



Curriculum Connections to Markham Fair

Intermediate - Grade Seven

Subject	Specific Expectations	Connection to Markham Fair
Life Systems – Interactions within Ecosystems	<ul style="list-style-type: none"> • Identify living (biotic) and non-living (abiotic) elements in an ecosystem • Identify populations of organisms within an ecosystem and the factors that contribute to their survival in that ecosystem • Identify and explain the roles of producers, consumers, and decomposers in food chains and their effects on the environment • Describe the process of cycling carbon and water in the biosphere • Investigate ways in which natural communities within ecosystems can change, and explain how such changes can affect animal and plant populations • Investigate the impact of the use of technology on the environment (greenhouse effect, redirection of water flow for human needs, use of pesticides) • Investigate the bio-economical costs and benefits of the recycling and waste disposal industries • Explain the importance of plants as sources of energy (food, fossil fuels), as producers of carbohydrates and oxygen, and as habitats for wildlife • Identify the importance of plants in the Canadian 	<ul style="list-style-type: none"> • Does Markham Fair have its own ecosystem? If so what is included in the ecosystem? • What would be a food chain that is connected to the animals, plants, and organisms that are located here at the Fair? • How does the water cycle affect farmers and their harvests? Does the cycling of carbon and water in the biosphere have an economical impact on agriculture? • How does an ecosystem change? What are the factors involved in changing an ecosystem? What impact(s) do the changes have on animal and plant populations? • How has increased technology impacted greenhouse emissions, redirection of water flow for human consumption? Can you see any of the above concerns impacted here on the Markham Fairgrounds? • How important are plants? If we lose them, what will the impact be on the ecosystems? What will the impact be on the Fairgrounds? • How important are plants in the economy?

	<p>economy (farming, forestry, drug manufacturing) and describe the impact of the industrial use of plants on the environment</p> <ul style="list-style-type: none"> • Explain the long term effects of the loss of natural habitats and the extinction of species 	<p>Are we as a society dependent on plants? What plant life do you see evident at the fair?</p> <ul style="list-style-type: none"> • What will be the long term effect of the loss of natural habitats on animals and humans?
<p>Structures and Mechanisms – Structural strength and stability</p>	<ul style="list-style-type: none"> • Classify structures as solid, frame, or shell structures • Demonstrate awareness that the position of the centre of gravity of a structure is stable or unstable • Describe, using their observations, ways in which different forces can affect the stability of a structure • Identify forces within a structure that are affected by forces outside the structure • Describe, using their observations, the function of symmetrical design in structures and mechanical systems 	<ul style="list-style-type: none"> • What structures do you see present on the Fairgrounds? Which structures do you believe would be best used on a multiuse property? • Examine several different types of structures found on the fairgrounds. Identify what makes them stable. • What forces inside the structures are being affected by the forces pushing on them outside the structure? What damage can be done if the forces do not balance out? • Why is it important to design structures symmetrically? Are all structures on the fairgrounds symmetrical?

Grade Eight

Subject	Specific Expectations	Connection to Markham Fair
Structures and Mechanisms – Mechanical Efficiency	<ul style="list-style-type: none">• Distinguish between velocity and speed• Determine the velocity ratio of devices with pulleys and gears• Predict the mechanical efficiency of using different mechanical systems	<ul style="list-style-type: none">• Watch the extreme sports and BMX show. What velocity and speed do they need in order to perform the jumps and stunts safely and accurately?• Are these bikes the most efficient mechanism to use to perform the stunts? If not, what do you think would be a better mechanism to use?