



Internet Packet Game

LO To model how internet packets travel across the world via routers

Prior Learning

This module is best done after mapping the Internet

Useful Background Information

The Internet comprises of all of the wires and routers (boxes that route information) connecting networks around the world. Routers direct traffic around the Internet via the quickest route. Information is broken up into small packets, which are labelled with their destination, point of origin and their order. These are then sent over the Internet. Once they reach their destination they are reassembled and used.

Introduction

Show pupils the Packets Tale video or remind them about it from a previous lesson. Display the packet help sheet on the interactive whiteboard during the activity. Give out packets cut up and dice. Explain that they are going to model how packets of data move from the user to the recipient across the Internet. In this model we are using an email as an example. Pick up two packet cards and explain how they can send messages by filling in the To and From section of the top of the packet. They can write a message with one letter in each box only. If their message runs out of space they must continue on the next packet. Once they have the completed message they fill in the order section. A one packet message will be 1/1, the first packet of a two packet message will be 1/2 and the second 2/2. Finally they roll the dice and add 6 to create the time to live. Explain that the time to live is the maximum number of routers that the packet can go through before it is destroyed, helping the Internet not to get clogged up with data. At this point model one packet of data as it moves to its intended recipient. Make sure each pupil acts as a router and reduces the time to live by one. Only allow pupils to hand packets to those within arms length.

Activity

Now allow pupils free range to send message to whom they will. Remind them fairly often about reducing the time to live by one every time a packet is handed to them.

Interventions

If a packet reaches zero publicly destroy it reminding pupils why. At some point note a choke point between tables and freeze the class. Explain that a Tsunami has broken the fibre optic cable between these continents. Packets will have to be re-routed another way.

Computing National Curriculum

understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration

Resources

- [Packets Tale Video](#)
- [Packet cards](#) cut up (5-10 each)
- [Packet Help Sheet](#)
- Dice

Approximate Time to do
20-30 minutes