

# Oasis Classroom Program - Kids' Growing City

## Grade 4

### Curriculum connections to "Seeds and Seedlings" Lesson

#### Science and Technology

	Strand Code	Expectation	OE	SE	
HABITATS A	ULS:H&C	analyse the effects of human activities on habitats and communities	1	NA	x
HABITATS A	ULS:H&C	investigate the interdependence of plants and animals within specific habitats and communities;	2	NA	x
HABITATS A	ULS:H&C	demonstrate an understanding of habitats and communities and the relationships among the plants and animals that live in them.	3	NA	x
HABITATS A	ULS:H&C	analyse the positive and negative impacts of human interactions with natural habitats and communities	RST	0.1	x
HABITATS A	ULS:H&C	identify reasons for the depletion or extinction of a plant or animal species (e.g., hunting, disease, invasive species, changes in or destruction of its habitat), evaluate the impacts on the rest of the natural community, and propose possible actions for preventing such depletions or extinctions from happening	RST	0.2	x
HABITATS A	ULS:H&C	follow established safety procedures for working with soils and natural materials	DICS	0.1	
HABITATS A	ULS:H&C	build food chains consisting of different plants and animals, including humans	DICS	0.2	x
HABITATS A	ULS:H&C	use scientific inquiry/research skills (see page 15) to investigate ways in which plants and animals in a community depend on features of their habitat to meet important needs	DICS	0.3	x
HABITATS A	ULS:H&C	use scientific inquiry/research skills (see page 15) to create a living habitat containing a community, and describe and record changes in the community over time	UBC	0.4	x
HABITATS A	ULS:H&C	use appropriate science and technology vocabulary, including habitat, population, community, adaptation, and food chain, in oral and written communication	UBC	0.5	x
HABITATS A	ULS:H&C	use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes (e.g., use presentation software to show the steps one might follow to set up and maintain a terrarium)	UBC	0.6	x
HABITATS A	ULS:H&C	demonstrate an understanding of habitats as areas that provide plants and animals with the necessities of life (e.g., food, water, air, space, and light)	UBC	0.1	x
HABITATS A	ULS:H&C	demonstrate an understanding of food chains as systems in which energy from the sun is transferred to producers (plants) and then to consumers (animals)	UBC	0.2	x

HABITATS	ULS:H&C	identify factors (e.g., availability of water or food, amount of light, type of weather) that affect the ability of plants and animals to survive in a specific habitat	UBC	0.3	x
HABITATS	ULS:H&C	demonstrate an understanding of a community as a group of interacting species sharing a common habitat (e.g., the life in a meadow or in a patch of forest)	UBC	0.4	x
HABITATS	ULS:H&C	classify organisms, including humans, according to their role in a food chain (e.g., producer, consumer, decomposer)	UBC	0.5	x
HABITATS	ULS:H&C	Identify animals that are carnivores, herbivores, or omnivores (decomposers)	UBC	0.6	
HABITATS	ULS:H&C	describe structural adaptations that allow plants and animals to survive in specific habitats (e.g., the thick stem of a cactus stores water for the plant; a duck's webbed feet allow it to move quickly and efficiently in water)	UBC	0.7	x
HABITATS	ULS:H&C	explain why changes in the environment have a greater impact on specialized species than on generalized species	UBC	0.8	x
HABITATS	ULS:H&C	demonstrate an understanding of why all habitats have limits to the number of plants and animals they can support	UBC	0.9	x
HABITATS	ULS:H&C	describe ways in which humans are dependent on natural habitats and communities	UBC	0.10	x
LIGHT AND	UME:L&S	assess the impact on society and the environment of technological innovations related to light and sound	1	NA	x
LIGHT AND	UME:L&S	investigate the characteristics and properties of light and sound	2	NA	x
LIGHT AND	UME:L&S	demonstrate an understanding of light and sound as forms of energy that have specific characteristics and properties	3	NA	x
LIGHT AND	UME:L&S	assess the impacts on personal safety of devices that apply the properties of light and/or sound (e.g., UV-coated lenses in sunglasses, safety eyes on garage door openers, reflective material on clothing, ear plugs, backup signals on trucks and cars, MP3 players, cellphones), and propose ways of using these devices to make our daily activities safer	RST	0.1	
LIGHT AND	UME:L&S	assess the impacts on society and the environment of light and/or sound energy produced by different technologies, taking different perspectives into account	RST	0.2	x
LIGHT AND	UME:L&S	follow established safety procedures for protecting eyes and ears	DISC	0.1	
LIGHT AND	UME:L&S	investigate the basic properties of light	DISC	0.2	x
LIGHT AND	UME:L&S	investigate the basic properties of sound	DISC	0.3	
LIGHT AND	UME:L&S	use technological problem-solving skills to design, build, and test a device that makes use of the properties of light (e.g., a periscope, a kaleidoscope) or sound (e.g., a musical instrument, a sound amplification device)	DISC	0.4	x
LIGHT AND	UME:L&S	use scientific inquiry/research skills to investigate applications of the properties of light or sound	DISC	0.5	x

LIGHT AND	UME:L&S	use appropriate science and technology vocabulary, including natural, artificial, beam of light, pitch, loudness, and vibration, in oral and written communication	DISC	0.6	
LIGHT AND	UME:L&S	use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	DISC	0.7	x
LIGHT AND	UME:L&S	identify a variety of natural light sources (e.g., the sun, a firefly) and artificial light sources (e.g., a candle, fireworks, a light bulb)	UBC	0.1	x
LIGHT AND	UME:L&S	distinguish between objects that emit their own light (e.g., stars, candles, light bulbs) and those that reflect light from other sources (e.g., the moon, safety reflectors, minerals)	UBC	0.2	x
LIGHT AND	UME:L&S	describe properties of light, including the following: light travels in a straight path; light can be absorbed, reflected, and refracted	UBC	0.3	x
LIGHT AND	UME:L&S	describe properties of sound, including the following: sound travels; sound can be absorbed or reflected and can be modified (e.g., pitch, loudness)	UBC	0.4	
LIGHT AND	UME:L&S	explain how vibrations cause sound	UBC	0.5	
LIGHT AND	UME:L&S	describe how different objects and materials interact with light and sound energy	UBC	0.6	
LIGHT AND	UME:L&S	distinguish between sources of light that give off both light and heat (e.g., the sun, a candle, an incandescent light bulb) and those that give off light but little or no heat (e.g., an LED, a firefly, a compact fluorescent bulb, a glow stick)	UBC	0.7	
LIGHT AND	UME:L&S	identify devices that make use of the properties of light and sound (e.g., a telescope, a microscope, and a motion detector make use of the properties of light; a microphone, a hearing aid, and a telephone handset make use of the properties of sound)	UBC	0.8	
ROCKS AND	UESS:R&M	assess the social and environmental impacts of human uses of rocks and minerals;	1	NA	x
ROCKS AND	UESS:R&M	investigate, test, and compare the physical properties of rocks and minerals;	2	NA	
ROCKS AND	UESS:R&M	demonstrate an understanding of the physical properties of rocks and minerals.	3	NA	x
ROCKS AND	UESS:R&M	assess the social and environmental costs and benefits of using objects in the built environment that are made from rocks and minerals	RST	0.1	x
ROCKS AND	UESS:R&M	analyse the impact on society and the environment of extracting and refining rocks and minerals for human use, taking different perspectives into account	RST	0.2	x
ROCKS AND	UESS:R&M	follow established safety procedures for outdoor activities and for working with tools, materials, and equipment	DISC	0.1	x
ROCKS AND	UESS:R&M	use a variety of tests to identify the physical properties of minerals	DISC	0.2	

ROCKS AND MINERALS	UESS:R&M	use a variety of criteria (e.g., colour, texture, lustre) to classify common rocks and minerals according to their characteristics	DISC	0.3	x
ROCKS AND MINERALS	UESS:R&M	use scientific inquiry/research skills to investigate how rocks and minerals are used, recycled, and disposed of in everyday life	DISC	0.4	x
ROCKS AND MINERALS	UESS:R&M	use appropriate science and technology vocabulary, including hardness, colour, lustre, and texture, in oral and written communication	DISC	0.5	x
ROCKS AND MINERALS	UESS:R&M	use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	DISC	0.6	x
ROCKS AND MINERALS	UESS:R&M	describe the difference between rocks (composed of two or more minerals) and minerals (composed of the same substance throughout), and explain how these differences determine how they are used	UBC	0.1	
ROCKS AND MINERALS	UESS:R&M	describe the properties (e.g., colour, lustre, streak, transparency, hardness) that are used to identify minerals	UBC	0.2	
ROCKS AND MINERALS	UESS:R&M	describe how igneous, sedimentary, and metamorphic rocks are formed	UBC	0.3	
ROCKS AND MINERALS	UESS:R&M	describe the characteristics of the three classes of rocks	UBC	0.4	