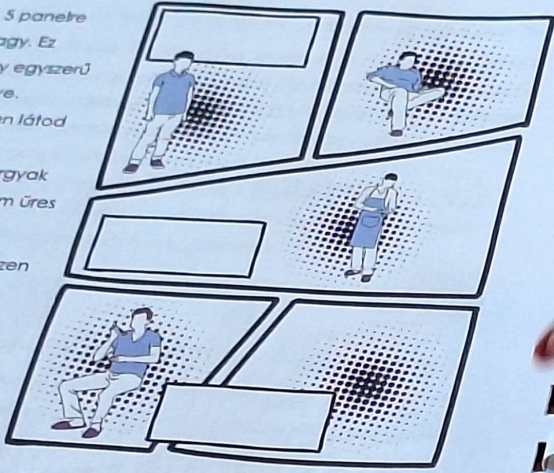


14

Most egy másik, 5 paneles osztozott oldalon vagy. Ez nagyrészt üres, egy egyszerű karaktertől eltekintve. Különböző paneleken látod a karaktert állni vagy ülni, de csak hátterek, tárgyak és néhány szó van. Csak három üres panel van.



Írd meg, hogy a karakter ezen az oldalon nem beszél, és minden hiányzik... Rajzolj és írd meg ezeket a paneleket valamivel, a karakterrel megjelölve a jelenet információját.

Írd meg a cselekmény kibontakozásához.  
 → Menj a 9. bekezdéshez.

Írd meg a helyszínének azonosításához.  
 → Menj a 3. bekezdéshez.

Írd meg, hogy meghatározzák, mit csinál a karakter.  
 → Menj a 17. bekezdéshez.

Írd meg, hogy az egyik.  
 → Menj a 12. bekezdéshez.

15

Az egyik szereplő a következőket mondja: "Az első dolog, amit tehetnél, hogy segítsz nekünk azonosítani, mik ezek az események a következő oldalon. Te látod az eseményekben a karakter alakú szavakat." Ezeket a szavakat általában a karakterek, szavak és események vannak.



Írd meg, hogy a következő oldalon 6 panel van, mindegyikük eredetileg más oldalakon voltak. Írd meg, hogy mit jelentenek, vagy hová tartanak a rövid szavak vannak, színes elemekkel: "Vroom" és "Splash".  
 → Mire használják őket?

→ Menj a 5. bekezdéshez.

→ Menj a 7. bekezdéshez.

→ Menj a 18. bekezdéshez.

# IMPLEMENTATION GUIDE

## Homework Adventures: Feedback & Best Practices



Co-funded by  
the European Union



# INTRODUCTION

- **Context of the project**

Homework is a cornerstone of the different school systems in Europe. It is not always described as such in official documents but in practice all students have to spend a sizable part of their afterschool time doing it. And yet the topic is debated with numerous studies arguing in favour or against homework, analysing whether homework is effective or how much time it should take. When compiling different studies, the effects seem overall positive but are associated with potential downsides such as “physical and emotional fatigue, fuel negative attitudes about learning and limit leisure time”. Different research also shows that the socio-economic status of the student and family support impact these outcomes. So, if homework has the potential to improve learning but its actual positive effects are not valued enough and diminished by circumstances, what can be done? Some voices advocate for its suppression, but a more constructive way is to work on how homework is done and to improve its quality.

This general observation led to the creation of Edugraal, a project within the framework of the European Union's Erasmus+ programme, whose main objective is **to improve academic results and student engagement at school**, by improving the efficiency and engagement of Homework through **gamification and storytelling techniques applied to homework**. As this Game-based learning or gamified learning is essentially more oriented towards learning-by-doing, it is especially useful to apply in the STEAM subjects, as those tend to be more abstract and difficult in terms of pupil engagement. This project therefore aims at creating innovative and creative pedagogical tools to be used in a homework context in order to engage pupils in a homework adventure. And by doing so, we seek to encourage the development of basic skills: by promoting cross-curricular collaboration in the same adventures which is an innovative learning approach that is focusing and engaging learners in a competence-based revision, integration or assessment system.

This adventure homework format presents a series of tasks under the form of a story with different pathways including in-story support for struggling learners. While this is not be sustainable for 100% of homework, it helps re-engage pupils and associate

the concept of homework with something positive. The level of retainment of information also increases thanks to gamification mechanisms imbedded in the class materials, as it is proven that Gamification and Game-based-learning have a higher rate of information retainment than classical learning techniques. This adventure homework format could be suited to all school topics, but for practical reasons we focused on one topic to provide the most accurate content possible.

- **Pedagogical approach of the project**

Edugraal is based on a pedagogical approach that combines gamification, game-based learning, and creative storytelling to transform the conventional homework experience. Indeed, transforming homework into something more engaging and interactive can significantly improve students' performance and interest in learning.

We do this by incorporating elements of games into homework, such as **challenges, rewards, competition, and a sense of achievement**, thus motivating students to do their homework more effectively and enthusiastically.

Homework adventures resemble **game scenarios or quests**, and are designed to be interactive, immersive, and fun, encouraging active learning and creating a narrative framework that captures students' interest and encourages them to follow the tasks. This approach makes learning more relatable and memorable. In this way, students are given the opportunity to apply their knowledge, solve problems and experiment in a safe and engaging environment.

The project pays special attention to STEAM (Science, Technology, Engineering, Art and Mathematics) subjects because these fields can be perceived as more abstract and challenging, so the aim is to make them more accessible and exciting for students through gamification.

On the other hand, its pedagogical approach also focuses on **inclusion**, as well as the format of the stories, which have also been designed to be inclusive, in particular for students with Specific Learning Disabilities (SLD). By presenting homework in a different and more engaging format, it hopes to reach students who may struggle with traditional homework methods. This approach can benefit students with learning disabilities, those from diverse backgrounds and those facing

socio-economic difficulties. The emphasis on positivity and progress, not just success, contributes to a more inclusive learning environment.

Ultimately, their project aims to boost the achievement rate of students in basic skills fields. By improving engagement and efficiency through gamified task adventures, it aims to promote the development of essential skills among students. This, in turn, contributes to their academic success and overall well-being.

In short, the pedagogical approach of the project is **innovative and dynamic**. It aims to transform the traditional approach to homework by making it more engaging, interactive, and accessible, with a strong focus on gamification, game-based learning, storytelling and inclusivity. This approach has the potential to significantly impact students' learning experiences and outcomes, especially in STEAM subjects, and aligns with modern educational strategies that seek to promote active and enjoyable learning.



- **What are best practices and why are they so important?**

As part of the development of the different homework stories offered in this project, they have been implemented in different schools and educational centres in Europe. The aim was to test the exercises created in Edugraal, as well as to correct possible errors and collect suggestions and advice from teachers and students. This feedback is gathered in this manual, in the form of best practices, with the idea that it will serve as a help and guide to other teachers who want to put into practice the contents developed in this project.

The following best practices can help educators make the most of their time and available resources, implementing content and activities more effectively. Efficient homework adventures reduce the burden on teachers and students and maximise the impact of each task.

By applying this piece of advice, teachers can design and implement homework adventures that lead to better learning outcomes. These practices help students **assimilate concepts, develop problem-solving skills, and retain information more effectively.**

In addition, good practices often encourage creativity on the part of both teachers and students. In this way, these activities can **spark innovative thinking, helping students to explore topics in depth and from a variety of angles.**

- **What is the aim of this manual?**

The aim of this implementation guide is to provide educators with a practical and detailed reference to help them successfully implement the gamified homework adventure methodology in their classrooms.

This handbook has several essential purposes, the first being to **provide step-by-step guidance** on how to effectively design, implement and manage gamified homework adventures. This includes creating stories, selecting challenges, incorporating game elements, and managing student engagement.

To this end, best practices collected from educators who have already experienced success with this methodology are presented. These practices are lessons learned from classroom experience and are based on real cases.

Another aim is to **inspire** educators to be creative in creating gamified school tasks through these examples and tips. In addition, it also aims to provide guidelines to ensure that homework adventures are inclusive and accessible to all students, regardless of their specific abilities, backgrounds or challenges.

Finally, it will also explain **how to assess students' progress** in the context of gamified homework adventures and how to provide effective feedback.

In summary, the aim of the manual or implementation guide is to serve as a practical and enriching tool for educators, providing them with the necessary tools and knowledge to effectively implement gamified homework adventures in their classrooms and, at the same time, foster a more engaging and effective learning environment for students.

## PART 1 - HOMEWORK ADVENTURES

- **Homework Adventures: What is it?**

The Homework Adventures created for this project are a series of stories, under the form of a story with different pathways, where students must test their knowledge in different subjects in order to progress through the story. The stories below cover a range of topics related to the subjects of mathematics, chemistry, and biology. By infusing gamification, game-based learning, storytelling, and an inclusive approach into school assignments, we aim to increase student achievement, particularly in STEAM subjects. In a constantly evolving educational environment, it is essential to adapt and innovate, and that is precisely what Edugraal seeks to achieve.

These Homework Adventures and all materials provided are inclusive and user-friendly for pupils with Specific Learning Disorders (SLD) but also for any pupil that is part of the groups most likely to fall behind in academics, especially in STEAM subjects. While pupils facing learning difficulties (such as pupils with SLD) benefit from the gamification approach, their active inclusion is often put aside when games are setup. Here, it will not be the case since special care has been given to make the material accessible for as many learners as possible.

- **How to implement Homework Adventures in the classroom?**

The following Homework Adventures are easy to implement. The most important part is that the knowledge required for each story has already been taught in class, so that the pupils can apply this knowledge throughout the stories.

These activities can be done both in class and at home, although the original idea is that they serve as a reinforcement of what has been done together with the teacher and classmates.

Each enigma or situation faced by the reader has several options and, depending on the answer chosen, this leads to the next paragraph in which the story continues, and so on until its final resolution.



## ● Homework Adventures

Edugraal developed a series of 19 ready-to-use adventures that are available on the project website. These adventures can serve as a model for teachers who wish to create their own stories or can be applied directly in the classroom. They are as follows:

### Einstein, the crazy scientist (Biology)

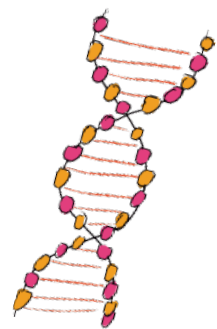
- **Level:** Secondary education (13-14 years old)
- **Topic:** Digestive system - Organs – Food

In this story, a young scientist asks for your help to travel in his brother's digestive system to understand why he is sick. The path in this story is inspired by the natural path of food inside the body.

### Run for the planet (Biology)

- **Level:** Secondary education (13-14 years old)
- **Topic:** Human body - Muscular system - Circulatory system

Three friends choose to participate in a charitable race in favour of the ecology and the planet. They will discover along the way how their muscles work but also learn to know their body better. The story will be advanced by jumping from paragraph to paragraph, depending on the reader's responses, filling the blanks of the texts with the right words.



## The secret of Kilauea (Science of the Earth / Geology)

- **Level:** Secondary education (12-13 years old)
- **Topic:** Types of volcanoes, tectonic plates, materials and composites

You and your classmates are going on a field trip today to the Hawaiian Volcanoes National Park, where Leo, the guide, will show you around and tell you about the history of the Kilauea volcano. Don't forget to be mindful of the dangers it hides... you never know what can happen if the volcano "wakes up".

## Einstein, the crazy scientist (Chemistry)

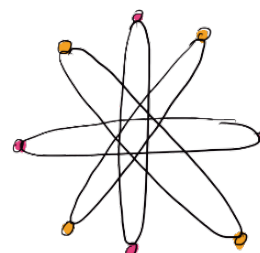
- **Level:** Secondary education (14-15 years old)
- **Topic:** Chemical equation - Chemical function – Valence

A young scientist who suffers amnesia needs your help to find a neurological helmet to recover memory. This is a classical path, with multiple choices. The right choice leads to the continuity of the story.

## The energy quest: A journey to rescue the princess (Physics)

- **Level:** Secondary education (14-15 years old)
- **Topic:** Conversion and transfer of energy

In the mystical realm where energy shapes destiny, Prince Eamon embarks on a daring mission to rescue Princess Isabella from a malevolent sorcerer's clutches. As they escape the sorcerer's enchanted castle, their journey unfolds as a symphony of energy forms. Faced with challenges, they harness heat, light, potential, wind, and mechanical energy, transforming obstacles into opportunities.



## Camping at the mountain (Science)

- **Level:** Primary education (9-10 years old)
- **Topic:** States of matter - Matter properties - Water Cycle

Three friends discover the mountains and its landscapes with Sam, the coordinator. The telling of the story will depend on the choices made by the reader to different questions presented to them, which will lead to one paragraph or another. If the answer is incorrect, you will be given a hint and try the exercise again or continue the story.

## Einstein, the crazy scientist: On the track of the lost water (Science)

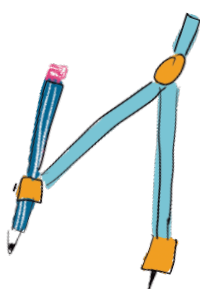
- **Level:** Secondary education (14-15 years old)
- **Topic:** Water in living organism & water cycle in nature

A young scientist needs your help to find the cause of the water shortage that threatens the lives of the inhabitants of a small town.

## The beak of the toucan (Maths)

- **Level:** Secondary education (12-13 years old)
- **Topic:** Equations

In this story, you are the creator of Wonderful Treasures, an ancient treasure recovery agency who embarks on a quest to find a legendary Inca amulet. To get it, you must solve various mathematical problems and equations.



## In the shadow of the pyramids (Maths)

- **Level:** Secondary education (12-13 years old)
- **Topic:** Geometry

This adventure is a part of the Wonderful Treasures saga. This time a truly mysterious mission will lead to discover famous pyramidal buildings around Europe, looking for clues to find a Roman treasure.

## Searching for the Corvina (Maths)

- **Level:** Secondary education (14-15 years old)
- **Topic:** Equations, Pythagoras Theorem

This adventure takes you to the Renaissance court of Matthias Corvinus, King Matthias. By solving mathematical problems (equations and Pythagorean theorem), the student will get to the correct solution, find the code hidden in the Corvina and save the King's memory. While solving the mathematical problems, students will learn about King Matthias' life and the places where he lived.

## The trigonometric expedition: The rescue (Maths)

- **Level:** Secondary education (14-15 years old)
- **Topic:** Trigonometry

Embark on an adventure with Lily and Max as they explore the labyrinth of ancient Egyptian pyramids to rescue their grandpa. Guided by trigonometry challenges posed by gods like Thoth and Ra, they unlock mysteries, uncover connections between ancient Egypt and maths, and triumph over Set's chaos to reunite their family!

## Bad joke at the British Museum (History)

- **Level:** Primary education (10-11 years old)
- **Topic:** Assyrian civilisation

This adventure takes you to the British Museum, where a valuable collection of Assyrian artefacts exists. It introduces you to Henry Austen Layard, the British archaeologist who was one of the pioneers of Assyriology. Several topics relating to the history of the Assyrians are proposed, which the teachers can modify if they wish to focus on other aspects.

## On the traces of the neolithic revolution (History)

- **Level:** Primary education (11-12 years old)
- **Topic:** Neolithic Revolution

In this story, you are going back with your friends to the Neolithic Age. With the help of an archaeologist, you will have to gather clues to solve the final puzzle.

## The Emperor's Soothsayer (History)

- **Level:** Secondary education (14-15 years old)
- **Topic:** Roman Emperors

This adventure is a part of the Wonderful Treasures saga. This adventure is set in the time of Emperor Augustus: it allows a review of the history of the Roman Emperors from Augustus to the crisis of the 3rd century.



## The Enlightenment odyssey: A journey through time (History)

- **Level:** Secondary education (14-15 years old)
- **Topic:** Enlightenment

Join Markos and Nikos on a captivating journey through time as they navigate the Enlightenment. Through immersive exploration and encounters with Enlightenment thinkers, they unlock the power of knowledge, question established norms, and inspire students to embrace the legacy of reason and progress.

## Operation Freedom: A history of World War II (History)

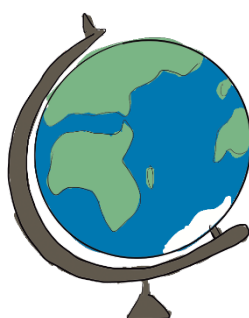
- **Level:** Secondary education (14-15 years old)
- **Topic:** World War II, alliances, geography

A young British soldier is given a mission that will change the course of history. In the midst of the spread of totalitarianism in Europe, Daniel and his comrades will face fear and danger to bring freedom and peace back to the European continent.

## International treasure (Geography)

- **Level:** Secondary education (13-14 years old)
- **Topic:** European countries and capitals

You've found a map of Europe with a strange parchment that says: "If you retrace our steps, a treasure you will find. Incredible riches await you, so don't waste any time!".



## Between the pages (Literature)

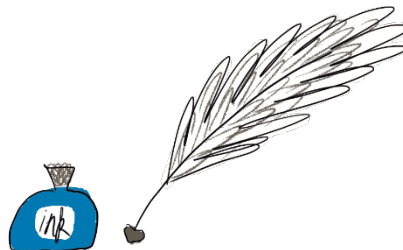
- **Level:** Secondary education (11-12 years old)
- **Topic:** Comics terminology and composition

While exploring the school library, you find a torn-up comic book and get transported within the story. The characters ask for your help to repair the damaged pages so you can escape back into the real world.

## The source of wisdom (Literature)

- **Level:** Secondary education (14-15 years old)
- **Topic:** Literary devices

In this story, you have become a character in the fantasy novel you are currently reading, and you try to escape from the story to go back to your real life. To this end, you have to find all the literary devices hidden in the tale.



- **Implementation: Advice and solutions to possible barriers**



Implementing Homework Adventures in the classroom requires careful planning, creative thinking, and a commitment to overcoming potential challenges. While the rewards of this innovative approach to education are significant, educators may encounter certain barriers along the way. Here, we offer advice and solutions to address these barriers and ensure a successful implementation:

- **Technical Challenges:** Educators may face technical challenges related to access to digital platforms, compatibility issues with devices, or internet connectivity issues. To mitigate these challenges, provide alternative options for accessing the adventures, such as printable versions or offline activities. Additionally, collaborate with IT support staff to troubleshoot technical issues promptly and ensure smooth implementation.
- **Student Engagement:** Maintaining student engagement throughout the adventure is crucial for its success. To enhance engagement, incorporate elements of choice, interactivity, and personalisation into the adventures. Allow students to make meaningful decisions that impact the outcome of the



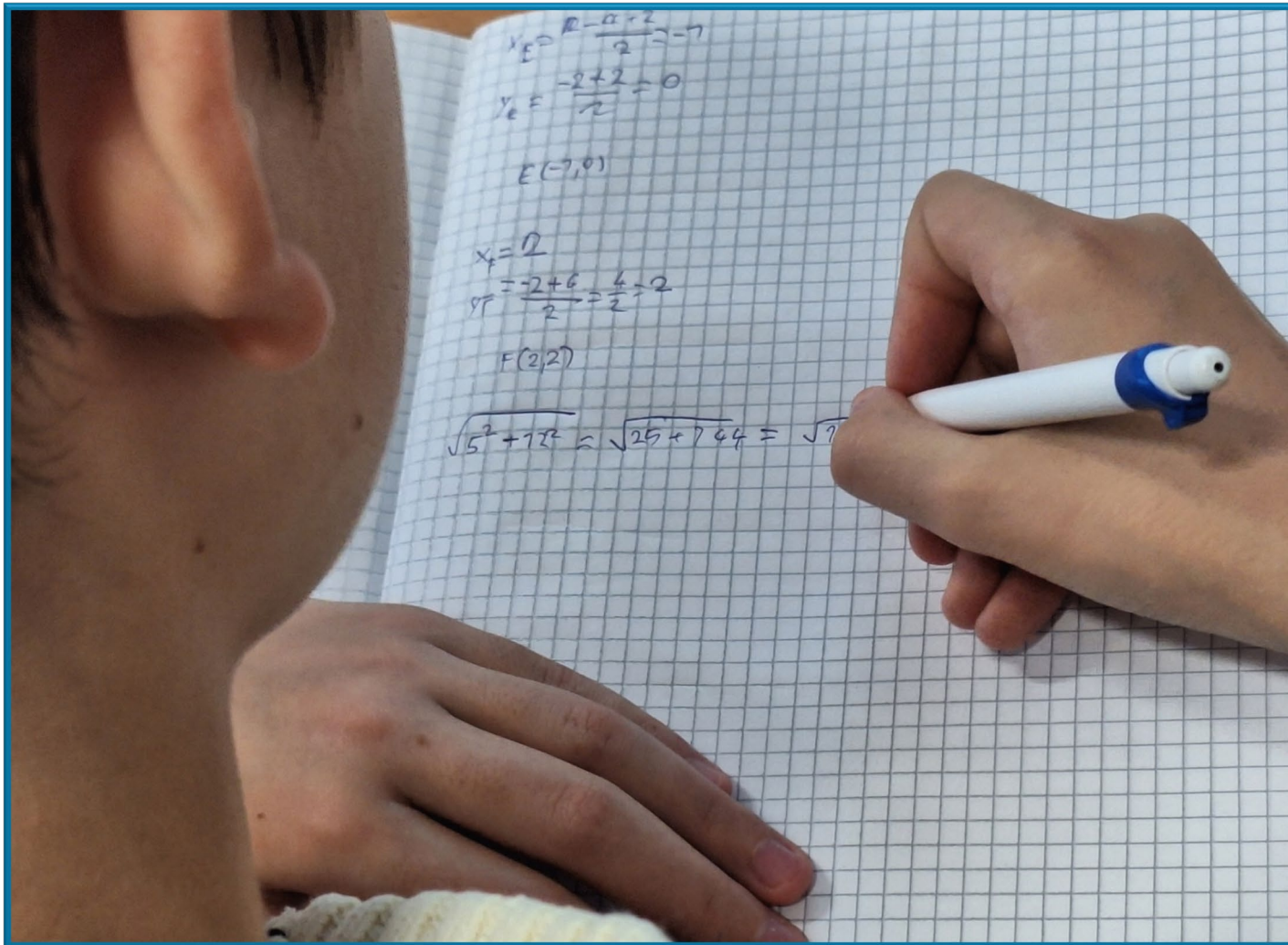
story, integrate multimedia elements to stimulate multiple senses, and tailor the content to match students' interests and preferences.

- **Time Management:** Balancing the time allocated for Homework Adventures with other classroom activities and curriculum requirements can be challenging. To optimise time management, integrate the adventures strategically into existing lesson plans, ensuring alignment with learning objectives and standards. Consider breaking longer adventures into manageable segments or incorporating them into homework assignments to distribute the workload effectively.
- **Differentiated Instruction:** Students have diverse learning needs and abilities, requiring differentiated instruction to support their individual learning journeys. Offer flexibility in how students engage with the adventures, providing options for independent exploration, small group collaboration, or teacher-led instruction. Additionally, scaffold the content to accommodate varying levels of proficiency and provide additional support or extension activities as needed.
- **Assessment and Feedback:** Assessing student progress and providing timely feedback are essential components of effective learning experiences. Incorporate formative assessment strategies throughout the adventure, such as quizzes, reflections, or peer evaluations, to gauge student understanding and adjust instruction accordingly. Provide constructive feedback that highlights areas of strength and opportunities for growth, fostering a growth mindset and continuous improvement.

By proactively addressing these potential barriers and implementing solutions tailored to the specific needs of students and educators, Homework Adventures can become a transformative tool for enhancing learning outcomes, fostering student engagement, and cultivating a lifelong love of learning.

If you prefer, we provide you with a decalogue of tips for implementing educational stories effectively:

1. Spend time **planning** the implementation of the stories, considering learning objectives, resources needed and timeframe.
2. Choose stories that are aligned with **curricular content** and student interests to maximise relevance and effectiveness.
3. Incorporate **interactive elements** such as student choices, multiple choice questions or hands-on activities to encourage active participation.
4. Ensure that all students have **access to stories**, whether through digital devices, hard copies or other accessible alternatives.
5. Adjusts the content of the stories according to the **level of the students**, offering appropriate challenges and providing additional support when needed.
6. Provides **constructive feedback** during and after the activity to guide student learning and reinforce key concepts.
7. Promote **teamwork and collaboration** among students by providing opportunities to discuss ideas, solve problems together and share knowledge.
8. **Vary story formats**, using multimedia, visual narratives, or interactive games to maintain student interest and motivation.
9. Regularly **assess the impact** of stories on student learning, collecting qualitative and quantitative data and adjusting implementation as needed.
10. Encourages students to **be creative and think critically** as they interact with the stories, encouraging exploration, experimentation, and discovery.



- **Other resources**

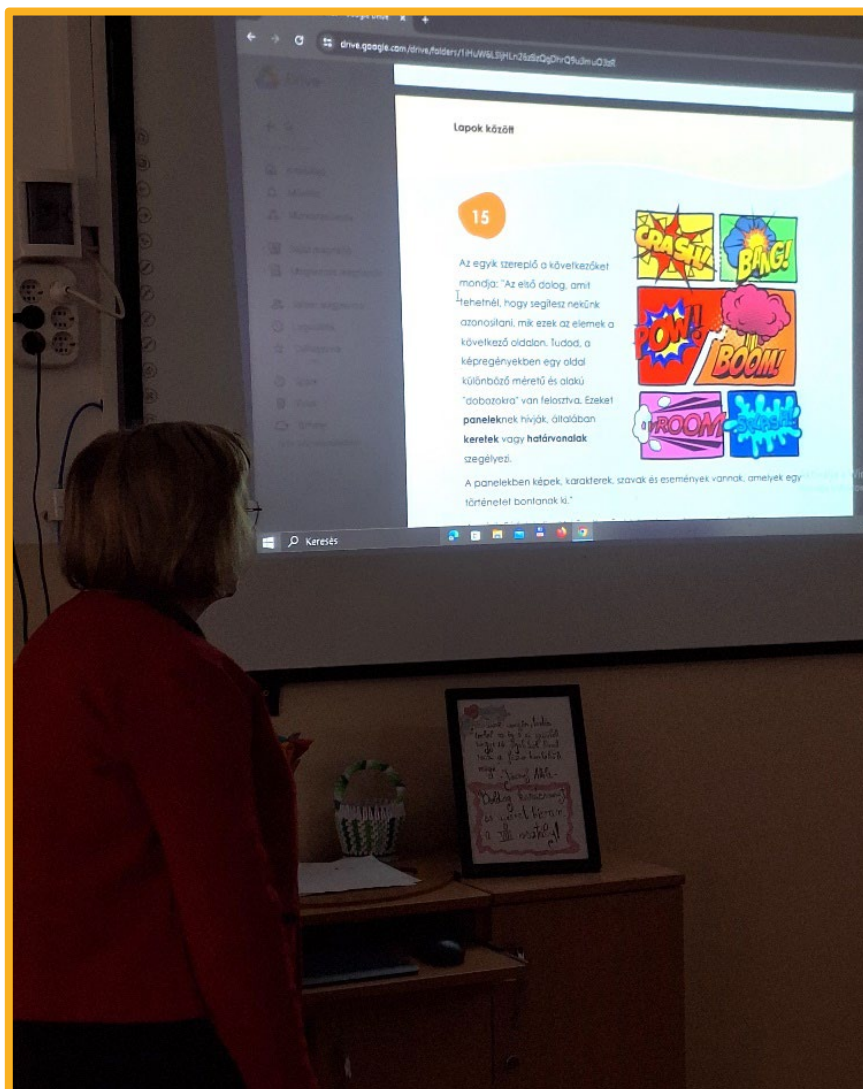
In addition to the homework adventures, the Edugraal project has created several additional outputs that support both teachers and learners in implementing and leveraging gamification in learning.

- **E-learning module:** The e-learning course is designed to support teachers in the process of creating their own gamified homework adventure. Through the module, teachers will discover how to leverage homework adventures to increase student learning. After the course, they will receive a certificate validating their training in this innovative educational methodology.
- **Pedagogical Toolkit:** This pedagogical toolkit includes tips, tutorials and guidelines on storytelling, gamification and writing. It is designed to support teachers in the technical and pedagogical aspects of creating their own

homework adventures. With these useful tools, developing gamified homework will be a simple and accessible process for any teacher interested in this methodology.

- **Implementation guide:** Designed as a collection of best practices and experiences, this guide helps teachers to implement their gamified homework adventures. It provides detailed information on gamified homework rules, frequency, delivery system and other logistical aspects. In other words, it contains everything you need to know before implementing your gamified learning.

With these resources, Edugraal offers a complete set of tools and training for teachers to transform the way they assign and manage homework, promoting more inclusive, motivating, and effective learning.



## 2 - GOOD PRACTICES

### ➤ “The beak of the toucan” (Maths: Algebra, Equations)

The goals of the teachers who carried out this implementation included reviewing content before the summer holidays, activating student participation in the educational process, fostering a love of mathematics, applying knowledge both in and out of school, promoting creativity and fun, and engaging students in working with equations in an alternative way.

#### ○ Implementation process

In the process of implementing this adventure, valuable feedback was received highlighting how the activity was adapted to different student groups and educational contexts. In France, for the older groups of students, the story was used as a review of the existing curriculum, while for the younger ones it served as an introduction to the topic. Students were guided to begin the story and the first exercises, which provided a cohesive starting point for their learning experience.

In Greece, at the Anchialos Gymnasium, a trial run of the activity was conducted in the classroom, proving to be an interesting, different, and constructive process. The students thoroughly enjoyed the novel approach, finding the story not only educational but also engaging and involving. Conversely, at Seneca School in Spain, they faced the challenge of the document's length, nearly 30 pages. To address this, they opted to project the story instead of printing each copy, allowing more time for each student to complete the activities individually. This practical adaptation facilitated logistics and ensured effective student participation in the learning process.

These testimonials highlight the versatility and effectiveness of our story as an educational tool, capable of adapting to the specific needs and characteristics of diverse learning environments. They also show how careful and thoughtful

implementation can maximize the impact of the activity on students' academic development and enjoyment.

### ○ **Best parts of the development**

Comments highlight the effectiveness of the print book format in engaging students, attributing it to the adventurous tone and the puzzles that captured their attention. It is noted that the adventure was an innovative and creative tool that fostered teamwork, critical thinking and interdisciplinary application of acquired knowledge. In addition, the activities are praised for their simplicity and their adaptation to the students' level of knowledge, which facilitated the revision of concepts. Overall, these comments suggest that the strategy of using print books with an adventurous approach resulted in meaningful engagement and effective learning on the part of the students.

### ○ **Potential problems & improvements**

Feedback related to problems in implementation points to some shortcomings in the execution of the activity. One of the problems highlighted is the absence of links in the PDF version, which made navigation difficult and slowed down the pace of the activity. Another problem noted is the length of the activity, which is considered too long to complete in one lesson, which could affect students' attention. In addition, the lengthy introduction was seen as an obstacle to maintaining students' interest, and the length of the text discouraged some. In summary, problems related to PDF navigation, the length of the activity and the length of the introduction were identified as affecting the students' experience.

To overcome these extension problems, some teachers opted to split the activity into two sessions, thus maintaining the attention and interest of the students.

### ○ **Other techniques and initiatives**

In France, a printed format in the form of a book was chosen instead of single sheets to facilitate the reading of the jumbled paragraphs. This choice demonstrates a

practical consideration on the part of the teaching staff, allowing students to access the information more fluently and follow the narrative flow of the story without difficulty.

Conversely, at Anchialos Gymnasium in Greece, a pedagogical strategy was implemented prior to the main activity. Teachers dedicated ample class time to thoroughly teach the equations, even extending beyond the standard lesson duration. This thorough preparation ensured that students had a solid understanding of the content before embarking on the adventure. By engaging in the activity after mastering the equations, students could apply and consolidate their newly acquired knowledge, highlighting the effectiveness of this pedagogical approach.

These initiatives underscore the importance of careful planning and creative adaptation by teachers to maximise the impact of experiential learning in the classroom. By considering the specific needs of students and the characteristics of the content, educators can design effective interventions that foster deep and meaningful learning.



### ○ **Additional comments**

An additional comment from the Third Gymnasium in Larissa, Greece, highlights key aspects of the implementation of the mathematical adventures. Due to the demanding academic programme and final exam preparations, math teachers couldn't incorporate these activities into the curriculum. However, one teacher reviewed the activities thoroughly and praised their engaging nature, noting they keep students' interest and provide valuable knowledge about various places and historical monuments.

The activities are well-directed, covering a wide range of knowledge and connecting various cognitive topics. They encourage different problem-solving methods, enhancing students' mathematical, reasoning, and logical thinking skills. However, the activities are often too long and complex, leading to more time spent on understanding the narrative than solving math exercises. A suggestion to address this is to start with easier problems and gradually progress to harder ones, to prevent discouragement.

Additionally, it is recommended to remove the calculator from the required materials and track or evaluate participants' progress at the end of the process, ensuring students not only enjoy the game but also acquire the appropriate knowledge. These comments provide valuable insights into the activities' strengths and offer constructive suggestions for improving their classroom effectiveness.



➤ **“The secret of Kilauea” (Geology: Types of volcanoes, tectonic plates, materials and composites)**

○ **Implementation process**

The implementation of the new story across various educational centers showcased a high level of teacher commitment and positive student reception. In the Romanian school, the activity was assigned as homework after a classroom presentation, with additional context provided for the unfamiliar volcano. This approach was well-received despite the novelty.

In the Greek school, an interactive classroom approach was used, with content projected on a screen and students engaging in discussions. Multiple-choice questions allowed for different story paths, and adequate time was provided for completion. Some areas for improvement were noted, such as the need for more images and a clearer time structure, but the experience was generally positive.

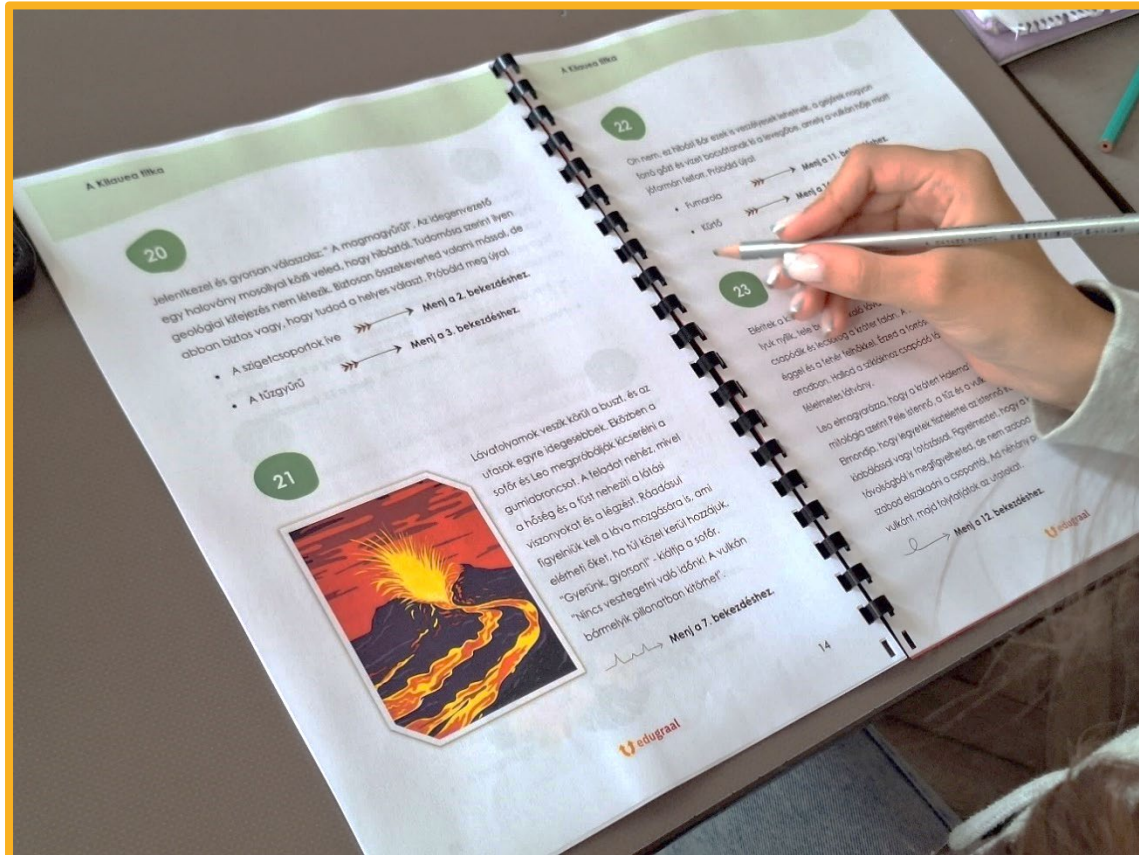
In the Spanish school, the activity was part of a natural sciences class for 13-year-olds. Although students initially struggled with geological concepts, the overall response was positive. The interactivity and practical nature of the activity, along with the preparatory lesson, helped deepen their understanding. Overall, the implementation was successful, effectively engaging students in meaningful learning.

○ **Best parts of the development**

Teachers and students highlighted several key parts in the development of the activity. For teachers, the activity enabled effective and engaging teaching of difficult concepts like geology. **The interactive and practical approach actively involved students in learning**, helping to **identify areas of confusion** and adapt teaching accordingly. The high student interest and participation demonstrated the activity's effectiveness in maintaining attention and motivation.

Students appreciated **the opportunity to make decisions** and see the consequences of their actions in the story, which made them feel more involved in learning. The

story was described as interesting and entertaining, **making complex concepts easier to understand**. The creative approach to learning about geology sparked their interest and encouraged active participation. Additionally, the activity's ability to foster teamwork and collaboration enriched the learning experience and promoted the exchange of ideas.



### o Potential problems & Improvements

During the process of adapting the activity, teachers may face potential challenges, but identifying these issues and considering improvements can optimize classroom implementation.

One challenge is understanding complex geological concepts. To address this, teachers **can review key concepts beforehand** or provide additional explanations during the activity. Time management can also be a problem, especially if group discussions run long. Setting clear time limits and guidelines for discussions can help manage time effectively.

Additionally, the activity's difficulty level may vary for different students. Teachers can **adapt the activity with different difficulty levels** or learning paths to accommodate various skill levels. Ensuring inclusivity and accessibility is crucial; providing additional support and accommodations for students with special needs is essential. Finally, offering detailed feedback can help students understand and learn from their mistakes.

- **Other techniques and initiatives**

In addition to previous suggestions, several additional techniques and initiatives can enhance the classroom learning experience.

One suggestion is the **use of digital supports**, such as videos or sound effects, to make the activity more dynamic and engaging, helping to visualize abstract concepts more concretely. Another idea is to divide students into groups, encouraging collaboration, idea sharing, and teamwork, which can boost participation and engagement.

Introducing **elements of competition and evaluation**, like counting correct answers or rewarding progress, can motivate students to improve their performance. Exploring interdisciplinary connections within the activity, such as incorporating geography, history, or environmental sciences, can provide a more holistic learning experience. Adapting the content to match the students' level and understanding, by simplifying information and providing additional explanations, is also recommended.

- **Additional comments**

The Spanish centre highlights the importance of the preparatory lesson as an effective tool to prepare students for the main activity. It is recognised that this previous phase not only helps to review key concepts, but also allows us to delve deeper into the topic and establish a solid foundation for subsequent learning. This highlights the importance of careful planning and proper sequencing of activities to ensure a coherent and meaningful learning experience for students.

➤ **“Einstein, the crazy scientist: On the track of the lost water”**  
**(Science: Water in living organism & water cycle)**

○ **Implementation process**

The story was tested by several partners, enabling to have a variety of feedback from students with various profiles including a student with Autism Spectrum Disorder who highlighted the interest of having homework adventures as this one to make the teaching of sciences more engaging despite the long amount of time given judged not necessary.

In Romania, the story underwent testing in two languages and across different schools, employing varied teaching methods including group discussions and interactive whiteboard tasks. Students particularly enjoyed creating mind maps. However, suggestions for improvement included more accurate assessment of students' knowledge levels and reducing task lengths.

In Spain, the story was integrated into science classes for 14 to 15-year-old students, where it was projected for group discussions and decision-making. Initial resistance to the "choose your own adventure" format faded as students became immersed in the story.

○ **Best parts of the development**

Both teachers and students praised the story's originality and interactive approach. The “choose your own adventure” nature and the inclusion of challenges and puzzles were highlighted as positive aspects that increase student engagement and participation.

Students also found a relevant and useful story to introduce them to the topic of the water cycle. Although some considered it more suitable for high school students than for schools, its usefulness as an educational tool was generally valued.

Additionally, the story provides an opportunity for students to consolidate and apply concepts learned about the water cycle and water energy in practical and creative ways. This practical application is considered beneficial to the teaching and learning process.

Finally, it is highlighted that history helps develop students' practical and cognitive skills, such as problem solving, decision making, and team collaboration. These skills are fundamental for the comprehensive development of students and were strengthened through participation in history.

In summary, both teachers and students positively valued the interactivity, relevance, and usefulness of the story about the water cycle, as well as its ability to encourage the development of practical and cognitive skills in students.

- **Potential problems & improvements**

Implementations varied in format and context, providing comprehensive feedback on the story's implementation. This diversity helped identify potential issues and improvements.

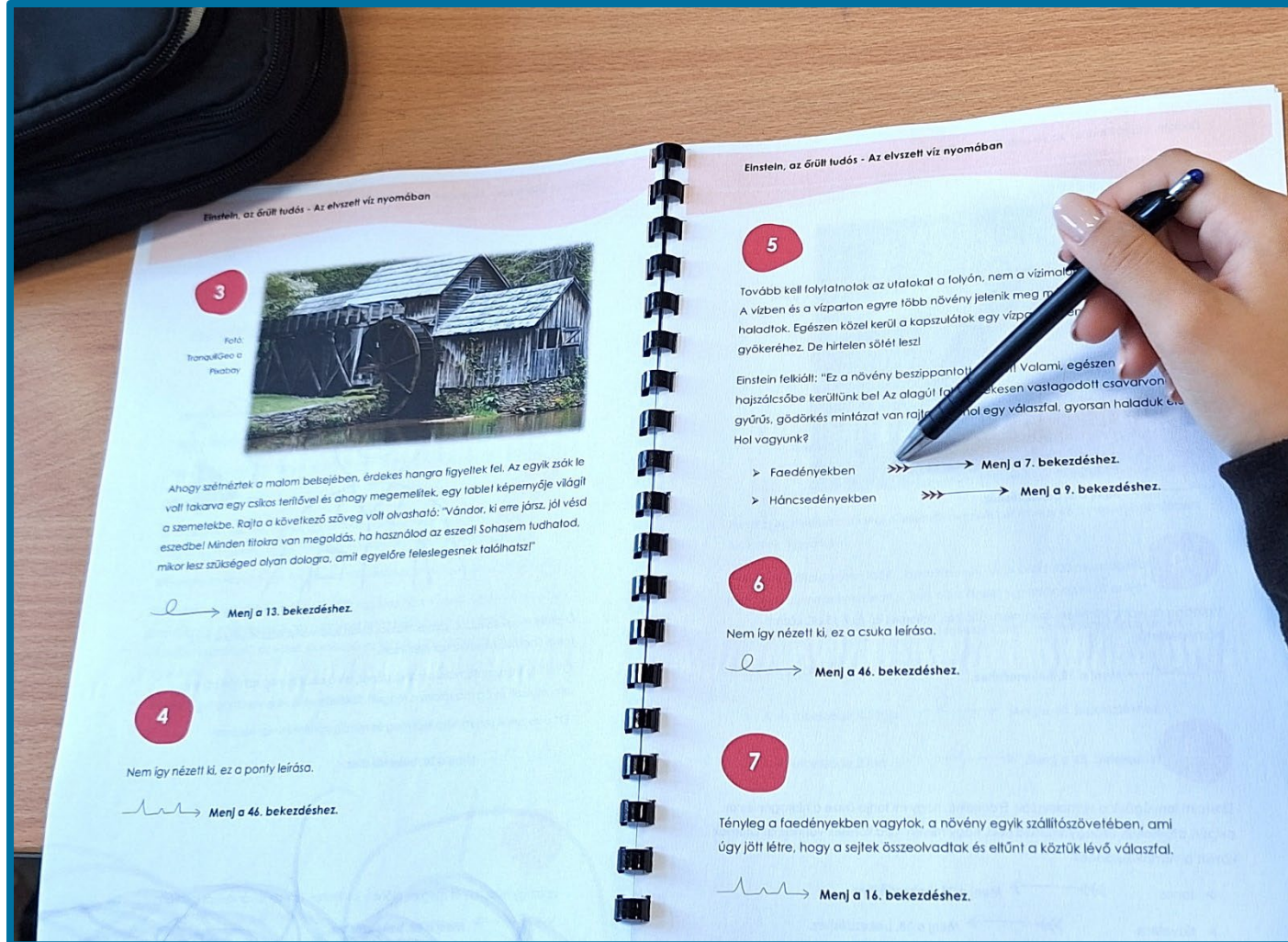
One challenge noted was the need for better integration of the activity into the school curriculum. Teachers suggested aligning the story more closely with related topics or subjects, requiring adjustments to curriculum planning.

Some students found it challenging to connect the story's challenges with scientific concepts. Enhancing clarity in instructions and content presentation could aid students in understanding each task's relevance to scientific topics.

Suggestions included adding more decision points in the story to enhance student agency and engagement. This personalization could better cater to individual preferences and abilities.

Lastly, making history more accessible was highlighted, with suggestions to explore web-adapted formats for easier implementation and greater student independence.

In summary, potential improvements involve better curricular integration, clearer instructions, increased personalisation and student agency, and enhanced adaptability and accessibility to ensure effectiveness for all students.



### ○ Other techniques and initiatives

The different educational centres and teachers who put this story into practice offered some suggestions and techniques that may be useful. Some of these proposals include:

1. **Use of educational technology:** It was mentioned that some teachers found the use of educational technology, such as smart boards or online tools, more effective to present the story and facilitate student participation. This technology allowed greater interactivity and dynamism in the teaching and learning process.
2. **Small group work:** Several teachers reported that they divided students into small groups to facilitate interaction and discussion about different aspects of the story. Working in small groups allowed for greater collaboration among students and encouraged the exchange of ideas and perspectives.
3. **Using pre-and post-story activities:** Some teachers suggested implementing pre- and post-story activities to improve student understanding and

engagement. These activities could include review exercises before the story to prepare students for key concepts, as well as follow-up activities after the story to reinforce learning and assess understanding. Luckily, the stories created by Edugraal already include a lesson for each adventure as an introduction to the topic, with activities and information that serve to review concepts already learned.

- o **Additional comments**

Feedback from various educational centres highlighted positive aspects of implementing the water cycle story in the curriculum. Both teachers and students were satisfied overall, praising the story's originality and its active engagement of students in learning scientific concepts.

Teachers appreciated the story's interactivity and hands-on approach, which effectively improved students' understanding of the water cycle and water energy through game elements and playful activities. They also lauded the relevance and challenge of quizzes and puzzles, promoting effective knowledge testing. The combination of theoretical and practical learning was deemed beneficial for teaching and learning.

Suggestions for improvement included better curriculum integration and enhancing accessibility for a wider range of students. Students found quizzes and puzzles entertaining but desired more decision-making options within the story. Some students also noted areas for improvement in the clarity of instructions or content presentation regarding the relationship between story challenges and scientific concepts.

Overall, feedback was positive and constructive, offering insights to enhance future implementations. The water cycle story proved to be an effective with potential for use in various educational settings.

## ➤ **“The source of wisdom” (Literature: Literary devices)**

### ○ **Implementation process**

The implementation process of the educational adventure "The Source of Wisdom" took place in various educational contexts across Greece, France, and Spain. In Greece, the activity was conducted in-class and at home, with an initial presentation explaining literary resources and topic-related exercises. Students' ability to gather information irrespective of their responses, absence of time constraints, and descriptive adventure writing were noted as successful elements.

In Spain, collaboration with Colegio Séneca's language and literature department saw high student interest and participation, though completion time posed challenges.

Overall, both teachers and students found the activity engaging and beneficial for literary device review and learning.

### ○ **Best parts of the development**

The best parts of the development of the educational adventure were diverse, according to the feedback received from teachers and students in different countries. In the Greek case, the students' ability to obtain information and knowledge was highlighted regardless of whether their answers were correct or incorrect. Furthermore, the absence of a time limit to complete the activity was valued positively, as was the descriptive writing of the adventure, which was interesting and motivating for the students. It was also mentioned that the previous preparatory lesson helped the students learn more about the topic of the activity.

In France, the story was appreciated for its literary theme and judged useful for reviewing the topic. Although it was suggested that the amount of time given was longer than necessary, its content and focus were positively valued.

While in Spain, a high level of interest and commitment was observed on the part of the students, who showed active participation in the activity. Teachers noted that students were more engaged compared to traditional teaching methods,



suggesting that the interactive and playful nature of the stories was one of the best parts of the development.

In summary, the best parts of the development include the ability of students to learn independently, the absence of time limit, the descriptive writing of the story and its interactive and playful nature, which motivated students to actively participate in the activity.

### ○ **Potential problems & improvements**

Potential problems identified during the implementation of the educational adventure include the need for more options and branches in the story to increase variety and students' sense of control. Some students expressed that they would like to have more options available at certain points in the story to increase variety and their sense of control over the development of the plot. Additionally, the need to provide more detailed feedback on the consequences of students' choices, especially in relation to the application of specific literary devices, was noted. This could involve including additional explanations or examples that illustrate how literary devices are used in different narrative contexts within the story.

Another suggestion is to include a summary at the end of each path to help students consolidate their understanding of the literary devices found in each path. This could serve as a useful tool to review and reinforce concepts learned during the activity.

### ○ **Additional comments**

In addition to specific suggestions to improve the educational adventure, the importance of teamwork and collaboration between students during the activity was highlighted. This social interaction enriched the learning experience by allowing students to discuss and share their decisions and results with their peers. It was noted that this collaboration not only enriched the learning experience, but also promoted important skills such as communication and critical thinking. This aspect highlights the value of educational activities that encourage interaction between students and working together to achieve common objectives.

## CONCLUSION

Homework Adventures represent a pioneering approach to education, seamlessly blending the captivating allure of storytelling with the rigours of academic learning. These adventures, redefine the concept of homework, transforming it from a mundane task into an exhilarating quest for knowledge and discovery. Rooted in the principles of gamification, Homework Adventures transform the learning experience into a thrilling journey of exploration and problem-solving.

At their core, Homework Adventures are interactive narratives that weave together elements of fiction, history, science, mathematics, and more. Each adventure presents students with a series of challenges, puzzles, and quests that they must navigate to progress through the story. Whether unravelling historical mysteries, deciphering mathematical riddles, or embarking on scientific expeditions, students find themselves immersed in a world where learning becomes an adventure.

One of the key features of Homework Adventures is their adaptability to **diverse learning styles and preferences**. Students have the freedom to engage with the adventures at their own pace, whether independently or collaboratively with their peers. **The nonlinear structure of the narratives allows for personalised exploration**, enabling students to choose their path and shape the outcome of the story based on their decisions and actions.

Moreover, Homework Adventures **foster critical thinking, problem-solving skills, and creativity in students**. By presenting academic concepts in a contextually rich and immersive environment, these adventures encourage students to think analytically, make informed decisions, and apply their knowledge to real-world scenarios. Students are challenged to think beyond the confines of textbook learning and engage with content in a meaningful and memorable way. By becoming active participants in their own learning journey, students are moved by a passion for exploration, curiosity, and lifelong learning.



Designed by 6 European organisations, the project intend to create efficient, engaging pedagogical materials and tools for teachers in order to implement an innovative gamified Homework methodology with pupils. In doing so, we wish to contribute to boost their efficiency and engagement rate in remote work, and more specifically, in Homework.

**Discover more stories on:**

[EDUGRAAL.EU](https://edugraal.eu)

**Funded by:**



**Co-funded by  
the European Union**

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.