5 Transportation Then and Now

Subject Area

The World of Science & Technology

Topics & Curriculum Links

transportation (Technology)
materials and components (Science; Technology)
how vehicles work (Science; Technology)
the history of transportation (Science; Geography; History)
trade and industry (Geography; Civics)
sizes and measurements (Mathematics)
energy, fuel, and the environment (Science; Civics)
safety (Technology; Civics)
places and countries (Geography)
tourism (Civics; Geography)
dates and events (History)

Vocabulary

transportation; vehicle parts; materials; fuels; places; weather; animals; measurements; dates; numbers; countries; nationalities; continents

Grammar

present simple; past simple; present perfect; past continuous; future simple; question forms; imperative; passive; adjectives; prepositions; adverbs

Teaching Ideas

See also pages 6–7 for general ideas that you can adapt.
Or go to **www.oup.com/elt/teacher/readanddiscover**

READ & TALK What Next?

After reading Chapter 8, ask students to answer the questions: *What transportation will people use in the future? Why? What transportation won't people use very much? Why not?* They can then present their ideas to the class, or they can do this as a class debate.

READ & TALK A Transportation Survey

After completing Project 2, students collect the survey information from the class. They can do this by listening to each student giving their information in turn, or by collecting the information in a big chart on the board. Then they make a bar chart for the results. Students can also do a class survey about how they travel to school. They can talk or write about the results like this: *Most / A lot of / Some / A few people have traveled / travel to school by / in / on [transportation].*

Transportation Research

Students choose a vehicle and do research using books or the Internet, and put the information into a chart like the one on page 45 of the Reader. Or they can display the information on a timeline.

Activities Answers

Pages 36–37 **1** 1 Cart 2 trailer 3 camel 4 spaceship 5 sled 6 ship **2** 1 no 2 yes 3 no 4 yes 5 yes 6 yes **3** Animals: camel, donkey, elephant, horse, llama; Vehicles: bicycle, bus, boat, train, truck; Goods: fuel, food, silk, spices, salt **4** 1 People walked or they used animals. 2 Because it's easier to pull heavy things than to lift them. 3 The wheel was one of the most important inventions. 4 Villages and towns became bigger, so people had to travel to find food. 5 It's more than 3,000 kilometers. 6 He flew there in a Russian spaceship.

Pages 38–39 **1** 1 propeller 2 compass 3 oar 4 sail 5 paddle 6 steam engine **2** 1 true 2 false 3 false 4 false 5 true 6 true **3** 1 rafts 2 canoes 3 sailing ships 4 steam ships 5 supertankers **4** 1 Thor Heyerdahl sailed from Peru to an island in the Pacific Ocean. 2 Egyptian sailors sailed on the River Nile. 3 The Ancient Greeks sailed around the Mediterranean Sea. 4 The Vikings lived in Denmark, Sweden, and Norway. 5 The Vikings sailed across the Atlantic Ocean. 6 Traders sailed between Japan, Korea, China, and Southeast Asia. **5** 1 Because they used sails and men rowed with oars. 2 They use compasses, which point to north. 3 A lot of ships sank and pirates often attacked ships. 4 They use oil or diesel. 5 They use cruise ships. 6 They use bicycles.

Pages 40–41 **1** 1 high-speed train 2 steam train 3 articulated bus 4 tanker truck 5 bus 6 refrigerator truck **2** 1 150 2 300 3 9,288 4 160 5 200 **3** 1 steam trains 2 underground trains 3 diesel trains 4 high-speed trains **4** 1 coal 2 coal, water 3 water, steam 4 steam, engine 5 engine **5** 1 They built it in Wales in the United Kingdom. 2 A car uses the most fuel per passenger. 3 It takes six days to travel across Russia. 4 It was in London in the United Kingdom. 5 Because people travelled on buses to get to work as cities became bigger.

Pages 42–43 **1** 1 helmet 2 glove 3 brake 4 saddle 5 frame 6 tire 7 gears 8 back wheel 9 chain 10 pedal 11 front wheel **2** 1 light 2 small 3 comfortable 4 popular 5 thick, strong **3** 1 gears 2 bicycle 3 wood 4 faster **4** 1 true 2 true 3 true 4 true 5 false 6 false **5** 1 Because they had no tires. 2 They cycle to work or school, and for fun or sport. 3 A cyclist stops the bicycle with the brakes. 4 So that they can turn quickly.

Pages 44–45 **1** 1 steering wheel 2 engine 3 brake 4 seat belt 5 gears 6 front wheel 7 pedals 8 back wheel **2** 1 false 2 true 3 false 4 true 5 true 6 true 7 false 8 false **3** 1885: the first car; 1905 Rolls-Royce, cars; 1913 Ford opened; 1927 15 million Model Ts were; 1950 were driving large cars; 1963 The Peel P50; 2005 was first made **4** 1 It had a gasoline engine and only three wheels. 2 Because they wanted to travel long distances. 3 A driver needs a key to start a car. 4 Seat belts and airbags protect them. 5 It helps the car to go faster because air can move easily over it.

Pages 46–47 **1** 1 tail 2 rudder 3 wing 4 engine 5 flap 6 cabin 7 wheel 8 nose 9 cockpit 10 pilot **2** 1 2003 2 90 3 2,140 4 1793 5 1903 6 850 **3** 1 airliner 2 balloon 3 rocket 4 airship 5 helicopter 6 plane 7 space shuttle **4** 1 Because a fire under the balloon heats the air inside the balloon. 2 There's a gas that is lighter than air. 3 The air under the wings pushes the plane up. 4 They sit in the cabin. 5 A person pedals it. 6 Because they can keep still in the air and they can fly in any direction. 7 free answers

Pages 48–49 **1** 1 cycle rickshaw 2 gondola 3 punt 4 snowmobile 5 auto rickshaw 6 sled **2** 1 sled 2 ox 3 cycle rickshaw 4 gondolier **3** 1 Khangai, Mongolia: carts, horses, camels 2 Delhi, India: buses, trains, bicycles, rickshaws 3 Oxford, United Kingdom: bicycles, punts 4 Nunavut, Canada: sleds, snowmobiles 5 Venice, Italy: boat, water buses, gondolas **4** 1 They travel by sled or snowmobile. 2 They use camels and horses. 3 Because there are no roads. 4 A punt is like a gondola. 5 A rickshaw has two wheels and a person pulls it, but a cycle rickshaw has three wheels and the driver pedals it. 6 They carry them in baskets or bicycle trailers.

Pages 50–51 **1** 1 plants 2 solar car 3 scramjet 4 transporter 5 jetpack 6 sails 7 maglev train 8 space plane **2** 1 no 2 no 3 yes 4 yes 5 no 6 yes **3** 1 true 2 true 3 false 4 false 5 true **4** 1 They will use sails to help power them. 2 We use plants. 3 We can get it from the sun and the wind. 4 Because it has an electric motor. 5 free answers