



**PLANIT**  
TEACHERS

## Creating a 3D Model of UAE Mangroves: An Interactive Learning Experience

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**Student Name:** \_\_\_\_\_

**Class:** \_\_\_\_\_

**Due Date:** \_\_\_\_\_

### Introduction

Welcome to this interactive learning experience, where you will create a 3D model of a UAE mangrove ecosystem. Mangroves are unique and fascinating ecosystems that play a crucial role in protecting shorelines, supporting biodiversity, and mitigating the effects of climate change. In this activity, you will learn about the importance of mangroves, design and create a 3D model, and develop essential skills in spatial awareness, teamwork, and problem-solving.

## Activity 1: Mangrove Research

Research and write a short report on the importance of mangroves in the UAE, including their role in protecting shorelines, supporting biodiversity, and mitigating the effects of climate change.

- What are the unique features of UAE mangroves?
- How do mangroves support biodiversity?
- What are the threats facing mangroves in the UAE?

## Activity 2: 3D Model Design

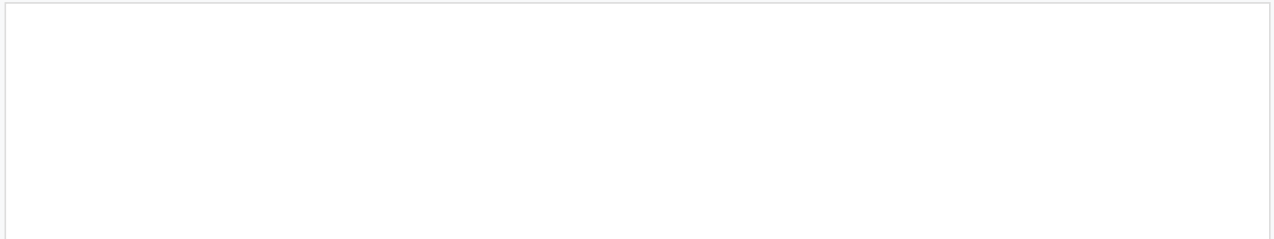
Design and create a 3D model of a UAE mangrove ecosystem, including features such as trees, wildlife, and water. Use a variety of materials, such as cardboard, clay, or 3D printing software, to create your model.

- What are the key components of a mangrove ecosystem?
- How can you represent the unique features of mangroves in your 3D model?
- What materials will you use to create your model?

### Activity 3: Mangrove Conservation

Design a poster or infographic on mangrove conservation, highlighting the threats facing mangroves and potential solutions.

- What are the main threats facing mangroves in the UAE?
- How can we contribute to the conservation of mangroves?
- What are some potential solutions to protect mangroves?



#### Activity 4: Reflection and Self-Assessment

Reflect on your learning and self-assess your progress. What did you learn about mangroves? What challenges did you face in creating your 3D model? What would you do differently next time?

- What were the most significant challenges you faced in creating your 3D model?
- How did you overcome these challenges?
- What did you learn about mangroves and their importance?

## Conclusion

Congratulations on completing this interactive learning experience! You have developed essential skills in spatial awareness, teamwork, and problem-solving, and have gained a deeper understanding of the importance of mangroves in the UAE. Remember to always think critically and creatively about the challenges facing our environment, and to take action to protect and conserve our unique ecosystems.

## Assessment Rubric

The assessment will be based on the following criteria:

- Content knowledge (40%): Does the student demonstrate a clear understanding of the UAE mangrove ecosystem and its unique features?
- Design and creativity (30%): Is the 3D model well-designed, creative, and visually appealing?
- Communication skills (30%): Does the student effectively communicate their ideas and explain the features of their model?

## Extension Activities

Choose any combination of the following activities:

1. Create a virtual reality experience of a UAE mangrove ecosystem
2. Design a mangrove conservation plan
3. Create a diorama of a UAE mangrove ecosystem

The following terms are used in this activity:

- Mangrove: A type of coastal ecosystem characterized by the presence of mangrove trees
- Ecosystem: A community of living and non-living things that interact with each other in a specific environment
- Biodiversity: The variety of different plants, animals, and microorganisms that live in an ecosystem
- Conservation: The practice of protecting and preserving the natural environment, including ecosystems and species



