

The Power of Steam! Materials all change at the Railway

STUDENT INTRODUCTION

- ▶ Materials such as coal and water change from one state into another when used in steam locomotives
- ▶ Can you work out how these materials change and why they change?



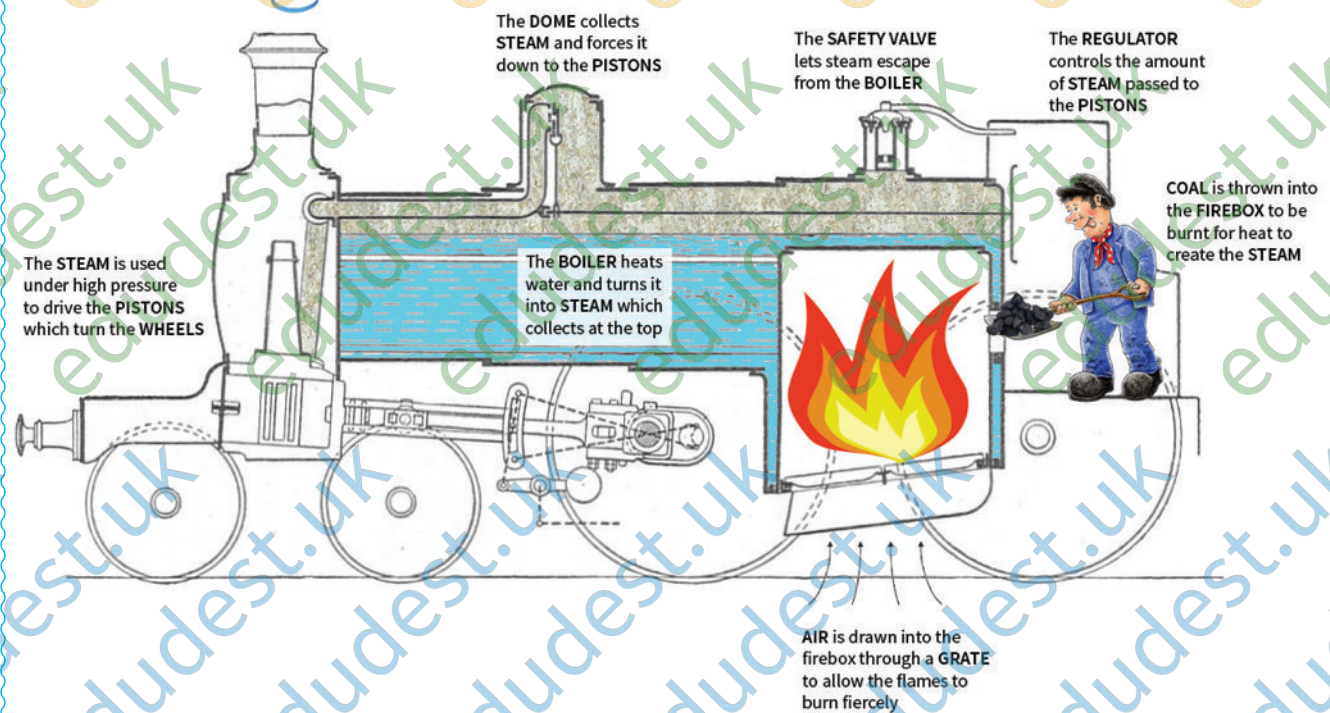
This diagram shows how the coal is used to heat water and generate steam energy

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Can you answer the following questions on materials? Use the diagram and the information on the station platform area to help you.

1. Which 2 main materials are shown to be changing in the diagram?
2. It is very important that the stoker (sometimes called the fireman) or driver continues to shovel the coal. What do you think would happen if he didn't?



3. What does the water change into and how?

4. What does the coal change into?

5. Why is air drawn in through a grate?

6. What is the 'steam' used for?

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8. What does the 'regulator' do?

9. What is the name of the device that lets steam escape from the boiler?

10. What device do the railway staff use to fill the tank up with water? Where on the station do you see this device?

11. What do you think would happen to the engine if it ran out of water?

12. What is the name for the mechanical devices that turn the wheels using the steam energy?

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