

# Motion

## Section 2 Velocity and Momentum

**Scan** Use the checklist below to preview Section 2 of your book.

- Read all section titles.
- Read all boldfaced words.
- Read all graphs and equations.
- Look at all the pictures and read their captions.

**Review Vocabulary**

**Define** speed in a sentence to show its scientific meaning.

*speed*

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**New Vocabulary**

Use your book to define the words below.

*velocity*

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*momentum*

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**Academic Vocabulary**

The words positive and negative are a natural pair. Explain how no number can be both positive and negative. Can any number be neither positive nor negative?

*negative*

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*positive*

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Section 2 Velocity and Momentum (continued)

**Main Idea**

**Velocity**

I found this information on page \_\_\_\_\_.

**Motion of Earth's Crust**

I found this information on page \_\_\_\_\_.

**Details**

**Critique** the phrase "airspeed velocity of a swallow."

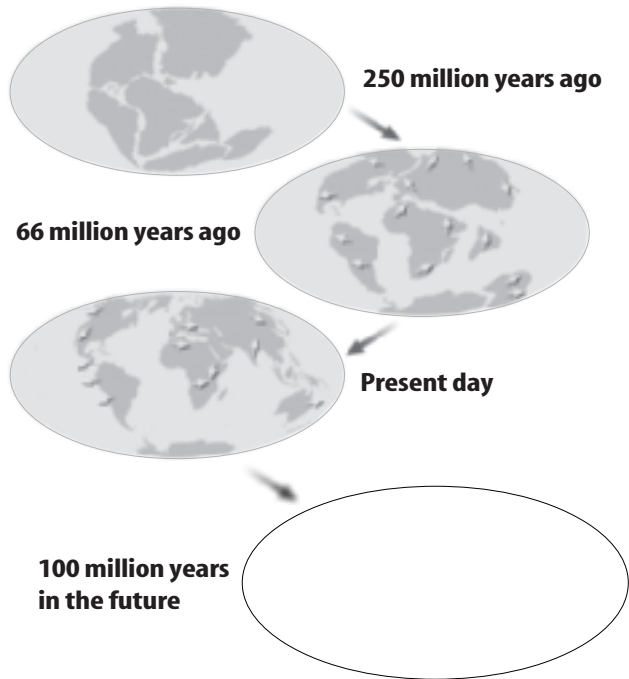
\_\_\_\_\_  
\_\_\_\_\_

**Model** a swallow in flight.

- Use an arrow to show the swallow's velocity.
- Label the arrow to indicate the swallow's speed.

\_\_\_\_\_

**Draw** the shape of the continents as they may appear at 100 million years from the present day.



Section 2 Velocity and Momentum (continued)

**Main Idea**

**Details**

**Relative Motion**

*I found this information on page \_\_\_\_\_.*

You are walking toward the back of a train that is moving forward with a constant velocity. The train's velocity relative to the ground is 30 m/s forward. Your velocity relative to the train is 1.5 m/s backward. How fast are you moving relative to the ground?

\_\_\_\_\_  
\_\_\_\_\_

**Momentum**

*I found this information on page \_\_\_\_\_.*

**Analyze** the property of momentum *in words and with an equation. Include units and identify all variables.*

**Words**

**Equation**

\_\_\_\_\_

\_\_\_\_\_

**Predict** *why momentum is a property of moving objects, but not of stationary objects.*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CONNECT IT**

Use your knowledge of velocity and momentum to describe how they are related.

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\_\_\_\_\_  
\_\_\_\_\_  
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