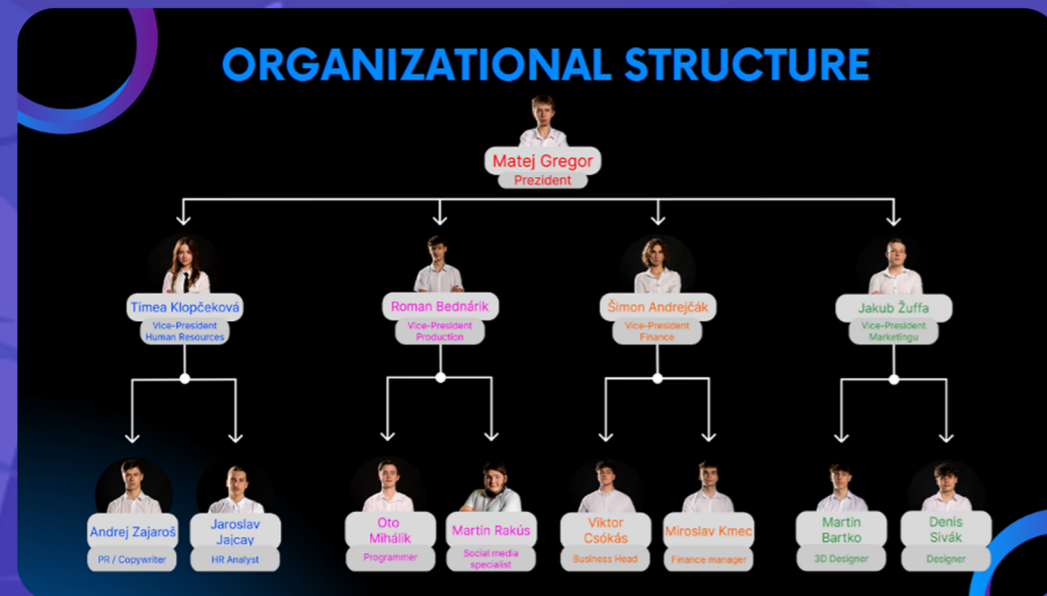
Of course, some words are easier to learn than others. They may remind you of a word you already know in the target language. Maybe, they're similar to ones in your own language. However, other words are more complicated. They just don't seem to make any logical sense. But don't worry. For these complicated words you can use mnemonics. Mnemonics (pronounced "nemomiks") are memory aids. Creating mnemonics consists of finding images or associated words that you can use to help you remember target words in the new language. For example, a Spanish student of English explained how she learnt the word "hill". She simply pictured the famous politician "Jesus Gil" (whose surname is pronounced the same as "hill", more or less) on a hill. And an English student of Spanish explained how he learnt the Spanish word "charco" ("puddle") by imagining a piece of "charcoal" in a puddle.

Other times, you can associate the word you want to learn with a word you already know in the target language. For example, another student was having problems with the Spanish word "ballesta" ("crossbow"), which was appearing in the news a lot. So, he created an image in his head of a whale shooting a crossbow. He chose this animal because "whale" in Spanish is "ballena", and this word is very similar to the word that he wanted to learn. And it was such an unusual image that it stuck in his head.

Easy...except that there's a slight problem. The thing is, very few words are found in isolation. They are often in partnership with other words. Take the case of the high-frequency word "evidence". It's often seen in the expression "a lack of evidence". The key is to learn chunks of words: words in sentences, words in expressions and words in phrases. So, next time you want to learn a word, write down a whole phrase, sentence or expression with the word in it (preferably one that's been spoken, as that way you can guarantee that it's a high-frequency expression or phrase). But there's another problem. You may be able to recognise the word, but can you use it in a sentence? Will it come to you while you're speaking? Of course, this is a problem in every language, including your own. And the thing that'll help you is repetition. Simply repeat key phrases or expressions over and over again until they become ingrained in your brain. Alternatively, you could record them and listen to them while you're waiting for a bus, on a train or walking along the street. And once these key expressions have become embedded in your head, they'll come to you when you need them most automatically and without thinking, because now they're part of your active vocabulary. Have fun learning words, but remember to learn them in context with their friends!



DEVECOL A Student Company Bringing Innovation and Ecological Solutions



Hi! We're Devecol, a student company that stands as living proof that young people can bring about significant changes. Our team consists of 13 enthusiastic members, including a president, four vice-presidents, and eight skilled collaborators. Together, we are committed to executing projects that are not only highly innovative, but also ecologically meaningful.

What Does Devecol Do?

Our pride is the ecological application ECOLECT, designed to help efficiently remove waste from various environments - from city parks to forested areas. But our activity doesn't end with digital solutions. We are also passionate about event management, organizing various school events to enhance school spirit and community. And since we know the way to the heart is through the stomach, we also take care of the school buffet, offering everything from healthy snacks to popular hot dogs.

Innovation in Practice - Production Department

Our production department creates digital wonders. Using HTML, JavaScript, and PHP, we develop applications that are user-friendly and full of innovative features. Our websites, www.devecol.com and www.ecolect.sk, showcase our work and serve as platforms to present all our projects.

Marketing That Gives Our Work a Voice

Visibility is crucial for our efforts. Our marketing department specializes in promoting our company and its products through social networks. Whether it's Instagram, Facebook, or Twitter, our team works to ensure Devecol's voice is heard.

Finance and Human Resources - Two Sides of the Same Coin

For a company like Devecol to thrive, it needs a strong foundation. Our finance department ensures every cent is used efficiently and with the future in mind. And people? They are our most important asset. The human resources department ensures everyone in Devecol feels like a part of the team, organizing team-building activities, social events, and ensuring we all work in a friendly and supportive atmosphere.

ECOLECT: An Application Changing the World

As mentioned, ECOLECT is our flagship. It's more than just an application - it's a tool that allows people to actively participate in environmental protection. Whether you want to contribute financially, report a polluted site, or become part of the collection team, ECOLECT is there for you. Every contribution is transformed into concrete actions.

ECOLECT introduces three key roles, enabling everyone to contribute to a cleaner tomorrow:

- 1. Contribute:** Users can financially support waste collection efforts. For every 10€ contributed, 10 kg of waste will be collected, with donors receiving before and after photos to show the impact of their contribution.
- 2. Report:** This feature allows users to report polluted sites or illegal dumping, helping us to maintain an overview of environmental conditions and effectively plan clean-up operations.
- 3. Collect:** Users can become active participants in waste collection, not only contributing to environmental clean-up but also receiving a financial reward for their efforts, as 50% of every donation goes directly to the collectors.

Thus, ECOLECT merges technology and personal initiative, enabling us to collectively make a significant impact.



In Devecol, we believe that small steps lead to big changes. Our student company and the ECOLECT application demonstrate that when young people combine their energy, enthusiasm, and creativity, they can achieve truly great things. Whether it's improving our school environment, aiding the community, or protecting the planet, Devecol shows that responsibility and innovation go hand in hand. Join us on this exciting journey and be part of the positive change!

Poems

By: Pavol Ondrej Slámka

love is light

and in my darkness
there's a light that
sets me right
which way to go
light that does not burn
but only heals and resembles
in my mind and my heart
that light is your heart
and you as whole
and i love you all
deep in my bones
carves euphoric sensation in my skin
for that i will love you
for ever more

all alone

when does your bell ring?
when you'll all alone
in dark searching through your mind
or when your mind is tattken
by someone you might or might not know

the eyes

its in the eyes
of the world that cries
its in the eyes
the eyes that look at you
they see you
will they take care of you?
will the cry for you?
do they know?
and they will look at you
in every way you walk
they will be with you
looking deep inside of your soul
and they know
and they cry
because they're the eyes
eyes of the world

slip

please grab me
before i slip
unconscious in the world
but you can't
because you don't have hands
and you watch him die
behind the wall of the end

THE BEST ESSAY

We are happy to present you the essay written by our student Martin Pecho, who won the first place in "The Best Essay" competition organized by our English teachers. The topic was based on the quote "Time is the most valuable thing that a man can spend"

The value of time is a currency we all possess, yet its value is bigger than any material wealth. On our journey through life, every moment spent is an investment. Unlike money, we cannot earn more time once it's gone.

Each day offers us the chance to create memories, relationships, spend time with our loved ones, and turn our dreams into reality. Time gives us the opportunity to learn, grow, and make the world a better place, not only for us but everyone around us.

Each passing second is an opportunity to make your life better, being a better person, a chance to leave our mark on the world. Time itself is the most important resource to humanity. When we waste time, we lose the most valuable asset that we can never recover. Each wasted second is a given up opportunity for happiness and enjoyment.

We must use our time wisely, focusing on what truly matters and making the most of every moment. Time is priceless. It's not about how much time we have, but how we choose to spend it. Time is the most valuable and precious gift that we have been given. Embrace each given day and live it as if it were your last.

Martin Pecho

QUIZ

1. Anacondas live in which rain forest?
2. The green anaconda is the heaviest snake. True or False?
3. The planets closer to the sun are composed of heat-resistant, dense material. True or False?
4. Polar bears are thought to have lived on Earth for how many years?
5. The Temminck's courser is a bird that lays its eggs on which kind of ground?
6. The North Pole is a landmass. True or False?
7. Humans journeying through frozen Siberia can travel by train from Moscow to which city?
8. The Sahara is not the world's biggest desert. True or False?
9. Jericho, the world's oldest continuously inhabited city, lies next to which extreme environment?
10. The Ruppell's vulture can fly up to what height above sea level?
11. Which creature has been responsible for half of all human deaths (apart from during warfare) since the Stone Age?
12. Camels can close their nostrils. True or False?
13. The Sonoran Desert toad survives by living in what?
14. A form of microbe can survive the conditions in the hot springs of Yellowstone Park. True or False?
15. Foraminifera can live in the sea at up to what depth under water?
16. Planetesimals are pieces of rock pulled together by gravitational attraction. True or False?
17. A spider released on the surface of the moon in 1969 survived for eight hours. True or False?
18. The roots of some plants in Death Valley are about how many times the height of the average human being?
19. Cockroaches have been shown to survive huge doses of radiation. True or False?
20. What is the name given to huge herds of ruminants that populate the Arctic region?
21. Camels have leathery patches on their knees to stop them from getting burned when they kneel. True or False?
22. What color is a polar bear's skin?
23. What caused the solar nebula to contract and spin faster?
24. What collective term is given to the moon's "seas"?
25. How does the sun produce energy?

Bonus Who is the author? Patrik Poór

1. South American 2. True 3. True 4. More than 115,000 5. Scorched earth 6. False 7. Vladivostok 8. True 9. The Dead Sea 10. 36,100 ft (11,000m) 11. The mosquito 12. True 13. Burrows 14. True 15. 7miles (11.2 km) 16. True 17. False 18. Ten times 19. True 20. Reindeer or caribou 21. True 22. Black 23. Gravity 24. Maria 25. Nuclear fusion

By Samuel Poór

MY TOP 5 ANIME



1. Unleash the power of the Death Note in a battle of wits between Light Yagami and the enigmatic detective L.
2. Join Satoru Mikami's whimsical journey in a fantasy world as a powerful slime, filled with friendship and adventure.
3. Enter the world of underground martial arts with Baki Hanma a relentless pursuit of strength and intense battles.
4. Follow Ippo Makunouchi's inspiring rise from obscurity to pursue his dream of becoming a world-class boxer.
5. Join Eren Yeager in a fight for survival against colossal threats and unraveling the mysteries behind humanity's walls.

Cigarette butts

They "decorate" cities and harm nature

There are several thousand of them on the ground and yet they don't get much attention. They are small, inconspicuous, but above all, they are harmful. We are talking about cigarette butts.

An experiment with a cigarette butt in a pot with a plant has shown that the butt has an effect on the plant's growth. Cigarette butts were thrown into one pot to see how the plant coped with them. After a couple of days, the plant stopped growing and started to slowly wither. The reason for the plant's death is that the cigarette butts released nicotine and other harmful substances into the soil. One cigarette butt is capable of degrading up to one square metre of soil.



Cigarette butt litter can be seen especially in places where a lot of people mill about, for example around railway or bus stations or in front of department stores. A cigarette butt that we throw on the ground takes about 15 years to decompose. It is a source of plastic waste, but most smokers do not know this, as confirmed by the results of a questionnaire among the inhabitants of Sládkovičovo. They think that cigarette butts are made of paper.



Cigarettes bring smokers some form of pleasure. The environment, on the other hand, does not enjoy it very much. A cigarette itself may seem harmless, but it is only harmful after it is lit and smoked, when it is thrown on the ground. "As a result of the irresponsible behaviour of smokers, traces of nicotine can be found in a variety of foods - in tea or in sauces," says the website of EcoButt, a company that recycles cigarette filters.

The imperfect combustion of tobacco in a cigarette produces carbon monoxide, which is present in between one and five per cent of the smoke. This means that if a cigarette butt has been dropped on the ground and there is residue of unburnt tobacco left, it still leaks smoke that is harmful to the air. The cigarette butt contains up to 140 different harmful substances.

In order to ensure that cigarette butts end up in baskets more often than on the ground, Prievidza has introduced an original voting basket to replace the classic ones. It was an idea from Great Britain, where these baskets were a success. There are two holes on the baskets into which the cigarette butts are thrown. Above each hole, for example, basketball teams are written, as they are in Prievidza. The team with the most cigarette butts symbolically wins.



In Žiar nad Hronom, they have found an efficient use for the waste from burnt cigarettes. The fibres found in them can be used as a substitute for cellulose fibres in asphalt mixtures. How did this idea come about? "Walking through the city, I noticed the enormous amount of cigarette butts in public spaces," says Hugo Repáň, managing director of EcoButt s.r.o. The cigarette butts that were used to repair the road in Žiar nad Hronom came from all over Slovakia.

"According to calculations, roughly 10 million cigarette butts were used for the road. The plan is to collect one tonne per month, which means millions of recycled cigarette butts every month. We are actively working on the preparation of a nationwide project - we are preparing measures for Slovak cities and also an opportunity for all residents to get directly involved in the fight against cigarette butts in their city," adds Hugo Repáň.

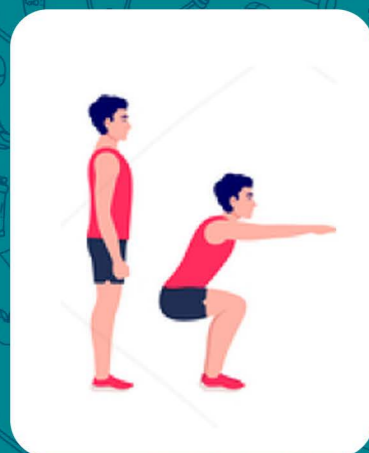
A questionnaire survey on cigarette butts in Sládkovičovo shows that citizens lack awareness of what cigarette butts contain and how harmful they are. As a solution to the problem, people would welcome more education and an increased number of litter bins. Thus, in Sládkovičovo, an awareness campaign called 2/3 was initiated by citizens. Information posters are put up in the town in places frequented by many people, such as the railway station, school, square, shops and bus stops.

A few weeks after the launch of the campaign, the initiators have received positive feedback from residents. Several people liked the campaign and the first progress is visible. Several people liked the campaign and the first progress is visible. Cigarette butts have stopped appearing in several places. Twenty new bins have been added in the city, which contain a metal flicker to extinguish the cigarette so that it can be safely discarded. The examples of several Slovak cities show that cigarette butts do not always have to end up lying loose on the ground, polluting nature and the surrounding area.

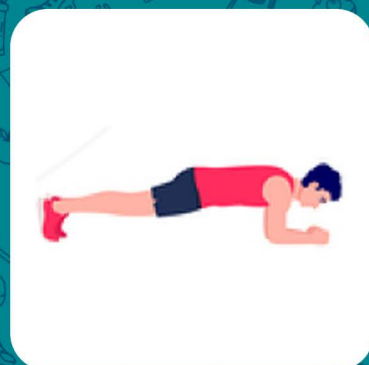


Easy exercises for novices

Exercising at home is a great way to stay fit and healthy, offering both convenience and comfort. It fits easily into any schedule, helping people stick to their fitness routines. Home workouts can make you feel happier too, thanks to the endorphins released during workouts. Working out in the privacy of your own home means you can exercise without feeling ashamed. Regularly exercising at home can boost your health by increasing strength, improving your heart health, and reducing the risk of chronic diseases. It's a simple, effective way to take care of both your physical and mental well-being. So why not start now?



Squats are an easy and effective exercise for novices, significantly enhancing the tone and strength of leg muscles. They are an efficient training move, as you are working with multiple muscle groups at once such as the hamstrings, quadriceps, and glutes. Because this exercise works out several muscle groups at the same time, it is also perfect in burning a higher number of calories. Nonetheless, employing proper form is crucial to get the maximum rewards and prevent injuries.

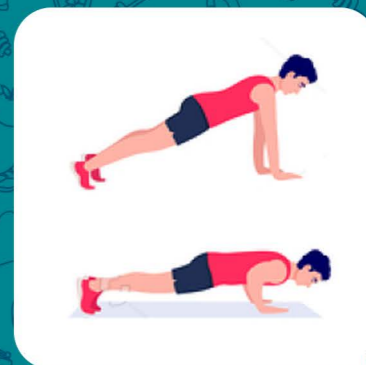


Planks stand out as an exceptionally effective method for both toning and strengthening the core, as well as the entire body. This exercise makes your abs stronger while avoiding back strain. But don't forget that having the good form is the key to seeing results. Adding planks into your everyday exercise routine can be highly beneficial.

Lunges are effective and not so complicated exercises that improve your balance and strengthen glutes and leg muscles. They promote muscle growth and offer various modifications to fit your fitness levels. However, it is important to train with the right technique as you can easily get injured with bad form.



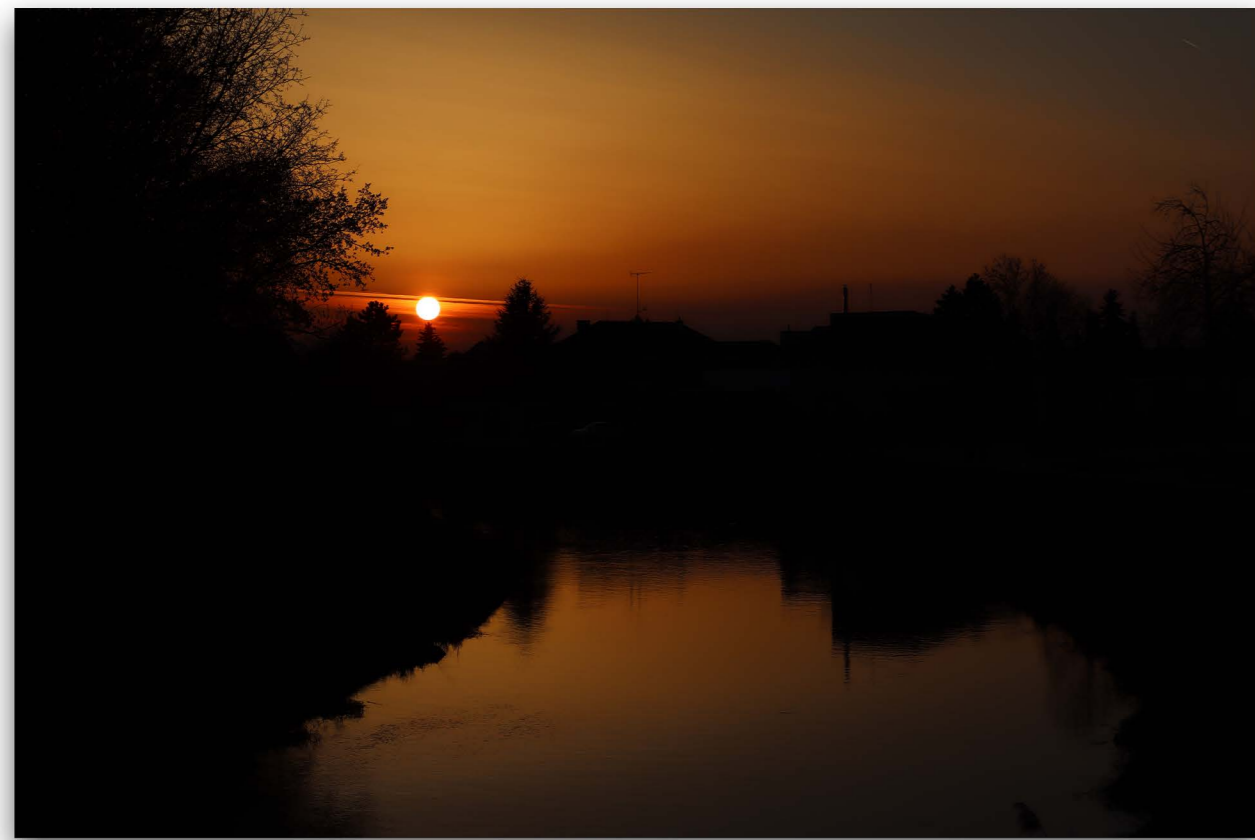
Push-ups are highly effective and one of the most common exercises in the whole fitness world. They engage multiple muscles when executed correctly, aiming in building a wider chest for men. If you can't do or you struggle with push-ups, there are a high number of easier forms all over the internet that will help you progress such as knee push-ups, wall push-ups or even incline push-ups.



Burpees are highly efficient, full-body exercises that give significant benefits for both muscular and cardiovascular health. This does mean that you will not only be stronger but you will increase your current state of your stamina. They can be changed up in many ways to include different styles for your fitness level.



Author: Martin Pecho

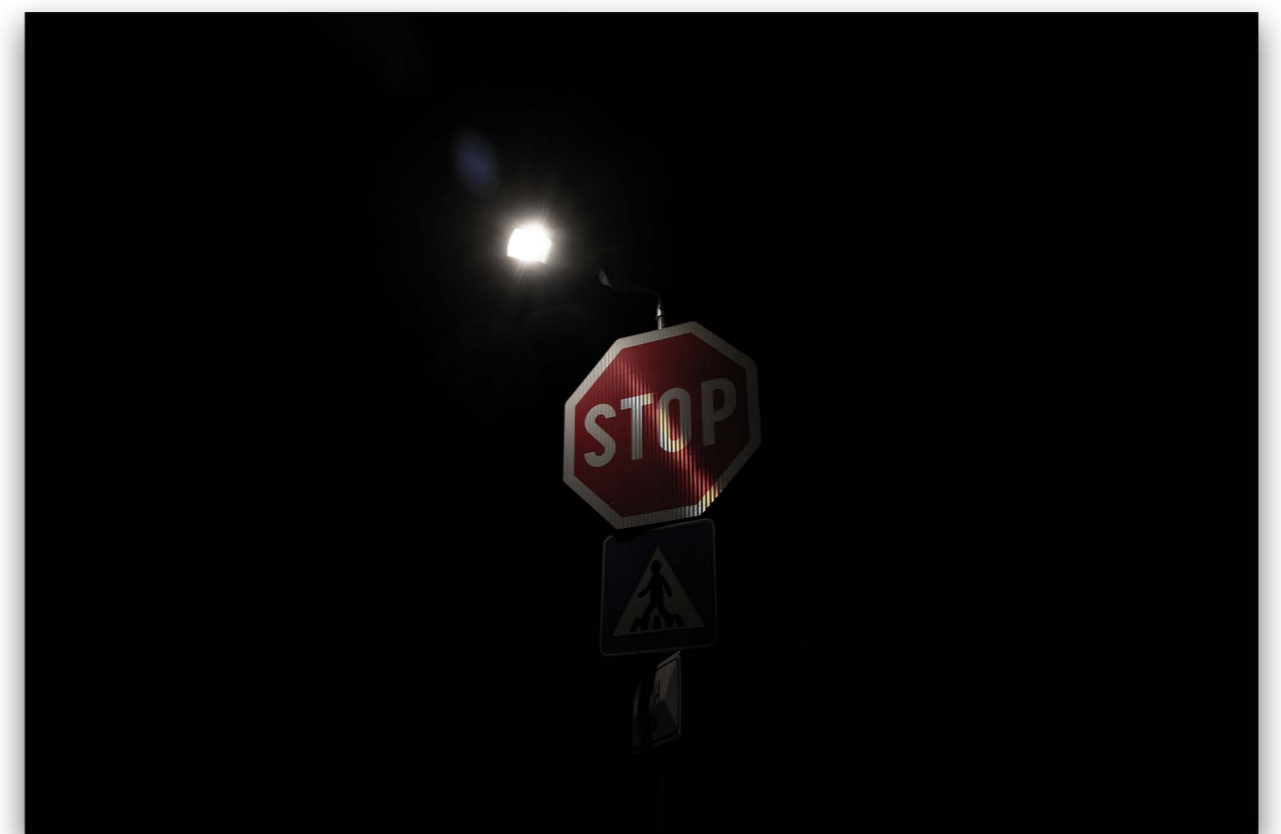


Patrik Poór

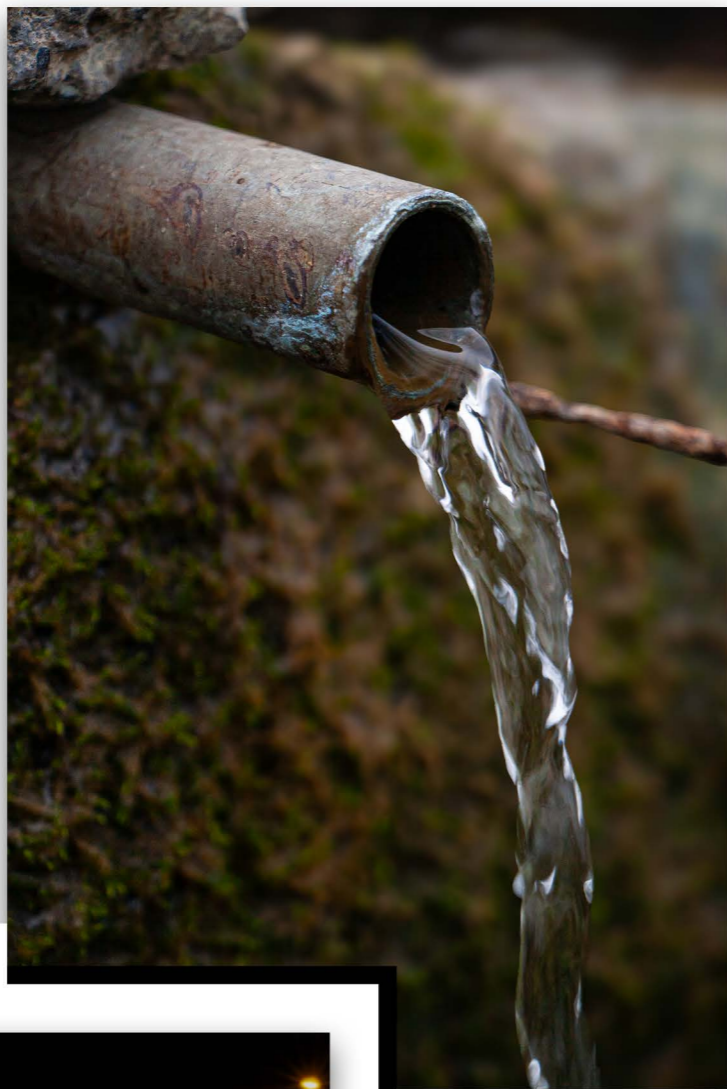
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