



Ocean Literacy Essential Principle 6

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Essential Principle 6





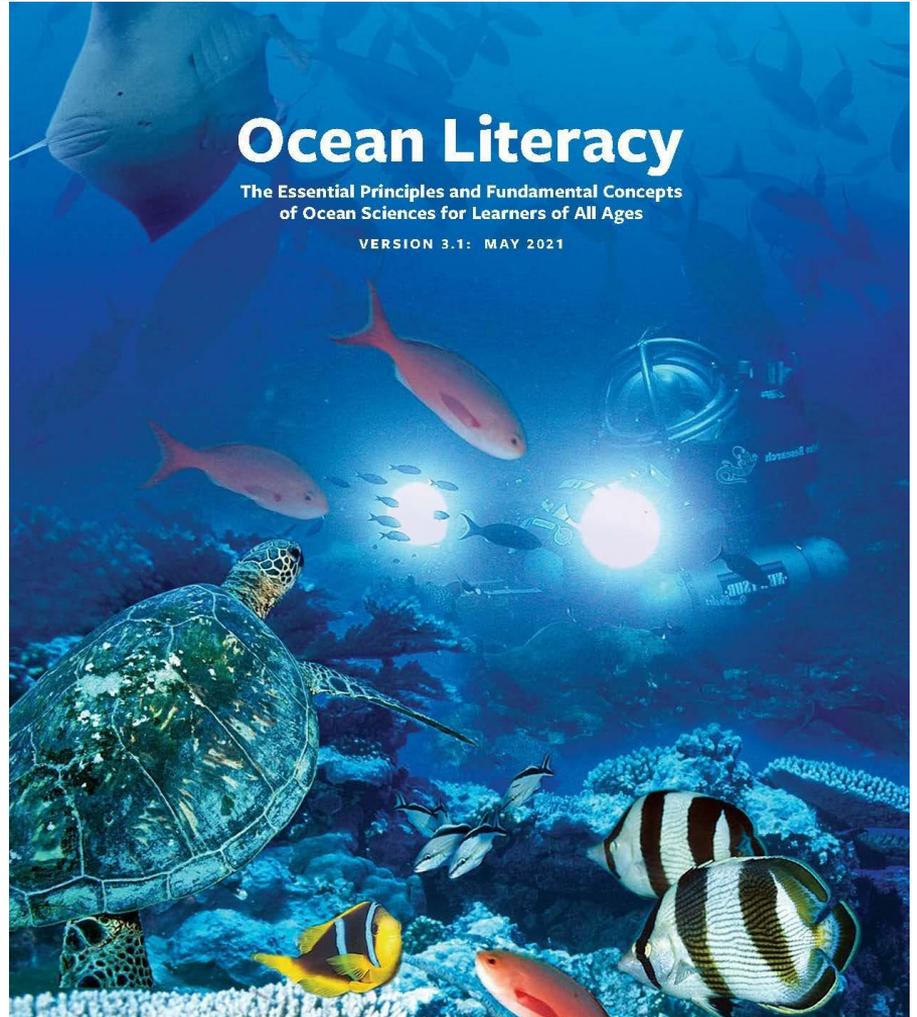
Using the OL Framework with Your Learners

1. **Look at the Guide** to determine the Essential Principles and Fundamental Concepts you want &/or need to address with your learners.
2. Then **look at the Scope and Sequence** for that principle for your grade level, and locate the concepts you decided to focus on.
3. Finally, **choose an activity** that addresses one or more of those concepts, following the flow shown in the scope and sequence.

Ocean Literacy Guide:

The Essential Principles & Fundamental Concepts of Ocean Sciences

<http://www.marine-ed.org/ocean-literacy/guide>



EP 6: The ocean and humans are inextricably interconnected.

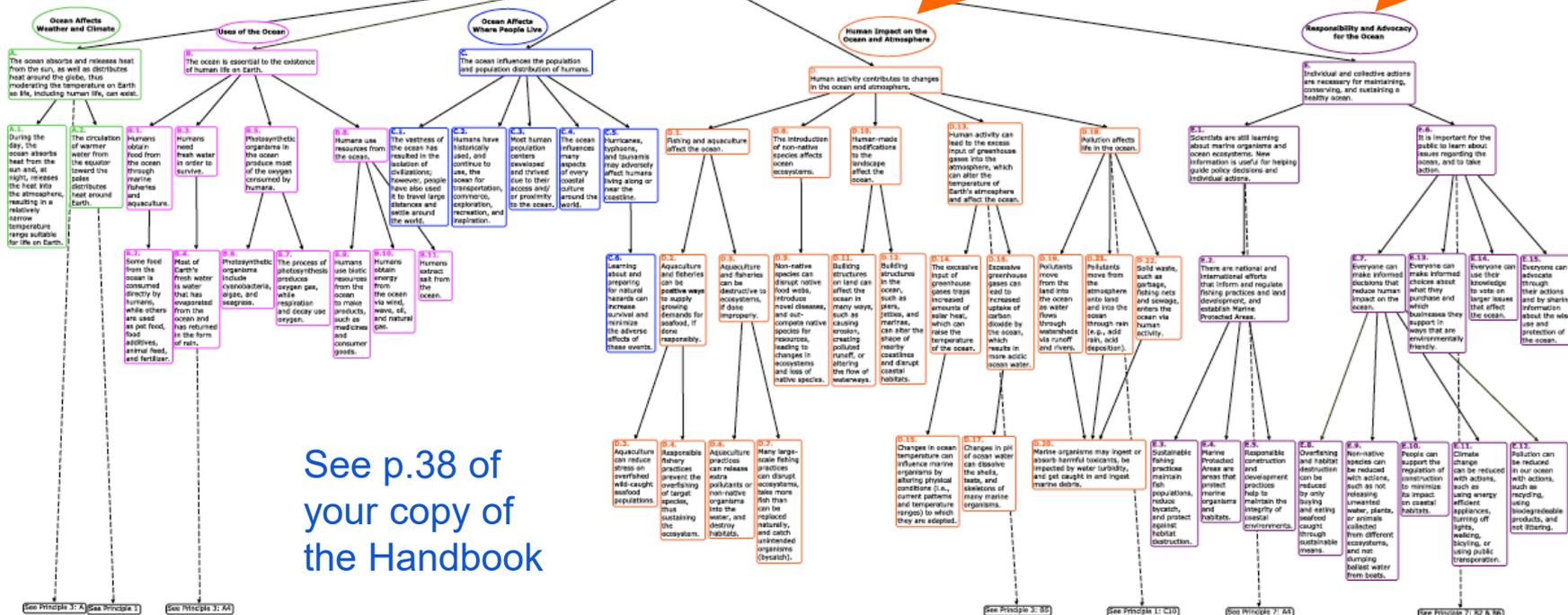
- a. The ocean affects every human life. It **supplies freshwater (most rain comes from the ocean) and nearly all Earth's oxygen. The ocean moderates Earth's climate**, influences our weather, and affects human health.
- b. **The ocean provides** foods, medicines, and mineral and energy resources. It supports jobs and national economies, serves as a highway for transportation of goods and people, and plays a role in national security.
- c. **The ocean is a source of inspiration, recreation, rejuvenation and discovery.** It is also an important element in the heritage of many cultures.

EP6 continued...

- e. **Humans affect the ocean in a variety of ways.** Laws, regulations and resource management affect what is taken out and put into the ocean. Human development and activity leads to pollution (point source, non-point source, and noise pollution), changes to ocean chemistry (ocean acidification) and physical modifications (changes to beaches, shores and rivers). In addition, humans have removed most of the large vertebrates from the ocean.
- f. **Changes in ocean temperature and pH due to human activities** can affect the survival of some organisms and impact biological diversity (coral bleaching due to increased temperature and inhibition of shell formation due to ocean acidification).
- g. **Much of the world's population lives in coastal areas. Coastal regions are susceptible to natural hazards (tsunamis, hurricanes, cyclones, sea level change, and storm surges).**
- h. **Everyone is responsible for caring for the ocean.** The ocean sustains life on Earth and humans must live in ways that sustain the ocean. **Individual and collective actions are needed to effectively manage ocean resources for all.**



Principle 6:
The ocean and humans are inextricably interconnected.



See p.38 of your copy of the Handbook

See Principle 3: A

See Principle 3: A

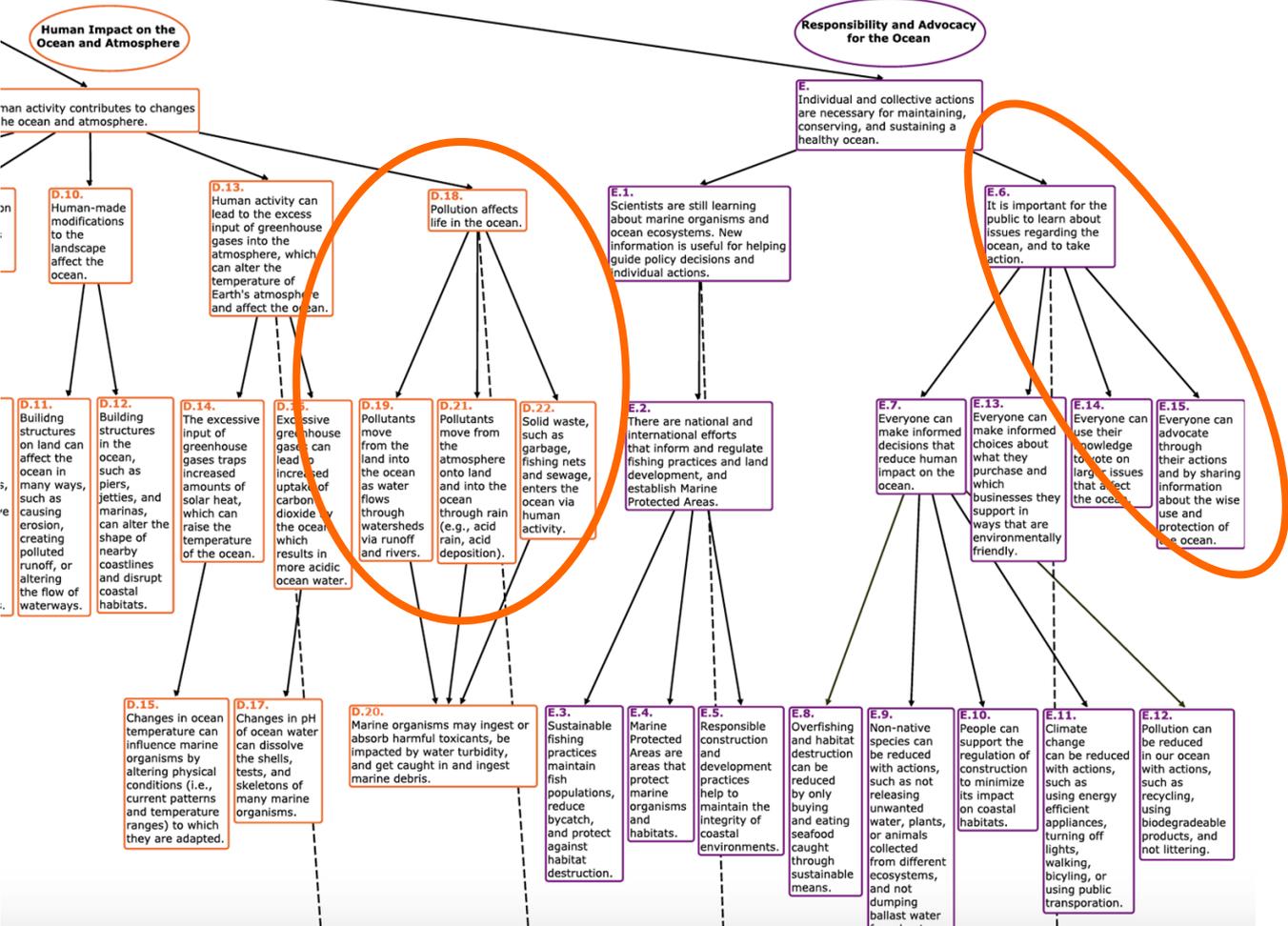
See Principle 3: A

See Principle 3: B

See Principle 1: C

See Principle 7: A

See Principle 7: B & C

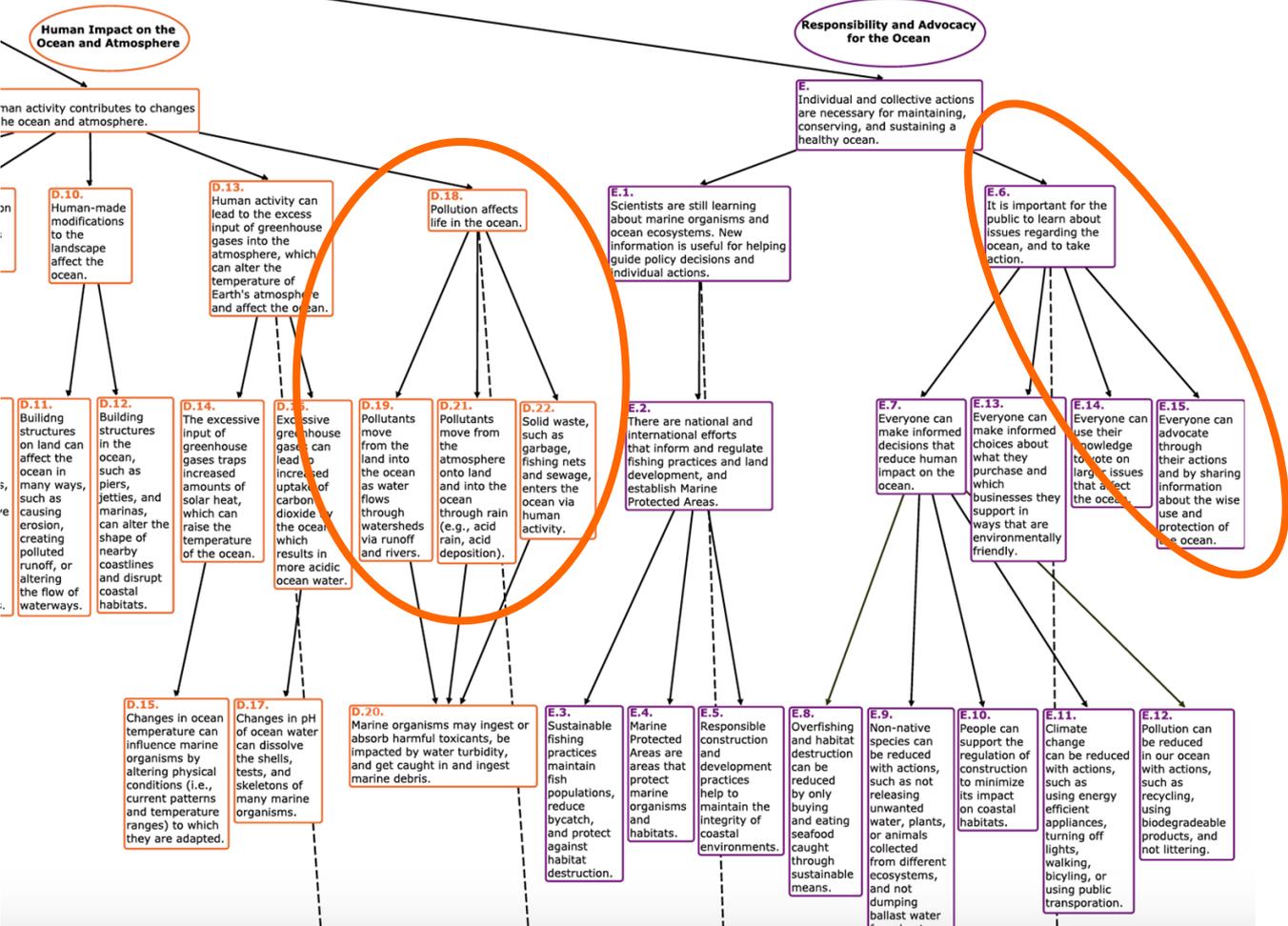


See p.38 of your copy of the Handbook

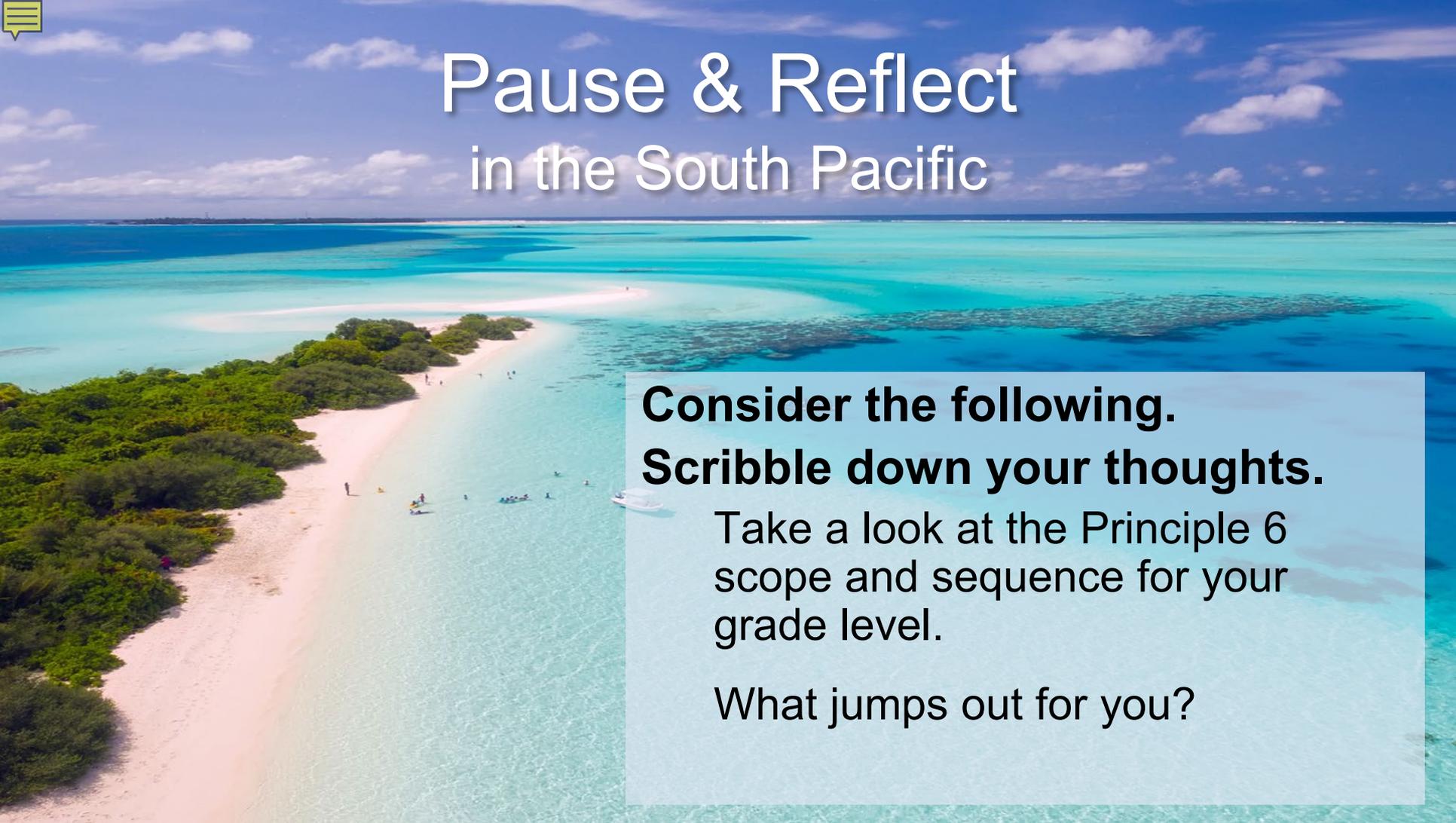


Essential Principle 6

Activity



See p.38 of your copy of the Handbook

An aerial photograph of a tropical beach. The water is a vibrant turquoise color, transitioning to a deeper blue further out. A white sandbar runs diagonally across the frame, separating a shallow lagoon from the open ocean. The beach is lined with lush green vegetation. Several people are visible on the sandbar and in the shallow water. A small white boat is anchored near the sandbar. The sky is a clear, bright blue with a few wispy white clouds.

Pause & Reflect in the South Pacific

**Consider the following.
Scribble down your thoughts.**

Take a look at the Principle 6
scope and sequence for your
grade level.

What jumps out for you?

Back-up Slides

**Principle 1:
Grades 3-5**

Strand Topic

Properties of Ocean Water

97% of all water on Earth is salt water in the ocean.

Major concept of this strand

A.1. Only 3% of all water on Earth is fresh water stored in lakes, rivers, underground aquifers, glaciers, and other places.

A.4. Salinity and temperature vary throughout the ocean.

2 ideas that support bigger ideas in this strand

A.2. Most of all the fresh water in the world is stored in ice caps and glaciers.

A.5. The movement of ocean water as currents is partly driven by these differences in salinity and temperature.

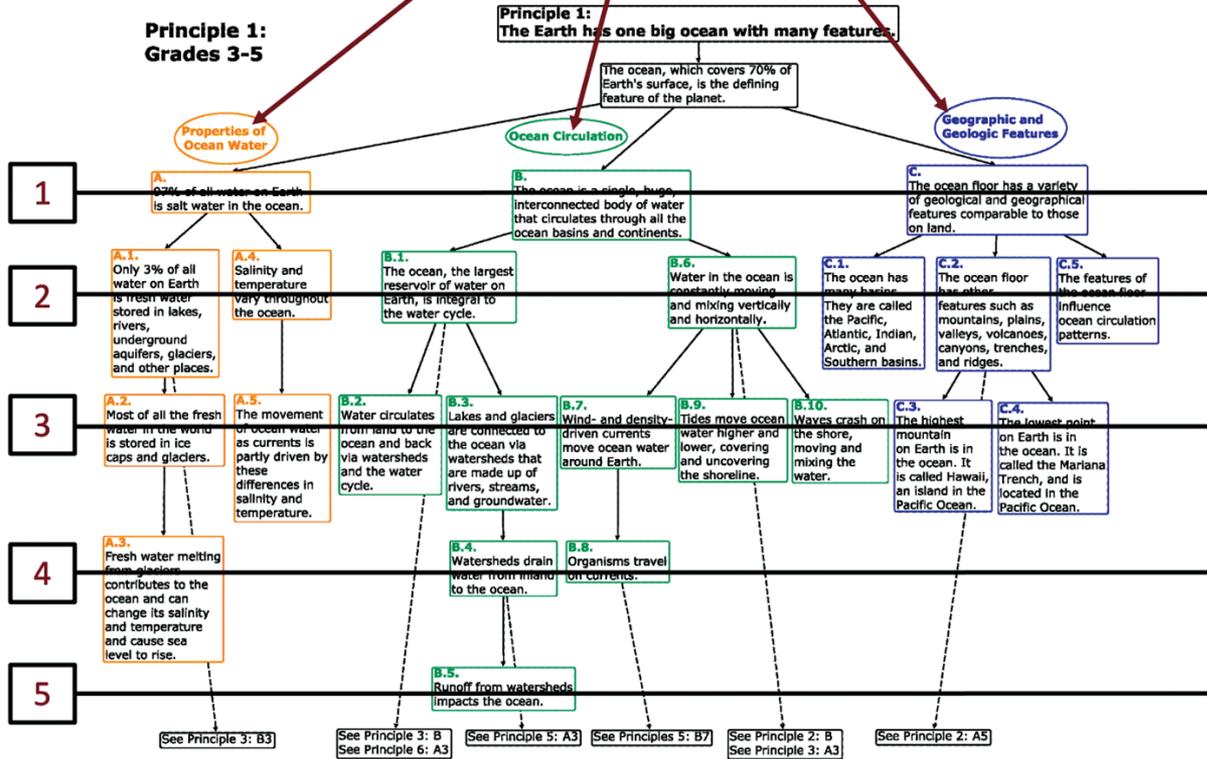
Supporting ideas on properties of ocean water discussed in further detail

A.3. Fresh water melting from glaciers contributes to the ocean and can change its salinity and temperature and cause sea level to rise.

See Principle 3: B3

For Grades 3-5, concept A2 in Principle 1 is connected to concept B3 in Principle 3

Strand A → Strand B → Strand C



Dashed lines lead to cross-referenced concept statements in other essential principles.