



Cnidarians • Lesson Plan

Lesson Plan: Introduction to Cnidarians

Grade Level: Middle School and High School

Video: www.blueworldtv.com/webisodes/watch/what-are-cnidarians

Lesson Duration: Approximately 60 minutes

Next Generation Science Standards (NGSS):

☐ **Disciplinary Core Ideas:**

- ☐ LS2.A: Interdependent Relationships in Ecosystems
- ☐ LS2.B: Cycles of Matter and Energy Transfer in Ecosystems
- ☐ LS4.A: Evidence of Common Ancestry and Diversity
- ☐ LS4.B: Natural Selection
- ☐ LS4.D: Biodiversity and Humans

☐ **Crosscutting Concepts:**

- ☐ Patterns
- ☐ Cause and Effect
- ☐ Systems and System Models
- ☐ Stability and Change

☐ **Science and Engineering Practices:**

- ☐ Developing and Using Models
- ☐ Asking Questions and Defining Problems
- ☐ Constructing Explanations and Designing Solutions
- ☐ Engaging in Argument from Evidence

Learning Objectives:

- ☐ Students will understand the characteristics and diversity of cnidarians, including their body forms and stinging mechanisms.
- ☐ Students will learn about the ecological roles of cnidarians in marine ecosystems.
- ☐ Students will recognize the impact of cnidarians on the underwater environment.

**Materials:**

- ☐ Projector or Smartboard
- ☐ Internet access for displaying the video
- ☐ Whiteboard and markers
- ☐ Handouts with questions about the video (optional)

PROCEDURE:**Introduction (10 minutes):**

1. Begin the lesson by asking students if they've ever heard of or seen a jellyfish. Encourage them to share their experiences or knowledge about these creatures.
2. Explain that you will be watching a video about cnidarians, a group of marine animals that includes jellyfish, anemones, and corals.

Video Presentation (15 minutes):

3. Show the video "Look out for that medusa!" to the class. Encourage students to pay close attention to the characteristics, diversity, and ecological roles of cnidarians.

Discussion (20 minutes):

3. After watching the video, facilitate a class discussion by asking the following questions:
 - ☐ What are cnidarians, and what is their phylum called?
 - ☐ Describe the basic body forms of cnidarians, including polypoid and medusoid forms.
 - ☐ How do cnidarians capture and subdue their prey?
 - ☐ Explain the significance of nematocysts and toxins in cnidarians.
 - ☐ Which cnidarians can deliver painful or fatal stings to humans?
 - ☐ How do corals contribute to the formation of coral reefs?
 - ☐ What are some of the challenges faced by cnidarians in their underwater environment?
5. Encourage students to share their thoughts and observations.



Activity (10 minutes):

6. Provide students with handouts containing questions related to the video. You can use these questions for a written or group discussion activity to assess comprehension and critical thinking.

Conclusion (5 minutes):

7. Summarize the key points of the lesson, emphasizing the importance of cnidarians in marine ecosystems and the uniqueness of their stinging mechanisms.
8. Assign homework or additional reading materials related to marine biology, focusing on other oceanic species or ecosystems.

Assessment:

- ☐ Assess students based on their participation in the discussion and their responses to the video-related questions. Evaluate their understanding of cnidarians and their ecological significance.

Extension Activities:

- ☐ Arrange a field trip to a local aquarium or marine center to observe live cnidarians.
- ☐ Have students create posters or presentations on specific cnidarian species, their habitats, and unique characteristics.
- ☐ Discuss the importance of conservation efforts to protect coral reefs and other cnidarian habitats.