

Pictou County Forest School - Grade 8 Pre-visit Lesson Plans

Climate Change: Design an Eco-House

Activity: Design an Eco-House

Overall Curriculum Outcome:

Learners will evaluate the impact of human activity on climate change.

Learners will formulate a plan to mitigate or adapt to the effects of climate change.

Specific Curriculum connections:

Sources of energy

- How do we get energy?
- How can the environmental impacts of various forms of energy production be determined?

Enhanced Greenhouse Effect

- How do humans impact the greenhouse effect?
- How is energy production related to climate change?

Climate change solutions

- How will humans need to change the way they live in response to a changing climate?

Green Technology

- How can technology help us adapt to a changing climate?
- How can climate change solutions pose other problems?

Materials:

- Paper
- Colouring materials

Activity:

Day 1/2

Students briefly research various animal homes found in nature, such as nests, dens and caves. Discuss how these animal homes are insulative, both in how they are made and the materials used.

What connections can we make between how these animals construct their homes and how we build and insulate our homes?

Day 3/4/5

Students can spend several days researching, sketching and discussing and/or presenting various styles of human houses that utilize natural building materials: straw-bale, rammed earth, cob, igloo, yurts, log-cabins etc.

Students should be able to articulate an understanding of the following curriculum concepts:

- How does my house collect and conserve energy?
- How does my house help people adapt to a changing climate?
- How does my house pose other problems?
- Is my house a realistic alternative for people to adopt in Nova Scotia?

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For a comprehensive selection of videos illustrating these styles of houses:

<https://www.youtube.com/@ExploringAlternatives>

The principles learned from this project will provide a solid context and theoretical understanding for students to apply their knowledge while building passive solar shelters at PCFS and their insulated boxes back in the school setting.