



CTF Challenge Idea Generation

Challenge	For the Birds		
Essential Question	How can we help provide shelter to birds that are part of our local ecosystem when their natural habitat is changing?	Estimated Time	30 hrs.
All CTF learning outcomes should be addressed in each CTF challenge.			

Challenge Description	<p>This project is designed to give Grade 7 students an introduction to some basic design and construction procedures. Students conduct research to address the needs of local birds, which will help inform decisions about the design of the birdhouses that will be constructed. The use of fractional measurements is required to build the birdhouses. Students will learn how to lay out a simple project from a plan, construct all pieces in preparation for assembly, and then explore finishing methods. Students will learn safe woodworking procedures, including the use of basic hand tools, machinery, and equipment found in computer and woodworking labs. Even though each student will produce his or her own birdhouse, teamwork skills will be practised throughout this project.</p>		
Scenario	<p>Our birds are in danger! Nature Canada sends an SOS as our birds face mounting pressures on their habitats and populations. You are asked to identify which species are common to your area and to improve their habitat. Birds need shelter from predators and the elements. Since bird species are so diverse, their habitats and nesting habits vary tremendously and the requirements for cover can be quite specific. You and your classmates are urged to build bird shelters and place them in appropriate locations around the community. After all, a healthy bird population suggests healthy habitats for all species, including humans!</p>		
Occupational Areas	<p>BUSINESS</p> <p><input type="checkbox"/> Computing Science <input type="checkbox"/> Financial Management <input type="checkbox"/> Management & Marketing</p> <p><input type="checkbox"/> Enterprise & Innovation <input type="checkbox"/> Information Processing <input type="checkbox"/> Networking</p> <p>COMMUNICATION</p> <p><input type="checkbox"/> Communication Technology <input checked="" type="checkbox"/> Design Studies <input type="checkbox"/> Fashion Studies</p> <p>HUMAN SERVICES</p> <p><input type="checkbox"/> Community Care Services <input type="checkbox"/> Foods <input type="checkbox"/> Legal Studies</p> <p><input type="checkbox"/> Cosmetology <input type="checkbox"/> Health Care Services <input type="checkbox"/> Recreation Leadership</p> <p><input type="checkbox"/> Esthetics <input type="checkbox"/> Human & Social Services <input type="checkbox"/> Tourism</p> <p>RESOURCES</p> <p><input type="checkbox"/> Agriculture <input type="checkbox"/> Forestry <input checked="" type="checkbox"/> Wildlife</p> <p><input type="checkbox"/> Environmental Stewardship <input type="checkbox"/> Primary Resources</p> <p>TECHNOLOGY</p> <p><input checked="" type="checkbox"/> Construction <input type="checkbox"/> Fabrication <input type="checkbox"/> Mechanics</p> <p><input type="checkbox"/> Electro-Technologies <input type="checkbox"/> Logistics</p>  		
Safety and/or Environmental Concerns	<p>Students will need to be familiar with the safety plan for the construction lab as well as safe practices for the equipment they will use during the construction of their birdhouses (band saw, disc sander, drill press, and jigsaw). Students must successfully pass safety tests before they can start work on their birdhouses.</p> <p>Students need to be aware of the impact of using wood as a resource, and how forests need to be managed to ensure the use of wood is sustainable. Efficient use of material will also be demonstrated.</p> <p>To ensure the safety of all students in the shop, students in construction classes will abide by the Zero Tolerance Safety Policy; i.e., failure to follow proper safety procedures will result in the students being required to achieve learning without the “hands-on” construction portion of the project.</p>		

