2nd Grade Whale Watching Adventure Packet

Grade that is addressed: 2nd

NGSS performance expectation:

Students who demonstrate understanding can:
2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats. [Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats.] [*Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.*]

Purpose of this pre trip packet: This packet is designed for second grade students based on the content standards adopted by the California State Board of Education. Students will gain a better understanding of how different animals survive in different habitats. They will also be able to make connections and construct arguments that different animals may survive in the same habitat so long as most of their needs are met.

Time: 30- 45 minutes

Overview of activities: Students will participate in short discussions and hands on activities to notice the similarities and differences between marine mammals and land mammals. By the end of this packet, students should be able to participate in sharing their data with their peers and identify patterns.

Procedures:

Engage in discussion 1: Ask students to describe what 5 things all living organisms need to survive? (Food, water, shelter, air, space). If an animal lives in the ocean, does it still need these things to live? How might it find those things? If students are unsure, share with them that even living things in the ocean must have food, water,

air, shelter, and space to survive. However, not all marine life finds these necessities in the same way. For example kelp is a plant, ask students how do plants find food? The method of plants using sunlight to make their own food on land is still how plants in the ocean produce their own food. Now let's shift our thinking over to mammals. Marine mammals have differences and similarities to land mammals. Whales, dolphins, seals, sea lions and porpoises are all mammals because they have these characteristics:

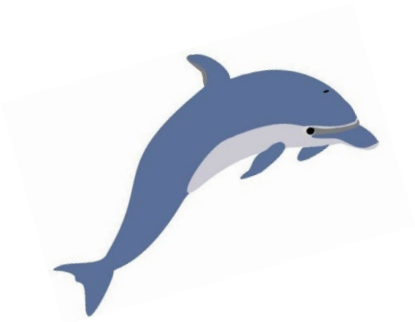
Warm blood

Hair

Air breather

Live birth

Eats milk



We can help ourselves remember these things with the acronym WHALE. Ask students to make prediction of how a whale can find these 5 things for survival: food, air, space, shelter and water. Do they do anything similar to us humans since we need those same 5 things? In what ways are we similar? How are we different than whales and dolphins when finding those 5 things for survival?

Activity 1: Marine Mammal Bingo

Procedures for bingo:

- Print outcopies of the bingo sheets and pass 1 out to each student. They will need a pencil or crayon to complete their sheet.
- Have a teacher or other chaperone save a copy of each for themselves and they will use these as a key.
- Read off the card in typical bingo fashion, with the letter coming before the answer in the boxes. For example, "H-sea otter" and "L-fin."

- Repeat until a few students have bingo. Note: some students will have different cards, so some will not get bingo the first time
- To extend the game, switch card keys and continue calling out combinations until a student/s has double bingo, then finally switch card keys once more and call out combinations until ”black out bingo” is achieved.

Engage in discussion 2: Share with students that the ocean is a highly diverse place with more plants and animals in it than we can count. Our oceans (and lands) are home to ecosystems. An ecosystem is a place where all living things are dependent on each other and all nonliving components for survival. There are many different kinds of ecosystems, and they can be very big or very small. Ask students if they have visited an ecosystem before? (Note: it does not have to be related to the ocean or marine areas). Are we a part of an ecosystem? (yes! Have students elaborate) The living things in an ecosystem can be referred to as organisms and includes all the plants, animals, fungi, and bacteria. Organisms can adapt to their environment or in other words find a way to change over time to be more comfortable in their environment. An adaption could be something like a snake using camouflage to not be seen by its prey and hunt without being detected. Let’s focus on our local marine ecosystem, the Pacific Ocean, and try to find a solution to this question: How are plants, whales, and fish all able to survive in the same ecosystem? Have students complete the following activity then participate in a class summary to answer this question.

Activity 2: Ecosystem Exploration research pages

Procedure:

- Print out copies of the activity sheets for each student
- Allow time for independent work, then come together for a group discussion at the end.

Ending class discussion: After students have completed the worksheets, have them share their findings and ideas. Discuss as a class how the diversity of the ocean allows many living things to survive in the ocean, even if their needs are slightly different. The way a fish uses a kelp forest may be different than how a gray whale uses it, but their adaptations and needs are different as well which allow them to learn and use these resources in a way that helps them survive.

Name:

Date:

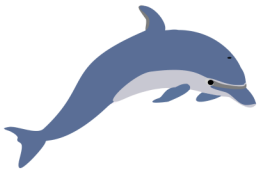
Ecosystem Exploration

Research pages

Part A:

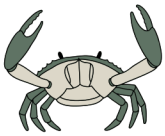
Identify 2 or 3 areas of the ocean that could be shelter for a fish. Draw or write them below.

Part B:



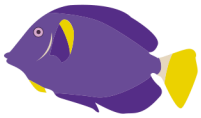
Describe how you think whales or dolphins find their food. If you are not sure, discuss with a partner to make your best guess.

Part C:

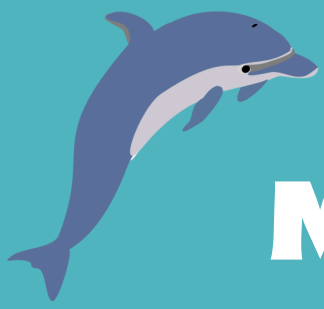


Using your answers from parts A and B, draw or describe how plants provide either food, shelter or something else for fish and dolphins.

Part D:



Using your answers from Parts A, B and C, draw and color how all of these things might look all together in the ocean.



Marine Mammal Bingo!

W	H	A	L	E
Has hair	Hump back	Eats milk	Gray whale	Common dolphin
Sea lion	Risso's dolphin	Baleen	Harbor seal	Minke whale
Live birth	Blow hole	Free	Orca	Breathes air
Flipper	Blue whale	Walrus	Teeth	Sperm whale
Sea Otter	Warm blood	Tail	Bottlenose dolphin	Fin

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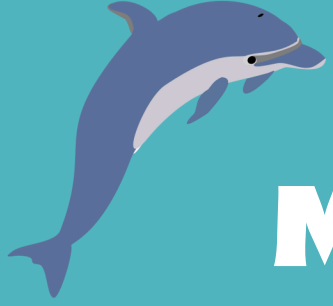

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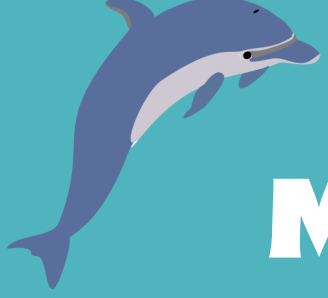

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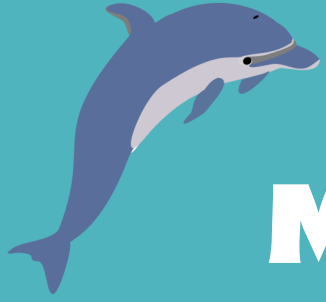

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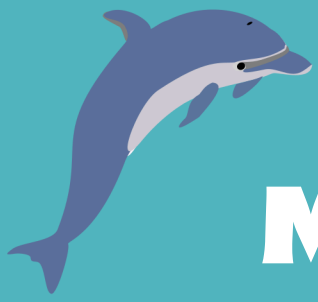

Marine Mammal Bingo!

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