



St. Kateri Outdoor Learning Centre
Lesson Plan
Tying Knots



Target Station(s):	Station 4
Target Grade(s):	Grades 10 – 12
Target Subject(s):	Construction Technology
Overall Curriculum Expectation(s):	<ul style="list-style-type: none"> • TCJ2O – A2 – demonstrate an understanding of the safe and correct use of construction tools, equipment, and techniques • TCJ2O – A3 – use correct terminology to describe building components and construction materials, tools, equipment, and processes • TCJ3C – A4 – demonstrate an understanding of design considerations for residential buildings • TCJ3C – A5 – use construction terminology correctly • TCJ3C – C1 – demonstrate appropriate technical skills, including the safe use of construction tools, equipment, and materials • TCJ4C – A4 – demonstrate an understanding of design considerations for residential and light commercial buildings • TCJ4C – A5 – use construction terminology correctly • TCJ4C – C1 – demonstrate appropriate technical skills, including the safe use of construction tools, equipment, and materials • TCJ4C – C2 – demonstrate safe and accurate building techniques
Specific Curriculum Expectation(s):	<ul style="list-style-type: none"> • TCJ2O – A2.1 – explain how to correctly and safely use, maintain, and store construction tools and equipment • TCJ2O – A3.1 – use correct terminology for the names, characteristics, and functions of construction materials, tools, and equipment in oral and written communication • TCJ3C – A4.4 – describe human factors to consider when planning aspects of a house • TCJ3C – A5.1 – use correct terminology to identify and describe materials, supplies, and structural components • TCJ3C – C1.1 – demonstrate safe work practices when using hand tools, power tools, equipment, and materials • TCJ3C – C1.3 – lay out construction projects using a variety of tools and equipment • TCJ4C – A4.1 – assess the human factors to consider when planning aspects of a building • TCJ4C – A5.1 – use correct terminology to identify and describe construction components and materials • TCJ4C – C1.1 – demonstrate safe work practices when using hand and power tools, materials, and equipment • TCJ4C – C2.3 – describe and implement appropriate solutions and/or modifications in response to problems encountered in residential and light and commercial construction projects
Catholic Graduate Expectation(s):	<ul style="list-style-type: none"> • CGE3c -thinks reflectively and creatively to evaluate situations and solve problems • CGE4a -demonstrates a confident and positive sense of self and respect for the dignity and welfare of others • CGE4f -applies effective communication, decision-making, problem-solving, time and

	resource management skills
Connection to FNMI Perspectives and/or Teachings:	First Nations people once used balsam roots to tie knots for bags and furniture, instead of using rope.
Learning Goals:	We are learning to tie various knots used in the construction industry, as well as in everyday life settings (e.g., animals, boats, hauling).
Prerequisite Knowledge and/or Skills:	<p>Before coming to St. Kateri, students should have had some practice in identifying and tying different knots. They may wish to visit the following websites in advance:</p> <ul style="list-style-type: none"> • <i>Animated Knots by Grog</i> at http://www.animatedknots.com/ • <i>10+ Knots You Want to Know</i> at https://www.youtube.com/watch?v=yMRNeqomLjE
Required Materials:	The tote will include ten or more 10-foot lengths of rope, as well as a copy of the handout <i>Various Knots and Hitches</i> for each student. Sawhorses at the gazebo may also be needed.
Activity and Approximate Times:	<p><u>ACTIVITY 1 – Tying Knots for the First Time</u> (1 hour)</p> <ol style="list-style-type: none"> 1. Provide each student with a piece of rope, as well as a copy of the handout <i>Various Knots and Hitches</i>. 2. Allow students sufficient time to attempt tying as many different types of knots as desired. 3. As students complete each knot, their work should be assessed, using the spreadsheet provided. <p><u>ACTIVITY 2 – Using Ropes and Knots to Secure Dangerous Areas</u> (1 hour)</p> <ol style="list-style-type: none"> 1. Instruct the class to bring their ropes and handouts with them as they walk the trail to Station 4. 2. At Station 4, have students take note of the fallen rock and its potential safety hazard. 3. Invite each student to use their own rope to create a barrier that will deter visitors from walking too closely to the fallen rock or other dangerous area. Note: some students may have to join their ropes together in order to make a longer or more appropriate barrier. <p><u>OPTIONAL ACTIVITY</u> (time variable)</p> <p>Depending on the time of year and needs at the camp, some sections of the self-guided trail could be improved by simply securing a rope in place to act as a support and/or assist people as they walk up or down an incline in the trail.</p>
Suggested Modifications or	Although this lesson plan was created for construction technology classes, there are other curriculum areas to which it might equally apply (e.g., physical education, physics).

Extensions:	
Assessment:	Students will be assessed on their ability to interpret plans of a knot and tie the knot based on the instructions provided.
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