FANTASTIC CREATURES IN UNKNOWN LANDS

VAST values across space & time

HTTPS://WWW.VAST-PROJECT.EU/

Preface

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Project: VAST: Values Across Space & Time

https://www.vast-project.eu/

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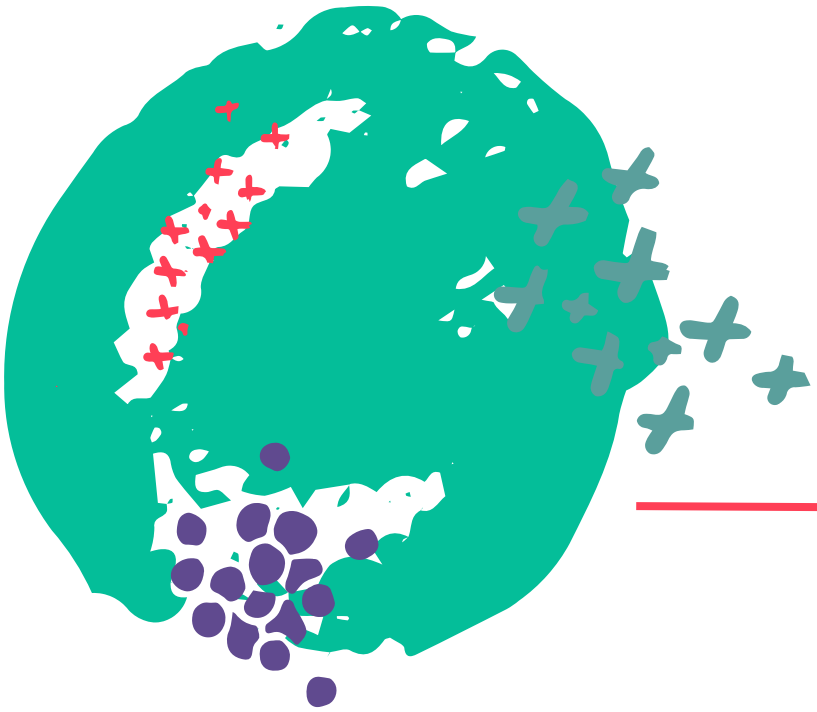


overview

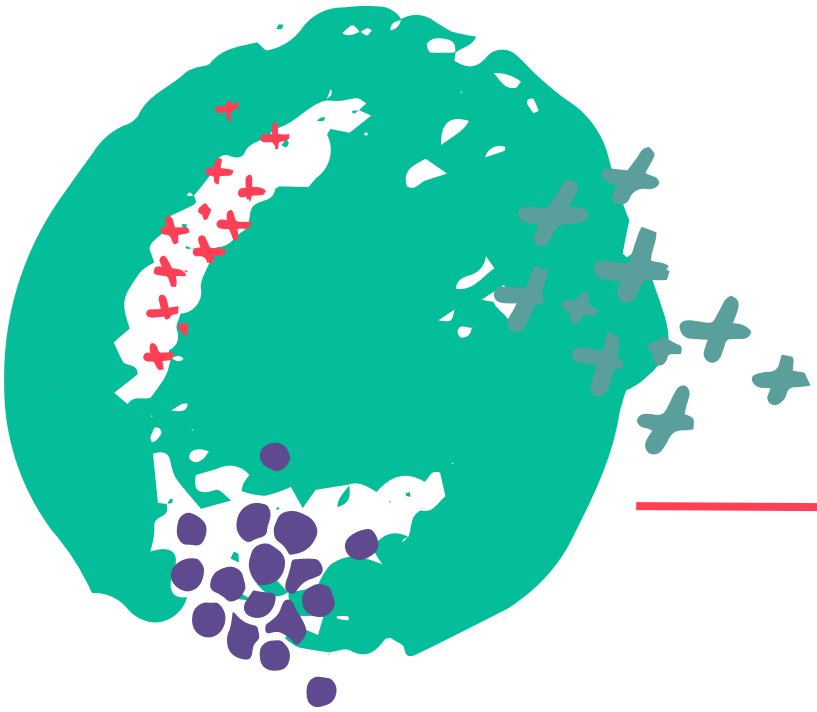
The H2020 European research project VAST- Values Across Space & Time is a collaboration among the National Center for Scientific Research ‘Demokritos’ (Greece), National and Kapodistrian University of Athens (Greece), the Athens & Epidaurus Festival (Greece), Università degli Studi di Milano (Italy), Fairytale Museum (Cyprus), Museo Galileo (Italy), Universidade NOVA de Lisboa – NOVA (Portugal) and Semantika (Slovenia).

The project envisions to study the dissemination of the european values (such as freedom, democracy, equality, tolerance, dialogue, human dignity, the rule of law) in space and time through the use of digitised materials and intangible cultural artefacts as well as to explore the communication, reception and perception of these values in the modern era. For the purposes of this research, three pilots have been described concerning: 1. the theatre/ancient drama, 2. the scientific texts of the 17th century, 3. the fairy tales.

A digital platform has been developed, as part of the project, with open access to citizens. In this platform, values-related scientific and educational materials and research evidence/results will be posted, as well as various tools for scientific and research study.

Do not miss visiting!

This activity engages participants in the exploration of hidden creatures within historical cartographic representations to facilitate discussions about the challenges inherent in discovering new worlds and interpreting novel social and natural realities. It underscores the significance of tolerance and dialogue among diverse living beings and their importance in everyday life.



activity

Institution

Museo Galileo (Institute and Museum of the History of Science)

Audience

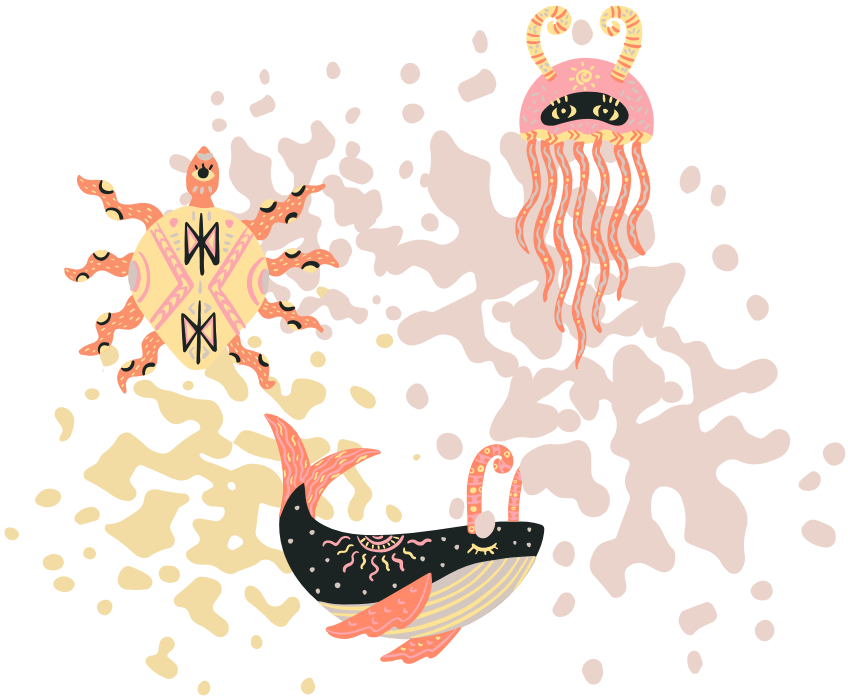
6 to 10 years old

Title

Fantastic creatures in unknown lands.

Description

This activity is intended for primary school students and aims to spark their curiosity about unknown or imaginary populations, as described in works such as Margaret Cavendish's *The Blazing World*. Through exploring representations of sea monsters and fantastical creatures on maps, the students will be guided to discover the hidden creatures depicted in ancient cartography. By discussing the challenges faced by past explorers in discovering new worlds and interpreting new social and natural realities, the activity highlights the importance of tolerance as a means of fostering dialogue between different living beings, and emphasizes its relevance in everyday life.



Educational Objectives

Through this activity the participants are expected to:

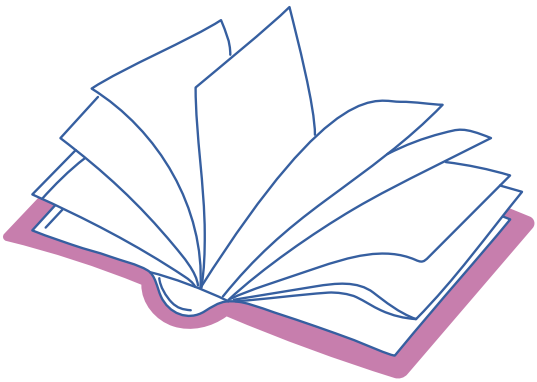
1. come into contact with a broader perspective of the concept of travel and by extension with the values of curiosity, experimentation, knowledge, dialogue, courage, happiness, tolerance, hospitality, and progress

2. understand the difficulties and obstacles that past explorers faced as they ventured into uncharted territories and encountered new people, cultures, and environments

3. learn about how their experiences shaped our understanding of the world and influenced the social and scientific advancements of their time

4. exercise their critical thinking by identifying and articulating their personal values and reflect on what values are most important to them

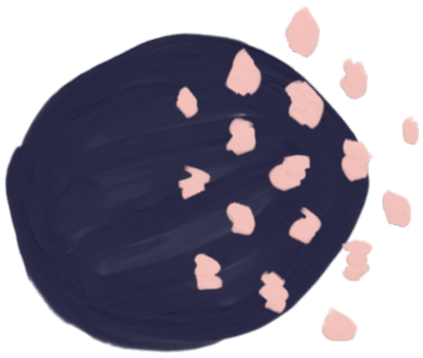
5. understand concepts of the past and how they have shaped our present understanding of the world



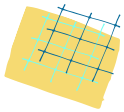
Expected outcomes

After completing the activity, the participants:

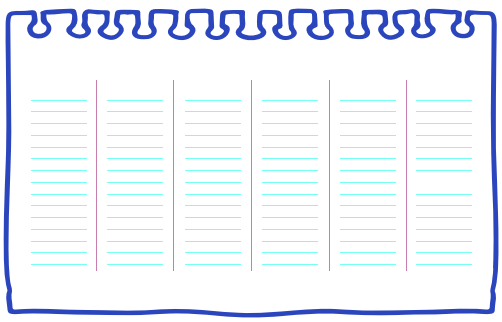
1. will have understood the importance of having an open mind, ready to welcome new stimuli and challenges to appreciate the world around us
2. will have an overview of the challenges faced by past travelers and their representation of the known world
3. will have understood how lack of knowledge can generate “monsters” in our imagination
4. will have constructed a new awareness on how knowledge and tolerance can foster a more peaceful and harmonious coexistence between people of different backgrounds, cultures, and beliefs
5. have worked together to argue about their own experience and thoughts in a playful way
6. will have realized that by embracing differences and promoting dialogue, they can make a positive impact on their own lives and the lives of others



Structure



Duration	90′ - 120′
Educational materials/tools	• Paper (or digital) pre-visit questionnaires for teachers • Video teaser • PPT projection with texts and images • Ball designed as a globe • Discussion and reflection • Learning through inquiry system and instruments replicas' manipulation • Replicas of astrolabe, compass, log, scale model of a caravel • Spices • Numerous copies of monsters made of laminated paper divided into three parts • Magnetic board & colored markers • Small magnets shaped like aforementioned monsters • Visit to the museum collection • Paper (or digital) post-visit questionnaires for teachers
Educator/facilitator	1 educator/facilitator for up to 25 students
Target group	Primary school students (from 6 to 10 years old)



Modules/sections (design)

Pre-visit questionnaire	Described in pages:	11
Welcome	Duration:	10'
	Materials/tools:	Video
	Described in pages:	12
1st part of the activity	Duration:	10'
	Materials/tools:	-
	Described in pages:	13
2nd part of the activity	Duration:	10'
	Materials/tools:	World map ball
	Described in pages:	14-15
3rd part of the activity	Duration:	15'
	Materials/tools:	Power point with texts and images
	Described in pages:	16-17

4th part of the activity

Duration:	20'
Materials/tools:	Power point, spices, replicas of ancient instruments
Described in pages:	18-19

5th part of the activity

Duration:	10'
Materials/tools:	Power point with creatures' ancient images
Described in pages:	20

6th part of the activity

Duration:	15'
Materials/tools:	Numerous copies of monsters made of laminated paper divided into three parts, magnetic board, small magnets with the whole monsters, colored markers
Described in pages:	21-22

7th part of the activity

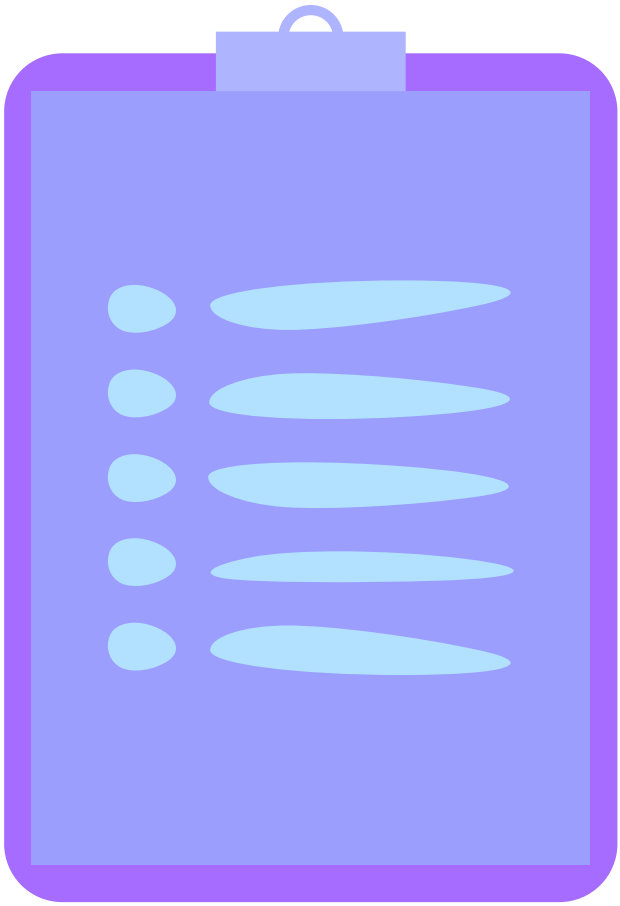
Duration:	30'
Materials/tools:	Replicas of ancient instruments
Described in pages:	23

Farewell - Activity evaluation

Described in pages:	24

Pre-visit questionnaire

Prior to the visit, a brief questionnaire (Appendix I) is provided to teachers in order to understand the demographic and cultural context, which will aid in interpreting the final evaluation phase of the activity with greater accuracy.



Welcome

A. Introduction (5')

Welcome to the participants.

B. Ice breaker activity (5')

Video teaser: introducing the values (https://youtu.be/L22AWKRJeG8)

During the activity, a video is shown featuring brave travelers in stormy seas, encountering sea monsters and real animals such as seals and whales as they journey from the unknown to the known. We watch and discuss the video together, reflecting on what the travelers have seen and experienced. The final quote from Margaret Cavendish's *The Blazing World* reminds us that curiosity is a characteristic of scientists and explorers alike, driving them to seek out new knowledge and explore the world around them. We discuss the importance of curiosity in fostering a sense of wonder and discovery, and how it can lead us to explore new places… like the museum, for example.

Note: Visual and auditory stimuli are incredibly important in capturing the attention of students and making difficult topics more engaging. As young learners, students are naturally curious and eager to explore the world around them. However, their attention spans can be short, and they may become easily distracted or disinterested in topics that are not immediately relevant or accessible to them. By incorporating visual and auditory elements into our educational activities, we can effectively capture their attention and immerse them in the topic at hand. For example, using videos, images, and interactive displays can help to bring abstract concepts to life, making them more tangible and easier to understand. Similarly, incorporating sound effects, music, and storytelling can create a sense of excitement and intrigue, drawing students into the learning process and encouraging them to explore further.

1st part of the activity: *Traveling Then and Now*

In this part, the group will learn about travel, exploring the differences between past and present.

Discussion

The video leads to a conversation with the students about their own experiences with travel, including where they have been, what emotions and sensations they felt, and what modes of transportation they used. By reflecting on the differences between past and present travel, we can appreciate the impact that technology and innovation have had on our ability to explore the world and connect with people from different cultures and backgrounds. We also consider the challenges that past travelers faced, such as long distances and extended travel times, and how these compare to the conveniences of modern travel.

2nd part of the activity: *Orienting yourself*

In this part, the group will learn the basics of orientation and how to interact with the world map.

Activity

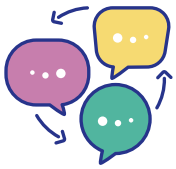
In this section, we discuss the world map and try to understand if the students are already familiar with it, and if so, what they know about it. We ask the students if they can indicate on the map where we are located, and if they have ever traveled and where they have been. For younger students , around 6-7 years old, we provide a brief introduction to the world and its continents. For older students , starting from 9 years old, we delve deeper into the topic of geographical coordinates, the grid formed by meridians and parallels, and concepts such as latitude and longitude, which are part of the school curriculum at that age. We also discuss what is known in the present about the world and how our understanding of it has evolved.

Discussion

In both cases, we talk about how to plan for a long journey, the preparations that need to be made, and the challenges that may be faced. We also highlight the differences between travel in the past and present. Overall, this section aims to provide students with a better understanding of the world and how it is explored and understood in the present, as well as fostering an open-mindedness and a willingness to try and accept new things.

3rd part of the activity: *Discovering the Values of Travel*

In this part, the group will discuss a selection of values related to travel.



Discussion

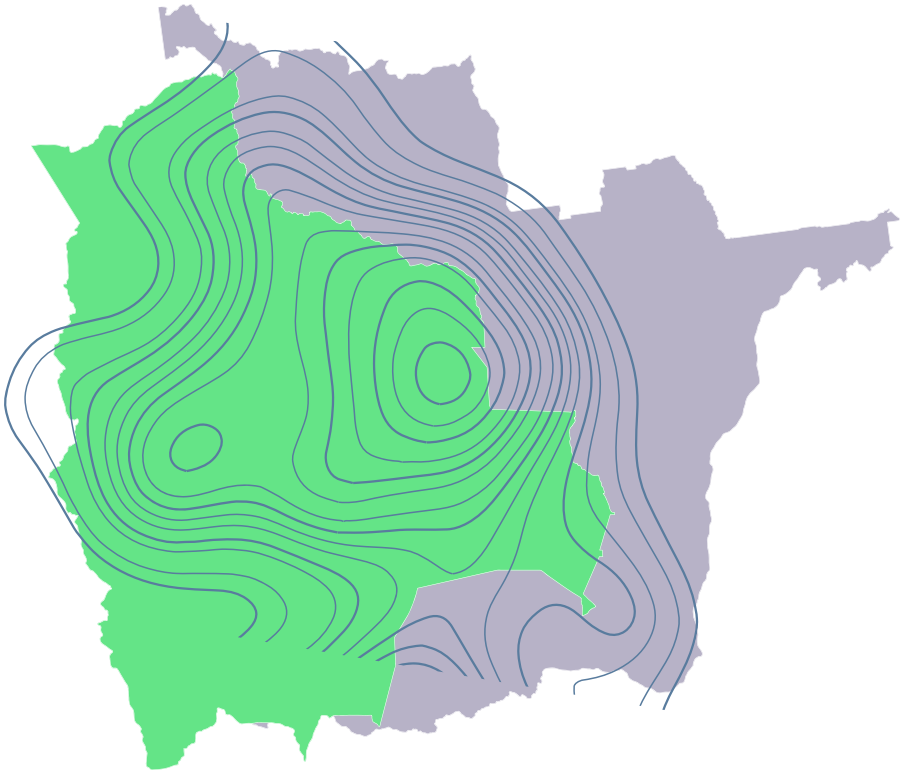
At the beginning of this part, the group is presented with a PowerPoint slide featuring the image of the Earth with words emanating from it. The students are invited to reflect and try to explain the meaning behind the image and what the words represent to them. The words were previously selected by us, and we chose values that are simpler and more intuitive, which we believe are more familiar to students. The selected values are curiosity, experimentation, knowledge, dialogue, courage, happiness, tolerance, and hospitality. We engage the group in a discussion that explores each of these values and how they relate to the concept of travel.

We start with curiosity, discussing how it drives us to explore the world and learn new things. We then move on to experimentation, highlighting the importance of trying new things and taking risks when traveling. Next, we discuss knowledge, emphasizing the value of learning about different cultures, histories, and traditions. We then talk about the importance of dialogue, how it helps us to communicate with people from different backgrounds and understand their perspectives. Courage is the next value we explore, discussing how it can help us overcome our fears and take on new challenges while traveling. We then move on to happiness, highlighting how travel can bring us joy and create lasting memories. Tolerance is another value we discuss, emphasizing how it helps us to appreciate and respect differences in people and cultures. Finally, we discuss the importance of hospitality, how it can make us feel welcomed and create a sense of community when we travel.

Through this discussion, we aim to help students understand the values that can be gained through travel and how they can apply these values in their own lives. We encourage the group to share their own experiences and perspectives, creating a collaborative and enriching learning environment.

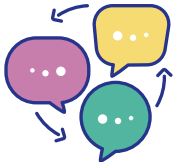
Pre-visit questionnaire

Described in pages: 11



4th part of the activity: *The Adventures of Travel in the Past*

In this part, students will understand the importance of spices in the past and how they were obtained through long journeys. We discuss their therapeutic uses and introduce tools and techniques used for navigation in ancient times, while also comparing them to modern technologies.



Discussion

Returning to the PowerPoint presentation, we shift our focus to the journeys of the past, where people went and why

Activity

We additionally explore the importance of spices, as they were a significant reason for travel in the past. Students are often drawn to sensory experiences, and we find that they are eager to smell the spices we present to them, even if many of them are common in households today. As they inhale the scents, we explain to them that these spices were precious and in the past people had to undertake long journeys to obtain them, as many of them were only found in distant lands, much like the pigments used to create colors.

We also discuss how spices were used for therapeutic purposes, such as using cloves to treat toothaches, cinnamon for stomach aches, and nutmeg for skin lightening and as an "amulet" against the plague.

Discussion

We examine the Fra Mauro map (https://mostre.museogalileo.it/framauro/en), discussing how people navigated and oriented themselves in the past, and the significance of the map being upside down, encouraging the group to consider different perspectives.

We then delve into the travels of Marco Polo, discussing the descriptions of places and creatures that he encountered, highlighting the importance of exploration and adventure in shaping our understanding of the world.

Finally, in addition to ancient cartography, we introduce the tools and techniques used in the past to navigate and orient oneself in the world, specifically focusing on the compass and astrolabe, as well as some navigational instruments like the log. We also discuss how people in the modern era use smartphones and other technologies to find their way and plan their routes.

Activity

With the help of replicas, we engage the students in a constant interaction, asking them questions and inviting them to try out these tools for themselves. We believe that hands-on experience is an essential part of learning and helps to deepen the students' understanding of the topic.

5th part of the activity: *Monsters on Maps: Reflections on the Unknown*

In this part, we explore the presence of monsters on maps and why they were represented.

Discussion

We discuss the fear of the unknown, real sightings and discoveries, difficulties in interpretation, and the ties between these figures and mythology. We begin by reflecting on the idea that the unknown can generate monsters. We observe drawings and figures composed of various parts of beings, beginning with more well-known figures like centaurs, satyrs, and harpies. We explore how these monsters can be symbolic representations of fears and the unknown, including a fear of everything that is different or unfamiliar.

At this point, we give the example of a whale, asking the students if they have ever seen one in person and prompting them to reflect on how we have access to video documentaries and knowledge about what whales look like, even if we have never seen one in real life. In contrast, in ancient times, this was not possible, and encountering a whale for the first time was like coming face-to-face with a gigantic and terrifying monster.

We also examine the problem of literal interpretation by cartographers and mapmakers, which could lead to the creation of imaginary creatures that do not exist in nature. We discuss how artists may have interpreted descriptions too literally, resulting in the creation of monsters based on inaccurate or incomplete information. We also help students understand how, in the past, explorers and naturalists had to use descriptive terms to name animals that were exotic and unknown to them, often relying on characteristics that were familiar to them. So, for example, seals became “sea calves” (vitulus marinus) while some gastropod mollusks were called “sea hares” (lepus marinus).

6th part of the activity: *The race of values*

In this part, students will create their own monster that embodies the three values - among those discussed - that they consider to be the most important in their life experience.

Activity

To wrap up our activity, we organize a final game that allows the students to create their own unique monster, embodying some of the values we discussed throughout the previous sessions. The students can choose from eight different creatures, each representing a distinct value (such as curiosity, experimentation, knowledge, dialogue, courage, happiness, tolerance, and acceptance). These monsters are split into three parts, and each child has the opportunity to create their own monster by selecting three different parts that correspond to the values they deem most important, like a superhero with their powers.

Once everyone has finished creating their own monster, we hold a "Race of Values." Using a magnetic board, we draw eight different race tracks, one for each monster/value, each track divided into several boxes. Each time a piece of a monster/value is used, the corresponding monster, drawn on a magnet, moves one space forward on the board. The number and type of pieces used by all the students to make up their monsters determine the winning value.

Note: This final activity is a fun and engaging way to reinforce the values that we discussed throughout the program and to encourage the students to think about how they can incorporate these values into their own lives. Throughout the game, there is an atmosphere of excitement
and creativity as the students work to create their own unique monsters, reflecting in them the values that they hold dear.


VAST
values across space & time
IL VIAGGIO CONTINUA


CONOSCENZA


DIALOGO


CORAGGIO

7th part of the activity: *Visit to the museum collections*

In this part, the students will have the pleasure of seeing in person original instruments, maps, and globes.

Activity

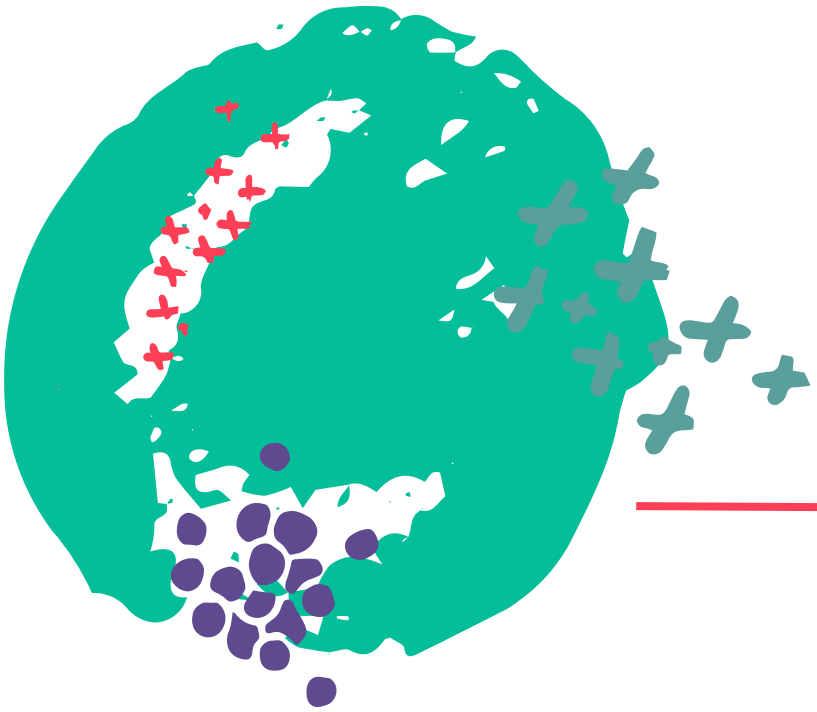
After the fun activities, the group gets to explore the museum galleries where the original instruments and objects that were discussed earlier will be on display. This provides a special opportunity to compare the replicas and images seen earlier with the real historical objects. Along the way, the students get to see many different scientific instruments up close, learning more about their uses and how they were created. It's like taking a step back in time, but without needing a time machine! Students are encouraged to ask lots of questions and engage in discussions with their friends and teachers, while the museum educators are available to answer any questions and satisfy any curiosities that may arise, making it a fun and interactive way to learn more about science and history.

Farewell - Activity evaluation

We summarize the most important points with students and ask the teachers to fill a paper post-visit questionnaire (Appendix II).

The purpose of this questionnaire is to understand:

- Whether the activity succeeded in stimulating a discussion on values among the students
- Whether it provided a broader perspective on scientific instruments
- Whether teachers believe that museums, as cultural institutions, can be a place for discussing the transformation of values in different eras
- If they believe that the digitization of experiences within the VAST Project can contribute to the study of values and their emergence in modern society
- Satisfaction with the experience



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APPENDIX - I

Pre-Visit Questionnaire for Teachers

Dear Teacher,

Thank you for the time you are dedicating to completing this survey. The questionnaire is anonymous, and your participation is entirely voluntary. The survey results will be evaluated and used for research purposes, and to enhance the educational offerings of the Museum. Should you have any questions regarding the survey, you can contact us.

Your contribution is greatly appreciated!

UNIQUE CODE*	

** Choose a unique code (word or number) and remember it to use in the post-visit questionnaire.*

Section 1 – Personal Information

1. Age
   - ☐ 22-30
   - ☐ 31-40
   - ☐ 41-50
   - ☐ 51-60
   - ☐ > 60
2. Gender
   - ☐ M
   - ☐ F
   - ☐ Other
   - ☐ I prefer not to answer
3. Where do you live?
   - ☐ Large City/Capital (>100.000)
   - ☐ Suburb near a large city
   - ☐ Small City (<100.000)
   - ☐ Town or Rural Area (<30.000)

4. Educational qualification
    - ☐ Bachelor's Degree
    - ☐ Master's Degree
    - ☐ Ph.D.
    - ☐ Other ……
5. Years of work experience in the educational field
    - ☐ < 5 years
    - ☐ 5-10
    - ☐ 11-20
    - ☐ 21-30
    - ☐ > 30
6. What type of school are you currently teaching at?

    ……
7. What is the age of your students?

    ……
8. What subject do you teach?

    ……

Section 2 - Museum Experience

9. Which museums have you already taken your students to?
    - ☐ Art Museums
    - ☐ Science and Technology Museums
    - ☐ Natural History Museums
    - ☐ Ethnographic, Anthropological, and Regional Museums
    - ☐ Archaeological Museums or Archaeological Parks
    - ☐ Historical Museums
    - ☐ House Museums
    - ☐ Military or War Museums
    - ☐ Maritime or Oceanographic Museums
    - ☐ Botanical Gardens
    - ☐ Outdoor Museums (e.g. caves and mining parks)
    - ☐ Fashion Museums
    - ☐ Sports Museums
    - ☐ Virtual Museums
    - ☐ Other ……

10. Do you recall a museum that left a particular impression on you? Could you explain why?

    ……

    ……

11. Is this the first time you are accompanying your students to our museum?
    - ☐ Yes
    - ☐ No

Section 3 - Museums and Values Communication

12. Have you ever participated with your students in an educational activity centered on values?
    - ☐ Yes
    - ☐ No

    If yes, which ones? ……

    ……

13. Do you believe that a museum can serve as a medium for promoting certain values and consequently contribute to societal change and the expression of values?
    - ☐ Yes
    - ☐ No
    - ☐ I'm not sure

    If you wish, please explain why ……

    ……

14. If your answer is positive, on which values would you like a museum to focus its attention?

    ……

    ……

15. Considering the current socio-political reality, do you think museums should contribute to reflecting on these events?
    - ☐ Yes
    - ☐ No
    - ☐ I'm not sure

    If you wish, please explain why ……

    ……

Section 4 - Activities at the Museum

16. What benefits do you expect for your students from this activity?

- ☐ Consolidation of knowledge
- ☐ Enrichment of cultural background
- ☐ Stimulating experience
- ☐ Sharing and exchanging opinions
- ☐ Development of critical thinking
- ☐ Other ……

17. Do you think an activity focused on the dissemination of the history of science is suitable for stimulating a discussion on values?

- ☐ Yes
- ☐ Somewhat
- ☐ No

  Why? ……

  ……

18. Do you believe there are inherent risks in this operation?

- ☐ Yes
- ☐ No
- ☐ I'm not sure

  If yes, what are they?……

  ……

APPENDIX - II

Post-Visit Questionnaire for Teachers

UNIQUE CODE*	

** Please, provide the unique code you used to complete the pre-visit questionnaire.*

1. How would you rate the activity?

   ☐ It was a pleasant surprise

   ☐ It was as I expected

   ☐ It was not very effective

   If you wish, please explain why ……

   ……

   ……

2. Do you believe the activity successfully stimulated a discussion on values?

   ☐ Yes

   ☐ Somewhat

   ☐ No

   If you wish, please explain why ……

   ……

   ……

3. Do you think the activity highlighted the connection between the displayed scientific instruments and the expressed values?

   ☐ Yes

   ☐ No

   ☐ Other ……

   ……

4. Do you believe the activity managed to provide a broader perspective on scientific instruments to your students?

   - ☐ Yes
   - ☐ No
   - ☐ I'm not sure

   Do you have any comments on this?

   ……

   ……

   ……

5. What did you like the most about the visit?

   ……

   ……

   ……

6. Which part of the laboratory activity do you think most stimulated your students?

   ……

   ……

   ……

7. The foundations upon which a value originates and develops lie within the social, cultural, and institutional context, as well as within the personality of individuals who are part of that context.
   Considering the activity conducted, do you believe that a museum, as a cultural institution, can be a place of interaction, where discussions about the transformation of values across different eras can take place?

   - ☐ Yes
   - ☐ No
   - ☐ Other ……

   ……

8. Values form the foundation of our intangible cultural heritage. Do you think that the digitalization of experiences carried out within the scope of the VAST Project could contribute to the study of values and their emergence in modern society?

   - ☐ Yes
   - ☐ No
   - ☐ I'm not sure

   If you wish, please explain why ……

   ……

   ……

9. Additional comments

……

……

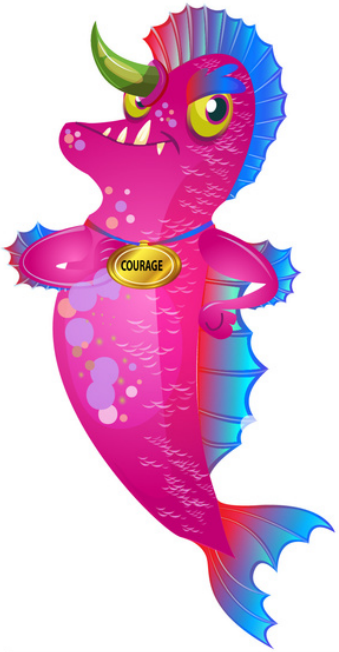
……

APPENDIX - III

TOLERANCE

KNOWLEDGE

DIALOGUE



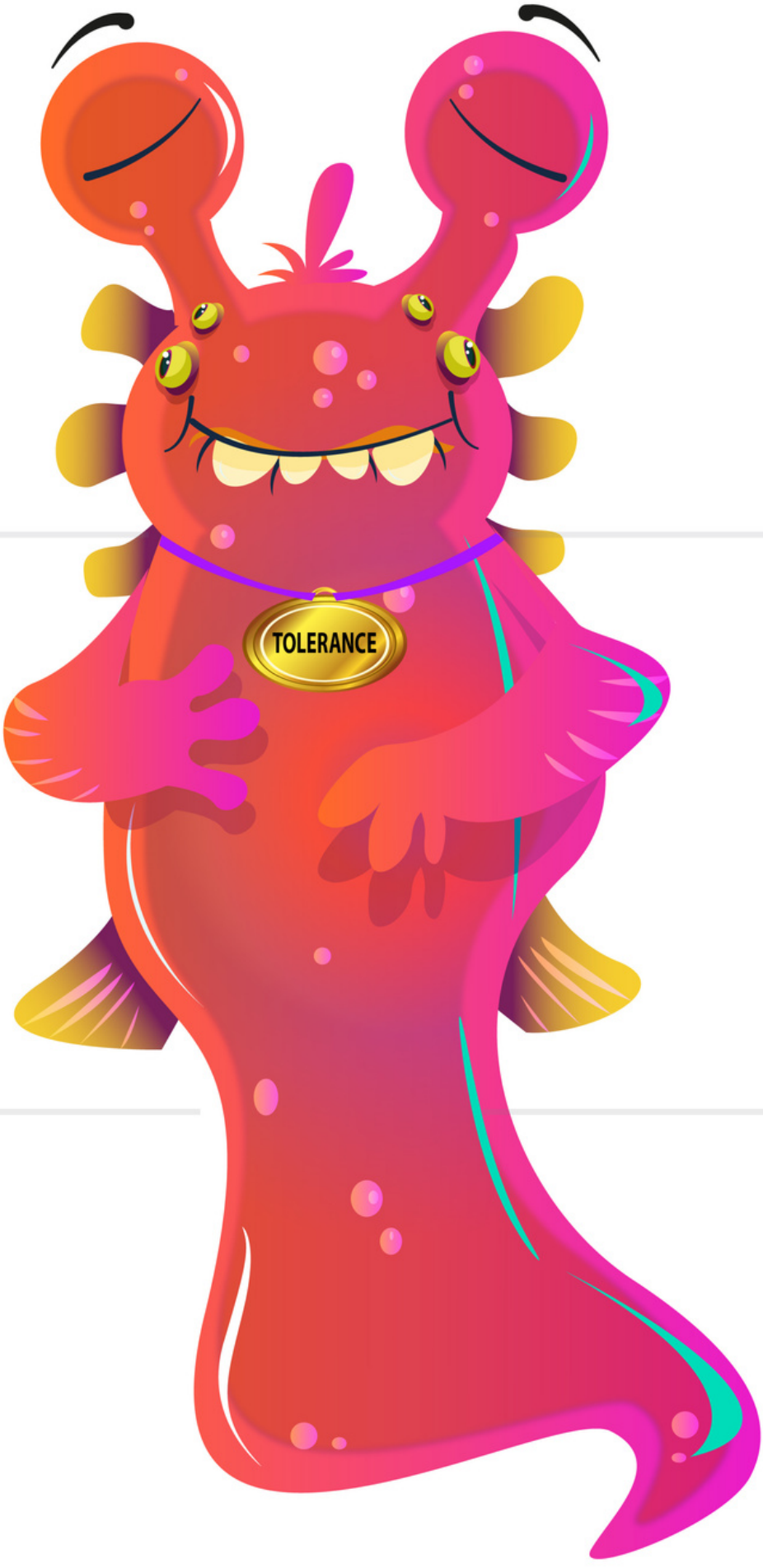
COURAGE

ACCEPTANCE

CURIOSITY

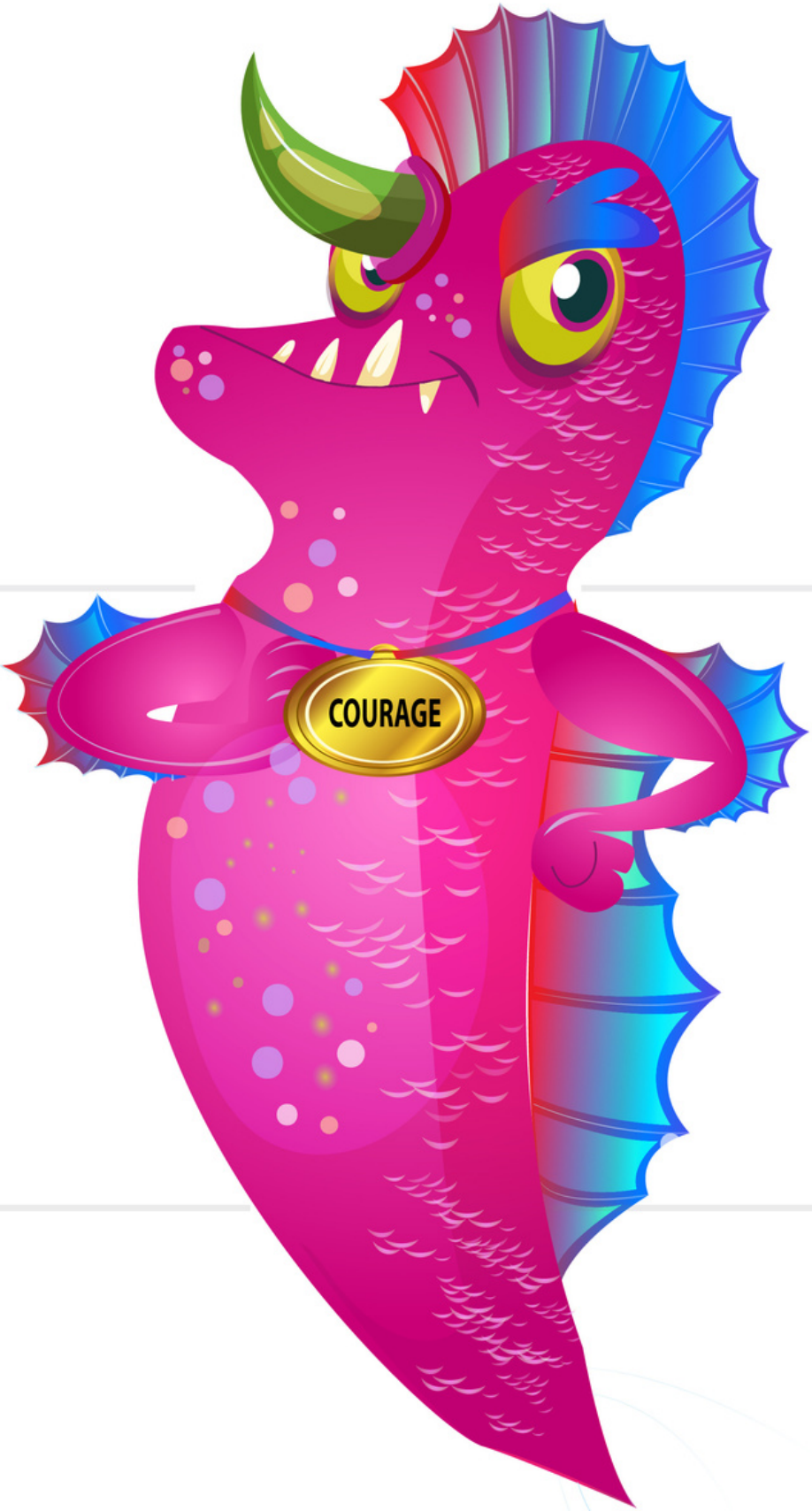
EXPERIMENTATION

HAPPINESS


TOLERANCE


KNOWLEDGE


DIALOGUE


COURAGE


ACCEPTANCE


CURIOSITY


EXPERIMENTATION


HAPPINESS

values
across
space
& time

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