KEY WORDS:
Archaeology, faeces, preservation, measurement, recording, evidence

ARCHAEOLOGY

Leif and his family are long gone now, but signs of Viking farms have been found all over Copeland and the west coast of Cumbria. Archaeology is a multidisciplinary subject, using many of the sciences and humanities in order to decipher the clues about how people used to live. Digging things up out of the ground is only one way that archaeologists find out about the past. From looking at archaeological finds, reading old manuscripts and looking at carvings and monuments left by the people who lived in Viking times, it has been possible to put together the story of Leif, his family and his men, and get a glimpse of what it may have been like to live in the Viking Age.

What did people eat in Viking times?

How do we know what people ate in Viking times? From their poo, preserved in their old toilet pits.

Investigating (fake) Viking poo

Teachers' note: Preserved faeces contain a wealth of information about the diets of people who lived in Viking times. They are usually quite safe to handle as the micro-organisms will be long dead. Preserved in the faeces are the remains of food that the people have eaten. The fake faeces will need to be made in advance of the activity.

People in Viking times did not use knives and forks to eat their meals. Larger chunks or lumps were cut up with knives. Solid food would be eaten with the fingers; sloppier food would be eaten with a spoon. There were no forks. People mostly ate savoury porridge with fish or meat, and vegetables added, plus fruit in season. Fish and meat were sometimes salted, or hung to dry in the open air, or smoked over fires to preserve food for over the winter. Most food was cooked over the fire in a clay or soapstone pot or, sometimes, an iron cauldron. Poorer people would add shredded pine-bark to their meals to help bulk them out, and also as a source of vitamin C (although they wouldn't have known that).

Grinding grain to make flour, using a quern, often meant that small fragments of stone were eaten when the flour was used to make bread. Sometimes remains of parasites are also found in the faeces, such as roundworms and tapeworms.

What can we ask? How do archaeologists find out what people in Viking times used to eat?

Equipment list:

Poo ingredients (for 20 poos):

- 300 g plain flour
- 300 g salt
- 2 tablespoons bicarbonate of soda
- 2 tablespoons vegetable oil
- 250 ml hot water
- 10 stock cubes (or brown poster paint or brown food colouring)
- Mixing bowl
- Measuring jug
- Cooked spaghetti or tagliatelle (optional)
- Evidence – fish bones, barley grains, apple pips, peas, cherry stones, small stones, small pieces of chipped wood bark

Activity equipment per group or pair: Fake poo, wooden scraper (lollypop stick or blunted cocktail stick), paper plate, ruler, vinyl gloves, pencils and paper

Preparation: Mix the hot water with the stock cubes (or other poo colouring), so the water is a good brown colour. Put the flour, salt, bicarbonate of soda and vegetable oil in the mixing bowl and slowly add the water until it is a firm but flexible dough. To make it darker add more food colouring, but make sure the poo does not end up runny. Add the evidence as follows, per poo:

- Two fish bones
- Plenty of barley grains
- Five peas
- Three apple pips
- Ten small stones (small gravel sized)
- One cherry pip
- To make it extra disgusting, add a length of cooked tagliatelle as a tapeworm and/or spaghetti as a roundworm.

If unable to make the poo using the ingredients above, you can use soft brown play dough.

Activity instructions: Hand out the equipment to the groups or pairs. Give each group their poo on a paper plate. The children should record the dimensions of the poo, such as length and thickness. They then use the wooden scraper to pull the poo apart and extract and record the evidence of the person's diet.

Related activities: Make a menu for the day based upon the food remains discovered.

KEY WORDS:
Archaeology, preservation, organic, soil, acidic, oxygen

How can items survive 1500 years or more in the ground?

Teachers' note: While some items are easily preserved for long periods of time, especially inorganic materials like rock, metal or ceramics, the preservation of organic materials depends upon the conditions of the soil it is buried in.

What can we ask? What are the best soil conditions to preserve objects from Viking times?

Equipment list: Three large tubs (from garden centre), garden soil, peat or ericaceous compost (from garden centre), a variety of organic and inorganic objects

Activity instructions: Prepare three tubs, either somewhere safe or buried in the school grounds. Fill the first tub with ordinary soil, the next tub with damp peat or ericaceous compost and the final tub with ericaceous compost or peat which is waterlogged. Make sure all are very well packed with soil material. Bury a variety of items: leather, wool, linen, cotton fabric, wood, food items like fruit, meat, butter or cheese wrapped in cloth, metal items made of iron, copper, silver, gold. Perhaps add synthetic fabrics as a contrast. Leave for several weeks then unearth and examine the condition of the items from each tub.

Explanation: Some items are naturally preserved in the ground as they are made of imperishable materials, such as rock, ceramic, minerals, silver or gold. Organic materials such as leather, fabric, hair, wood, food and bones can be preserved if the conditions underground are suitable. Generally, waterlogged, acidic conditions with very little oxygen are best for the preservation of organic materials.

Health and safety: When digging the items back up again ensure that gloves and eye protection are worn, especially when examining foodstuffs. When full, the tubs will be very heavy. If they need to be moved ensure proper manual handling precautions are taken.

Related activities: Vary other conditions, such as oxygen content, pH of soils, amount of water, using smaller containers. Use garden kits to test variables.