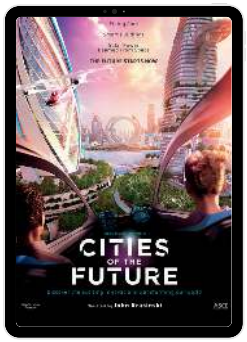
Kindergarten (K) OMNI TEKS

FORT WORTH MUSEUM SCIENCE AND HISTORY



Cities of the Future

- K.12 – The student knows that plants and animals depend on the environment to meet their basic needs for survival.
- K.12A – observe and identify the dependence of plants on air, sunlight, water, nutrients in the soil, and space to grow
- K.1A – ask questions and define problems based on observations or information from text, phenomena, models, or investigations

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- K.12A – Investigate and explain that living organisms have basic needs, including water, air, food, and space.
- K.12B – Observe and describe how living organisms depend on their environments to meet their basic needs.
- K.13B – Identify and describe the basic structures of animals, including physical characteristics that help them survive.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- K.12A – Investigate and explain that living organisms have basic needs, including water, air, food, and space.
- K.12B – Observe and describe how living organisms depend on their environments to meet their basic needs.
- K.13B – Identify and describe the basic structures of animals, including physical characteristics such as wings, legs, fins, and antennae.

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- K.12A – Investigate and explain that living organisms have basic needs, including water, air, food, and space.
- K.12B – Observe and describe how living organisms depend on their environments to meet their basic needs.
- K.13B – Identify and describe the basic structures of animals, including physical characteristics such as wings, legs, fins, and antennae.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity

Grade 1

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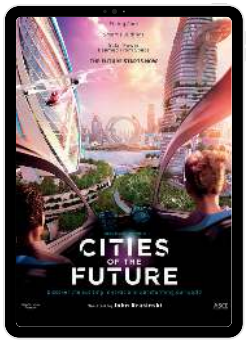

Cities of the Future

- 1.11 – The student knows that earth materials and products made from these materials are important to everyday life.
- 1.11A – identify and describe how plants, animals, and humans use rocks, soil, and water.
- 1.11B – explain why water conservation is important
- 1.11C – describe ways to conserve water such as turning off the faucet when brushing teeth and protect natural sources of water such as keeping trash out of bodies of water.

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- 1.12A – Classify living and nonliving things based upon whether they have basic needs and produce young.
- 1.13A – Identify and describe the external structures of animals that enable them to meet their basic needs.
- 1.13B – Record and describe information about the life cycles of animals.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- 1.12A – Classify living and nonliving things based upon whether or not they have basic needs and produce young.
- 1.13A – Identify and describe the external structures of animals that enable them to meet their basic needs.
- 1.13B – Record and describe information about the life cycles of animals.

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- 1.12A – Classify living and nonliving things based upon whether or not they have basic needs and produce young.
- 1.13A – Identify and describe the external structures of animals that enable them to meet their basic needs.
- 1.13B – Record and describe information about the life cycles of animals.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity

Grade 2

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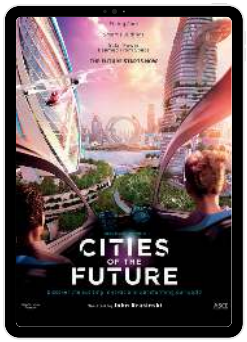

Cities of the Future

- 2.11A – distinguish between natural and manmade resources
- 2.11B – describe how human impact can be limited by making choices to conserve and properly dispose of materials such as reducing use of, reusing, or recycling paper, plastic, and metal.

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- 2.12B – Identify ways in which living organisms depend on each other.
- 2.13B – Identify and explain how animal structures and behaviors help animals survive in their environments.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- 2.12B – Identify ways in which living organisms depend on each other.
- 2.13B – Identify and explain how the physical characteristics of animals help them meet their basic needs, including how structures can be used for protection, movement, and feeding.

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- 2.12B – Identify ways in which living organisms depend on each other.
- 2.13B – Identify and explain how the physical characteristics of animals help them meet their basic needs, including how structures can be used for protection, movement, and feeding.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity

Grade 3

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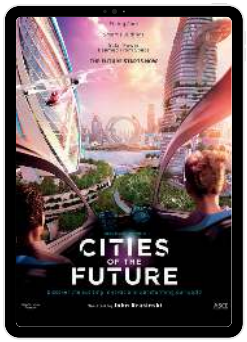

Cities of the Future

- 3.11A – explore and explain how humans use natural resources such as in construction, in agriculture, in transportation, and to make products;
- 3.11B – explain why the conservation of natural resources is important; and
- 3.11C – identify ways to conserve natural resources through reducing, reusing, or recycling.
- 3.1B – use scientific practices to plan and conduct descriptive investigations and use engineering practices to design solutions to problems

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- 3.12B – Identify and describe the flow of energy in a food chain and predict how changes in the environment affect organisms.
- 3.13A – Explore how structures and functions of plants and animals allow them to survive in a particular environment.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- 3.12B – Identify and describe how organisms depend on their environments, including food chains and the flow of energy.
- 3.13A – Explore how structures and functions of plants and animals allow them to survive in a particular environment.

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- 3.12B – Identify and describe how organisms depend on their environments, including food chains and the flow of energy.
- 3.13A – Explore how structures and functions of plants and animals allow them to survive in a particular environment.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity

Grade 4

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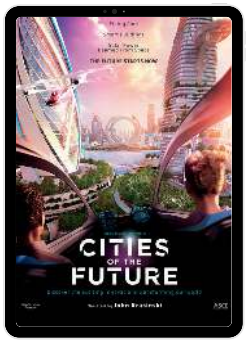

Cities of the Future

- 4.1A – ask questions and define problems based on observations or information from text, phenomena, models, or investigations
- 4.11A – identify and explain advantages and disadvantages of using Earth's renewable and nonrenewable natural resources such as wind, water, sunlight, plants, animals, coal, oil, and natural gas;
- 4.11B – explain the critical role of energy resources to modern life and how conservation, disposal, and recycling of natural resources impact the environment

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- 4.12 – Investigate and explain how organisms depend on one another within an ecosystem
- 4.12B – Describe the flow of energy in a food web and identify the roles of producers, consumers, and decomposers.
- 4.13A – Examine how structures and behaviors of living organisms help them survive in their environments.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- 4.12A – Investigate and explain how organisms depend on one another within an ecosystem, including the roles of producers, consumers, and decomposers.
- 4.13A – Examine how the structures and behaviors of living organisms enable them to survive in their environments.

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- 4.12A – Investigate and explain how organisms depend on one another within an ecosystem, including the roles of producers, consumers, and decomposers.
- 4.13A – Examine how the structures and behaviors of living organisms enable them to survive in their environments.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity

Grade 5

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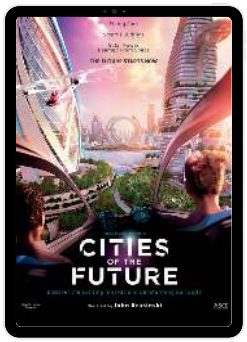

Cities of the Future

- 5.11 – The student understands how natural resources are important and can be managed. The student is expected to design and explain solutions such as conservation, recycling, or proper disposal to minimize environmental impact of the use of natural resources.
- 5.12C – describe a healthy ecosystem and how human activities can be beneficial or harmful to an ecosystem.

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- 5.12A – Observe and describe how a variety of organisms living in an ecosystem interact with biotic and abiotic factors.
- 5.12B – Describe the flow of energy in ecosystems through food webs, including producers, consumers, and decomposers.
- 5.12C – Predict the effects of changes in ecosystems caused by living organisms, including humans.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- 5.12A – Observe and describe how a variety of organisms living in an ecosystem interact with biotic and abiotic factors.
- 5.12C – Predict the effects of changes in ecosystems caused by living organisms, including humans

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- 5.12A – Observe and describe how a variety of organisms living in an ecosystem interact with biotic and abiotic factors.
- 5.12C – Predict the effects of changes in ecosystems caused by living organisms, including humans.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity

Grade 6

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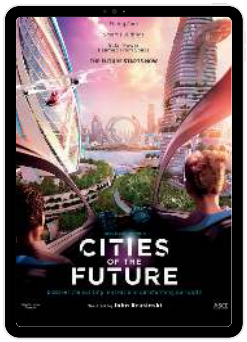

Cities of the Future

- 6.11 – The student understands how resources are managed.
- 6.11A – research and describe why resource management is important in reducing global energy poverty, malnutrition, and air and water pollution
- 6.11C – explain how conservation, increased efficiency, and technology can help manage air, water, soil, and energy resources.
- 6.12 – The student knows that interdependence occurs between living systems and the environment.

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- 6.12A – Diagram the levels of organization within an ecosystem, including organism, population, community, and ecosystem.
- 6.12B – Describe how variations in environmental conditions affect the survival of living organisms.
- 6.12C – Describe interactions among living organisms, such as competition, predation, and symbiosis.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- 6.12A – Diagram the levels of organization within an ecosystem, including organism, population, community, and ecosystem.
- 6.12B – Describe how variations in environmental conditions, including temperature and precipitation, affect the survival of living organisms.
- 6.12C – Describe interactions among living organisms, including competition, predation, and symbiosis.

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- 6.12A – Diagram the levels of organization within an ecosystem, including organism, population, community, and ecosystem.
- 6.12B – Describe how variations in environmental conditions, including temperature and precipitation, affect the survival of living organisms.
- 6.12C – Describe interactions among living organisms, including competition, predation, and symbiosis.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity

Grade 7

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Cities of the Future

- 7.12 – The student understands that ecosystems are dependent upon the cycling of matter and the flow of energy.
- 7.12B – describe how ecosystems are sustained by the continuous flow of energy and the recycling of matter and nutrients within the biosphere.

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- 7.12A – Investigate and explain relationships between organisms in ecosystems, including predator–prey relationships, using food webs.
- 7.12B – Analyze the importance of biodiversity to the sustainability of ecosystems.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- 7.11C – Analyze the impact of human activity on the environment, including the effects of technology and population growth.
- 7.12B – Analyze the importance of biodiversity to the sustainability of ecosystems.

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- 7.11C – Analyze the impact of human activity on the environment, including the effects of technology and population growth.
- 7.12B – Analyze the importance of biodiversity to the sustainability of ecosystems.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity

Grade 8

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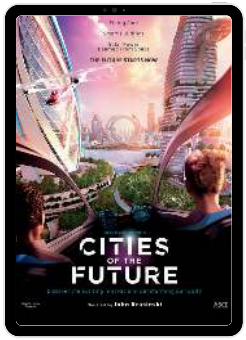

Cities of the Future

- 8.1B – use scientific practices to plan and conduct descriptive, comparative, and experimental investigations and use engineering practices to design solutions to problems;
- 8.1G – develop and use models to represent phenomena, systems, processes, or solutions to engineering problems;
- 8.5G – analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.
- 8.11 – The student knows that natural events and human activity can impact global climate.
- 8.11A – use scientific evidence to describe how natural events, including volcanic eruptions, meteor impacts, abrupt changes in ocean currents, and the release and absorption of greenhouse gases influence climate;
- 8.11B – use scientific evidence to describe how human activities, including the release of greenhouse gases, deforestation, and urbanization, can influence climate
- 8.11C – describe the carbon cycle.

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- 8.12A – Analyze how ecosystems are sustained through the continuous flow of energy and recycling of matter.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- 8.12A – Analyze how ecosystems are sustained through the continuous flow of energy and the recycling of matter.

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- 8.12A – Analyze how ecosystems are sustained through the continuous flow of energy and the recycling of matter.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity

High School

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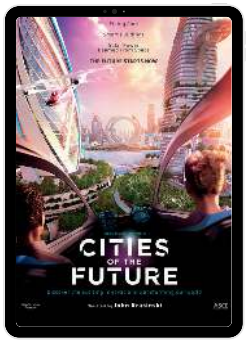

Cities of the Future

- Environmental Systems – Evaluate sustainability practices and resource management.
- World Geography / Economics – Analyze urbanization, infrastructure development, and human–environment interaction.

Themes: Engineering, sustainability, urban systems, human–environment interaction

Shark Kingdom

- BIO.11A – Describe the role of internal and external structures in maintaining life functions of organisms.
- BIO.12B – Analyze relationships among populations within communities and ecosystems.
- BIO.13C – Evaluate conservation practices and policies that protect biodiversity.
- BIO.13D – Analyze the effects of environmental change, including human activity, on biodiversity and ecosystem stability.
- ES.5A – Evaluate how biodiversity is affected by human activity, including overfishing and habitat loss.
- ES.10A – Analyze the relationship between human population growth and the health of marine ecosystems.

Themes: Marine ecosystems, predator–prey relationships, adaptations, conservation

Wild Rescue

- BIO.11A – Describe the role of internal and external structures in maintaining life functions of organisms.
- BIO.12B – Analyze relationships among populations within communities and ecosystems.
- BIO.13C – Evaluate conservation methods and practices used to protect biodiversity.
- BIO.13D – Analyze the effects of environmental changes, including human activity, on biodiversity and ecosystem stability.
- ES.5A – Evaluate how human activities impact biodiversity, including wildlife conservation and habitat preservation.
- ES.10A – Analyze the role of humans in environmental stewardship and sustainable management of natural resources.

Themes: Animal rehabilitation, conservation, human responsibility

Serengeti

- BIO.11A – Describe the role of internal and external structures in maintaining life functions of organisms.
- BIO.12B – Analyze relationships among populations within communities and ecosystems.
- BIO.13C – Evaluate conservation methods and practices used to protect biodiversity.
- BIO.13D – Analyze the effects of environmental changes, including human activity, on biodiversity and ecosystem stability.
- ES.5A – Evaluate how human activities impact biodiversity, including ecosystem disruption, habitat loss, and species decline.
- ES.10A – Analyze how human population growth and resource use affect ecosystems and biodiversity.

Themes: Migration, savanna ecosystems, predator–prey dynamics, biodiversity