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TEACHER TOOLKIT

#EMME APP

#EMME GOES DIGITAL

AUXILIARY

TABLE OF CONTENT

WHAT IS #EMME APP?

TThe EMME App is a digital companion to the „*Exchanging Memories – Memory of the Earth*” curriculum.
It transforms the five curriculum modules into interactive mobile learning experiences using:

- visual explanations
- short theory sections
- “*Show More*” extended learning segments
- interactive Genially games
- tasks and worksheets
- quizzes
- fieldwork prompts
- Carbon Footprint Calculator
- „Meet your Geopark” (Romania & Azores)

The app is designed to support place-based learning, geoscience literacy, environmental awareness, and digital competence.

STRUCTURE OF #EMME APP

The app is organized into five major learning chapters, each matching a module of the EMME Curriculum:

01.

Geology & Paleontology

- Earth's Building Materials
- Plate Tectonics & Mountain Building
- Volcanoes and Earthquakes
- Deep time and Fossils
- Chapter 1 Game: Geology (Genially)

02.

Ecology & Biodiversity

- Nature Journaling and Observation
- Investigating Soil and Water
- Nature-Based Art and Creativity
- Culinary Adventures with Backyard Bounty
- Learning about Sustainable Gardening Practices and Permaculture
- Chapter 2 Game: The ecology and the Environment (Genially)

03.

Environmental Stewardship

- Memory of the Earth / Digne Declaration
- Geological Heritage - The Best Memories of the Earth / Management and Governance
- Geoparks - Unique Places of Earth's Memories to be Discovered
- Meet your Geoparks - Examples of Geoparks from Romania, Portugal, Slovakia and Croatia
- Chapter 3 Game

04. Local History & Culture

- The Dialogues between Man and Earth - Local Raw Materials and Resources
- Stone-Made Objects - Geological, Anthropological and Socio-Economic Stories of Rocks and Minerals
- Local Mythology Related to Earth Processes
- Stone-Made Objects in Local Archaeology and Archirecture
- Chapter 4 Gam: Planet 42 Archaeology Games

05. Geomorphology

- Local Geomorphology - Introducing Landforms and Landscapes
- Mapping the 4D environment - 2D, 3D, and 4D Representations of Landforms and Objects
- Chapter 4 Game: Geomorphology Quizzes (Purpose Games)

Extra Sections

📍 **Meet Your Geoparks!**

- 🇷🇴 UNESCO Global Geopark Țara Hațegului (Romania)
- 🇵🇹 Azores UNESCO Global Geopark (Portugal)

🧮 **Carbon Footprint Calculator**

Simple, student-friendly tool to evaluate daily habits.

IMPLEMENTATION PRINCIPLES

01. **Interdisciplinarity**
Combining geosciences, ecology, culture, and digital mapping.

02 **Place-based learning**
Using local landscapes, raw materials, heritage, and geology as learning resources.

. **Experiential learning**
Outdoor activities, fieldwork, inquiry-based science, creative reflection.

03 **Digital integration**
Using the EMME mobile app, AR/VR tools, digital mapping, and online collaboration.

LESSON PLAN

MOUNTAIN BUILDING SIMULATION

Title of the lesson:

Mountain Building Simulation – Understanding Plate Collision & Orogeny

Related App Activity:

Activity 1.2 – Mountain Building Simulation
Grade Level: Middle & Upper Secondary

Duration:

1 learning session (50 minutes)

Learning objectives:

By the end of this lesson, students will be able to:

- Explain how tectonic plates collide at convergent boundaries and form mountain ranges.
- Simulate orogeny (mountain building) using sand or clay, following the steps shown in the EMME App.
- Describe how erosion (wind, water) reshapes mountains over time.
- Connect the simulation to real-world examples, such as the Himalayas or the Andes.
- Use simple diagrams and labels to model geological processes.

Materials needed:

- Sand or clay (enough for each pair/group)
- Flat tray or desk surface
- Small container of water OR straws for gentle blowing (erosion step)
- Paper towels
- Colored pencils or markers (brown, green, blue, white)
- Notebooks for observations

Lesson Procedure:

A. Introduction (5 minutes)

- Brief discussion: "*How do mountains form?*"
- Show students the app activity screen (Activity 1.2).
- Explain that today they will simulate plate tectonics using simple materials.

B. Step-by-Step Activity (30 minutes)

Step 1 – Prepare the Materials (5 min)

(*Refer to the instructions in the app*)

- Students place sand/clay on a flat surface.
- They divide it into two sections, representing two tectonic plates.

Observation prompt:

"*How do the two plates look before any movement?*"

Step 2 – Simulating Plate Collision (10 min)

(Refer to the instructions in the app)

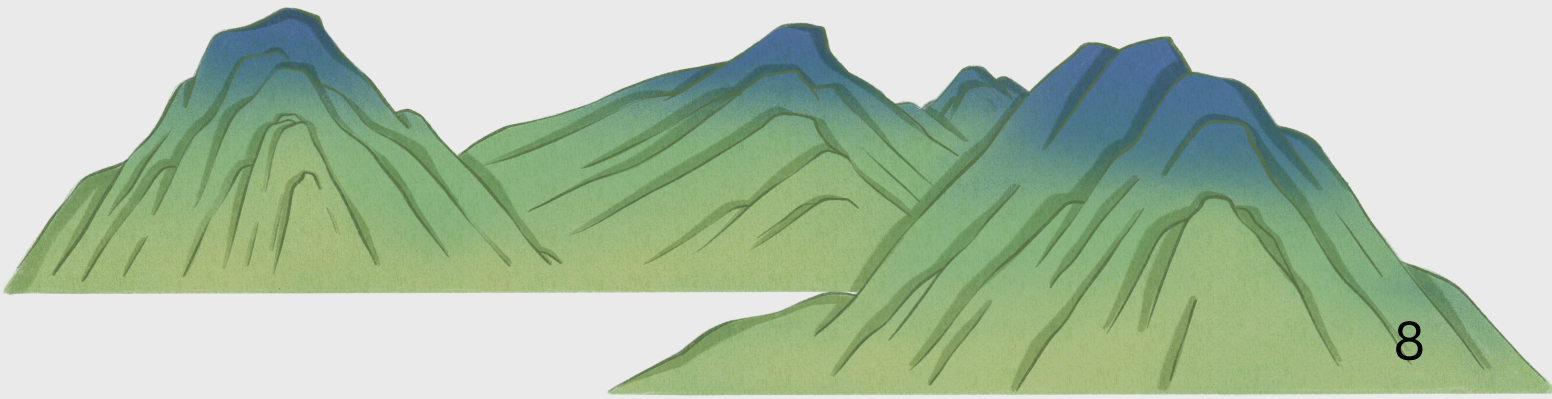
- Students gently push the two masses toward each other.
- The material will fold and rise, forming a ridge.

Students label the model:

➡️ "*Tectonic plates colliding → mountain formation*"

Teacher explanation:

"*This represents convergent boundaries, where two plates crash into each other.*"



Step 3 – Simulating Erosion (10 min)
(*Refer to the instructions in the app*)

- Students pour a small amount of water or blow air gently.
- They observe peaks wearing down, slopes smoothing, and sediments moving.

Students label the model:
➡️ "*Erosion: wind & water breaking down mountains*"
Discussion prompt:
"*What happens to mountains after they form? Do they stay the same height forever?*"

Step 4 – Connecting to Real-World Geology (5 min)
(*Refer to the instructions in the app*)

- Explain that real mountains rise and erode over millions of years.
- Show examples: Himalayas, Andes, Carpathians.
- Students add a small diagram in their notebook with arrows indicating movement.

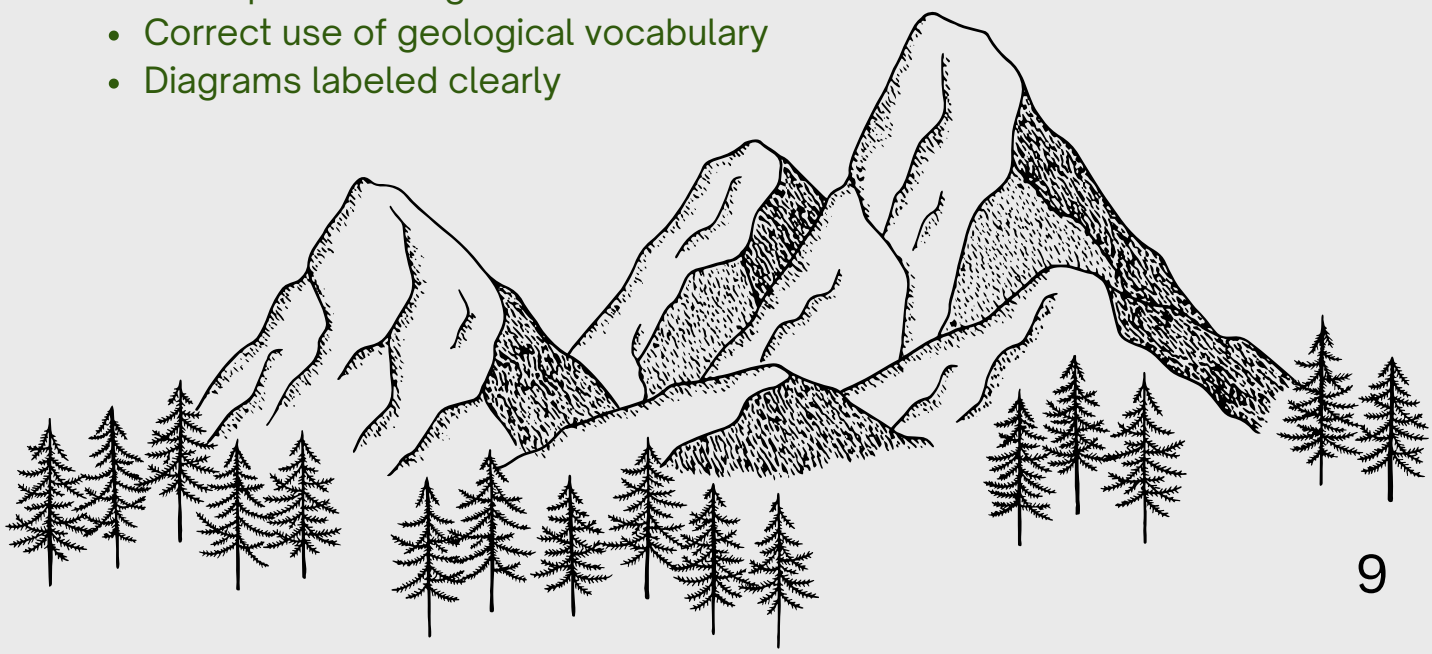
Assessment & Reflection (10 minutes)

Individual Exit Ticket
Students answer the following:

1. Describe what happened when the two "plates" were pushed together.
2. What did the water/air represent in the simulation?
3. Name one real mountain range formed by convergent plate boundaries.
4. Why do mountains eventually change shape?

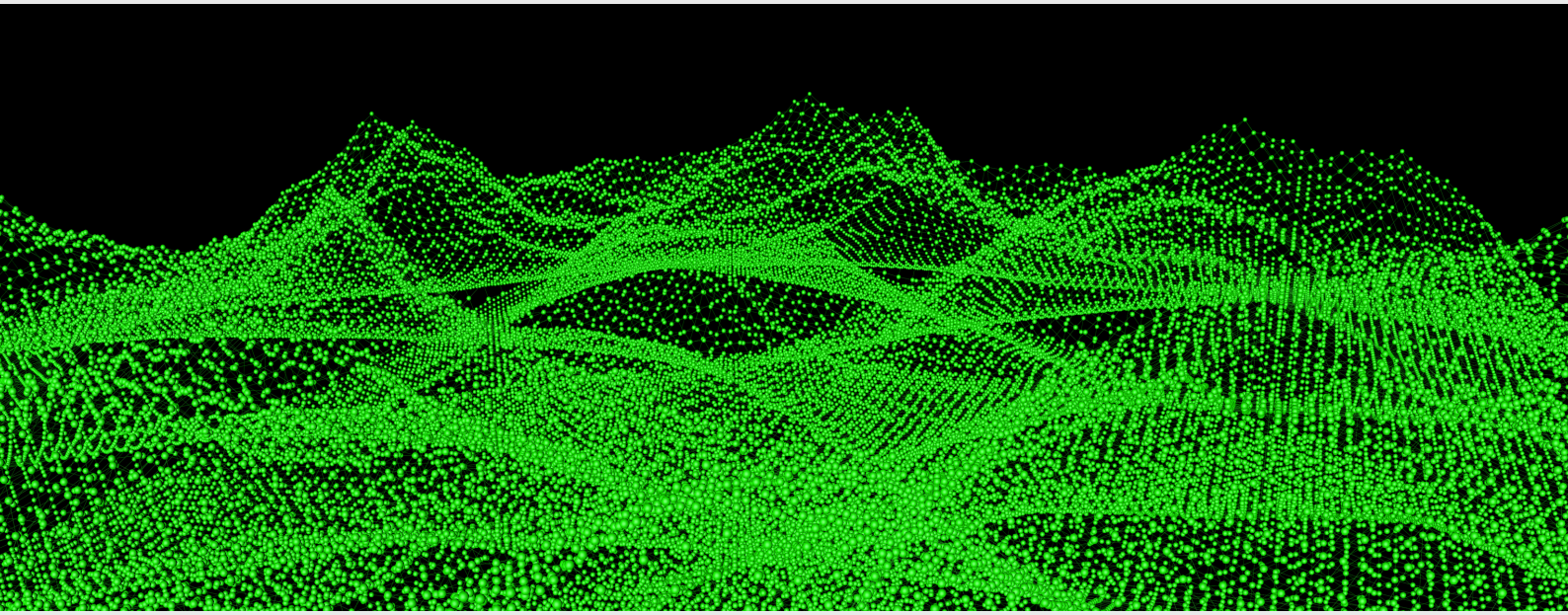
Teacher Observation

- Participation during the simulation
- Correct use of geological vocabulary
- Diagrams labeled clearly



Extensions (optional):

- Compare continental–continental collision vs. oceanic–continental subduction (drawings).
- Use time-lapse videos of mountain building & erosion.
- Integrate into a cross-curricular art activity: students paint their simulated landscapes.

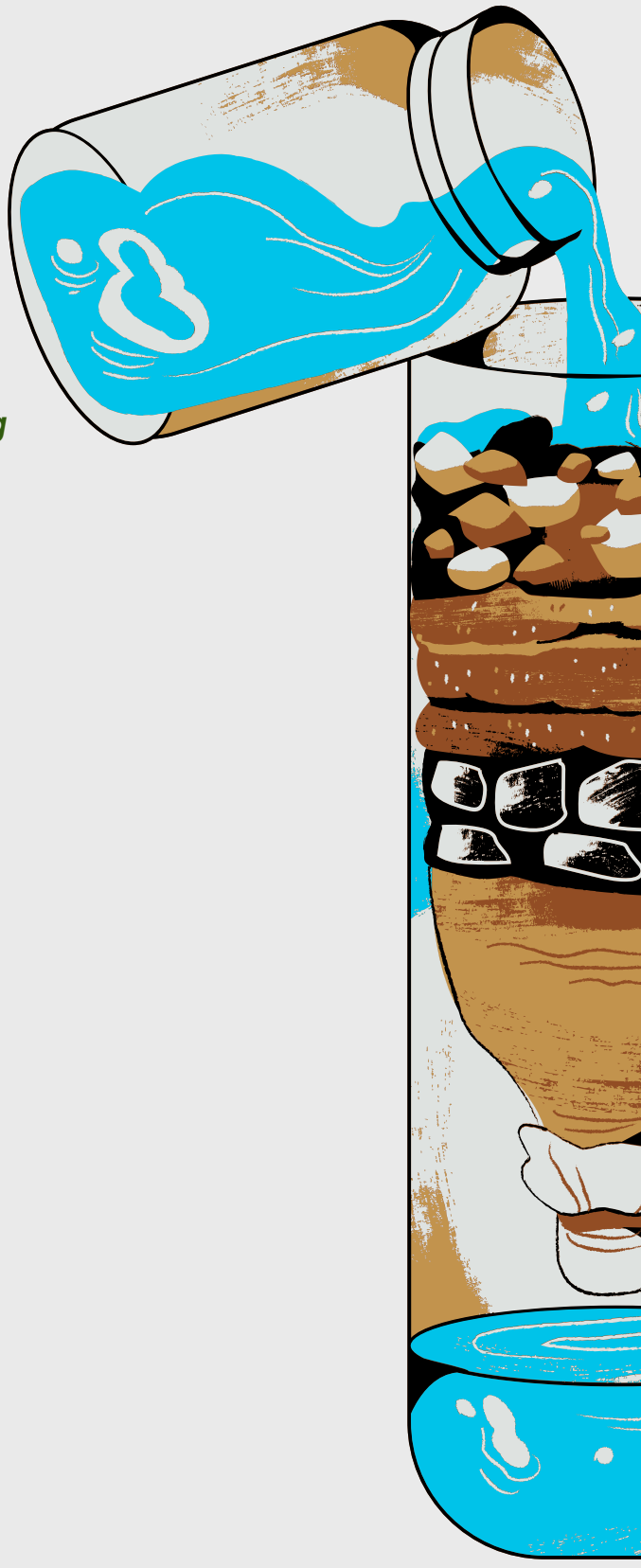


Safety Notes:

- Water should be used in small amounts.
- Keep sand/clay away from electronics.

LESSON PLAN

INVESTIGATING SOIL AND WATER



Title of the lesson:

Investigating Soil and Water: Understanding Texture, Quality, and Environmental Impact

Related App Activity:

Unit 2: Ecology and Biodiversity
EMME Mobile App – Activity 2

Duration:

50–60 minutes (plus 24h settling time for the soil jar)

Learning objectives:

By the end of this lesson, students will be able to:

- Identify the main components of soil (sand, silt, clay).
- Explain how soil particles settle in water and form layers.
- Conduct a basic water quality observation (pH, turbidity, oxygen).
- Compare soil and water samples and draw conclusions about local ecosystems.
- Reflect on how soil and water quality influence biodiversity and human activity.

Materials needed:

- Soil samples (from schoolyard or local area)
- Transparent jars with lids (1 per group)
- Water
- pH strips or a basic water testing kit
- Water samples from a pond/stream OR tap water
- Worksheet from the app (digital or paper)
- Pencils, colors (yellow, beige, brown, light blue, gray)

Activity Flow:

A. Introduction (5 minutes)

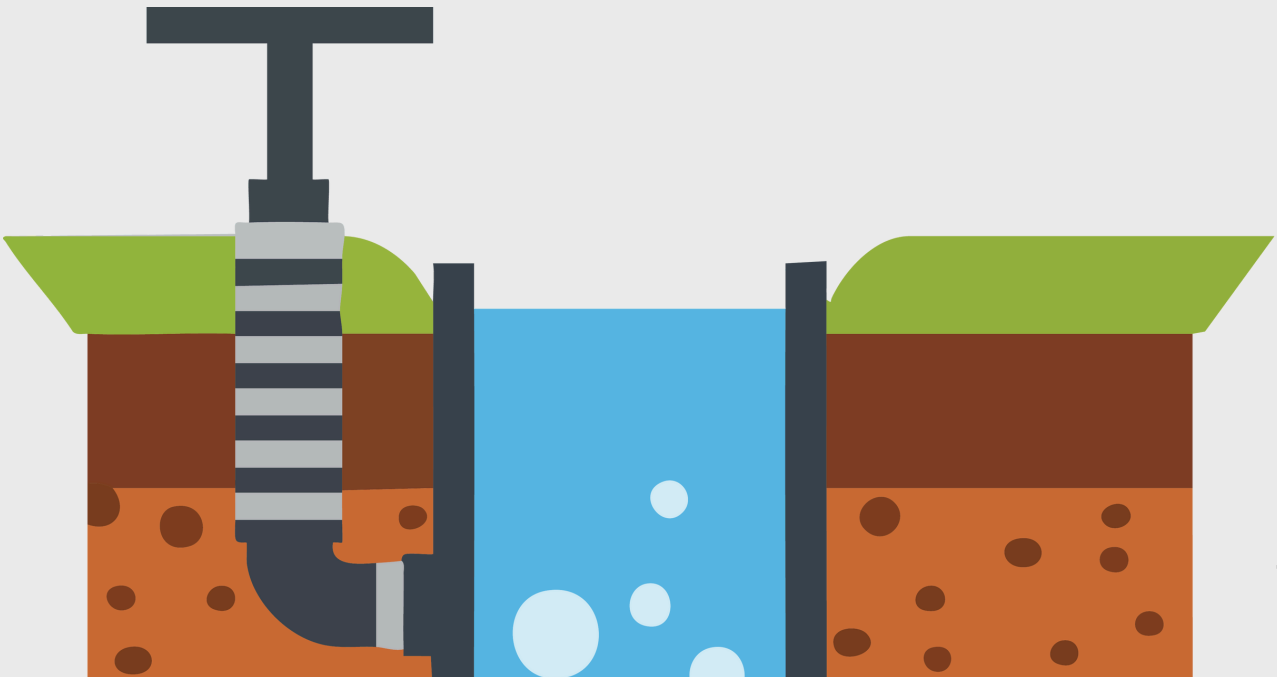
- Brief discussion: "*Why are soil and water essential for life?*"
- Show Activity 2 from the app to preview the two investigations: *Soil Texture Test and Water Quality Test.*

B. Main Activities

Activity 1 – Soil Texture Test (from Step 1 in app)
Time: 15 minutes (plus 24h settling time)

1. Each group collects soil in a jar and fills it with water.
2. Shake well.
3. Leave the jar to rest for 24h.
4. Next lesson: Observe layers:
    - Sand → bottom → yellow
    - Silt → middle → beige
    - Clay → top → brown
5. Students draw and label their jar.

Reference to app visuals: the screenshot shows the jar and the color-coded layers.



Activity 2 – Water Quality Test (Step 2 in app)
Time: 15 minutes
Students test or observe:

- pH (with strips or kit)
- Turbidity (clear vs. cloudy)
- Presence of oxygen (observing aquatic life OR using a basic test kit)

Students record:
"*Water quality: pH, clarity, oxygen*"
Suggested colors: light blue, white, gray — as shown in Step 2.

Activity 3 – Compare Results (Step 3 in app)
Time: 10 minutes
Discussion prompts from the app:

- *Which soil retained water best?*
- *Why are some water sources cleaner than others?*

Students work in groups to connect soil properties with water absorption and local biodiversity.

Reflection & Wrap-Up (5–10 minutes)

Use the "*Final Touches*" questions from the app:

- *Which soil type held the most water? Why?*
- *Why is this important for farming and plant growth?*
- *How does water clarity affect aquatic ecosystems?*
- *What factors improve or harm water quality?*

Students write a short environmental conclusion:

- "*What does today's investigation tell us about the health of our local environment?*"

Assessment:

- Accuracy of observations in the diagrams
- Participation in the soil and water tests
- Group discussion contributions
- Final reflection paragraph

Optional Extensions:

- Create a poster comparing soil types in different locations.
- Test multiple water sources and map them using GPS.
- Connect results with a biodiversity walk: "*What plants/animals thrive here and why?*"

Digital Integration (EMME App):

Students use the integrated activity in the app to:

- View the illustrated steps
- Compare their own jar with the model shown
- Access guiding questions directly from the activity page
- Submit a photo of their jar and water test via the teacher's chosen platform

LESSON PLAN

GEOLOGICAL HERITAGE

Title of the lesson:

Development vs. Conservation: Debating Geological Heritage Management

Related App Activity:

Corresponding App Activity: Activity 3.2 – Debate: Development vs. Conservation
Target Age Group: Lower secondary / upper secondary (flexible)

Duration:

50–60 minutes

Learning objectives:

By the end of this lesson, students will be able to:

- Understand the conflicting perspectives surrounding the use of geological heritage sites.
- Evaluate economic, environmental, and cultural arguments in decision-making.
- Develop skills in structured debate, public speaking, argumentation, and critical thinking.
- Demonstrate awareness of sustainable development principles and geopark governance.
- Work collaboratively in role-based groups (developers, conservationists, expert panel).

Curriculum Links:

- **EMME Unit 3: Environmental Stewardship** – Geological heritage, governance, sustainability.
- **GreenComp:** Systems thinking, critical thinking, responsibility.
- **Key Competences:** Multilingual competence, citizenship, personal & social competence.

Materials needed:

- Mobile phones/tablets with access to the EMME App – Activity 3.2 (Debate).
- Printed role cards (optional).
- Whiteboard / flipchart for verdict.
- Notebooks for preparation of arguments.

Lesson Procedure:

A. **Introduction (5 minutes)**

1. Briefly introduce the concept of geological heritage and its value (scientific, educational, cultural).
2. Show the Activity 3.2 introduction screen where the scenario is described.
3. Explain that students will simulate a real-life decision: *Should a geological site be used for economic development (mining/tourism), or should it be strictly protected?*

B. Assigning Roles (5 minutes)

Using Step 1 from the app (page 3):

Divide students into three groups:

- **Developers** 💰 – advocating for economic growth, jobs, tourism, mining.
- **Conservationists** 🌿 – advocating for protection, ecological balance, heritage preservation.
- **Expert Panel** 👩⚖️ – decision-makers who must evaluate both sides impartially.

Tip: Larger classes can create sub-groups within each role.

C. Preparing Arguments (10–12 minutes)
Use Step 2 from the app:

- Developers prepare economic arguments: job creation, local business growth, national revenue, tourism potential.
- Conservationists prepare environmental and cultural arguments: biodiversity loss, pollution, degradation of heritage, long-term sustainability.
- Experts prepare questions and evaluation criteria: sustainability, long-term impact, community benefit, scientific value.

Students use notebooks or app notes to structure ideas.

D. Presenting the Case (10 minutes)
Follow Step 3 from the app:

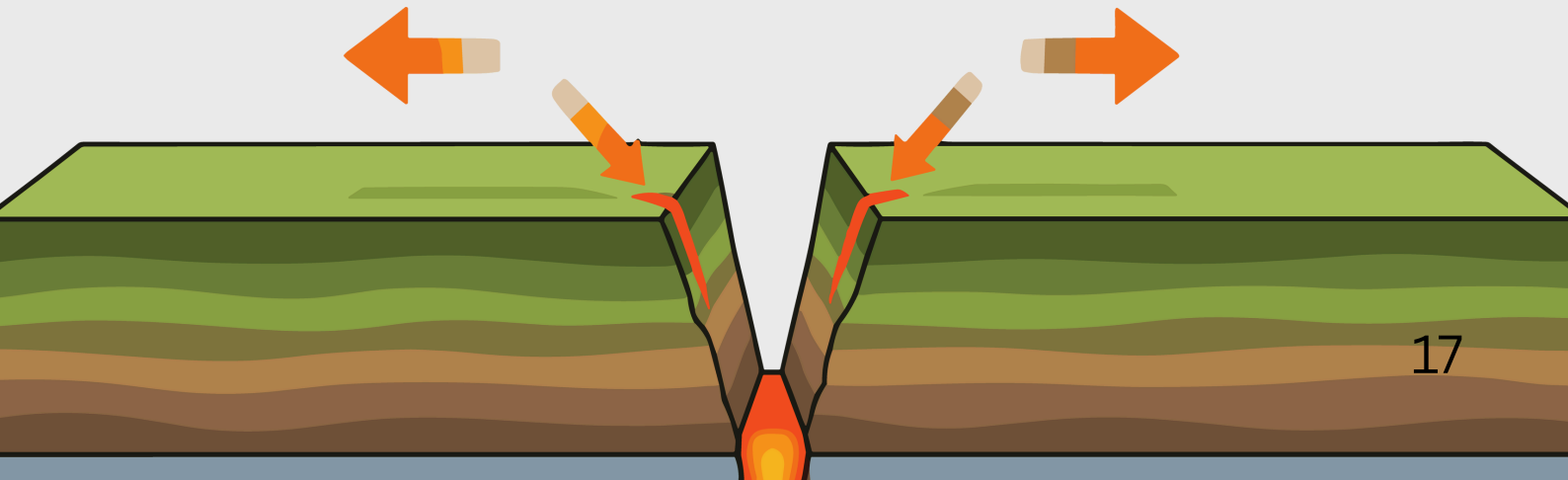
1. Developers present first.
2. Conservationists present second.
3. The teacher moderates time and ensures clarity.

E. Cross-Questioning (10 minutes)
Use Step 4 from the app:

- The two sides challenge each other with 2–3 questions each.
- Experts may ask clarifying questions.
- Encourage respectful tone and evidence-based arguments.

F. Verdict and Class Reflection (8–10 minutes)
Use Step 5 and Final Touches:

1. Experts deliberate and deliver a verdict, explaining their reasoning.
2. Write the decision on the board.
3. Whole-class reflection:
    - *Were the arguments balanced?*
    - *What real-world examples exist?*
    - *How do geoparks manage these conflicts?*
    - *What is the “best memory of the Earth” we must protect?*



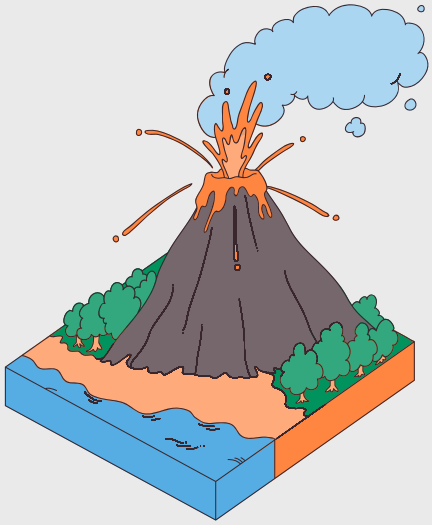
Assessment:

Formative:

- Participation in group discussion.
- Clarity of arguments and use of evidence.
- Respectful collaboration during the debate.

Summative (Optional):

- A short written reflection: "*What factors should weigh most heavily when deciding the fate of geological heritage sites?*"



Differentiation:

- Provide structured argument templates for students who need support.
- Allow advanced students to act as mediators or recorders.
- Use visuals or short videos for students who benefit from additional context.

Extension Activities:

- Research a real geopark conflict case (Hațeg, Azores, etc.).
- Create a mini-policy proposal for a geological site.
- Invite a geopark specialist to a classroom Q&A.

LESSON PLAN

THE DIALOGUE BETWEEN MAN AND EARTH

Title of the lesson:

The Dialogue Between Man and Earth: Local Raw Materials and Resources

Related App Activity:

Unit 4 – Local History and Culture
Lesson 4.1 (App-based version)

Duration:

60–90 minutes

Learning objectives:

By the end of this lesson, students will be able to:

- Identify natural raw materials and resources in their local environment.
- Explain how these resources are used by the community (construction, crafts, agriculture, etc.).
- Understand the balance between economic growth and sustainable resource management.
- Trace the transformation of a raw material into a final product, including environmental impacts.
- Engage in debate and critical thinking about sustainable choices.

Competences Developed:

- **GreenComp:** Systems thinking, critical thinking, environmental literacy.
- **Digital Competences:** Creating reports, posters, QR codes.
- **Social & Civic Competences:** Argumentation, collaboration, decision-making.
- **Cultural Awareness:** Understanding local natural heritage and traditional uses.

Materials needed:

- Soil, water, seeds
- Two plastic cups (with drainage holes)
- Clear plastic cups (for mini-greenhouse domes)
- Tray/plate, paper towels
- Notepad, pen
- Computer for creating info cards / QR codes
- Red and blue markers
- Smartphone/tablet with EMME app

Procedure:

Step 1 – Local Resources Exploration (15–20 min)

Based on Step 1: Local Resources Exploration

1. Take students outside (schoolyard/park/nearby green area).
2. Ask them to observe and document visible natural resources:
    - rocks, soil, water, plants, seeds.
3. Students take photos or notes.
4. They record how these materials are used locally:
    - construction, farming, crafts, traditional tools.

Product: A short field observation sheet.

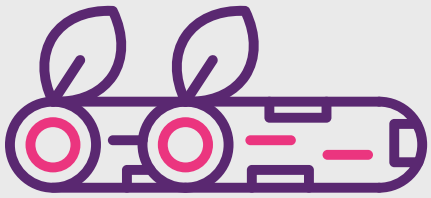
Step 2 – Sustainable Resource Management Debate (15–20 min)
Based on Step 2: Sustainable Resource Management Debate
Divide the class into two teams:

- Team A: Supports economic growth through resource extraction.
- Team B: Advocates for conservation and sustainable use.

Instructions:

1. Each team researches arguments (pros/cons).
2. Short debate with opening statements, rebuttals, conclusions.
3. Class vote: which approach benefits the community long-term?

Step 3 – Resource-to-Product Timeline (15–20 min)
Based on Step 3: Resource to Product Timeline
Students choose a raw material (wood, stone, metal, clay) and create a timeline or flowchart that includes:



1. Extraction
2. Processing
3. Use (final product)
4. Environmental impacts
5. Suggestions for reducing harm (recycling, renewable resources)

They can create a poster, PDF, or digital card.

Optional Step – Mini Greenhouse Experiment (10–15 min)
Based on materials in Step 1 & Step 4

Students plant two seeds:

- One with dome (greenhouse)
- One without dome

They observe over several days how temperature and humidity affect growth.

Step 4 – Reflection & Sharing (10 min)
Based on Step 4: Reflection & Results
Students answer:

- *What natural resources surprised you the most?*
- *Which argument in the debate convinced you?*
- *What did you learn about balancing human needs with Earth's resources?*
- *How can we use resources more responsibly?*

They finalize their posters with photos, labels, icons, and a small legend.

Assessment:

Students will be evaluated on:

- Field Observation Report – accuracy and relevance
- Debate Participation – clarity, evidence-based arguments
- Resource-to-Product Timeline – completeness, creativity, environmental awareness
- Reflection Answers – depth of understanding

Rubric (0–3 scale each):

- Identification of resources
- Understanding of local uses
- Argumentation skills
- Environmental insight
- Quality of final product/poster

Extension Activities:

- Visit a local craftsperson or quarry.
- Create a school exhibition on raw materials.
- Compare traditional vs modern uses of stone, clay, or wood in your region.
- Integrate QR codes linking to student-created fact sheets.

LESSON PLAN

LOCAL GEOMORPHOLOGY

Title of the lesson:

Local Geomorphology: Introducing Landforms and Landscapes

Related App Activity:

UNIT 5 MAPPING AND SPATIAL SKILLS
Lesson 5.1 - Local geomorphology - introducing landforms and landscapes

Duration:

60–90 minutes

Learning objectives:

By the end of this lesson, students will be able to:

- Identify common landforms in their local area (mountains, valleys, rivers, plateaus, etc.)
- Explain simple formation processes such as erosion, tectonic uplift, volcanic activity, and glaciation
- Create a simple 3D model of a landform and describe how natural processes shape landscapes
- Reflect on how local landscapes influence agriculture, settlements, and natural hazards

Resources:

- EMME Mobile App – Lesson 5.1 (Steps 1–4: Gather Materials → Identify Landforms → Formation Processes → 3D Model)
- Notebooks, colored pencils (Step 1, p.3) lesson5_1
- Local maps (digital or printed)
- Clay/papier-mâché/cardboard for the 3D model (Step 4, p.6) lesson5_1
- Smartphone or camera (optional)
- Projector/Smartboard

Development of the Lesson:

Step 1 – Gather Materials (5 minutes)
App reference: Step 1
Students prepare notebooks, colored pencils, a printed or digital local map, and optionally a camera/smartphone.

Step 2 – Explore and Identify Landforms (10–12 minutes)
App reference: Step 2
Teacher instructions:

1. Display local map on screen.
2. Students mark and label key landforms:
    - Mountain, valley, plateau, river, delta.
3. They draw a simplified sketch of at least two landforms in their notebooks.

Optional: use Google Earth for quick 3D observation.

Step 3 – Investigate Formation Processes (10 minutes)
App reference: Step 3 (erosion, tectonic uplift, volcanic activity, glaciation + visuals)
Students use the App to check each landform type and write a short explanation:

- *How was this landform created?*
- *What natural processes act on it today?* (e.g., erosion, landslides, sedimentation)

Teacher highlights the illustrated examples from the app (landslide, glacier, tectonic uplift).

Step 4 – Create a 3D Landform Model (15–18 minutes)
App reference: Step 4 – group model-making task
Group activity:

- Each group chooses a local landform.
- They build a small model using clay, cardboard, or papier-mâché.
- Include key features (slope, riverbed, plateau edges, etc.).
- Short presentation: explain how natural processes shaped it.

Step 5 – Final Touches & Reflection (5 minutes)
App reference: Final Touches (add arrows/labels, effects on agriculture, settlements, hazards)
Students:

- Add arrows showing erosion, deposition, uplift, etc.
- Give their models titles (suggested in the app: "*Our Local Landforms*").
- Reflect in notebooks:
  - *How do these landscapes influence human life?*
  - *What risks or opportunities do they create?*

Assessment:

- **Formative:** observation during mapping and group modeling.
- **Summative:**
  - Students submit a photo of their model + a short explanation of its formation process.
  - Quick oral check: identify 3 landforms and one process shaping each.

Homework (Optional):

- Take a photo of a landform in the local area and upload it to the class Padlet with a short geological description.
- OR explore Step 3 visuals again and prepare a mini-poster describing one process (erosion, uplift, volcanic activity).

Teachers Notes:

- The activity can be outdoors if the school is near a hill, river, valley, etc.
- The app steps provide enough structure for students to work independently.
- Models can be reused for Unit 5 Lesson 5.2 on mapping (2D–3D–4D).

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PROJECT NO. **2023-1-RO01-KA220-SCH-000166887**

PROJECT TITLE: **EXCHANGING MEMORIES - MEMORY OF THE EARTH**

CALL: **ERASMUS+-KA220-SCH-2023**

DURATION: **24 MONTHS**

DELIVERABLE TITLE: **#EMME APP - TEACHER TOOLKIT**

DISSEMINATION LEVEL: **PUBLIC**

DELIVERABLE LEAD: **UNIVERSITATEA DIN BUCURESTI**

WORK PACKAGE: **WP3**

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#EMME DIGITAL LOG

Interactive Activity Creator for Environmental Learning

Created during the *Erasmus+ KA220* project

Exchanging memories - Memory of the Earth,

Project code: *2023-1-RO01-KA220-SCH-000166887*

INTRODUCTION

The EMME Digital Log is your learning journal for exploring the Memory of the Earth.
It helps you collect observations, ideas, and reflections during outdoor lessons, field trips, or visits to Geoparks.
Each page invites you to look closer, think deeper, and connect what you see in nature with what you learn in school.
Use it together with the #EMME Goes Digital App to link your discoveries to digital maps, AR experiences, and challenges.

How to Use This Log

1. Before your field activity – Write the location, date, and your expectations. Think of what you hope to discover.

2. During the visit – Take notes, draw sketches, or add photos in each section. Observe geology, life forms, and human impact.

3. After the activity – Complete the reflection pages. What surprised you most? What could you do to protect this place?

4. Share your results – Upload your completed pages or photos to your class folder, or create a short digital story with your group.

5. Connect & grow – Scan the QR codes or open the EMME App to explore related locations and challenges.

💡 *Tip for teachers:* This fieldbook can be used for assessment, reflection, or group projects. Each student or team can create a digital portfolio documenting their environmental learning journey.

ABOUT OUR PROJECT

The *EMME – Exchanging Memories: Memory of the Earth* project connects schools and UNESCO Global Geoparks to explore how our planet's history can inspire more sustainable ways of living.
Through outdoor learning, digital tools, and creative collaboration, *EMME* helps students and teachers discover the stories written in rocks, landscapes, and communities — the living memory of the Earth itself.

OUR LOG

- This log was created as part of Work Package 3 – *"#EMME Goes Digital"*, during the teacher training in Croatia, to help learners document and reflect on their environmental experiences.
- It can be used in classrooms, on field trips, or in local community projects, encouraging students to observe, question, and act for a greener future.

Exchanging memories - Memory of the Earth

2023-1-RO01-KA220-SCH-000166887

OVERVIEW

EMME is co-funded by the Erasmus+ Programme of the European Union.
Project No. 2023-1-RO01-KA220-SCH-000166887
Coordinated by Liceul Teoretic "Avram Iancu" Brad, Romania, with partners schools from Portugal, Croatia, Slovakia, together with Azores Geopark and Hațeg Country Geopark.

Co-funded by the European Union

A Geopark is a place where learning meets adventure, where the past meets the future, and where every stone has a story to tell.

WHAT IS A GEOPARK?

UNESCO Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development.
A UNESCO Global Geopark uses its geological heritage, in connection with all other aspects of the area's natural and cultural heritage, to enhance awareness and understanding of key issues facing society, such as using our earth's resources sustainably, mitigating the effects of climate change and reducing natural hazard-related risks.
By raising awareness of the importance of the area's geological heritage in history and society today, UNESCO Global Geoparks give local people a sense of pride in their region and strengthen their identification with the area. The creation of innovative local enterprises, new jobs and high-quality training courses is stimulated as new sources of revenue are generated through geotourism, while the geological resources of the area are protected.

Located in Transylvania, the Hațeg Geopark reveals the ancient landscapes where dinosaurs once roamed.

Spread across nine volcanic islands in the Atlantic Ocean, the Azores Geopark showcases breathtaking volcanic formations and marine life.

HAȚEG COUNTRY GEOPARK

unesco Global Geopark

GEOPARK AZORES

unesco Global Geopark

"*We do not inherit the Earth from our ancestors; we borrow it from our children.*" - Native American Proverb

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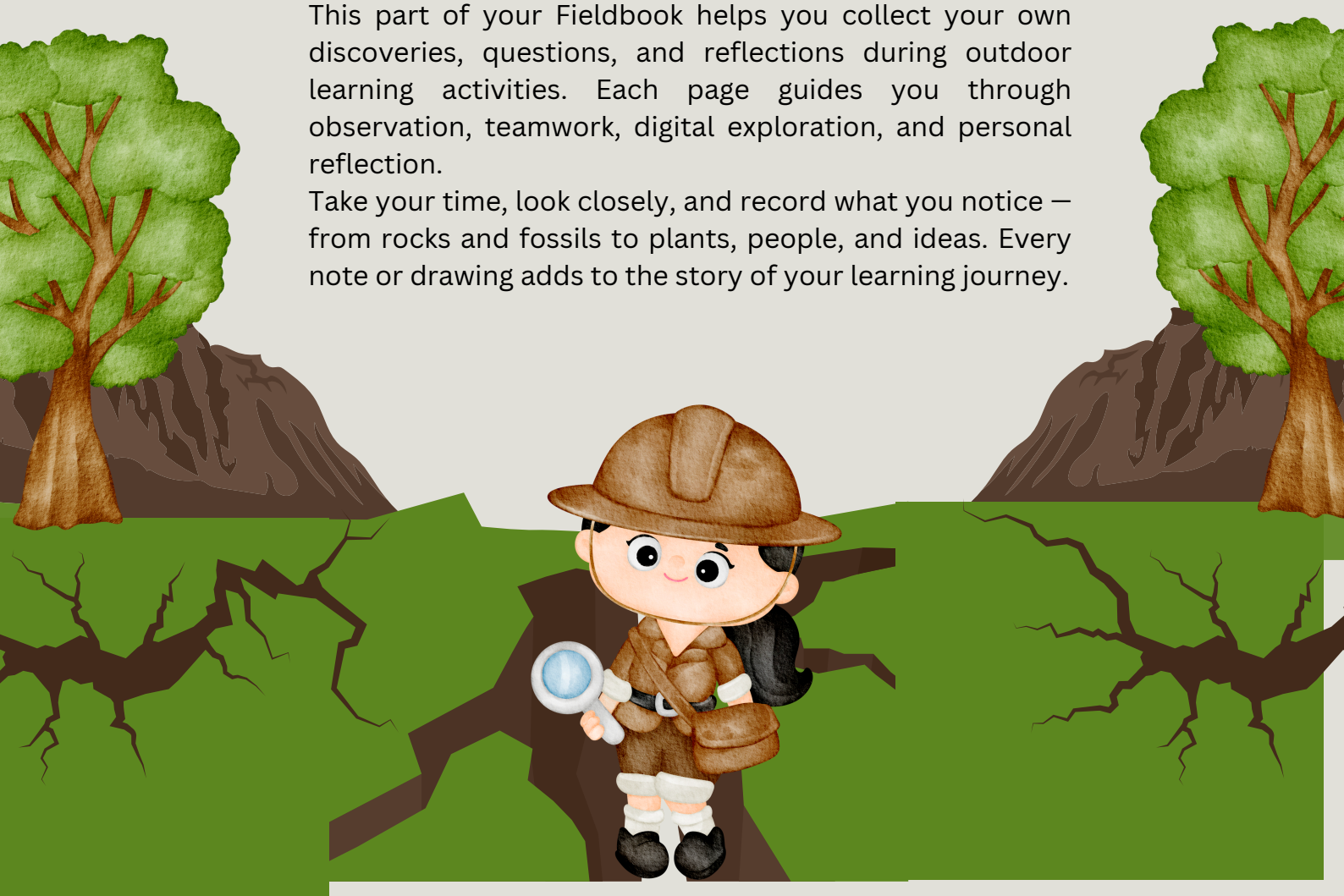
FIELD OBSERVATION LOG

EXPLORING AND UNDERSTANDING THE MEMORY OF THE EARTH

This part of your Fieldbook helps you collect your own discoveries, questions, and reflections during outdoor learning activities. Each page guides you through observation, teamwork, digital exploration, and personal reflection.

Take your time, look closely, and record what you notice — from rocks and fossils to plants, people, and ideas. Every note or drawing adds to the story of your learning journey.



EXPLORING THE MEMORY OF THE EARTH

Student Name

Class Week

Observation Date

🧭 LOCATION / GPS COORDINATES:

🌩️DESCRIBE THE LANDSCAPE OR FORMATION:

📸 UPLOAD / DRAW WHAT YOU SEE:

🌿 WHAT SIGNS OF LIFE OR HUMAN ACTIVITY DO YOU OBSERVE?

💬 THREE WORDS THAT DESCRIBE HOW THIS PLACE MAKES YOU FEEL:

1. .....
2. .....
3. .....

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SCIENCE SNAPSHOT

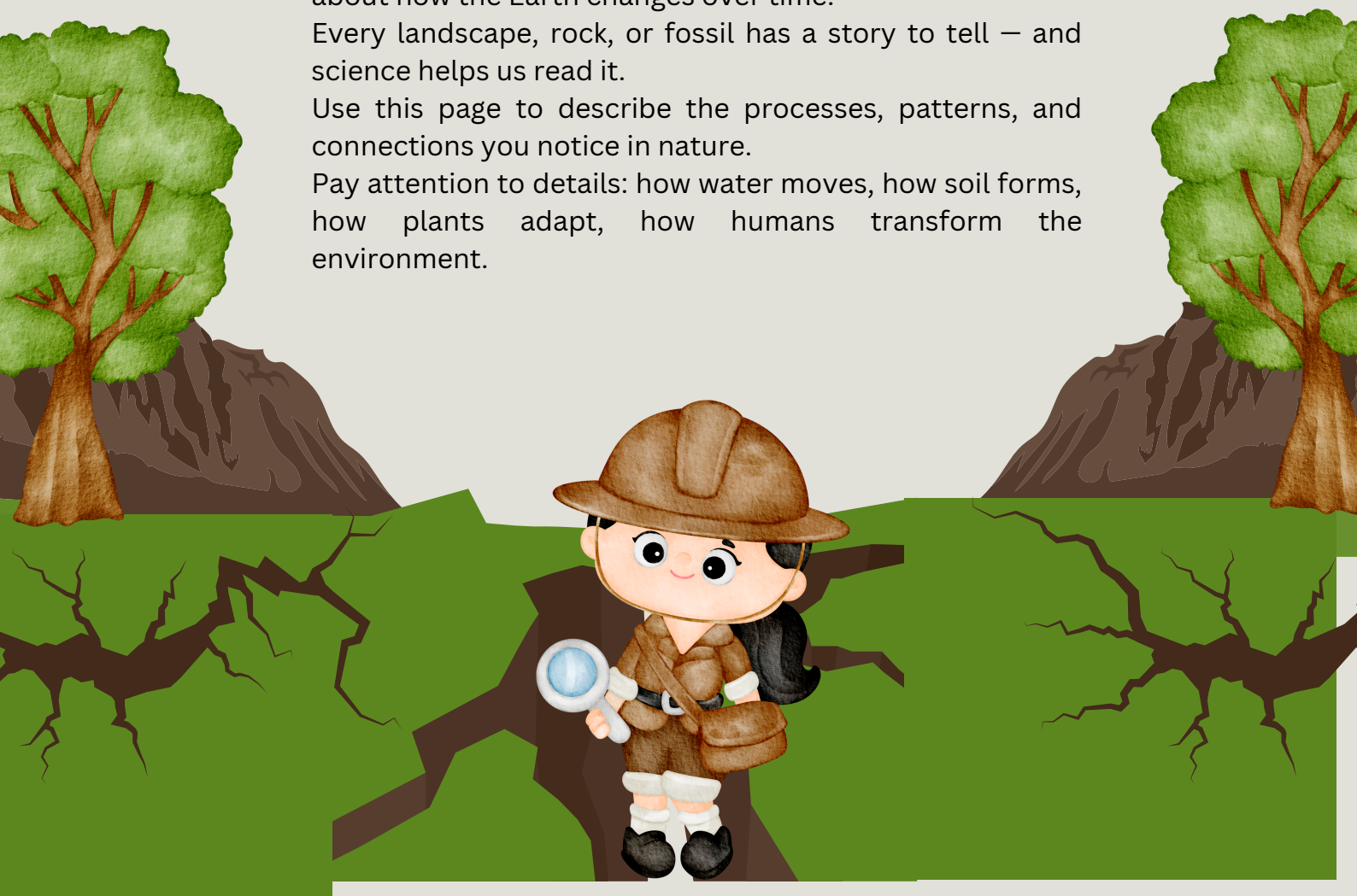
UNDERSTANDING WHAT WE SEE

In this part of your Fieldbook, you will think like a scientist. You will observe, ask questions, and look for explanations about how the Earth changes over time.

Every landscape, rock, or fossil has a story to tell — and science helps us read it.

Use this page to describe the processes, patterns, and connections you notice in nature.

Pay attention to details: how water moves, how soil forms, how plants adapt, how humans transform the environment.



SCIENCE SNAPSHOT

🔍 **What natural processes shaped this place?**

🧬 **What species (plants/animals) live here?**

📈 **Small diagram space**
Sketch or note key features.

🌍 **What sustainability challenges are visible?**

🧠 **How do human actions affect this environment?**

🧭 How to explore like a young scientist?

- **Observe carefully.** Look, listen, and record what you notice.
- **Ask questions.** *Why does this look like that? How was it formed?*
- **Make connections.** Link what you see with what you already know.
- **Sketch or measure.** Draw shapes, note colours, or use simple tools.
- **Reflect.** Think about what this tells you about the Earth's history and future.

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TEAMWORK & ACTION

WORKING TOGETHER FOR THE PLANET

Every great idea starts with people working together.
In this part of your Fieldbook, you'll reflect on how you collaborated, shared ideas, and took action during your activity.
Teamwork helps us see different perspectives, learn from each other, and build stronger connections — just like the systems in nature that depend on balance and cooperation.

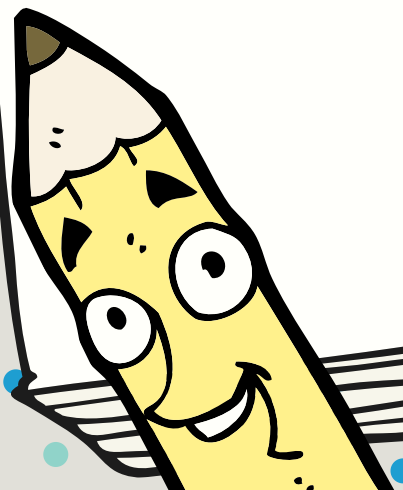
Working Together for the Planet

👥 Who did I collaborate with today?

💡 What new idea or solution did our team discuss?

🧩 What can we do to protect this area?

📸 Insert group photo



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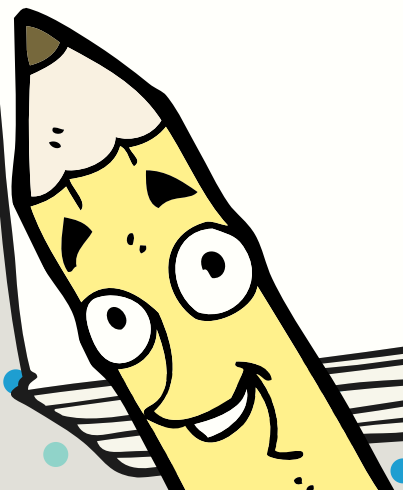

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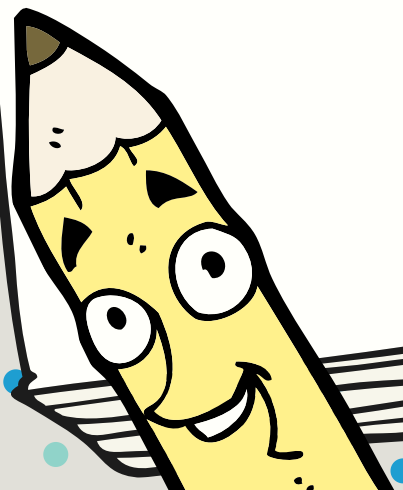
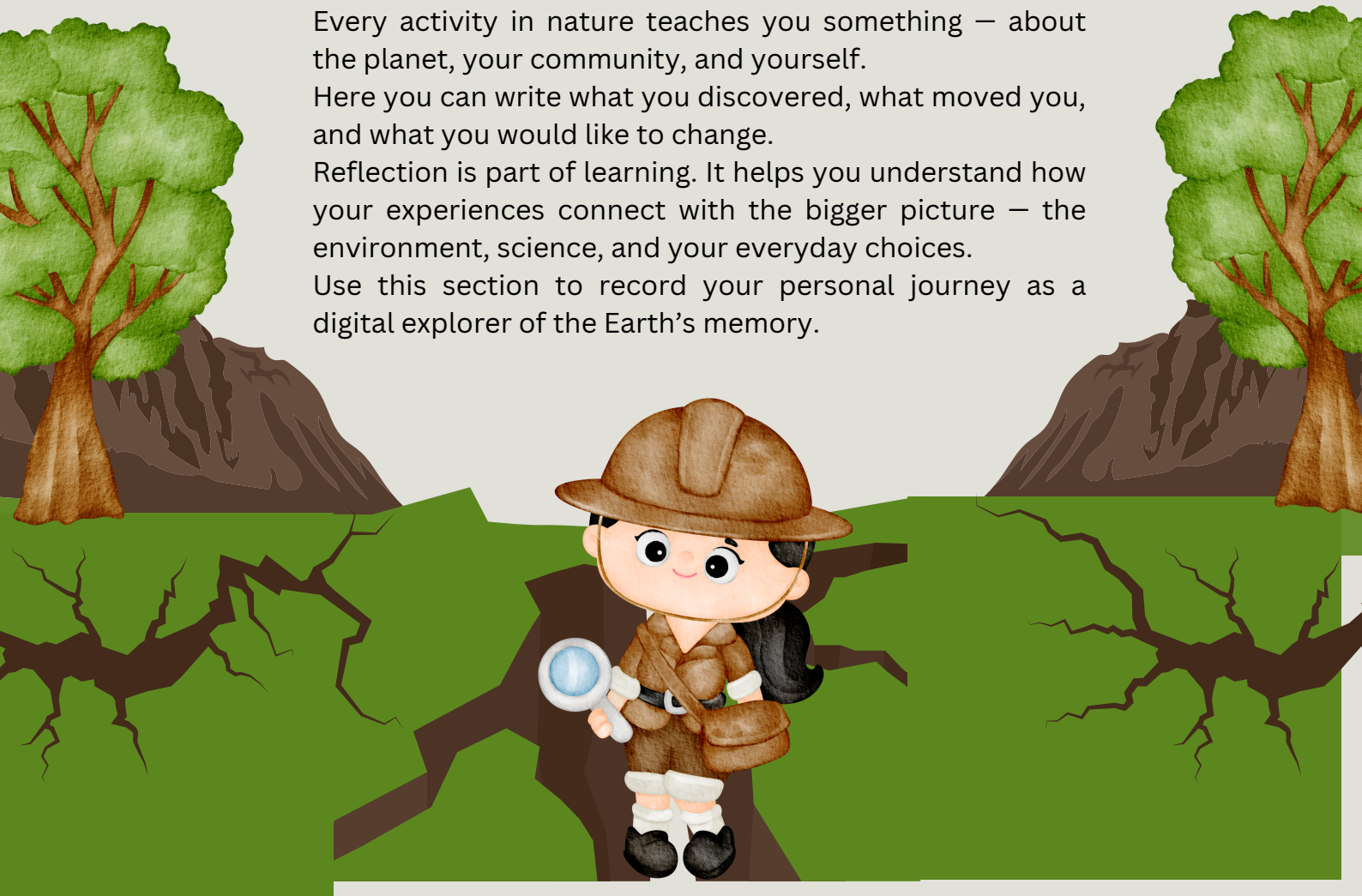


DIGITAL REFLECTION

MY #EMME EXPERIENCE

This page is your space to think, feel, and reflect.
Every activity in nature teaches you something — about the planet, your community, and yourself.
Here you can write what you discovered, what moved you, and what you would like to change.
Reflection is part of learning. It helps you understand how your experiences connect with the bigger picture — the environment, science, and your everyday choices.
Use this section to record your personal journey as a digital explorer of the Earth's memory.



My #EMME Experience

🧠 One thing I learned today:

❤️ Something that inspired me:

🔁 Something I want to change in my daily habits:

⭐ Rate today's activity:

☆☆☆☆☆

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⭐ Rate today's activity:

☆☆☆☆☆

ECO-CHALLENGE

MY GREEN COMMITMENT

Every discovery deserves an action.
In this part of your Fieldbook, you decide what you can do to make a difference — no matter how small it seems.
Each promise you write here is a seed for a greener future.
Your Green Commitment is a personal action plan: a step you choose to protect nature, reduce waste, or inspire others.
You don't have to change the world in one day — change begins with one person, one habit, one idea shared with your community.

My Green Commitment

✅ **I will... (choose or add your own)**

- *Reduce waste* ♻️
- *Share what I learned with my class* 🗣️
- *Revisit this place and monitor changes* 🔍
- *Create a digital story or post about today* 📱
- .....
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✍️ Signature / Date

MY FIELD JOURNAL – REFLECTION SUMMARY

This space is dedicated to your teacher's feedback and reflections on your work.
It helps you understand your strengths and the areas where you can continue to grow.
Your observations, teamwork, and reflections are all part of your personal learning journey — there are no perfect answers, only progress and curiosity.
Teachers can use this section to comment on how you engaged in the activity, how you collaborated with your peers, and how you connected your discoveries with environmental understanding.

Criteria	**Excellent**	**Good**	**Needs improvement**	**Comments**
Observation	☐	☐	☐	
Collaboration	☐	☐	☐	
Digital skills	☐	☐	☐	
Environmental understanding	☐	☐	☐	

Funded by
the European Union