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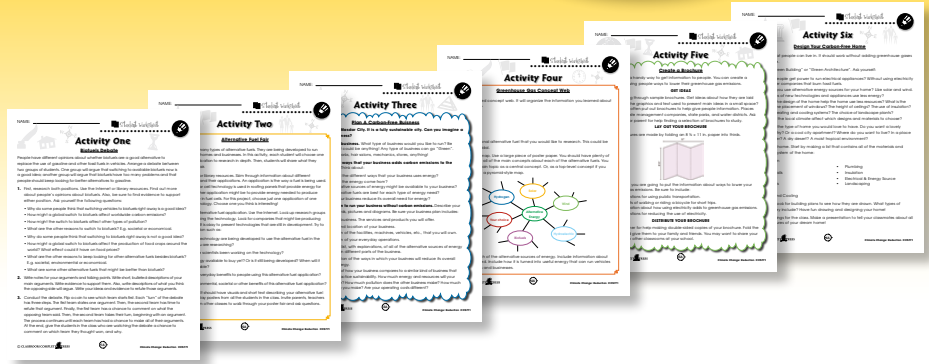
EASY MARKING™ ANSWER KEY 19

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NAME: _____

Before You Read



Urban Planning



1. Think about the city or town where you live. Describe the characteristics of homes and businesses. Do you live in a big city with tall apartment buildings? Is there a busy business district? Do you live in a suburb with big areas of single family homes? Are there only a few businesses? What is it like where you live?

2. Use the terms in the box to answer each question. You may use a dictionary to help you.

emissions	skyrise	public transportation
urban	pedestrians	atmosphere

- a) What is the name of a tall apartment building?
- b) What word describes a city environment?
- c) What is a way for many people to get to school or work at once?
- d) What is the thin layer of air around Earth?
- e) What are substances put into the air by people?
- f) What is a word for people walking from place to place in a city?



Reading Passage

NAME: _____



Urban Planning



The ways that people live and move around can have a big effect on the environment. Where people live and work and how they travel in and around cities is the subject of **urban planning**. For example, city planners decide whether to allow large highrise apartment buildings or new single-family homes. They plan how and where public transportation and roads will connect people's homes and businesses.



Urban commuter train



What is urban planning?

How can urban planning affect climate change?

Some cities have lots of apartments close to businesses and public transportation. This makes it easy to move from place to place. Other cities are more spread out. They have neighborhoods that go way beyond the urban centers. How a city is laid out can help lower greenhouse gas emission. City planners aim for people to have an easier time getting from place to place in their daily lives without using cars. Some cities ban cars from central areas. They open up roads to bicyclists and **pedestrians** instead. Planners connect spread-out neighborhoods to business centers with **commuter** trains. Many cities now favor **live-work spaces**. These are apartments that are built over or adjacent to businesses. It makes it easy for people to shop and work close to their homes.

NAME: _____

After You Read



Urban Planning



1. Fill in each blank with the correct word from the reading. You may use the same term more than once.

- a) How a city is laid out can help lower _____ emission.
- b) Where people live and work and how they travel in and around cities is the subject of _____.
- c) Urban planners plan how and where _____ and roads will connect people's homes and businesses.
- d) Cities open up roads to bicyclists and _____ instead of cars.
- e) Some cities ban _____ from central areas.
- f) Planners connect spread-out neighborhoods to business centers with _____.

2. Think about lowering greenhouse gas emissions in a city. List steps that urban planners could take to achieve this.



After You Read

NAME: _____



Urban Planning



3. Answer each question with a complete sentence.

- a) Describe the job of an urban planner.
-
-
-
- b) Explain how building more live-work spaces can help lower greenhouse gas emissions.
-
-
-

Research

4. Help plan the future of your city or town.

Work in groups. Visit your town planning department office or website. Find maps showing where people live and where they work. These are residential, commercial and industrial zones. Also, look for maps showing major roads and public transportation routes.

Study all of these maps. Make inferences about how most people move around town between home, work and shopping. How can you better connect the areas where people live and work with public transportation? Make some recommendations.

Design Your Alternative Fuel Dream Car

If you could have any car, what would it be? Would you like a rugged, off-road truck? Maybe a sports car? In this activity, you will find a way to make your dream car "green."

First, research different vehicles that are already made. Look at magazines or the Internet. Find photos of vehicles that appeal to you. Don't forget to look at "concept" cars. These are futuristic vehicles designed by car makers.

Next, list the elements that you would like in your dream vehicle. Think about the following questions:

- What do you want the vehicle to look like?
- Where do you want to drive your vehicle?
- How many passengers do you want your vehicle to carry?
- What do you want the inside of the vehicle to be like?
- What special features do you want in your vehicle?

Now, research ways to make all of the parts of your vehicle "green." Think about the following questions:

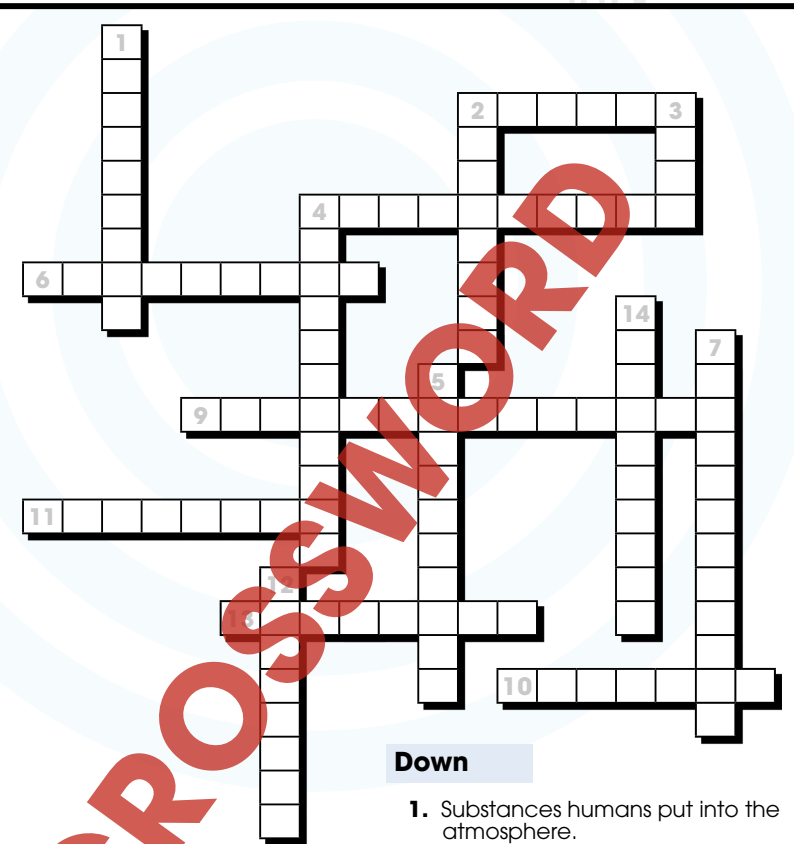
- How will your vehicle be powered? Is there a way to power your vehicle with little or no greenhouse gas emissions?
- What materials do you need to build your vehicle? What choices can you make for materials that would result in less pollution, waste and greenhouse gas emissions? Don't forget that you need materials for the vehicle's frame, tires, seats, dashboard, carpet, and any other special parts it may have.
- What design features could you incorporate to lessen your vehicle's need for power? For example, a heavier vehicle takes more power to move. What other features of your vehicle could help lessen its need for power?

Finally, design your vehicle. Use drawings and labels to explain your design features. Create a poster to display your design. Invite your classmates to look at your poster and ask questions. For an extension, you may also want to build a model of your vehicle.

Crossword Puzzle!

WORD LIST

- biofuel
- dams
- efficiency
- emissions
- fuel cell
- hybrid
- hydrogen
- manufactured
- planning
- pollutants
- renewable
- solar cells
- solar energy
- transportation
- turbines



Across

- A car that uses electricity as power.
- Objects that change energy from sunlight into electricity (two words).
- Most alternative fuels are also _____.
- The movement of people or goods from one place to another.
- An alternative fuel made of vegetable oil or plant parts.
- Urban _____.
- Wind _____ change energy from wind into electricity.

Down

- Substances humans put into the atmosphere.
- A common gas in the atmosphere used for energy in fuel cells.
- Structures that block the flow of rivers.
- Energy from the Sun (two words).
- A substance or condition that contaminates air, water or soil.
- Products that are made by people are _____.
- Technology that uses hydrogen as a source of energy to power vehicles.
- Fuel _____ describes how far a car can go on a certain amount of fuel.

Comprehension Quiz

Part A

Circle the word **TRUE** if the statement is TRUE OR Circle the word **FALSE** if it is FALSE.

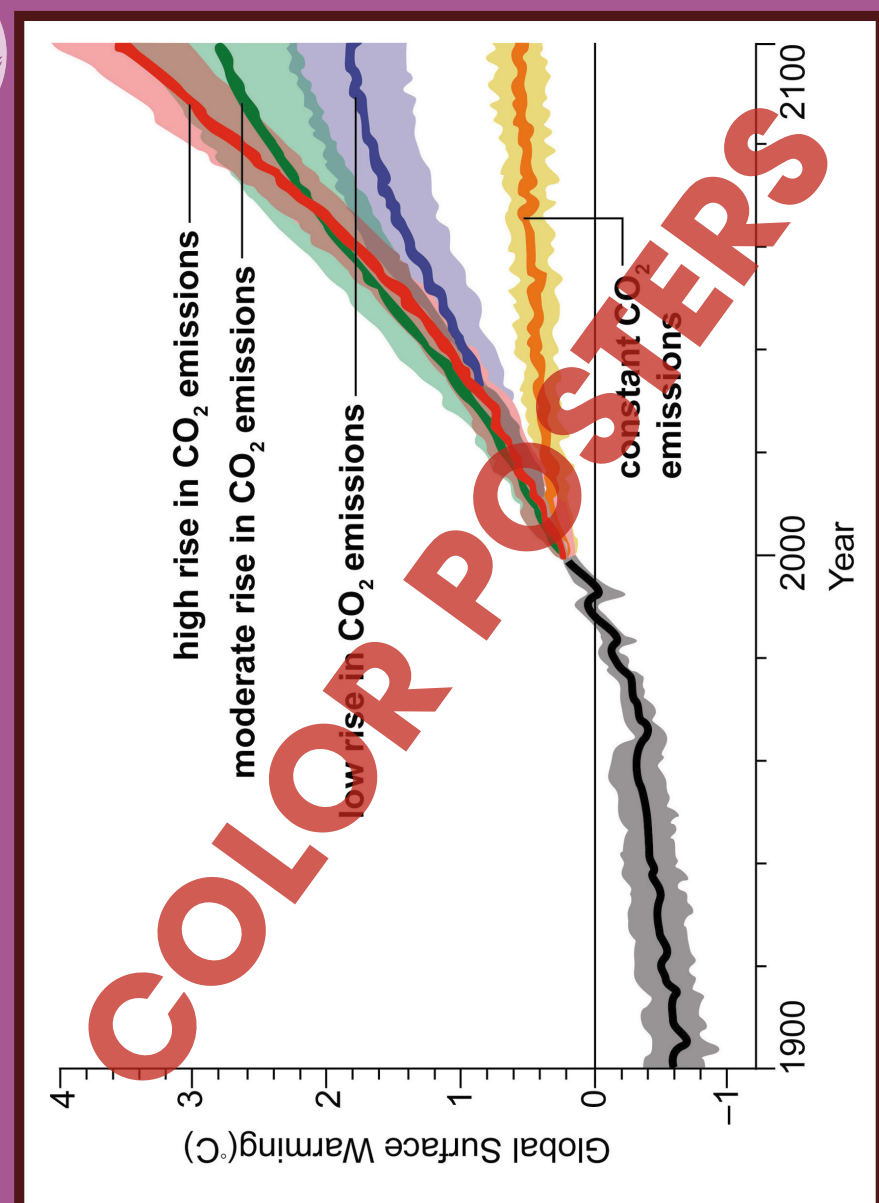
- Most greenhouse gas emissions come from burning fossil fuels.
TRUE **FALSE**
- If people stop emitting greenhouse gases today, Earth's average temperature will start to go down right away.
TRUE **FALSE**
- Alternative fuels release more greenhouse gases than fossil fuels.
TRUE **FALSE**
- Renewable sources of energy are replaced by nature faster than they are used up.
TRUE **FALSE**
- Hydroelectric generators change energy from sunlight into electricity.
TRUE **FALSE**
- A product made with recycled materials most likely used less energy to make than the same product made with raw materials.
TRUE **FALSE**
- Products that are manufactured are made by people using raw materials.
TRUE **FALSE**
- Buying fruits and vegetables grown near where you live is one way to help lower greenhouse gas emissions.
TRUE **FALSE**

Part B

List five transportation choices that result in less greenhouse gas emissions than driving individual vehicles.

SUBTOTAL: /13

Projections for Climate Change





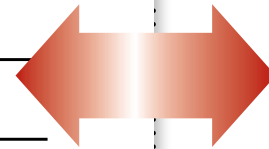
Urban Planning



3. Answer each question with a complete sentence.

a) Describe the job of an urban planner.

b) Explain how building more live-work spaces can help lower greenhouse gas emissions.



3.

a) To plan where people live, work, and how they move from place to place.

b) Because people do not have to travel far from home for jobs and shopping.

Research

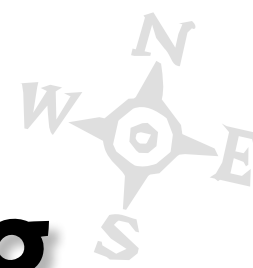
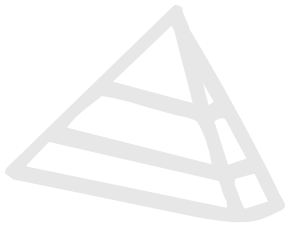
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EASY MARKING ANSWER KEY





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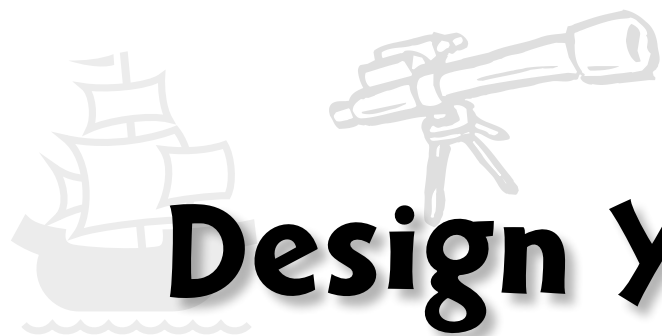
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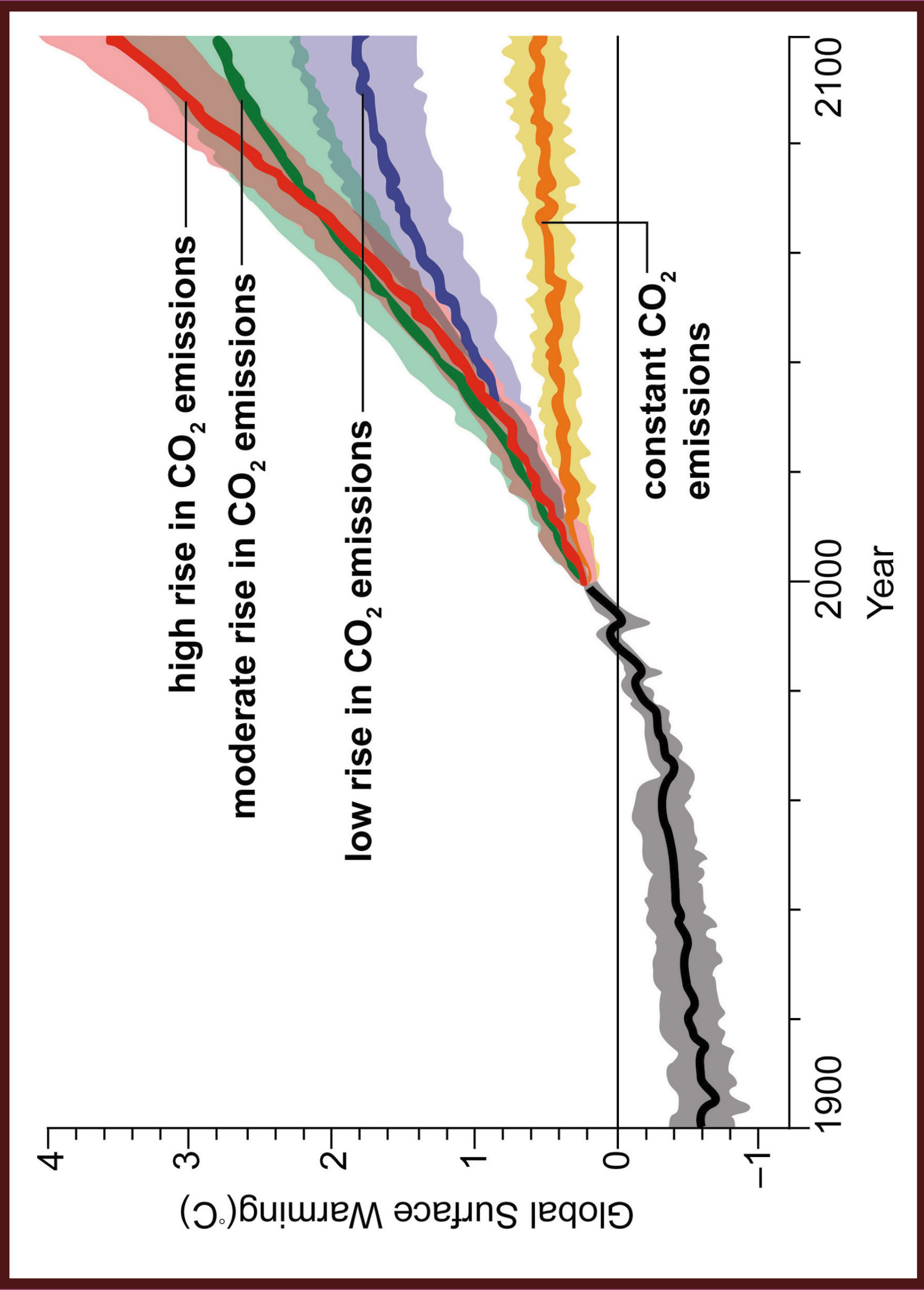
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Projections for Climate Change



Source: NASA Earth Observatory