

ANSWERS TO NATURE CENTER SCAVENGER HUNT

WERGELAND FAMILY DISCOVERY CENTER

Turtle Lagoon

1. How long can Eastern Pacific Green Sea Turtles live? *80 or more years.*
2. When do they start reproducing? *When they are 25 or more years.*
3. Although protected internationally, why are sea turtles still threatened?

Turtle and egg poaching still occurs in some countries.

4. Why are Green Sea Turtles endangered? *They are killed by boats, entanglement, they also eat floating plastic trash*
5. Why do Green Sea Turtles come and stay in San Diego Bay?

To eat Eelgrass and to live in the warm water from the power plant

The Bay

1. Name three kinds of fishes that swim in schools. *Sardines, anchovies, smelt*
2. What fish sensory organ allows them to school? *The lateral line.*
3. What does the Bay's food web consist of?

Plankton, schooling fishes, large fish, seabirds and marine mammals.

4. What animals use jetties and breakwaters for homes? *Lobsters and moray eels*
5. How can people keep the bay clean and healthy?

Use environmentally friendly chemicals in the garden, keep gutters and sidewalks clean, maintain vehicles, and dispose of pet waste and garbage properly.

6. How much of Moon Jellies is water? *97%*

Chula Vista's Fossil Bay

1. Three million years ago what areas were covered by the large fossil bay?

Tijuana, Chula Vista, San Diego

2. List 5 kinds of animals that lived in the fossil bay.

Clams, snails, halibut, tuna, sailfish, hammerhead sharks, walruses, sperm whales, sea cows

3. How many fossil species have been found? *470*
4. Where do walruses live today? *In the Arctic*

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5. How many marine invertebrates that lived 3 million years ago still survive today?

90%

6. In what community of Chula Vista were the fossil scallops found? *Rancho Del Rey*

The Marsh

1. What animals eat the rotting blades of eelgrass? *Invertebrates*

2. What animals take advantage of low tides? *Shorebirds*

3. Why are Light-footed Clapper Rails endangered. *Loss of habitat*

4. What three plants are adapted to salt water? *Cord Grass, Pickleweed, Eelgrass*

The Uplands

1. Name three kinds of animals that live the upland habitats.

Mammals, reptiles, birds, invertebrates, amphibians and insect

2. When birds migrate along the Pacific Flyway, where do they go?

From South America to Siberia

3. What kind of water do Rainbow Trout live in? *Fresh*

4. When was the Sweetwater River dammed? *1888*

5. How many people currently reside in the Sweetwater River Watershed? *300,000*

Shark & Ray Experience

1. Name three animals that live in the Shark & Ray Experience. *Shovelnose Guitarfish, Horn Shark, Gray Smoothhound, Bat Ray, Round Stingray, Leopard Shark,*

2. Do all of these animals live in San Diego Bay? *Yes*

3. What is the shape of most sharks' teeth? *Triangular*

4. What is the shape of most rays' teeth? *Flat like molars*

5. Why are fossil shark teeth abundant? *Yes*

6. Where does the oxygen sharks and rays need to breathe come from? *Water*

7. What is the name of the openings on the top of the head of rays and guitarfish that carry water to the animals' gills? *Spiracles*

8. Are storm drains sewers? *No, they go directly to the bay and ocean*

9. What great migratory path is San Diego Bay on? *The Pacific Flyway*

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10. Which county has more species of endangered plants and animals than any other county does in the United States? *San Diego County*
11. What are the leathery eggs laid by some sharks and rays called? *Mermaid's Purses*
12. How many pups can a female shark or ray produce during her lifetime? *200*
13. How many offspring can a bony fish produce in her lifetime? *Millions*
14. What can deplete shark populations? *Over-fishing*
15. Describe how the skin of sharks and the skin rays feel. *Shark skin is rough and abrasive; rays have smooth velvety skin.*
16. Name all the senses sharks use to be successful predators. *Hearing, smell, sight, sense vibrations with their lateral-line, special pores detect electrical impulses, taste*
17. What are the skeletons of sharks and rays made of? *Cartilage*
18. Why are fossil skeletons of sharks and ray seldom found? *Cartilage skeletons decompose quickly*
19. What kind of camouflage do most sharks and rays wear? *Counter-shading*

Lower Observation Deck

1. When is the time capsule going to be opened? *March 14, 2103*
2. What are the four refuges that comprise the San Diego National Wildlife Refuge Complex? *Tijuana Slough NWR, Sweetwater NWR, South San Diego Bay NWR, Otay/Sweetwater NWR, Seal Beach NWR*
3. What birds are wading birds? *Hérons and Egrets*
4. What birds are surface feeders? *Dabbling Ducks*
5. Name 6 shoreline birds. *Western Sandpiper, Ring-billed Gull, Long-billed Curlew, American Avocet, Marbled Godwit, Forster's Tern, Black-necked Stilt*

Verdi, the Green Iguana

1. What are Verdi's special requirements? *Proper diet, large enough caging, special light and heating, knowledgeable caretaker*
2. Verdi is native to what parts of the world? *Mexico and Central America*

Clapper Sound Booth

1. Why do Light-footed Clapper Rails vocalize? *To advertise their territory and to seek a mate*

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Burrowing Owl

1. Why would a Burrowing Owl imitate a rattlesnake? *To protect their burrows from predators*
2. Where does a Burrowing Owl nest? *In abandoned squirrel holes*

Walk-through Aviary

1. Which bird is featured in this exhibit? *Light-footed Clapper Rail*
2. Why is this bird endangered? *Loss of proper habitat*
3. What kinds of things does this bird eat? (Hint: Look at the dinner plates.)
Fish, insects, crabs, worms,
4. What bird is thought to be extinct in San Diego County? *Black Rail*
5. Why is the Coyote a friend of Clapper Rails? *Controls mezzo-predators*

Eagle Mesa and Raptor Row

1. What is a Raptor? *Any of the meat-eating birds of prey such as hawks, eagles, falcons and owls*
2. What are the three common traits Raptors share? *Strong toes and sharp talons, hooked beaks and excellent binocular vision*
3. Why are Raptors important? *They help maintain balance in nature by controlling rodent, reptile and insect populations*
4. Name three birds of prey you can see in the enclosures. *Bald and Golden Eagles, Short-eared Owl, Barn Owl, Turkey Vulture, Great-horned Owl, Peregrine Falcon, Swainson's Hawk, Northern Harrier, Red-shouldered Hawk, Osprey, Red-tailed Hawk, Burrowing Owl*
5. What senses are birds' brains devoted to? *Sight and hearing*
6. What do Raptors use their strong toes and sharp talons for? *To attack and hold their prey*
7. What is the center front talon like and what is it used for? *It is shorter and used for scratching and preening*
8. How many pounds of pressure per square inch and eagle toes exert? *200*
9. How is Raptor vision better than ours is? *8 times more powerful, the brain receives images from the eye nearly four times faster than a human does*
10. Which bird is the national bird of the United States? *Bald Eagle*

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11. Which bird is the national bird of Mexico? *Golden Eagle*
12. Where do Short-eared Owls roost and rest? *On the ground*
13. Can owls find and catch their food without seeing it? *Yes*
14. Why do Turkey Vultures have a feather-less head? *To keep clean*
15. Why do owls move their heads to see well? *They cannot move their eyes*
16. Why does the Nature Center have its birds? *They are non-releasable because of injuries or imprinting*
17. How fast do Peregrine Falcons fly? *As much as 100 miles per hour while chasing a bird.*
18. How did the pesticide DDT affect the eggs of Peregrine Falcons? *It caused eggshell thinning.*
19. Do Harriers fly high or low? *Low*
20. What can be dangerous for Red-shouldered Hawks? *Chain link and barbed wire fences*
21. What do Ospreys like to eat? *Fish*
22. Which hawk is the most common in the United States? *Red-tailed Hawk*

Composting Garden

1. What does composting save? *Landfill space*
2. What is “grasscycling”? *Leaving mower clipping on the lawn*
3. What are natural alternatives to pesticides and fertilizers? *Native plants, compost, organic mulch, beneficial insects, and compost tea from worm casting.*
4. Name 3 things compost improves? *Physical structure of the soil, water-holding capacity in sandy soil, and drainage in clay soils.*
5. What are 3 important residents of the compost pile? *Beetles, bacteria, sow bugs, earthworms*
6. What kinds of things are suitable for composting? *Leaves, tea leaves and bags, fruit and vegetable scraps, eggshells and newspaper*

Upper Overlook

1. What did the native people use the plants and animals of Sweetwater Marsh for?
Food, medicine, dyes, and basket materials
2. How many people worked for the Hercules Powder Company? *1500 people*
3. When was the marsh and upland designated as a national wildlife refuge? *1988*

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