

School curricula based Brainfinity tasks collection



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A booklet of Brainfinity problems based on school learning outcomes

This booklet contains problems created based on specified school learning outcomes. Each problem is accompanied by a description of its characteristics, which include the following:

School Subject

Brainfinity problems are interdisciplinary, so this section states the subject from which the core learning outcome is derived.

Main Learning Outcome

This section presents the primary school learning outcome that served as the starting point for the creation of the problem.





Additional Learning Outcomes Mapping

As previously mentioned, solving Brainfinity problems contributes to achieving multiple learning outcomes. This section lists those outcomes, although probably not exhaustively. A complete list can only be determined through careful observation of the teams solving the problem and through metacognitive communication with students about their expressions and thought processes during problem-solving.

It should also be noted that Brainfinity problems can often be approached from different angles, which further influences which learning outcomes are achieved.

In Anderson and Krathwohl's revised Bloom's taxonomy table, the learning outcomes for each problem are mapped across two dimensions: the cognitive



TASKS

Echo from the past

1 The chill of the European winter, a biting echo of the 12th century, nipped at Detective Weiss's gloved fingers as she examined the crumbling stones. A faded, leather-bound chronicle lay open before her, its medieval Latin script whispering tales of a desperate siege.

2 A woman's face, captured in a strange photograph tucked within the chronicle's pages, seemed to stare back at her, a silent question in her eyes. The woman bore an uncanny resemblance to a fairy-tale character from a popular 20th century film.



3 The translated text revealed a secret, a hidden passage, and a guardian who moved between times. The location, nested within the heart of the European continent, held a legacy far deeper than the official records suggested. A woman emerged from the shadows, her voice urgently warning "Feminae fides probatur cum vir nihil habet. Viri fides probatur cum omnia habet" of those who sought to manipulate the past.



The locket, **4** the hidden passage, the guardian's presence, the very reason for the siege itself - it all centered on their enduring strength and resilience.



Help Detective Weiss in order to solve this mystery.





Task 1: Echo from the past

School Subject: History

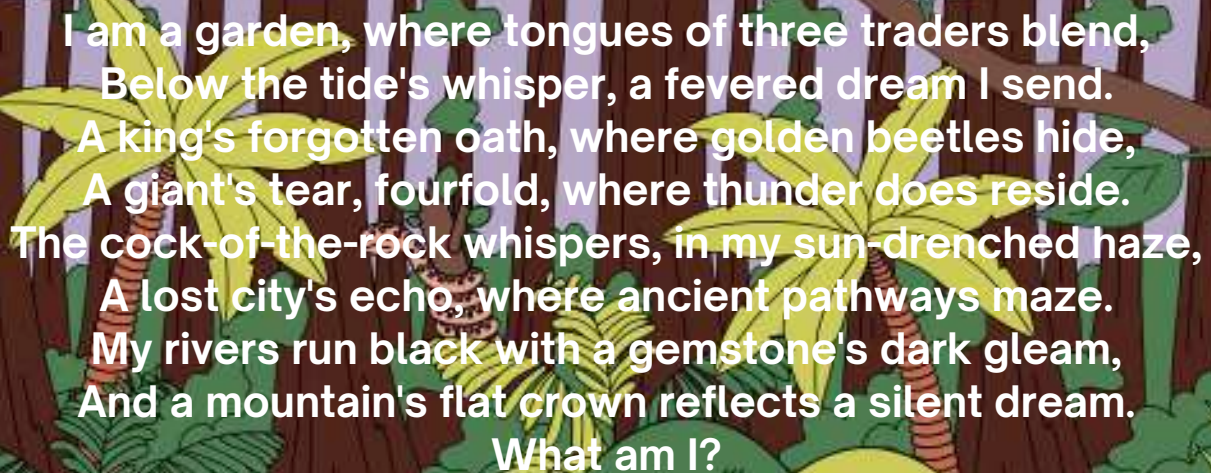
1

Main Learning Outcome: Finding out a specific event in the past

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge		Connecting facts based on literature research			Evaluation of the formulated hypotheses	
Conceptual Knowledge						Formulating hypotheses about the solution to the mystery
Procedural Knowledge			Finding the source of a photograph	Text analysis aimed at solving a mystery		
Metacognitive Knowledge						Developing a strategy for solving the mystery

Fantastic Four Challenge



I am a garden, where tongues of three traders blend,
Below the tide's whisper, a fevered dream I send.
A king's forgotten oath, where golden beetles hide,
A giant's tear, fourfold, where thunder does reside.
The cock-of-the-rock whispers, in my sun-drenched haze,
A lost city's echo, where ancient pathways maze.
My rivers run black with a gemstone's dark gleam,
And a mountain's flat crown reflects a silent dream.
What am I?



Task 2: Fantastic four challenge

School Subject: Geography

Main Learning Outcome: Identifying and understanding geographical facts about a specific place

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge	Identify fun geographical facts.	Finding out the meaning of indirect references.	Use their knowledge of the region's geography	Analyze all the aspects of Guiana's shield [nature, species, problems...]	Evaluate the clues and decide which ones to use.	Use all the <u>elements</u> to create a challenging riddle.
Conceptual Knowledge	The riddle emphasises the features of waterfalls, rainforest and historical background of Guiana shield.	Understanding the location of Guiana within South America	Focus on the clues that directly give you specific information.	Analyse the key words <ul style="list-style-type: none"> • garden • cock/of the/rock • golden beetles 	Evaluate if there are any misleading clues.	Form a task based on the information.
Procedural Knowledge	Recalling the steps in the solution (Big Waterfall, Jungle Environment, etc.)	Understanding that "cock-of-the-rock" implies a jungle habitat.	Using all the information from the clues and eliminating possible wrong answers.	Analyzing which clues are misleading, and why the misleading clues were added.	Judging the accuracy of the information found.	Creating a new <u>riddle</u> , that uses the same techniques.
Metacognitive Knowledge	Remembering previously learned strategies, and recalling your own strengths and weaknesses as a problem-solver.	Understanding your weak points.	Adapting your learned strategies and changing your search terms based on the results you are getting.	Analysing which strategies are more effective.	Evaluating the effectiveness of your chosen strategies.	Creating new ways for problem/solving

Once upon a time there lived a man. He was very rebellious. The ruler wanted to punish him. He gave him a task to find an iberian lynx and cachena cow. He didn't do that so the ruler cursed his family. None of his descendants could fulfill this task until the 21st century. Finally a boy was born who could undo the curse and liberate the family.



Can you find the descendant and his work ?

Look at it.

**With that knowledge you will be able to
create something on your own.**



Task 3: One man's trash is another man's treasure

School Subject: Art

Main Learning Outcome: Create a sculpture

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge	how to use google search by picture		google search	the picture and find the name of the artist	how the picture of the sculpture is connected to the pictures of the animals	
Conceptual Knowledge	what extinct, pollution mean	the concepts extinct and pollution		how these two concept relate to the artist		
Procedural Knowledge			all the steps to get a solution	the photos of a ceramic sculpture		they look and the artist's work and create their own piece of art
Metacognitive Knowledge			what they have found out to find the artist's name	what they have done so far and how these findings relate		:

SOUL



01. SUBJECT

PHILOSOPHY

02. PROBLEM

Can the soul live without the body?



03. OUTCOME

ARGUMENTATIVELY DISCUSSES

04. OUTCOME

LEARNING TO DEEBATE



05. EXPLORE

Antice Greece, Plato, Aristotel

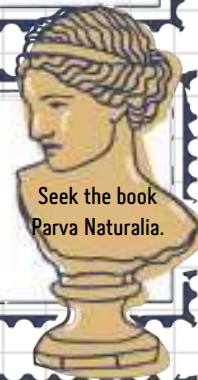
PHILOSOPHY

SOUL



The Seeker stood at the gates of a grand city, where marble columns reached for the heavens and statues of past thinkers lined the streets. The journey was one of wisdom, a quest to uncover the name of a man who shaped the very foundations of knowledge. With a map in hand and a mind full of riddles, the Seeker pressed on.

First, the Seeker arrived at a vast library, its shelves filled with scrolls and tomes of ancient thought. Within the dim light of oil lamps, a scholar whispered, He founded a place of learning, where young minds flourished under the trees of the Lyceum. His words on perception and life still echo in the halls of philosophy.



Seek the book
Parva Naturalia.



With this clue, the Seeker moved to a grand mosaic, embedded in the floor of a Roman villa in Cologne. It depicted a bearded man in deep contemplation, surrounded by celestial symbols and the flowing river of the underworld. "This is a piece of a larger puzzle," a guide explained. "A hint of one who painted a vision of the afterlife through words. His dialogues live on."

Continuing through the city, the Seeker arrived at another library, smaller yet equally significant. "A conversation on the soul and what comes after," murmured an elderly scribe. "A window into the philosopher's thoughts on life beyond death. If you follow this path, you will find him."



Here, a worn parchment
bore the title Fedon.



A final destination awaited—the heart of an Academy, founded by the very thinker the Seeker pursued. Here, ideas of forms, justice, and the nature of reality were debated. In this space of learning, the last piece of the puzzle fell into place.

The Seeker now knew the name. Two figures, bound by teacher and student, yet each carving their own legacy. One envisioned a world of perfect ideals, while the other grounded knowledge in the tangible world. With a smile, the Seeker whispered the name into the wind, and in that moment, the philosopher's wisdom lived on once more.

TASK

The Seeker stood at the gates of a grand city? Whos name is at a grand mosaic? Read the book Parva Naturalia. Who founded an Academy? Read an article which worn parchment bore the title Fedon.

Discuss and debat about diferent opinions about the soul



Task 4: Soul

School Subject: Philosophy

Main Learning Outcome:
Argumentatively discusses

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge	Searching about Ancient Greece	summarizing the different philosophical currents	know how to debate in a group about their philosophical knowledge	organise the information	reflecting about different sources like text, pictures.	divide up the pieces to organize themselves
Conceptual Knowledge	Recognize the different theories of the philosopher	comparing Plato and <u>Aristotel</u>	preparing a plan to solve the problem	correlation between different thoughts	detect the differences between philosophical currents	outline the different answers and think about which one will be the most viable
Procedural Knowledge	Reading the clues of the story	design a plan to solve the problem	put into practice their knowledge, learned in the classroom context and discuss it	question/debate the different sources of information particularly about the different philosophical currents	argue as a group the different opinions and try to reach a conclusion	collaborating in teams
Metacognitive Knowledge	making connections between different philosophical currents	structure a theory to solve the problem	apply their knowledge to achieve the final result	deduce a consistent theory about the subject addressed	reflect on all the details of the story and draw a conclusion	build a theory, that allowed to explain their answer

THE ARCHITECT'S QUEST

Greetings from the past! We offer you an exploration of the old world. You will travel through the labyrinth of history. At the end, the ultimate challenge awaits you.

1.

I stand so tall with sides of four,
A pointed top, but nothing more.
My base is square, so strong, so wide,
With slanted faces on each side.

If you seek my space inside,
A simple trick will be your guide:
Take my height and square my base,
Then divide—three sets the pace!
To find my skin, the path is clear,
One big square and triangles near.
Their heights are secrets you must seek,
A slanting edge—so strong, not weak!
Look to the land where sand winds blow,
We were built so long ago.
Reaching high, touching heaven.
We are just the first of seven.

2. Which of them was my closest neighbour?
In the same town there is a famous building.
Find the most famous female person there.
She was tragically murdered.

3. This incredible lady is one of them
"on" school of "town" named after the
goddess of wisdom.
Who else is watching at you?
The name is the key to your next task.
Be careful with the spelling!
Click here!





Task 5: The Architect's Quest

School Subject: Mathematics

Main Learning Outcome: Apply formulas for volume of cylinder, sphere and prism in an unfamiliar real-world context

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge	Recall the ancient wonders to identify the nearest one.			Recognize key architectural features from historical descriptions and interpret clues.		
Conceptual Knowledge	Compare locations of ancient wonders to identify the nearest one.	Connect a city's landmarks to its historical figures.	Analyze the historical significance of the city's landmarks and its historical figures.	Recognize key architectural features from historical descriptions and interpret clues.		
Procedural Knowledge			Use mathematical formulas to determine the volume and surface area of a historical structure.	Use historical reasoning to identify missing historical figures based on burial locations.	Identify geometric patterns within a structure.	Perform calculations, verify results.
Metacognitive Knowledge				Establish links between historical figures, locations, and themes of knowledge and learning.	Evaluate links between historical figures, locations, and themes of knowledge and learning.	Perform actions, verify results in an unfamiliar real-world context.

The Master's Secret

Footsteps echoed across the cold stone floor as the researchers stepped into the grand hall. Towering columns rose toward an opening in the ceiling, where light poured in, creating the illusion that the space was breathing alongside history itself.

At first glance, it seemed as though they had entered an empty chamber—but one of the researchers noticed something unusual. On one of the marble blocks forming the wall, a subtle engraving stood out: a simple circle intersected by four lines.

A touch of the hand triggered a slight shifting of the stone.

With a soft creak, a hidden compartment slid open, revealing an ancient scroll, sealed with wax and marked with an insignia that took the researchers' breath away—the monogram L.V. Leonardo da Vinci.

With excitement, they broke the seal and unrolled the parchment. But instead of readable text, they were met with a seemingly nonsensical string of letters.

UEBGDAU
CUHOYFCQAFCEU MAU
LO MATTON XOAT
YMCCUMO CP CF
MAUUEF LO
NODEUYFXAFON
DAFBODAFCMATTK.
Na Hcumc

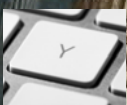
There was a song added:
The Secret in the Reflection

*In the mirror, the truth may hide deep,
yet shadows and visions still silently creep.
Letters that always remain the same,
hold the key to the start of the game.
The mirror deceives, yet never will lie,
what you see in its face may still pass you by.
Seek the ones that never shift,
their perfect form is the guiding gift.
Only with this will the doorway unlock,
where wisdom of ages is sealed in the rock.*

The puzzle had been set before them. Da Vinci had not wanted just anyone to decipher his message without thought. They had to unravel the illusion to uncover the truth he had left for future generations. What was he trying to say?

Only one thing was certain—centuries later, the master was still testing the minds of those who dared to see beyond the surface.

Discover the
message of Da Vinci's secret
using the same word
cipher.





Task 6: The Master's secret

School Subject: English language

Main Learning Outcome: Use the rules of the English language to decipher the text

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge		Recognize the importance of the cipher and understand its structure in the context of historical secrets.				
Conceptual Knowledge		Recognize common linguistic patterns.	Apply cipher-decoding techniques to decipher the scrambled message.			
Procedural Knowledge		Figure out there is a connection between Da Vinci's name and the coded signature	Apply learned strategies for decoding the rest of the message.	Investigate the connection between Da Vinci's name and the coded signature	Evaluate the connection between the cipher and the final answer (JIGSAW).	"Translate" the given word to a coded one.
Metacognitive Knowledge					Reflect on the steps taken to solve the puzzle, evaluate the effectiveness of strategies.	Create an understanding of the logic behind the hidden message.



BEQQO

DECODE THE MESSAGE

Problem solvers!

The aliens have become suspicious. Now they're sending coded messages, and one of our insiders has revealed the code. It's simple: they write in English, but they have switched some letters (e.g. if A is B, then B is A). Numbers and punctuation are the same. Although the code is a simple one, we don't know how the letters are switched. Luckily, we have intercepted one of their messages. Here it is:

Meomqe od ybe yvenyt-dakjy genyxkt, Ckeeyancj!

A ip vkayanc ybaj qeyyek vayb ybe jmegadag anyenyaon od jbikanc jope mekjoniq yboxcbyj vayb yboje od tox vbo ike iqkeift dipaqaik vayb ewenyj vbagb yoor mqige hedoke inf fxxkanc pt qadeyape, vbagb ike feyiaqef an ybe hoor. Qocag fagyiyej ybiy pt goppenyj vaqq he waxyxiqqt peinancqejj yo yboje vbo ike noy dipaqaik vayb ybe gaxgxpjyingej.

Vbaqjy toxk ixybok, Fiwaej, bij fone i gkefahqe soh od feqawekanc tox lxaye jope gonjafekihqe anjacbyj anyo ybe jayxiyaonj vbagb jxxkoxnfef pe, iqonc vayb ybeak bajyokagiq gixjej inf higrckoxnfj, ybeke ike ybancj od vbagb be goxqf noy mojjahqt he ivike.

A biwe newek gonjafekaf ptjeqd yo he i Ykinjtqwinain. A vij hokn ybeke, gekyianqt, hxy ay vij fxxkanc ybe yape ybiy pt mikenyj qawef ybeke an i jeqd-apmojef euage. Ay noy onqt pife qade jidek dok pt poybek, hxy iqjo remy pt diybek iy ikp'j qencyb dkop voxqf-he ijijijanj – be bif pxkfekef wikaqxj pephekj od ybe kawiq Boxje od Finejya inf ybe dipaqt vij oxy dok baj hqoof.

Iqq oxk gonwekjiaon ihoxy 'bope' bancef on Viqqigbai, inf oxk ckeiyejy fkeip vij yo he ihqe yo keyxkn ybeke inf mkogeef vayb nokpiq qawej – iy qeijy, ij nokpiq ij tox goxqf eumegy dok i vikqokf inf baj dipaqt.

Qooranc higr iy ay, pt gbaqfboof vij newek vbiy tox pacby giqq ejt. tej, pt hkoybek inf A bif ckeiy dxn vben ve veke rafj, hxy pojy od ybiy vij fxe yo ybe gonjyiny iyyenyaon od oxk poybek, vbo faf bek hejy yo reem xj oggxmaef fxxkanc ybe qonc mekaofj od pt diybek'j ihjengej. Fejmaye pt poybek'j hejy eddokyj, A danf ptjeqd xnihqe yo fejkgahe int miky od pt qade ij heanc intybanc oybek ybin bikf, ok faddagxqy. Heanc ybe jon od ybe vikqokf vijn'y ij ejt ij tox pacby ybanr.



BEQQO

DECODE THE MESSAGE

Ij tox rnov, A vij onqt dawē vben A vij anfxgyef anyo ybe okfek inf cawen ybe ckeiy keijmonjahaqayt od fedenfanc oxk goxnykt icianjy ybe enept. veqq, ay jeepef qare dxn iy ybe yape, hxy ay keiqqt vij i qayyqe pxgb dok i dawē teik oqf.

Inf ij in euyenjaon od ybiy, vbiy pt diybek faf yo pe inf Kifx an 1442 vij beikyhkeiranc inf joxq-fejykotanc. Ay vij xndokcaweihqe, fejmaye ybe oxygope. A fon'y rnov vbo deqy ay vokje, Kifx ok pe, hxy jopebov A ybanr ybiy Kifx gipe oxy od ay i qayyqe ibeif od pe. Be vij toxncek, noy ij jekaoxj inf poke djeuahqe – sxjy qoor iy vbo baj nev hejy dkaenf dokewek yxknef oxy yo he!

Iy ybe yape vben A dakjy engoxnyekef oqf Diybek Cijyon, A vij ptjyadaef ht ybe kimmoky heyveen bap inf pt poybek, inf ay kepienef i ptjyekt yo pe dok lxaye jope yape. Ewenyxiqqt, gxkaojayt coy ybe heyyek od pe, inf A immkoigbef pt poybek ihoxy ay. Pt jxjmagaon, ij tox kegiqq, yxknef oxy yo he vkonc. No jxkmkaje ybeke... bov vij l yo rnov?

Inf tej, A faf jee ybe cakq nipef Rkajya Sobnjon, hxy noy an toxk mkejeny yape. Tox pxjy kepephek ybiy A vij feiqanc vayb lxaye in epekcengt iy ybiy popeny, inf A vijn'y ewen anlxajayawe ihoxy bek. Dok ybe Nev Vokqfekj iponc tox (nov rnovn ij lpekaginj), ay jeepj ybiy toxk coweknpenyj biwe diaqef yo afenyadt jope od ybe japmkejy noyaonj vbagb xnfekqae i nxphek od toxk gxkkeny mkohqepj. Ay aj faddagxqy dok pe yo jee bov ybet goxqf biwe pajjef jxgb ohwaoxj digyokj vben A moanyef ybep oxy, wekt gikedxqqt inf gqekqt vit higr an 1456, iy ybe dakjy peeyanc A bif vayb ybe hotikj iy Gxkyei fe lkcej. Ybancj biwen'y gbincef.

Inf jmeiranc ihoxy ybiy peeyanc... Tej, od goxkje A anyenfef ybe mxn. Fo tox jekaoxjqt ybanr ybiy i pin vbo jmeirj dawē qincxicej inf jmeny fegifej jyxftanc qocag inf piybepiyagj voxqf pire i sore ht iggafeny?! Qey pe yeqq tox; yo pe, ay vijn'y ybe mqit on vokfj vbagb vij dxnnt. Ybe dxnnaejy miky vij ybe qoorj on ybeak digej inf ybe digy ybiy ybet veke yoo jgikef yo qixcb. Nov ybiy vij keiqqt baqikaoxj!

Ht ybe vit, A fon'y fo intybanc ht iggafeny.

Assignment no. 1: We would like to send them the following message: "We want to be friends with you." However, we want to make sure the code is correct. And that's your first task – code this message so that we can send it to the aliens.

Assignment no. 2: The second assignment is much more complex. Your task is to create an app that codes and decodes messages.



Task 7: Decode the message

School Subject: English language

Main Learning Outcome: Use the rules of the English language to decipher the text

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge			Apply the fact that the only letter in English that is written as a capital when it stands alone is the letter 'I'	Recognizing an unknown word based on known letters, word structure, and context		
Conceptual Knowledge			Searching the text to find the most frequently occurring three-letter words	Noticing a greeting made up of two identical letters	Evaluation of the assumed letter substitution	
Procedural Knowledge			Applying the identified pattern to the text that needs to be translated			
Metacognitive Knowledge						Developing a strategy for deciphering the text

A famous movie character addressed us and told us the following: "I am on an island in the middle of a lake on an island. Interestingly, on the island where I am, there is another lake with something like an island. Even stranger is that my coordinates are whole numbers. And in the Big Apple, those coordinates are an address. If you look around a bit, you'll see the familiar pizzeria from which I was fired. You don't have to send me a slice of pizza, but my photo with the hat from that pizzeria would mean a lot to me."

Who is this movie character? Provide as much evidence as possible to confirm that it is indeed this character.






Task 8: Actor

School Subject: Geography

Main Learning Outcome: Using geographical coordinates

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge			Finding the geographic coordinates of a place on Earth			
Conceptual Knowledge				Identifying key elements related to a specific place on Earth		
Procedural Knowledge			Searching the internet using keywords			
Metacognitive Knowledge						Creating a strategy for solving the problem

Espionage affair



Serbian hackers managed to intercept the communication between two spies from the English-speaking world. From the communication, they concluded that the spies were focused on a specific event. Spy James sent these two numbers to Spy Rock:

3099960211592574565136572461148574259746575
46581491408447894678070060560470315

~~The~~ they represent that event. The last thing our discovered before James and Rock realized they had been hacked was a link in Rock's browser history.

Your task is to decipher the message!



Task 9: Espionage affair

School Subject: Mathematics

Main Learning Outcome: Application of the greatest common divisor

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge			Application of the greatest common divisor in a real-life situation			
Conceptual Knowledge		Understanding that the key is a common divisor				
Procedural Knowledge			Finding the greatest common divisor of numbers Decoding the text using a clear key	Analysis of encrypted text		
Metacognitive Knowledge						Creating a strategy for decoding based on video material

Strange Game

Pay attention to the piano. I am in the country where the game began. The number of players at the start of the game is a number you can also write as two identical letters. The last two digits of that number are the designation of a road. If you follow that road south, near its end, close to the river, it intersects with a road whose sign will lead you to the player who called me. He is actually an actor, and I'll be waiting for you in a museum in his birthplace. Those two identical letters I mentioned will help you find the museum.

My friend got into some debt and simply disappeared. A few days later, his parents called me to his apartment because they had received a strange letter from him and couldn't fully understand it. They think the letter is meant for me.

Brainfinity detectives, help me unravel this mystery. What country is it? What kind of players is he talking about? Who is this actor? And of course, which museum is my friend referring to? And make sure to include evidence for everything you claim.



brainfinity
COLLABORATIVE PROBLEM SOLVING CHALLENGE



Task 10: Strange game

School Subject: Music

Main Learning Outcome: Playing a simple melody on the piano based on given notes

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge			Playing a simple melody on the piano based on given notes		Checking possible solutions to the mystery	
Conceptual Knowledge				Analyzing the text to solve the puzzle		Developing assumptions about possible solutions to the detective problem
Procedural Knowledge	Converting numbers from the decimal to the hexadecimal number system		Finding a song based on playing a part of its melody Searching the world map based on given data			
Metacognitive Knowledge						Creating a strategy for solving a problem

WEIGHT LOSS

Three months ago, four friends (Petra, Goga, Ceca and Ema) decided to start exercising and dieting to get in shape. They all chose different types of exercise (yoga, running, rowing and cycling) and different diets (vegetarian, gluten-free, sugar-free and low-fat). Now, after three months of a healthy regimen, they have lost 3, 5, 7 and 9 kilograms. The following facts are known about these four friends: 1. The one who practiced yoga lost more kilograms than the one on a vegetarian diet. 2. Petra and the girl on the gluten-free diet were the least satisfied with their appearance. One of them lost 7 kilograms and the other went running. 3. The girl who didn't eat sugar and the one who went rowing are different people. One of them is Goga. 4. The girl who went rowing lost 5 kilograms. 5. The girl who lost 3 kilograms was on a sugar-free diet. 6. The girl on the vegetarian diet is either Ceca or Petra. 7. Goga and the girl on the low-fat diet are different people and one of them practiced yoga. Using these facts, fill in the table.

Person	Type of exercise	Type of diet	Kilograms lost
Petra			
Goga			
Ceca			
Ema			





Task 11: Weight loss

School Subject: Biology

Main Learning Outcome: Understanding the importance of exercise and healthy eating for health

Additional Learning Outcomes Mapping

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge		Understanding the importance of exercise and healthy eating for health				
Conceptual Knowledge			Applying tools to solve logical puzzles Applying logical operations to everyday text	Analyzing the relationships between logical statements		
Procedural Knowledge			Connecting clues to solve a logical puzzle		Checking the validity of the solution	
Metacognitive Knowledge						



CONCLUSION



Dear teachers,

Using the Brainfinity methodology you can get several benefits for your students and yourself. Please see below some of the proven benefits:

- Children give their best in challenges such as Brainfinity
- Strengthening cognitive abilities using empirical examples
- Children find unusual math problems interesting
- A unique method for learning the rules of logic
- Solving different life situations in a modern fashion
- Strengthening team spirit and curiosity
- Developing one's ideas and forming new ones
- Improving debating skills
- IT at the service of science
- Solving logical puzzles stimulates the students' minds
- No fear of failure – any way of thinking is right
- Preparation doesn't require hours of practicing predefined tasks
- "Little geniuses" easier to spot
- Provoking creativity





If you wish to learn more on how to transform the school curricula into Brainfinity tasks, or to involve your students in Brainfinity competition, you may wish to check the resources created by the consortium of the Erasmus+ project “Brainfinity Detectives - collaborative problem solving” at the [project web page](#):

- Brainfinity educational content
- Booklet of Detective Tasks
- Brainfinity Teacher Training Methodology & Implementation Set
- Brainfinity Step-by-Step guide for organizing national competition
- Brainfinity Marketing Plan
- Brainfinity Class Guide

Should you need some help in solving tasks from this booklet or need any additional support in creating your own tasks, you can contact the creator of the Brainfinity idea, dr. Ivan Anic: ivan.anic@its.edu.rs

Enjoy the process, enjoy Brainfinity!

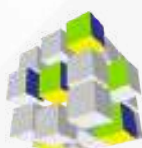




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