



Name of the method	Storytelling
Origin or ownership of the method	<p>It is a method that has been used since the dawn of humanity.</p> <p>The owner of the approach, presented here, is Ina Petkova, expert within the Golden Ratio Teaching project team from Bulgaria.</p>
How the method corresponds to the common guiding principles of GRT	<p>Golden Ratio – the importance of the teacher Storytelling can be used in both online and classroom environments. Once a teacher is inspired to try out the steps suggested below, an instant focus of the attention is almost guaranteed. Students long for new challenges, surprises and inspiration.</p> <p>Golden Ratio - human values. Love and freedom. The main prerequisite of students learning and acquiring knowledge is having a good, loving, empathic human being for a teacher. Telling stories helps teachers connect with their inner hero, with their own dreams and memories. Everyone has their own learning style and we need to give our students the freedom to choose their specific way of acquiring knowledge.</p> <p>Golden Ratio – inspiration is vital for teachers nowadays. Writing as a tool that provokes mental stimulation. The formula “Inspired teachers = Inspired students” is old and tested. Burnout in teachers is one of the key challenges the system of education faces nowadays. If we manage to inspire teachers to take a fresh, new point of view to their work, we can help them build a better bond with the students. And with themselves.</p> <p>Golden Ratio – focus on the curriculum The main focus of any school teacher is the curriculum. We are not proposing a revolution in the existing system of teaching; we take into consideration all the requirements of the curriculum and re-shape it, without changing the core.</p> <p>Golden Ratio – creativity is the key A study at Drexel University found that spending just 45 minutes on a creative activity could boost one’s ability and confidence to complete tasks at work. If this creative activity IS in a teacher’s job description, then the effect is doubled. And tripled, if the students focus more and can be provoked to create their own stories based on the curriculum.</p>
Preparation needed for implementation of the method	<p>Lesson plans with underlined main learning objectives and important elements of the learning content, which must be taught to the students.</p> <p>Visualizations, which can support the story.</p> <p>Fresh look on the curriculum, creativity and rehearsing in advance.</p>

<p>Materials needed</p>	<p>Laptop for work on the introduction and the story and well as on the presentation of the story, if the lesson takes place online. Projector – in case the lesson takes place physically – for presenting any visuals supporting the story. Printer and paper for preparing any hard copies of the materials for the students (if necessary).</p>
<p>Additional staff support needed or combinations with other scientific topics (optional)</p>	<p>-</p>
<p>Method description</p>	<p>How to create a story. Why do we need stories.</p> <p style="text-align: right;">“Docendo Discimus”</p> <p>By teaching, we learn. A Latin proverb derived by Seneca the Younger (c. 4 BC – 65 AD).</p> <p>Being a teacher is not a profession. It is a calling, a vocation. And hard work, too.</p> <p>So, we found and compiled some thought-provoking information. Experts claim that “some students perform better when they know what they can expect. Tackling new material can sometimes be intimidating, but priming students by presenting information before a lesson is given can help.”</p> <p>The term used is “priming” and it means introducing one stimulus that later influences how people respond to a subsequent stimulus. Priming works by activating an association or representation in memory just before another stimulus or task is introduced. This phenomenon occurs without our conscious awareness, yet it can have a major impact on numerous aspects of our everyday lives.</p> <p>The basic technique that we can use in a classroom is simple – we find new ways to present the new material even before it is taught so that it sounds at least vaguely familiar and thus allows the student to be comfortable with it once it is introduced in the new lesson.</p> <p>One of the best ways and also one of the most ancient ways to give this preliminary information is to tell a story.</p> <p style="text-align: right;">“Stories are genuinely symbiotic organisms that we live with, that allow human beings to advance.” Neil Gaiman</p> <p>Stories bring their listeners to the state of “surprised amusement” (a term used by psychologist Jerome Bruner when speaking of creativity) and with their help we can “prime” or introduce new</p>

	<p>information to students, but also introduce new ideas, or, even better, to give them the advocacy of creating new stories, new worlds, new ideas.</p> <p style="text-align: right;">“To be a moral human being is to pay, be obliged to pay, certain kinds of attention..” Susan Sontag</p> <p><i>Check out Ina Petkova’s introductory video:</i></p>  <p>https://youtu.be/cEv8b1VIn1U</p>
<p>Detailed instructions</p>	<p>So, how exactly do we teach through a story?</p> <p>Easy. FIRST, we need to prepare what we need to teach (facts, concepts, information, knowledge). SECOND, we pinpoint the most important facts, keywords and new terms. THIRD, we combine them into a short story. We also prepare a short introduction in order to “prime” the audience for the story we are about to teach.</p> <p>FOURTH, we present them to our students. The introduction could be a personal narrative, while the real story is read to the students. If we play some classical music as a background, the reading hence the emotional connection and retaining knowledge becomes even more impressive.</p> <p>FIFTH, we work with them – do drills, exercises, make use of the connection between pictures and facts, listen to classical music, play games, provoke positive emotions, encourage, inspire your students to be creative, include some role play (ask your students to share information about LARP, maybe they will surprise you!), draw, sing or dance with them – use different channels to revive the chunks of information you are teaching.</p> <p><i>Check out video n. 1 by Ina Petkova:</i></p>



<https://youtu.be/zZLtZwIYNdY>

And then we test the understanding and knowledge.

How do we create a story is the question we shall discuss now. How do we **start**, how do we make it **worthy, memorable, inspiring**?

Telling a **story**, developing **characters** and **plot lines** was something we all have studied at school. Moreover, we teach all these topics to our students. We all know the theory and laws of storytelling. However, even the most experienced **cook** needs sometimes to look at the recipe to be reminded of the **ingredients** and maybe try some different **flavors** so that a totally new and unexpected dish is created.

Experts say that “the best creative writing delights our **senses**, challenges our **minds**, and engages a broad range of **emotional reactions**, including love and anger, sadness and joy, contempt and empathy”.

So, what is important is not only what are we trying to say or teach but also what do we want our readers or students to feel? Sadness? Yes, and how would it help us in the **process of understanding**? Compassion? How would this affect the class? What **voice** do we use when we read or tell our story? Is there any **background music** we can play? How do we **illustrate** our story? Is there a **dialogue**, so that we can impersonate characters?

Methods

**“Don’t start with a big idea.
Start with a phrase, a line, a
quote. Questions are very
helpful. Begin with a few you’re
carrying right now.”**

Naomi Shihab Nye

Naomi Shihab Nye is a Your People’s Poet Laureate, and she promotes the idea of **creative writing** in a paragraph that can answer



the question why would I bother with storytelling and spend more time writing

“If we trust in the words and their own mysterious relationship with one another, they will help us find things out... Consider the **pleasure** we feel when we go to a beach. The broad beach, the bigger air, the endless swish of movement and backdrop of sound. We feel uplifted, exhilarated. **Writing regularly** can help us **feel that way** too.”

But even before we start thinking of a story, we may want to follow some steps. Just to do some planning ahead. It’s like the shopping list we prepare, even before we start making a dish. First, we need to

- 1. Understand.** Define your case. Try to identify your goals, or the amount of information you need to teach. Which is your **topic**? Which **lessons** do you want to include in a story? Our main **focus is teaching** and the curriculum, so we need to have a very clear view of what is going to become part of our story.
- 2. Redefine the objectives.** Reach a deeper understanding of both the **story** and the **lessons**. **Clarify** on what you need to accomplish. Think about **key messages** that you want to bring across. Teaching three or five **lessons** and including them in a story is one thing. But we can always convey some other **messages**. Try to imagine a situation - our students expect a lesson in Geometry, for instance, and there has been some conflict in the class recently, so we incorporate very delicately and matter-of-factly some **tips** on Nonviolent Communication in the flow of our story. This may serve a **higher purpose** - bringing peace back to the classroom and enhancing understanding and empathy.
- 3. Consulting our ideas with others** - colleagues, friends, children helps us improve and correct. If we follow the Build-Measure-Learn cycle and test our ideas, we may end up with a much better story and teach better.

There are other points that we could list here but if we take too long to prepare, we might never start cooking. So, let’s look at the recipe.

Check out video n. 2 by Ina Petkova:



<https://youtu.be/DqHtw6mZ Pg>

How is a good story written?

1. The first ingredient of a story is a **word**. The words we chose depend on the context, the audience and our own proficiency in languages. More often than not **simple and short words** can provoke more feelings, more imagination and be more enriching.

And since provocation was mentioned, all human senses - **touch, taste, smell, hearing** should be taken into consideration when we build a character or scene. **Meaning and ideas** could be conveyed with simple descriptions or with words and associations specially used to provoke all our senses - one at a time or all of them, simultaneously.

If we are ever tempted to write an obscure sophisticated **word** that in order to understand it our audience needs to open a dictionary, the story we are telling would not benefit too much from it. On the other hand, as teachers we use stories to introduce new vocabulary when we teach a foreign language or a new terminology in chemistry, for instance, then we should provide a very subtle and clear explanation or synonym of the new and complicated word. But then again explanation will be perceived better if the words we use are **short and easy to remember** and understand.

2. Probably the same applies to **sentences**, the next ingredient of our recipe. The longer and vaguer they are the less information is likely to stick to the memory of our audience. **Clear, short and beautifully structured sentences**, followed by some not so precise and concise - to add contrast, and allow for the brain to relax for a while, would create a good rhythm for listeners.

Check out video n. 3 by Ina Petkova



<https://youtu.be/rphnzuiEZS8>



If our **story** provides **challenge to the mind** as well as **pleasure to the senses**, we usually provoke **interest** and **curiosity**. If we combine realistic settings with historical events and figures from the past, we provoke **surprise** and hence intellectual engagement. Meeting Don Quixote at the bus stop and being engaged in an insightful conversation with him could change the perspective, provoke laughter or inspire new unexpected ending or development of the story. Or, alternatively, we invite our students to create a fictional world immersing us in the times when Don Quixote was riding his Rocinante and attacking windmills. We all could lay back and enjoy the creative process and prepare to be amazed by the results. Most probably, the creativity of our students will never cease to surprise us, if we give them the right instructions, some guidance and the rules of the game.

3. So, from sentences we moved to **ideas**. And we can now start exploring our new world, our new characters. What is it like? Who are they? Where is the action? What is going on? How does it all work? What is important and why is it important?

The Art of Writing. Approaches

The answers to all these questions are found in different formats, there are a number of good cooking books as far as writing is concerned. And I am sure we all have read and taught a number of them.

Hero's Journey

Hero's Journey is worth considering, of course but most of us have heard and read about it a lot. Here, the collective unconscious of the human race is addressed and it states that any interesting journey always presents a problem (complication) to overcome. We all know that any story has a beginning, a middle and an end. In the beginning we set up our hero and his story, then we perplex him with something that is a source of conflict and therefore takes him into some trouble. After that our hero overcomes a number of obstacles, faces some enemies and finally saves the day, the world or the girl. Joseph Campbell's idea about the Monomyth from his book *The Hero With A Thousand Faces* gives a kind of a "formula" that we can stick to and could help us build our story and tame our futile creative impulses. From Homer and *The Odyssey* to the first episode of the *Star Wars* series, students can and have been taught to identify and track the developmental stages of the protagonist as he navigates the stages of his hero's journey. However, there are authors and teachers who believe that when it comes to storytelling, any formula



is not universally applicable. Others go further and claim that “Campbell's monomyth is unrealistic and spreads the idea that war is therapy.” And anyways, this theory gets enough media and curriculum attention, so we decided to look for some fresh concepts. Or, as it turned out, not so fresh.

The Art of Dramatic Writing - General

What we could explore now are the ideas of a Hollywood playwright Lajos Egri whose book is widely regarded as one of the best works on the subject of writing, and whose teachings have since been adapted for the writing of short stories, novels, and screenplays. Why are we opening the Bible of dramaturgy and scriptwriters? This book proposes a universal approach to writing based on the natural law of dialectics. It will be included in the Golden Ratio Teaching Reading list and is recommended to anyone who ever thought of writing for any audience. We cannot share the full range of his ideas here but we can outline some of its basic concepts for our new GRT cooking book for stories.

What Egri gives in his *The Art of Dramatic Writing* is a very methodological and most importantly **jargon-free** approach to the problem of achieving truth in writing. He basically teaches the basic techniques every successful playwright knows.

1. The Art of Dramatic Writing – Ingredients

So, the main ingredients of a well-written play or story are:

- **Premise**
- **Character**
- **Conflict**

1. First comes the **Premise**. The best stories follow the logical method of thesis, antithesis and synthesis to prove what Egri calls a **premise**. If we need synonyms for **premise**, we can use theme, thesis, root idea, central idea, plan or plot. To give us an idea what **Premise** is, the author quotes Shakespeare's *Romeo and Juliette*. As we all know this immortal love, we can cut the long story short and jump to its **Premise**: “Great love defies even death”. Or another one of Shakespeare classics? *Macbeth* - “Ruthless ambition leads to its own destruction.”

I would use this tip from a renowned author and teacher of creative writing, just to give myself a general outline of what my story would be about.

And since it is believed that a good premise is a thumbnail synopsis of your work, as Egri advises, we should not write only flat



statements which contain all that is required of a well-constructed premise: character, conflict, and conclusion but always stay tuned to the author's conviction. The author (or a teacher, in our case) should take sides, otherwise there is no story.

And, to make the long story short, maybe we should mention that neither the premise nor any other part of a play has a separate life of its own and all must blend into a **harmonious whole**, so we can proceed with probably the most important ingredient – **human beings** in our story.

3. So far, we showed why premise is necessary as the first step in writing a good play. Now we will discuss the importance of **character**. We will try to find out just what elements go into this being called "human being." Character is **the fundamental material** any writer is forced to work with, so we must **know** our character as thoroughly as possible.

If we describe an object – a tree, a box, a house, we know that it has three dimensions: depth, height, width. When we describe human beings, we can try and think of three dimensions: **physiology, sociology, psychology**.

1/ Physiological Dimension

Why is **physiology** important? However shallow this statement sounds, our physical make-up has always influenced our outlook on life. A sick man, for instance, sees health as the supreme good; a healthy person belittles the importance of health. It affects our mental development, and serves as a basis for inferiority and superiority complexes. Overall, it is the most obvious of man's first set of dimensions.

2/Sociological Dimension

And then comes the **sociological** aspect. If you were a girl born in a mansion and played in beautiful and antiseptic surroundings, your reactions will be very different from let's say a homeless boy who was sent by his parents to beg on the streets.

3/ Psychological Dimension

And then comes the third dimension, **psychology**. It is the product of the other two. Their combined influence gives life to ambition, frustration, temperament, attitudes, complexes. Psychology, then, rounds out the three dimensions.



0. Step-by-step approach provided by Lajosh Egri.

So, what do we do when we decide to build a character? What concrete questions we need to answer when we approach the very hazy process of imagining our protagonist?

We will attach here a step-by-step guide provided by Lajosh Egri
PHYSIOLOGY.

1. Gender
2. Age
3. Height and weight
4. Color of hair, eyes, skin
5. Posture
6. Appearance: good-looking, over- or underweight, clean, neat, pleasant, untidy. Shape of head, face, limbs
7. Defects: deformities, abnormalities, birthmarks. Diseases
8. Heredity

SOCIOLOGY

1. Class: lower, middle, upper
2. Occupation: type of work, hours of work, income, condition of work, union or nonunion, attitude toward organization, suitability for work.
3. Education: amount, kind of schools, marks, favorite subjects, poorest subjects, aptitudes.
4. Home life: parents living, earning power, orphan, parents separated or divorced, parents' habits, parents' mental development, parents' vices, neglect. Character's marital status.
5. Religion
6. Race, nationality
7. Place in community: leader among friends, clubs, sports.
8. Political affiliations
9. Amusements, hobbies: books, newspapers, magazines he reads.

PSYCHOLOGY

1. Sex life, moral standards
2. Personal premise, ambition
3. Frustrations, chief disappointments
4. Temperament: choleric, easygoing, pessimistic, optimistic.
5. Attitude toward life: resigned, militant, defeatist.
6. Issues: obsessions, inhibitions, superstitions, phobias.
7. Extrovert, introvert, ambivert
8. Abilities: languages, talents.
9. Qualities: imagination, judgment, taste, poise



If we aspire to write a full-blooded work, like Macbeth or Hamlet, this is the bone structure of a character, which the author must know thoroughly, and upon which he must build.

We are well aware that as teachers we do not need to go into such depths when we build a character of a story. But just bearing all these questions in our mind, even if we do not include all the above details and facets, would help our students get the bigger picture.

Why do we need to make the effort, although our audience would never really comprehend the depth of our insights into the protagonist? On a very subconscious level our students feel the need for structure and **organization** even if it is not obvious on a superficial level. And people need stories about people. Or people-like animals, like Kermit the frog.

In any case, the best storytellers know that they do not construct the story. Their audience does. Each listener actively constructs a story out of the pieces we give them.

4. The Conflict

Having decided on the plot (or premise), the protagonist and its characteristics, we need to address the last ingredient of a successful story.

The conflict. If, with the help of Egri, we trace back the nature of confrontations, we can start with our caveman ancestor who went after food, and actually he fought with a tangible enemy: a huge beast which meant food— there we are - a conflict! He would risk his life and fight to his last breath. This was rising conflict: conflict, crisis, conclusion.

Another example of a conflict? All competitive sports are conflict. Football, boxing, hockey, to name but a few. A street fight is a conflict. A fight for supremacy among men or nations is a conflict. Every manifestation of life, from birth to death, is a conflict.

But how does all these relate to our Art of Writing? Egri claims that “Conflict grows out of character. The intensity of the conflict will be determined by the strength of will of the three-dimensional individual who is the protagonist.”

Egri also proceeds with different kinds of conflicts – static, rising and movement. Any conflict should evolve into transition. There is another way of putting it which also sounds helpful and it goes Crisis-Climax-Resolution

But we are not involved in real dramatic writing, we are merely touching on some of the important aspects and approaches to writing, so that we are able to produce a good story with which we teach in an interesting and inspiring way.



I would not linger on the subject any further, in fact, I wouldn't have drawn your attention to conflicts (I would rather research action) but I would like to leave you with this quote from the book: "Without conflict, life would not be possible on earth, or, for that matter, anywhere in the universe. The technique of writing is only a replica of the universal law, which governs an atom or a constellation above us."

Find it Inside – Motivation.

"If you cannot differentiate between fragrances, you cannot be a perfume maker; if you have no legs, you cannot be a runner. If you are tone-deaf, you cannot be a musician."

So, what do we need if we aspire to be master chefs of a good story? A job description of a perfect storyteller, if we consult Egri are:

- Use your **imagination** and **common sense**
- Be **observant**. You must never be satisfied with superficial knowledge
- Be **patient** when searching for causes.
- Have a sense of **balance** and **good taste**
- Have a basic **understanding** of economy, psychology, physiology, sociology

We are well aware that all these requirements are too much for an ordinary person, be it a scriptwriter or writer. Fortunately, this project and this paper addresses **teachers**. And teachers are the **superheroes** of our society, of the ever-changing and unpredictable times we live in.

VII. Storytelling in the classroom

And how about giving advocacy to students and making THEM authors of stories? If we proceed as described above - giving some simple and easy-to-follow instructions to a group, starting with a simple short story (with three to five key phrases to be included in it) so that they feel the satisfaction of completing a creative task and be prepared for a serious assignment. And if the serious assignment is presented in the form of a game, they will find inner motivation to participate in the process. So, how do we proceed?

We give them a list of facts (to be included in the initial Test), give them some more basic training in storytelling, remind them to think about premise, characters, conflict, dialogue, structure, etc. and provoke them to write a story incorporating the facts already included in the initial Test.



Why We Tell Stories

The main purpose of telling a good story is to **inspire**, to **connect**, to **teach** a moral.

Telling and listening to stories is an **immersive experience**.

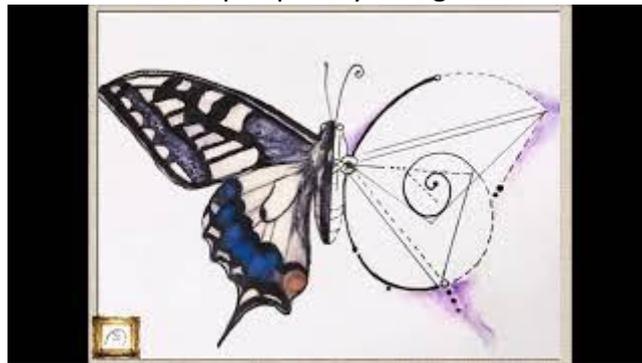
In our case, we are teachers.

We are being fully aware of the topics we need to teach and yet if we have a better understanding of how our students think and play, we may apply the principles of game or narrative design - transformation, immersion and motivation, to name but a few.

Young people are not indifferent, they are basically looking for a new type of experience - they want to be captivated by a story world, to assume a character's viewpoint and forget themselves.

The recipe of a good immersive experience relates so much to telling a good story and also to good teaching experience - show, don't just tell and engage, don't just show!

A video that wraps up storytelling:

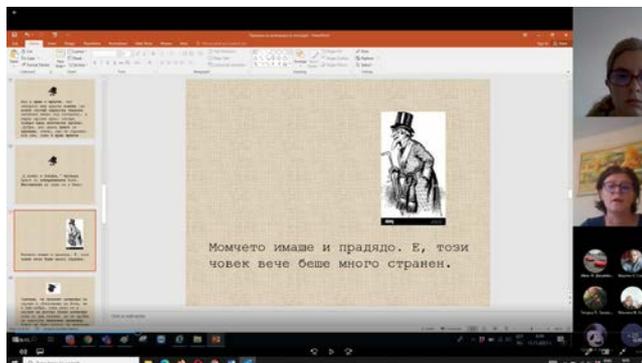


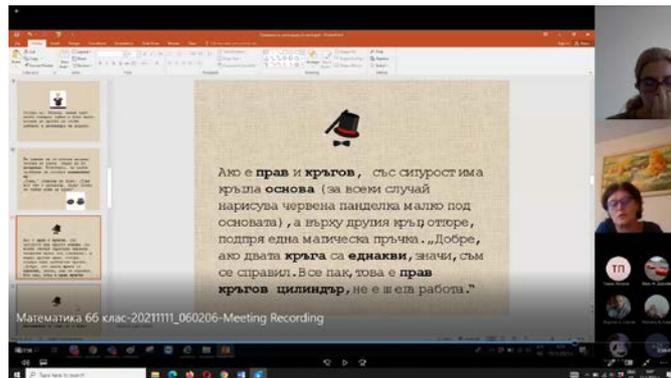
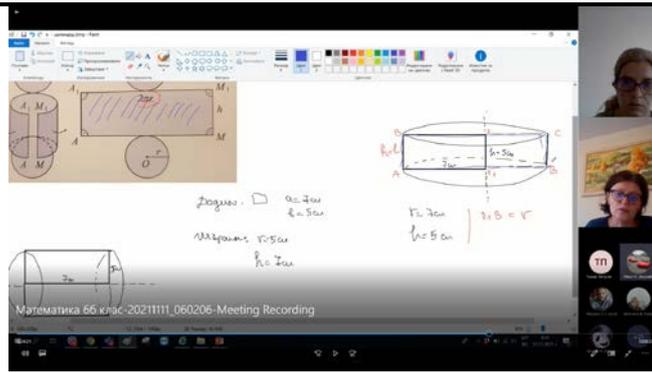
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Experiments,
conducted in the
different schools,
involved in the
project

Experiments were carried out in secondary school n. 39 "Petar Dinekov" in Sofia, Bulgaria as follows:

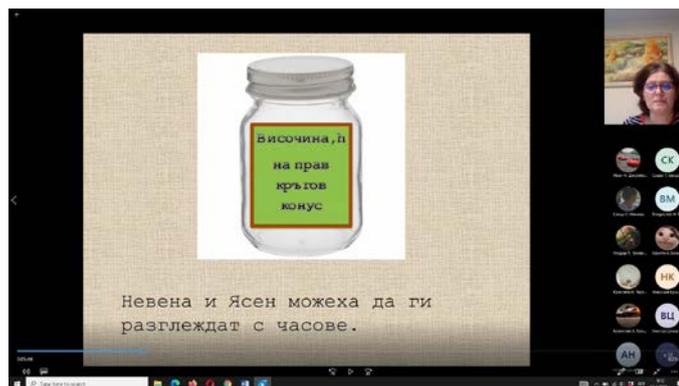
1. **Straight circular cylinder** - 11.11.2021 with grade 6B. The modification description, the original lesson plan and the adapted lesson plan can be discovered in the package "**Straight circular cylinder test in Bulgaria**".

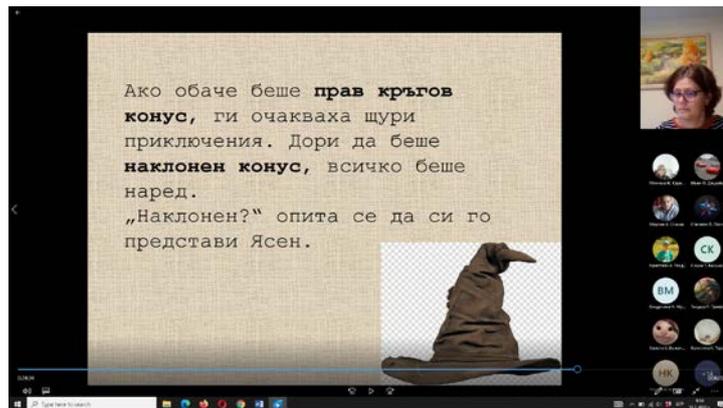
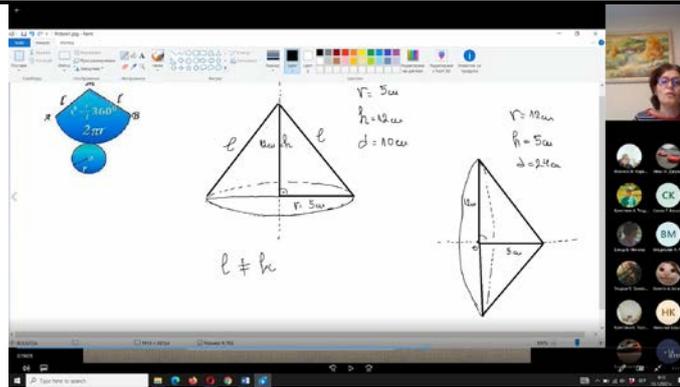




<https://youtu.be/i-GrC8PWuwg>

2. **Straight circular cone** - 17.11.2021 with grade 6B. The modification description, the original lesson plan and the adapted lesson plan can be discovered in the package “**Straight circular cone test in Bulgaria**”.

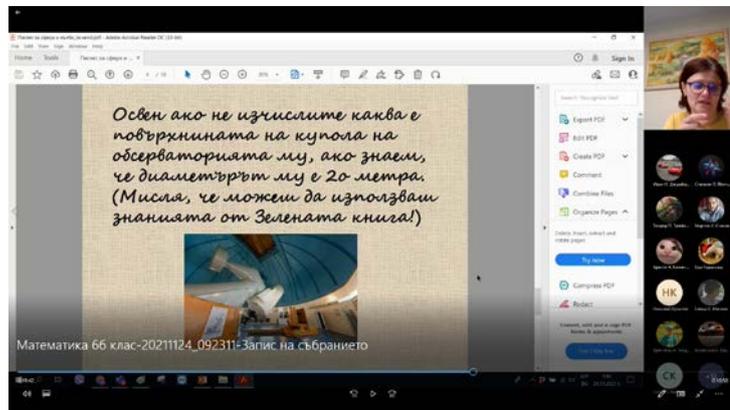
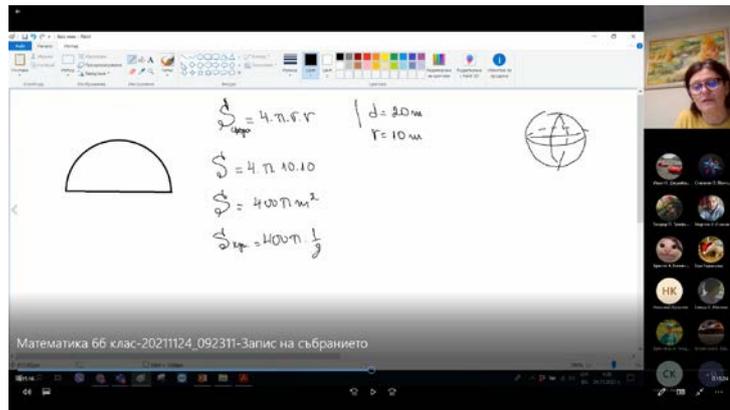
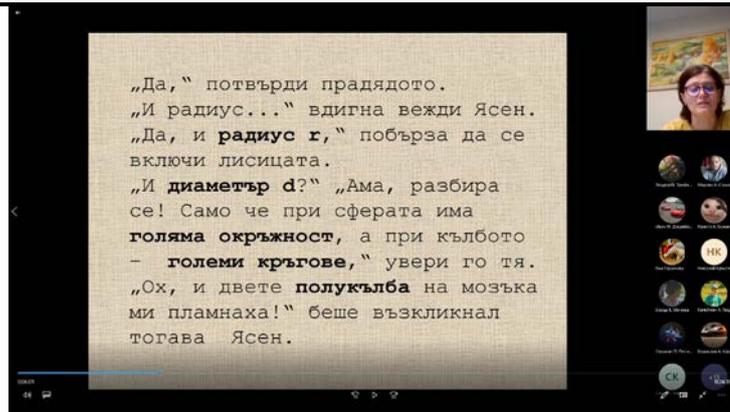




<https://youtu.be/7Xx-le8GPPk>

3. **Orb and sphere** - 24.11.2021 with grade 6B. The modification description, the original lesson plan and the adapted lesson plan can be discovered in the package **“Orb and sphere test in Bulgaria”**.





<https://youtu.be/nPcDI11Tc0o>

The screenshots provided aim at demonstrating that each adapted lesson added a story to the traditional topic explanation as it is usually provided by the teacher. The adding of a story helps the students consolidate the new knowledge by creating emotional links, triggered by the tale, standing behind the scientific content. Full recordings of the lessons are available in mpeg4 format. They can be shared with other teachers, following an official request and with the explicit consent of 39 Secondary school “Petar Dinekov”, Sofia, BG.

	<p>27 Bulgarian students from 6 grade, who participated in the testing of the adapted lesson plans delivered by teacher Sashka Nikolova, evaluated the experience as follows:</p> <ul style="list-style-type: none"> - Was it easier to understand the material delivered through this approach? 74.1% say YES. - Was this way of delivering the content more distracting for you? 85.2% say NO. - What is your motivation for learning after you experienced these modified lessons? 51.9% state that they feel more motivated to learn, 40.7% for not see a huge difference and 7.4% do not feel motivated to learn. - Would you like more lessons to be adapted this way? 74.1% answer Definitely yes, 18.5% are not sure and only 7.4% say that they prefer the traditional way of delivering. <p>Other lessons adapted with the use of the storytelling tool:</p> <p>Any scientific subject - Story Book - Vitor Costa – Portugal</p> <p>English language - Antonella Pozobon – Italy</p> <p>Geography - Joaquim Saial – Portugal</p> <p>Mathematics and Sciences - Cristina Grossi – Italy</p> <p>Sciences - Nina Georgieva - Bulgaria</p>
<p>Evaluation tools</p>	<p><i>Questions, which a teacher can use in order to monitor his/her progress with this tool and establish its usefulness and feasibility:</i></p> <p><i>After interweaving terms, concepts, definitions, data from the lesson plan/s into stories, was it easier or harder for the students to understand and engage with the material?</i></p> <p><i>What is the learning motivation after the lesson? Have there been any changes?</i></p> <p><i>Would you personally prefer to have more lessons of this type or to return to traditional lessons?</i></p> <p><i>How would you evaluate the usefulness of the exercises within the tool?</i></p> <p><i>What feedback did you receive from the students, if any?</i></p> <p><i>Was the adapted lesson more distracting than the regular lesson?</i></p> <p><i>Was there a change in the marks of the students, after using the adapted approach? Was there an increase in information retention?</i></p>



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