

Language  
Arts

# CONDUCTING RESEARCH

Student Name: \_\_\_\_\_

© David Zalubowski/  
AP Wide World

**H**ow do trains pull themselves up big hills? How do they stay on the tracks? It's time for you to "conduct" some research. Select one mechanical aspect of a train that really interests you such as the engine, the generator, or the wheels. Using the outline below, write a research report that describes how technology has improved this mechanical feature over time. Predict how it might be improved in the future.

## I. Introduction

A. Subject \_\_\_\_\_

B. Thesis Statement or Your Opinion \_\_\_\_\_

1. Supporting Reason #1 \_\_\_\_\_

2. Supporting Reason #2 \_\_\_\_\_

## II. Supporting Paragraph #1

A. Topic \_\_\_\_\_

1. Detail \_\_\_\_\_

2. Detail \_\_\_\_\_

## III. Supporting Paragraph #2

A. Topic \_\_\_\_\_

1. Detail \_\_\_\_\_

2. Detail \_\_\_\_\_

## IV. Conclusion

A. Restate the Subject \_\_\_\_\_

B. Restate the Thesis Statement or Your Opinion

\_\_\_\_\_

1. Supporting Reason #1 \_\_\_\_\_

2. Supporting Reason #2 \_\_\_\_\_

## Extension

On a large poster board, illustrate and label the parts of a train, including the mechanical feature that you researched. Attach your written report and present it to the class.

## *To start, read about these trains*

**High-speed train:** As this train whizzes around bends, it tilts slightly in the direction that it's turning. This is a very fast train. Electrical wires that run above the railroad tracks provide the power that makes the train go. Passengers enjoy a smooth ride.

**Freight train:** The cars on this train carry heavy things from place to place. The last car on this train is called the caboose.

**Steam engine:** On this old train, a man keeps water hot by adding coals to a fire in the boiler. The hot water creates steam, and the steam powers the engine.

**Passenger train:** These trains carry passengers and use diesel oil and electricity to run. Diesel oil is used to run the generator, the generator makes electricity, and the electricity powers the motor that turns the train's wheels.

**Crane train:** When trees or other large objects fall on the tracks, this train uses its large hook to clear them away.