



Geography/ Science

Strand: Human Environments

Strand unit: People living and working in a contrasting part of Ireland – *Transport and Communication*

Strand: Energy and Forces/ Environmental awareness and Care

Strand unit: Forces/ Science and the Environment

Aims:

- Explore and make a fact file of ports in Ireland and locate these ports on a map of Ireland
- Explore and make a factfile of ports in Britain and locate these ports on a map of Britain
- Explore and make a factfile of ports in Europe and locate these ports on a map of Europe
- Using the 'Follow the Fleet' website to find choose a ship and read the Captain's report to find out what port the ship is at or what was the last port that the ship docked at.
- Plot the ships visit to the various ports on a map of Europe
- Choose a port that is local to you and interview somebody who works in the port
- Discuss what equipment would need to be included in the design of a port and why e.g. cranes, levers, ramps etc.
- Investigate rollers and wheels
- Design and make a wheeled vehicle

Suggested Ideas:

- Complete a fact file on the various ports explored on the 'Follow the Fleet' website

Country	Name of Port	Function of port	Other interesting facts

- Log the different ports where the various ships from the fleet dock

Name of ship	Port 1 visited	Port 2 visited	Port 3 visited	Port 4 visited

- Ask the children to consider how some of the cargo is moved off the ships, i.e. cranes, levers, rollers. Encourage the children to consider how they would move a brick by rolling, rather than pushing or pulling. Try making rollers from different objects, e.g. a lid placed on marbles, pencils, thread spools etc. The children should mount the brick on the rollers. Attach a rubber band to the brick and pull, so that it begins to move on the rollers. The children should observe, and measure with a ruler, the extent to which the rubber band is stretched while the brick is moving. Ask the children to consider how they will continue to move the brick, i.e. having to move the rollers from the back to the front. Consider the disadvantages of this system. (Gov. of Ireland 1999, Science Teacher Guidelines, pp. 114-115)
- Observe and investigate wheeled toys, such as cars, trucks, dumpers and tricycles. Note the size and number of wheels in use on the various wheeled vehicles and the ways in which the wheels are fixed on the various toys.
- Design and make a wheeled machine that can be used to move loads. Evaluate their design in terms of movement and ability to carry a load.
- Conduct a fair test to assess the effectiveness of the various constructions. The variable in this case is the vehicle that is designed and made. The load must be the same and must have to move it the same distance at the same speed. Discuss the results.