

Finding Your Way (Teacher Version)

Corresponding Material

Networking Fundamentals, Routing

Discussion

Information you request from the internet gets to your computer by following a path through the web of the internet. This journey is called routing. Each piece of information, called a packet, must be sent through *routers* until it arrives at your computer. Routers are responsible for choosing what router to send the packet to next, or deciding your computer is close enough and routes the packet to your computer.

You, or you and your family, have done a similar routing process before. For example, suppose that it is Saturday and you need to go grocery shopping, pick up some school supplies, and get dog food for the dog. You must decide which errand to complete first and the best way to get place to place.

Can you think of other times when you have had to decide a path to take to reach a destination?

Activity Setup

You will need to print out maps for your students. Students may work alone or in groups. You can search for your local zoo map, or use one of the suggested maps below:

Birmingham Zoo, Birmingham AL:

<https://www.birminghamzoo.com/wp-content/uploads/2015/05/Zoo-Map-March-2016.pdf>

Taipei Zoo, Taipei City Taiwan:

<http://english.zoo.gov.taipei/public/Attachment/4731631791.pdf>

Jacksonville Zoo, Jacksonville FL:

<http://www.jacksonvillezoo.org/Documents/ZooMap.pdf>

Sofia Zoo, Sofia Bulgaria:

http://zoosofia.eu/wp-content/uploads/2015/10/Zoo_Sofia_Map-724x1024.jpg

Class Exercise

You are setting out for a fun filled day at the zoo! But first, you decide that you

need to figure out where you will go first by looking at the zoo's map.

Choose five animals that you *must* see. Then, find routes starting from the front gate and ending at the front gate that passes by each of the five animals you picked, based on the following criteria:

1. Find what looks like the shortest route
2. Find a route that takes you through the most of the zoo
3. Find a route where you never turn right
4. Find a route where you can stop and eat something in the middle of the route.

Example Shortest Path:

Visits rhinos, elephants, lions, giraffes, kangaroos in the Jacksonville Zoo

