

Ecosystems and Habitats

GRADES 9 – 12



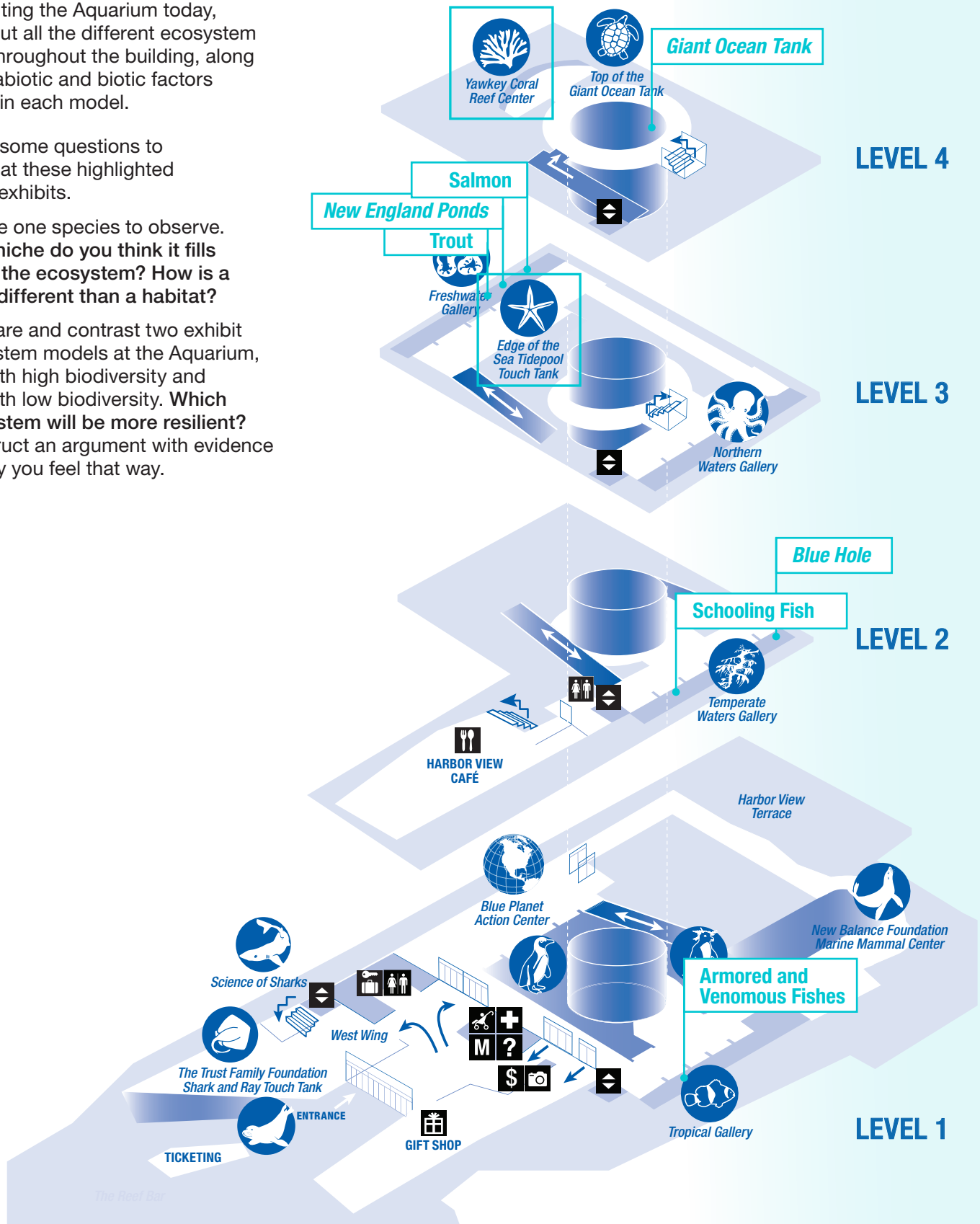
New England Aquarium

Protecting the blue planet

While visiting the Aquarium today, think about all the different ecosystem models throughout the building, along with the abiotic and biotic factors included in each model.

Here are some questions to consider at these highlighted galleries/exhibits.

1. Choose one species to observe. What niche do you think it fills within the ecosystem? How is a niche different than a habitat?
2. Compare and contrast two exhibit ecosystem models at the Aquarium, one with high biodiversity and one with low biodiversity. Which ecosystem will be more resilient? Construct an argument with evidence for why you feel that way.



Food Webs and Energy

GRADES 9 – 12



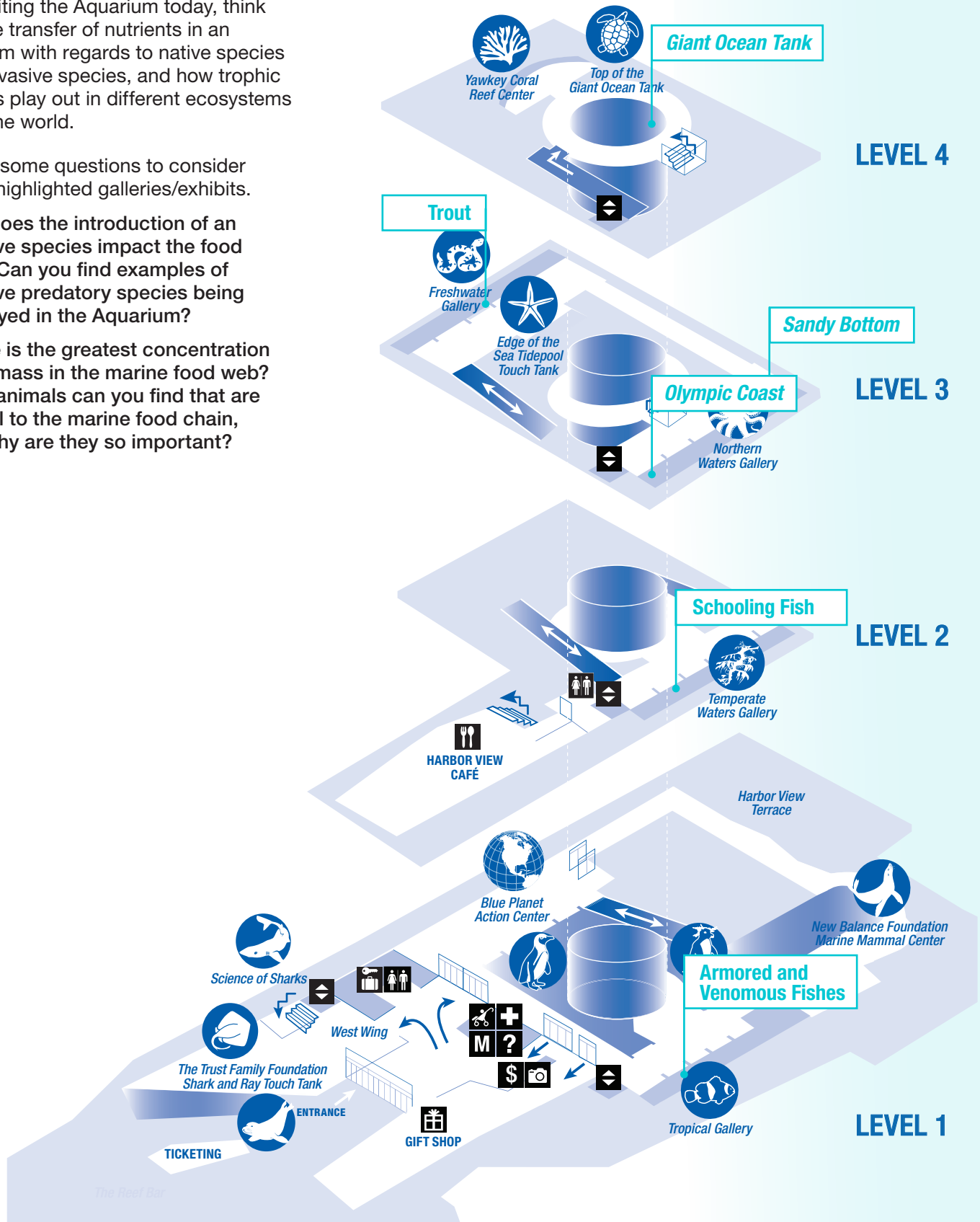
New England Aquarium

Protecting the blue planet

While visiting the Aquarium today, think about the transfer of nutrients in an ecosystem with regards to native species versus invasive species, and how trophic cascades play out in different ecosystems around the world.

Here are some questions to consider at these highlighted galleries/exhibits.

1. How does the introduction of an invasive species impact the food web? Can you find examples of invasive predatory species being displayed in the Aquarium?
2. Where is the greatest concentration of biomass in the marine food web? What animals can you find that are critical to the marine food chain, and why are they so important?



Adaptations and Evolution

GRADES 9 – 12



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While visiting the Aquarium today, think about how the different environments have resulted in the evolution of the species that inhabit them.

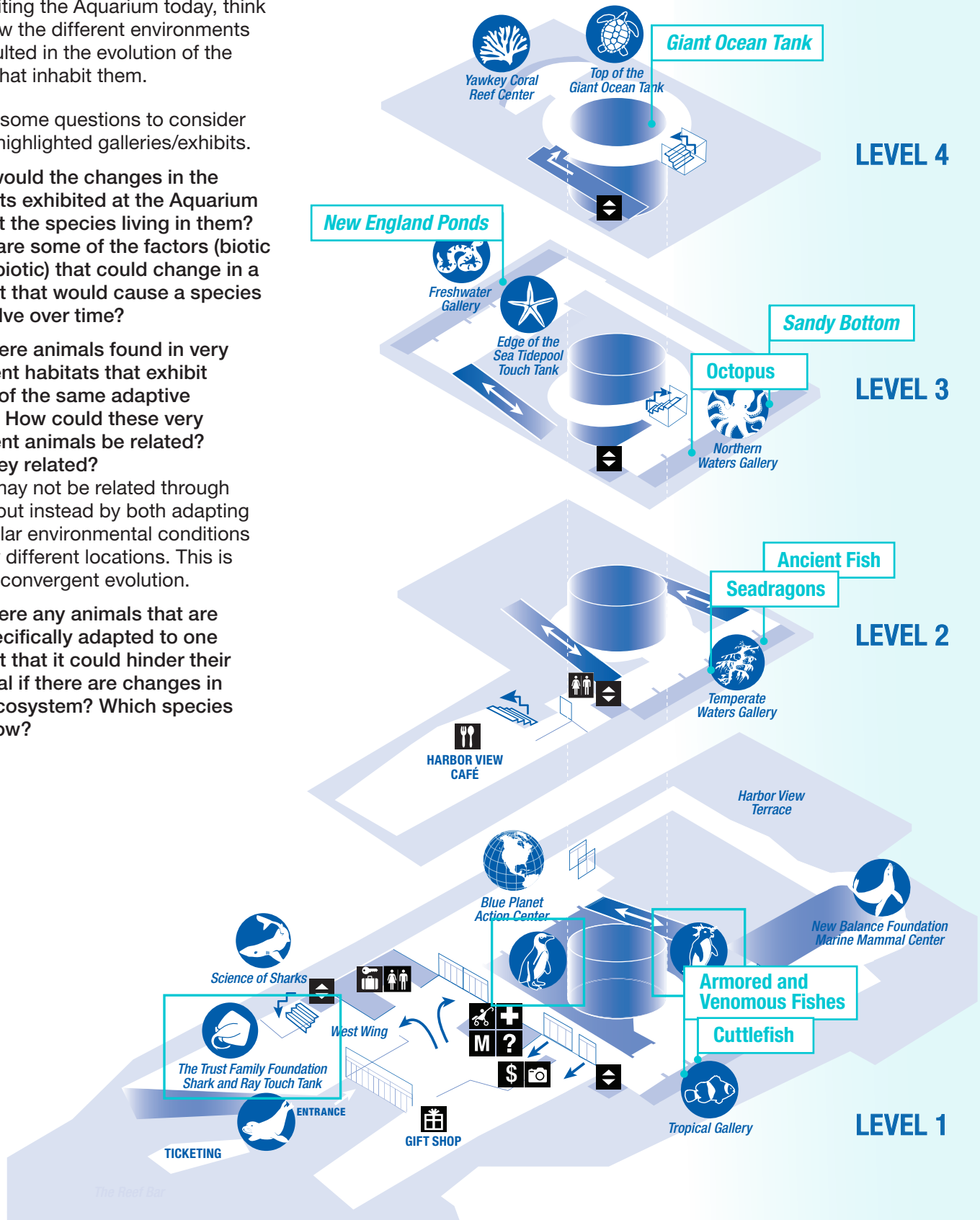
Here are some questions to consider at these highlighted galleries/exhibits.

1. How would the changes in the habitats exhibited at the Aquarium impact the species living in them? What are some of the factors (biotic and abiotic) that could change in a habitat that would cause a species to evolve over time?

2. Are there animals found in very different habitats that exhibit some of the same adaptive traits? How could these very different animals be related? Are they related?

They may not be related through DNA, but instead by both adapting to similar environmental conditions in very different locations. This is called convergent evolution.

3. Are there any animals that are so specifically adapted to one habitat that it could hinder their survival if there are changes in that ecosystem? Which species and how?



Climate Change and Conservation



New England
Aquarium

Protecting the blue planet

GRADES 9 – 12

While visiting the Aquarium today, think about the following questions: How do human activities impact ecosystems? How can humans, including yourself, protect ecosystems?

Here are some questions to consider at these highlighted galleries/exhibits.

1. The Aquarium offers many ways for people to get involved in conservation projects around Boston! What are some volunteer activities you could be a part of with the Aquarium, or lead yourself in your own community?
2. How have you seen the impacts of climate change around your neighborhood?
3. Do you recognize any species and/or habitat conservation going on at the Aquarium that you have seen on the news or other forms of media?
4. Are there ways to conserve one habitat or species that would benefit many?

