

First Nations Math

Activity 1 - Model Igloos

The Inuit people, who live in Northern Canada (Yukon, Northwest Territories and Nunavut, had three different types of houses that they use. They mainly live in a tent during the summer months and build a winter house for the colder season. This house is partially dug into the ground and covered with earth and snow to create a layer of insulation. They use the igloo exclusively as a temporary shelter while they are traveling. It can provide great protection in cold climates for up to weeks at a time. The igloo is a dome-shaped dwelling that is constructed with blocks of snow placed in an ascending spiral with a tunnelled entrance.

Activity Instructions: It's time to build an igloo out of baker's clay. The first thing we need to do is measure out the ingredients and get our blocks ready for construction.

For this activity you will need: baker's clay, a knife, 180 mm paper plate, a pencil and white icing. Ingredients for baker's clay: 1 L flour, 400 ml water and 300 ml salt.

1. Mix all the ingredients in a bowl. Knead the dough for five to 10 minutes. Roll out the dough to a 10 mm thick slab. Cut out 50 blocks about 10 mm long by 5 mm wide.
2. Lay four blocks in a line and cut them diagonally. Trim the sides so that they fit around the outside rim of an upside down 180mm (7") paper plate. Glue them down with icing. (The raised inner section of the paper plate could be cut to leave a sleeping and cooking platform.)
3. Continue trimming blocks and gluing them down to complete the circle. If you reach the sloped blocks, trim the bottoms as well as the sides so that the next layer tilts inwards a little.
4. Continue spiralling upwards, tilting each layer a little more until you reach the top of the dome. Fill the center hole with a block cut to fit.
5. Cut a doorway two blocks high and build a porch of smaller blocks. Paint your igloo with "icing" snow.

Can you believe THIS is math?