Fish Skin Tanning at Home

Students learn Indigenous sustainability perspectives, examine traditional practices like fish skin tanning, then complete group sustainability projects.

Overview

Throughout this lesson, students will learn about sustainability from an Indigenous perspective. They will be exposed to various examples of Indigenous sustainability practices - including fish skin tanning - while having the opportunity to work in groups to complete their own sustainability projects!

Duration

2-3 Hours

Materials

- Internet Connection
- Fish Skin Tanning Materials: any kind of fish skin, black tea bags, dish soap, spoon and butterknife, salt, glass jar/container, bowl, tea towel, and any kind of oil
- "Fish Skin Tanning Self-Assessment" Rubric

Activate: Exploring Indigenous Sustainability Movements

Begin by asking the class if they know any examples of Indigenous sustainability practices either in the past or present including modern sustainably movements. Write student responses on the board. See examples of modern Indigenous sustainability movements below.

Next, have students conduct internet research to answer the following:

1. Where is this initiative located?
2. What environmental issue are they addressing?
3. What is their proposed solution to address the environmental issue?
4. Why do they say sustainability is important?

Some examples of modern Indigenous sustainability practices and movements include:

- Aki Solutions Group: http://www.akienergy.com/
- Coastal First Nations Community Clean Energy Projects: https://coastalfirstnations.ca/our-economy/clean-energy/community-clean-energy-projects/
- Indigenous Clean Energy Initiatives: https://indigenouscleanenergy.com/ice-projects/
- Indigenous Environmental Network: https://www.ienearth.org
- Lake Winnipeg Indigenous Collective: https://www.lwic.org
- Mother Earth Recycling: http://www.motherearthrecycling.ca/
- Wa Ni Ska Tan: http://hydroimpacted.ca/wa-ni-ska-tan-2/

Once the class has conducted their internet research to get familiar with various social impact projects, inform them that they will be working in groups to complete their own sustainability projects!

Acquire: Fish Skin Tanning at Home (Amber Sandy)

Have students read Fish Skin Tanning at Home by Amber Sandy found on pages 192 - 198 of the Create to Learn textbook. Alternatively, students can watch her lessons here: https://www.createtolearn.ca/tutorial/fish-skin-tanning

To debrief the reading, ask the class the following questions:

1. What does Amber's work focus on?
2. What materials are needed to tan fish skins?
3. What are some tips Amber gives to source fish skins?
4. How can Amber tell if the skin isn't done tanning?
5. What types of things can you make with your tanned fish skin?

Apply: Sustainability Project

Teachers have the option of either allowing students to work in groups to develop their own sustainability projects – such as picking up litter, expanding recycling initiatives or advocating for change– or having everyone in the class make tanned fish skin leather to either utilize for their own crafts or donate to someone who can make leather goods as a way to contribute to sustainability.

If choosing the latter, if feasible, it is suggested that teachers provide an honorarium for a local Indigenous fish skin tanner to lead the class through a fish skin tanning session. The purpose of this is twofold – to create economic opportunities for Indigenous fish skin tanners in the community and to pass down local techniques and traditions.

Alternatively, the class can follow Amber's instructions to make tanned fish skins.

Once students form their groups, allow them time to complete the "Sustainability Project Planning" Worksheet together.

Inform the class that they will graded using the "Sustainability Project Self-Assessment" as well as a written reflection assignment. Teachers should review the rubric at the beginning of the project so students know what attitudes and behaviours they should be aiming for.

Assess: Sustainability Project Rubric and Reflection Assignment

Once students have completed their sustainability projects, students will be self-assessing their professionalism including work ethic, attitudes and behaviours. Students will be reminded to complete this self-reflection honestly. They will be informed that you will also be grading them using this rubric and comparing the grade you would have given them based on the grade they gave themselves to see how accurate the self-assessment is.

Teachers may change the students grade based on their observations throughout the project, as well as any feedback from other group members.

Finally, students will complete a Reflection Assignment which will be graded based on their level of honesty and the depth of their self-reflection. The project is out of 100 marks in total.

Social Impact Project Planning Worksheet

Group Members:

Describe your social impact project idea:

What problem are you attempting to solve or address?

What steps are needed to complete your project? What strengths and talents do each group member have? Assign group members roles for each step in the project.

What materials/resources do you need to complete this project? How will you acquire them?

How will you know that your project was successful?

Sustainability Project Self-Assessment Rubric

Complete this self-reflection honestly. Your teacher will compare the grade they would have given you based on the grade you gave yourself to see how accurate you assessed yourself. Teachers may change your grade based on their observations of you throughout the project, as well as any feedback from your group members.

Category	EXCELLENT (12-15)	GOOD (10-12)	SATISFACTORY (7-9)	NEEDS IMPROVEMENT (0-7)
Attitude	My attitude remained positive the entire project. I gave my best at all times	My attitude remained positive mostly the entire project. I did my best most of the time	My attitude was slightly positive. I did not always try my best	My attitude was poor, and I did not always try my best

Group Work	I worked great in a group – being a leader at times, while also following directions at times. I respected all my group members and was an integral part of our success	I worked well in a group – being either a leader or follower. I respected my group members and was an integral part of our success	I attempted to work well in my group. I was, at times, an integral part of our success	I did not work well in my group.
Goal Setting and Time Management	I set realistic goals for each class, and I used time effectively and completed my objectives each day	I set goals and usually completed the objectives each day	I set goals and sometimes used class time effectively	I did not set goals, and I rarely met objectives
Clean Up	I kept my area neat and cleaned up after myself at the end of each day, including the safe handling and storage of materials	I usually kept my area neat and helped clean up after myself at the end of each day, including the safe handling and storage of materials	I sometimes kept my area neat and helped clean up after myself at the end of each day	I rarely kept my area neat or helped clean up after myself at the end of each day
Overall Success	The final project was impactful and successful!	The final project was impactful	The final project was somewhat impactful	The final project was not very impactful

Total = /75 marks

Written Reflection Assignment

Once your group has completed the final project, take some time to individually answer these reflection questions in paragraph form. You will be graded based on your honesty and the depth of your self-reflection.

1. What would you consider to be the "successes" of your project? How did you contribute to them? (5 marks)
2. Describe a challenging moment completing this project. How did you overcome it or handle the situation? (5 marks)
3. What was the biggest thing you learned from completing this project? 5 marks
4. If you had an opportunity to do something like this again, what would you do? How would it be similar or different to your project this time? 5 marks
5. What attitudes and behaviours did you find to be the most helpful in this project? 2.5 marks
6. What are your final thoughts? 2.5 marks

Grade out of 25 marks.

Curriculum Connections

Alberta, Northwest Territories and Nunavut

- Entrepreneurship 11
- Entrepreneurship 12
- Aboriginal Studies 10, 20, 30
- Knowledge and Employability
- Special Projects 10, 11, 12

British Columbia and Yukon

- Entrepreneurship and Marketing 10
- Career-Life Education

Ontario

- Career Studies
- Business Studies 9,10
- Business Studies 11,12
- First Nation, Metis and Inuit Studies 9-12
- Social Studies Grades 9-12
- Science Grades 9-10
- Environmental Science Grade 11

Grade 9 and 10 Technology and Skilled Trades

Strand A: Design Processes and Related Skills

- A1.1 investigate and describe fundamental technological concepts, and explain how they are relevant to developing products and/or services in a variety of broad-based technology areas
- A1.2 apply an understanding of fundamental technological concepts, design considerations, and science, technology, engineering, and mathematics (STEM) concepts as appropriate in developing projects involving the creation of products and/or services
- A1.3 investigate design considerations, including accessibility requirements, that are relevant to developing projects, and identify those that are essential to various users or communities
- A1.4 communicate design ideas for various purposes and audiences, using appropriate industry terminology
- A1.7 collect and synthesize information from a variety of sources, including people with diverse perspectives and from various communities, such as First Nations, Métis, and Inuit, to inform their projects
- A2.1 use project management skills to develop a process to create a product and/or service
- A2.4 select, use, and maintain tools and equipment appropriately as part of creating products and/or delivering services
- A2.7 select appropriate units of measure and tools to make accurate measurements using relevant measurement systems, such as the metric and imperial systems, and converting between systems and units
- A3.1 identify challenges they encounter in the process of developing their projects and apply critical thinking skills to address these challenges and minimize the probability of their reoccurrence
- A3.2 identify various industry-relevant performance standards and quality control methods
- A4.3 use tools and equipment safely, including using personal protective equipment and safety devices according to safety standards and regulations, as appropriate
- A4.5 follow proper procedures for the safe handling, storage, and disposal of materials and waste products
- A4.6 demonstrate a safety mindset by making safety a priority at all times and by engaging in industry-specific safety procedures

Strand B: Technological Development, Impacts, and Careers

- B1.2 analyze how the development and application of technologies are impacted by legal, ethical, social, economic, and environmental considerations
- B1.3 investigate and identify contributions to technological innovations made by Canadians, including women, and members of diverse groups and communities in Canada, including First Nations, Métis, and Inuit
- B2.2 assess local and global impacts of various technological innovations on the environment and the economy, including the labour market
- B3.1 explore a variety of roles, responsibilities, and opportunities related to current and emerging careers in technological fields, including a variety of broad-based technology areas, and the skilled trades
- B3.3 investigate and describe a variety of pathways leading to careers in technological fields and the skilled trades, including their structure and the educational and financial requirements for them