

## Section 23.1

### Studying the Ocean Floor

**Before you read:**

Recall what you know about ways scientists gather information about Earth. Then list the key vocabulary terms in your science notebook, leaving a few lines beneath each.

**While you read:**

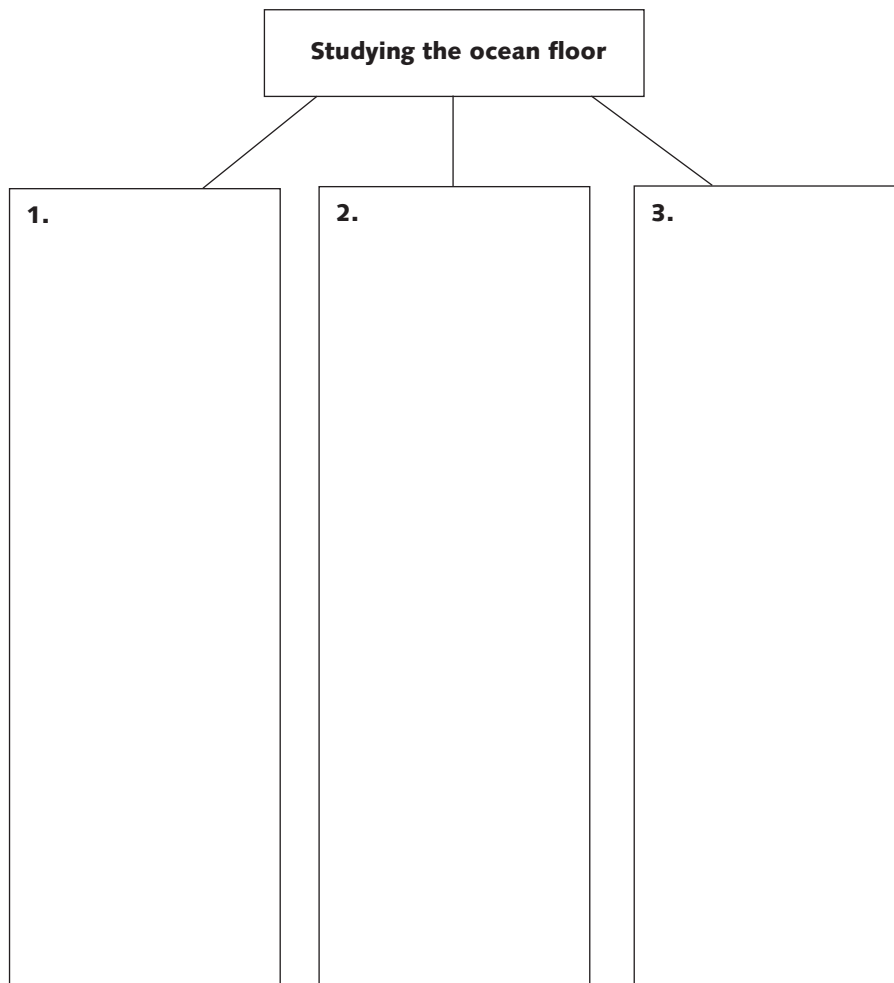
Summarize the main ideas of this section by naming and describing three important ways that scientists study the ocean floor.

**KEY IDEA**

Scientists have developed many different technologies and methods with which to study the ocean floor.

**KEY VOCABULARY**

- echo sounding
- core sampling

**After you read:**

In your science notebook, write what you learned about each key vocabulary term.

## Section 23.2

### The Continental Margin

#### **Before you read:**

Use your knowledge of the words *continental* and *margin* to generate ideas about the first six key vocabulary terms. Write your ideas in your science notebook.

#### **While you read:**

In the spaces provided, write brief descriptions of active continental margins and passive continental margins. Discuss the continental shelf, continental slope, continental rise, continental and oceanic crusts, and ocean floor.

#### **1. Passive continental margin**

#### **2. Active continental margin**

#### **KEY IDEA**

The continental margins are the underwater edges of continents and include several types of topographical features.

#### **KEY VOCABULARY**

- continental margin
- continental shelf
- continental slope
- continental rise
- active continental margin
- passive continental margin
- submarine canyon
- turbidity current

#### **After you read:**

Describe how submarine canyons form.

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## Section 23.3

### The Ocean Basins

#### **Before you read:**

Many of the key vocabulary terms contain familiar words. Think about these words and how they could describe the landscape of the ocean floor. Write your ideas in your science notebook.

#### **While you read:**

Each feature of the ocean floor develops in response to particular factors. Define each feature and explain its cause.

1. Abyssal hill

2. Abyssal plain

3. Deep-ocean trenches

4. Mid-ocean ridges

5. Seamounts/guyots

#### **KEY IDEA**

The ocean basin has a wide range of topographical features. Natural forces change these features over time.

#### **KEY VOCABULARY**

- abyssal plain
- abyssal hill
- island arc
- fracture zone
- seamount
- guyot
- coral atoll

#### **After you read:**

Name a specific geographic location where you might find each undersea feature.

- a) Abyssal plain \_\_\_\_\_
- b) Abyssal hills \_\_\_\_\_
- c) Deep-ocean trenches \_\_\_\_\_
- d) Seamounts \_\_\_\_\_

## Section 23.4

### Ocean Floor Sediments

#### **Before you read:**

In your science notebook, make a list of what you already know about ocean floor sediments. Then add questions you still have about the topic.

#### **While you read:**

Describe each of the four types of sediments in the appropriate box. List the origin, textures, and typical locations of each sediment type.

<p><b>1. Terrigenous sediments</b></p>	<p><b>2. Hydrogenous sediments</b></p>
<p><b>3. Calcareous oozes</b></p>	<p><b>4. Siliceous oozes</b></p>

#### **After you read:**

Explain why the study of ocean sediments is important.

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#### **KEY IDEA**

The sediments covering the ocean floor have different origins and textures and vary by location. They can provide useful information about past changes in the ocean and in global climate.

#### **KEY VOCABULARY**

- terrigenous sediments
- biogenous sediments
- hydrogenous sediments