Teacher Resource Guide

What's included in this resource:

- **Introduction to Rockpools classroom poster**
- **Five worksheets on learning activities about rockpools**
- **Beneath the Tide YouTube video link- Short fun fact videos from our aquarists!**
- **Suggested guide on how to use the resources in classroom activities**
- **Craft Activity- Make your own rockpool!**

Introduction to Rockpool Habitats

Rockpools are unique marine ecosystems found along the coastline where seawater is trapped among rocks during low tide.

These environments are constantly changing due to waves, temperature fluctuations, and varying water levels. As a result, organisms living in rockpools must be adapted to survive challenging and unpredictable conditions.

This resource supports Stage 3 students in investigating how living things survive in rockpool environments. Students will explore adaptations, environmental challenges, and the relationships between organisms within an ecosystem.

Learning Intentions

Students will:

• analyse how living things survive in rockpool environments
• explain how structural and behavioural adaptations support survival
• investigate how environmental conditions affect organisms
• explore relationships between living things within an ecosystem
• evaluate the impact of human activity on marine environments

This resource is designed to support a sequence of learning experiences focused on rockpool ecosystems. Students begin by exploring a visual overview using the classroom poster, followed by a series of worksheets that investigate individual organisms and their adaptations. Video content is integrated throughout the resource to support observation and analysis. Students use this information to explain how organisms survive and interact within the ecosystem.

Rockpool Classroom Poster

Use the classroom poster to introduce key features of rockpool environments. Students can identify environmental conditions and discuss why rockpools are considered extreme habitats. Encourage students to consider how these conditions influence the types of organisms that are able to survive there.

Ask students to think of an animal that they will find living in a rockpool. Get students to write one animal down on a piece of paper. Collect all students' thoughts and place them in a bag or hat. Get students to create a tally and record the animals to see which animal is the most popular one that students think lives in a rockpool. Students can then complete the Beneath the Tide Rockpool Worksheet

Worksheet Activities

Each worksheet focuses on a specific rockpool organism or ecosystem feature.
Students use video content and supporting information to:

- identify and describe adaptations
- explain how these adaptations support survival
- analyse environmental challenges
- explore relationships between organisms

Teachers are encouraged to guide students in using scientific language and to prompt deeper thinking through explanation and discussion.

Video-based Investigation

Short video content is used throughout the resource to support student learning.

Students watch each video to investigate how organisms survive in rockpool environments. They are encouraged to identify adaptations, explain how these adaptations work, and connect them to environmental challenges.

Videos should be used as a starting point for discussion, analysis, and application of knowledge.

Beneath the Tide: Epaulette Shark https://www.youtube.com/watch?v=n0pEcJNz0YM

Beneath the Tide: Sea Star https://www.youtube.com/watch?v=-ULctcL6QWw

Beneath the Tide: Octopus https://www.youtube.com/watch?v=to7cLZ4XQ2A

Beneath the Tide: Sea Urchin https://www.youtube.com/watch?v=DDqic9FU3Hw

Beneath the Tide: Rockpool Environment https://www.youtube.com/watch?v=FHCkMKfl15s

Extension & Deep Learning

Students can extend their understanding by comparing different organisms and evaluating how their adaptations differ.

Encourage students to consider how changes to the environment or the removal of a species might impact the ecosystem.

Opportunities for deeper learning include creating food webs, analysing interdependence, and predicting outcomes based on environmental change.

Human Impact & Conservation

Students explore how human activity can impact rockpool ecosystems, including pollution, climate change, and physical disturbance. They can apply their understanding by designing informative materials that encourage others to protect these environments. This supports students in making connections between scientific knowledge and real-world environmental responsibility.

Excursion Opportunities

Visiting a rockpool environment or SEA LIFE aquarium provides students with the opportunity to observe marine organisms in a real-world context.

Excursions support students in connecting classroom learning to authentic experiences and deepen their understanding of marine ecosystems and conservation.