Curriculum Connections to Markham Fair

Intermediate - Grade Seven

Subject	Specific Expectations	Connection to Markham Fair
Life Systems – Interactions within Ecosystems	• 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	• 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?

	economy (farming, forestry, drug manufacturing) and describe the impact of the industrial use of plants on the environment • Explain the long term effects of the loss of natural habitats and the extinction of species	Are we as a society dependent on plants? What plant life do you see evident at the fair? • What will be the long term effect of the loss of natural habitats on animals and humans?
Structures and Mechanisms – Structural strength and stability	• 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	• 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	• Distinguish between velocity and speed • Determine the velocity ratio of devices with pulleys and gears • Predict the mechanical efficiency of using different mechanical systems	• 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?