

Lobster Escape Room: Survive Climate Change!

Activity summary

This interactive activity draws inspiration from the "Escape Room" dynamics, transforming it into an educational and immersive experience focused on marine conservation and the impact of climate change. Throughout the activity, participants assume the role of a lobster, exploring its life cycle from hatching to maturity, facing challenges that represent both natural hazard and human-induced threats.

Introduction

Engaging questions and essential facts:

Start the activity by sparking curiosity with a few initial questions and revealing some fascinating facts about lobsters. Here's a suggested approach:

- Opening questions:

- ❑ "Do you know what a lobster is? Can anyone describe one?"
- ❑ "What color do you think lobsters are?"
- ❑ "How long do you expect lobsters can live?"
- ❑ "Do you think lobsters face any dangers in the ocean?"

After gathering responses, introduce some fascinating facts about lobsters to set the stage for the challenges they will face in the activity:

- Interactive discovery:

After participants share their thoughts, enlighten them with some captivating truths about lobsters:

- ❑ "While many may picture lobsters as red, they display a variety of colors in the wild, including vibrant blues and even rare greens. The red color we commonly associate with lobsters only appears when they are cooked."
- ❑ "Lobsters can live for over 60 years, facing numerous threats from natural predators, human activities, and the impacts of climate change. From the moment they hatch as tiny larvae to when they mature into adults, their survival is constantly challenged."

- Linking to Climate Change and its impact on lobster larvae:

- ❑ "Now, let's focus on one particular threat: the impact of climate change on these fascinating creatures. As the ocean temperatures rise, the survival of lobster larvae becomes even more unstable. These young lobsters are extremely sensitive to changes in their environment, which can drastically affect their ability to grow and eventually reproduce."

- Challenge introduction:

- ❑ "With this knowledge, I challenge you to step into the tiny 'shells' of lobster larvae. Imagine you are just hatching into the ocean, facing a world full of dangers and the looming threat of climate change. Your task will be to navigate through various stages of a lobster's life, facing and overcoming obstacles to reach adulthood in time to successfully adapt and thrive."

- Team Formation:

- ❑ "Before we dive in, let's form our teams. Please choose a team name that reflects your group's spirit or something you find inspiring about lobsters or the ocean. Once your team has a name, I will hand out the first lifecycle card to each team."

- Lifecycle cards introduction:

- ❑ "These cards represent different stages in the life of a lobster. Your first card is the 'Larva' stage. On the back of this card, you'll find explanations and clues that will help you progress to the next stages of the lobster's lifecycle—each card bringing you closer to reaching maturity as an adult lobster. Are you ready to take on the challenges and see if you can survive and thrive in the changing ocean environment?"

- Beginning the Activity:

- ❑ "Once you have your team's name and your first card, the journey begins. Use the clues wisely, collaborate with your teammates, and move through each stage of development. Good luck, and let's see how well you can adapt and survive like a lobster!"

The timer will start now, and each team will work through the stages outlined on their lifecycle cards. The challenges are designed to be engaging and educational, simulating the real-life pressures lobsters face from larvae to adulthood.

Keep in mind that depending on the age of the participants, different levels of support and information may be needed. For younger participants, organizers should provide additional guidance and explanations to help them understand the challenges and clues. For older or more experienced groups, less direct support can encourage critical thinking and problem-solving skills.

To aid in navigating the activity space, we use lobster claw clips as directional signs. These signs will help the participants to the various stations. Please note that the arrangement and placement of these signs may vary depending on the venue, so be sure to check the 'Layout and Distribution' section for specific details regarding the setup at your location.

Activity Stations

Station 1. Submarine search: Find your marine shelter

- Objective:

Participants must transition from living as free-swimming larvae in the water column to settling on the seabed as postlarvae. Not all seafloor habitats are safe for them, so choosing the right habitat is crucial for survival.

- Setup:

Inside the activity area, multiple boxes will be scattered around. These boxes will contain different photographs representing various seabed habitats. We have filled the boxes with fabric scraps to make the search more engaging and challenging. We chose fabric because we had it readily available from family members who sew. However, any other material can be used to create a similar search experience. Initially, we considered using sand to give a feel of natural substrates, which remains an option for those who want to add an extra tactile element to the challenge.

- Task:

Among the habitats depicted in the photographs, only four are suitable for the larvae to develop into postlarvae. These photographs are randomly placed within the boxes, requiring participants to search through multiple boxes to find the correct habitats.

- Instructions for participants:

The participants can find the different clues in the Larvae card. Depending on your group's experience or age, organizers may provide additional guidance to help them get started. Here is an example:

"Start by exploring the boxes and searching for habitat images. Remember, not all habitats are safe for the lobster's development. You need to find the four correct habitats that are safe for a lobster postlarva."

- Completion:

Once participants have collected the correct habitat cards, they need to find a sign marked 'Salty Home Sweet Home.' Here, they will deposit the four chosen habitat cards. An organizer will be stationed at this sign to verify the cards and provide the next lifecycle card, leading to the subsequent challenge.

- Organizer Role:

The organizer at the 'Salty Home Sweet Home' station will ensure that the correct habitat cards are submitted. They will assist participants if there are any questions and provide the next lifecycle card which contains clues or tasks for the next stage of the activity.

Station 2. Lobsters in distress: Avoid being the dish of the day!!!

- Objective:

Participants, now in the postlarva stage, face the challenge of surviving predators even in their safe habitats. The goal is to avoid becoming the "dish of the day."

- Setup:

Game Components:

A total of 50 cards are used in the game:

- ❑ 40 octopus cards
- ❑ 10 lobster cards
- ❑ Optionally, include a pair of cards featuring a lobster and a conger eel to highlight the association between these two species in the marine ecosystem.

- Instructions for participants:

"This memory game requires teamwork and sharp observation. You and your teammates will take turns trying to find pairs of lobster cards. One at a time, each team member will flip over two cards. Here's how it works:

- ❑ If the two cards you flip over form a pair of lobsters, you will remove them from the game. This is a successful match.
- ❑ If the cards do not match or if any card is an octopus, turn them back over to their original positions. It's then the next player's turn to try their luck.
- ❑ The goal is to continue this process, taking turns among all team members until all pairs of lobsters (and the optional lobster-conger pair) are successfully matched and removed from the game."

- Completion:

Once all lobster pairs (and the optional lobster-conger pair) are matched, the organizer will provide the team with the 'Juvenile Pass.' This pass will lead them to their next challenge, where they will face new threats as juvenile lobsters."

- Organizer Role:

The organizer will oversee the game, ensuring participants understand the rules and providing guidance if needed. They will also handle the distribution of the Juvenile Pass once the team has completed the memory game.

School settings with fewer facilitators (modified version):

When fewer volunteers or assistants are available (as is often the case in school settings), the activity is adapted for larger group dynamics using quiz panels and colour-coded answer cards to streamline participation.

Modified Setup:

- Instead of a memory card game, panels or posters are displayed with different multiple-choice questions about lobsters.
- Each question is associated with a specific colour, and each participant or small team is given coloured answer cards.

Instructions for participants:

"Work as a team to read each question and decide together on the correct answer. Each question is linked to a colour (e.g., blue, green, red, yellow), and you must raise or place the card of that colour to respond. The goal is to discuss and agree on the best answer as a group."

This version allows the activity to flow more efficiently in settings with limited supervision, while still promoting collaboration and learning about lobsters and marine threats.

Station 3. Deadly Riddles: Can you avoid the dangers?

- Objective:

Participants, now juvenile lobsters, must retrace their steps to a specific point where they encounter new anthropogenic threats. They must solve a series of riddles to uncover a secret word that will grant them the final lifecycle card, transforming them into adult lobsters.

- Setup:

Directions and signs:

As participants follow the path back, they will find a sign marked "New Dangers Ahead!" This sign also indicates that they need to decipher a secret word, presented in a hangman-style puzzle, to advance.

Riddle Station:

At this station, teams will find an envelope containing five riddles. Each riddle represents a different anthropogenic danger that juvenile lobsters might face. The answer to each riddle includes one or more letters marked in blue. These blue letters are part of the secret word they need to uncover.

- Instructions for participants:

"Upon reaching the New Dangers Ahead sign, open the envelope to solve the riddles. Each correctly solved riddle will reveal a letter or letters marked in blue. Pay close attention to these letters as they are clues to the secret word."

- Completion:

Once all five riddles are solved, all the teammates will work together to arrange the blue letters to form the secret word. The secret word could be 'CLIMA'.

They will present the correctly decoded word at the station to receive the 'Adult Lobster' card."

- Organizer role:

An organizer will be present at this station to provide additional clues, if necessary, especially for younger participants who might struggle with more complex riddles. The organizer will also verify the secret word and distribute the final lifecycle card upon successfully completing the challenge.

This station not only tests participants' problem-solving and teamwork skills but also educates them about the real-world threats faced by marine life due to human activities. It encourages them to think critically about environmental issues and the vocabulary related to marine conservation.

Station 4. Voices from the sea: Protecting our future

- Objective:

Participants have now reached the adult stage in the lobster lifecycle, but the journey doesn't end here. This station addresses the severe threat of overfishing and other dangers to adult lobsters. The challenge is to use creative expression to advocate for marine conservation.

- Setup:

Materials Provided:

- ☐ Poster boards.
- ☐ Markers, paints, and other craft supplies.
- ☐ Information sheets on lobster overfishing and conservation strategies.

- Instructions for Participants:

Creative campaign:

"Though you've reached adulthood, significant threats like overfishing still loom. Your final challenge is to create an impactful campaign slogan or poster that calls for the protection of marine life. Utilize the provided materials to express your message through drawing, painting, writing, or even performing."

- Integration of Conservation Message:

As the participants work on their advocacy campaigns for marine conservation, it's vital to incorporate discussions about species restoration. This topic is a central strategy in the broader context of marine conservation efforts. As an organizer, your role involves guiding the participants to understand and communicate the significance of species restoration effectively.

During the last activity, provide participants with information and insights about how species restoration works, why it's necessary, and its benefits to marine ecosystems. This could include examples of successful restoration projects and their impacts on both local and global scales.

- Scoring and Timing:

Time management:

In this activity, the progress of each team has been tracked from the start and timed through each phase of the lobster's lifecycle. As organizers or organizers, it's important to communicate that while the journey to reaching the final station is timed, the final task offers an opportunity for teams to improve their overall time based on their performance. Specifically, for each creative and impactful campaign presented, a set amount of time should be deducted from their total. This acts as a bonus, rewarding teams for their efforts in creating compelling conservation messages. It's crucial to monitor these presentations carefully and apply time deductions consistently to ensure fairness.

- Philosophy of completion:

As organizers, one of your key roles is to reinforce that this activity is not about competing against one another but about collaboratively reaching a common goal. Make it clear to all participants that every team that reaches the final station has achieved success. The true measure of victory is in the awareness and advocacy raised for marine life protection. Encourage teams to focus on the learning experience, the sharing of knowledge, and the collective effort to make a difference. This philosophy should be communicated from the start to foster a cooperative and supportive environment throughout the activity. Remind participants that their collective actions contribute to a larger cause, emphasizing the importance of unity and shared purpose in conservation efforts.

- Completion and presentation:

Presentation setup:

- ☐ Prepare a space where each team can present their campaign to all participants.
- ☐ Ensure each team has equal time, about 3-5 minutes, to share their message.

Evaluation criteria:

Evaluate campaigns based on creativity, clarity of message, and potential impact on marine conservation.

Feedback and recognition:

After presentations, provide constructive feedback and recognize all teams for their contributions to raising awareness about marine conservation.

Layout and Distribution

- Outdoor events (e.g., Fairs with a Stand):

- ☐ Main area: Use the stand as the central hub for presentations and the final two activity stations (3 and 4), where participants can engage in discussions and creative tasks.
- ☐ Surrounding space: Distribute the initial activity stations (1 and 2) in the area around the stand but keep them close enough to maintain easy flow and accessibility.
- ☐ Flexibility based on volunteers: If sufficient staff is available, consider setting up Station 3 outdoors to add variety and keep participants engaged in the outdoor space.

- Classroom settings (Large Groups):

Subgroup Formation: Divide participants into smaller subgroups for better management and engagement. Assign each group color-coded stations to streamline movement and organization.

- ☐ Indoor Layout:

Introductory and Station 4: Utilize classroom space where teams can sit at tables to engage in the introduction, discussions, and the final station involving campaign creation.

Stations 1 and 2: Arrange these activity stations in separate areas such as the schoolyard or an adjacent classroom to allow movement and interaction.

- ☐ Single Room Layout:

If only one room is available, adapt by clearly marking different corners or sections of the room for each activity station. Ensure each section is distinctly set up to prevent overcrowding and confusion.

- General tips:

- ☐ Ensure all stations are clearly marked, using signs or color codes as mentioned. This helps in guiding participants smoothly from one station to another.
- ☐ Consider the flow of participants and try to arrange stations in a logical sequence to minimize congestion and maximize engagement.
- ☐ The setup and execution of each station may need to be adapted based on the number of organizers and volunteers available. More complex stations may require additional hands-on assistance, while simpler tasks might be managed with fewer staff. Be prepared to adjust roles and station activities dynamically to ensure each aspect of the event runs smoothly and efficiently.