Activity – Darwin's finches

Part 1

Why not step into Darwin's shoes and observe some of the finches he saw on the Galapagos Islands?

Go to the Darwin's finches scrapbook (www.arkive.org/darwins-finches) on the ARKive website to watch the videos, look at the photographs and read the information on the finches. On the website you'll find all thirteen species of finch found on the Galapagos.

Like Darwin, you need to write down the names of the finches then observe their colours, shapes and sizes, what they eat and the shapes of their beaks, and where they live.

Write notes and make sketches which could be used in a classroom display to show what you have found out. What are the similarities between the finches and what are the differences? Can you link their specific characteristics to what they eat and the habitats they live in?

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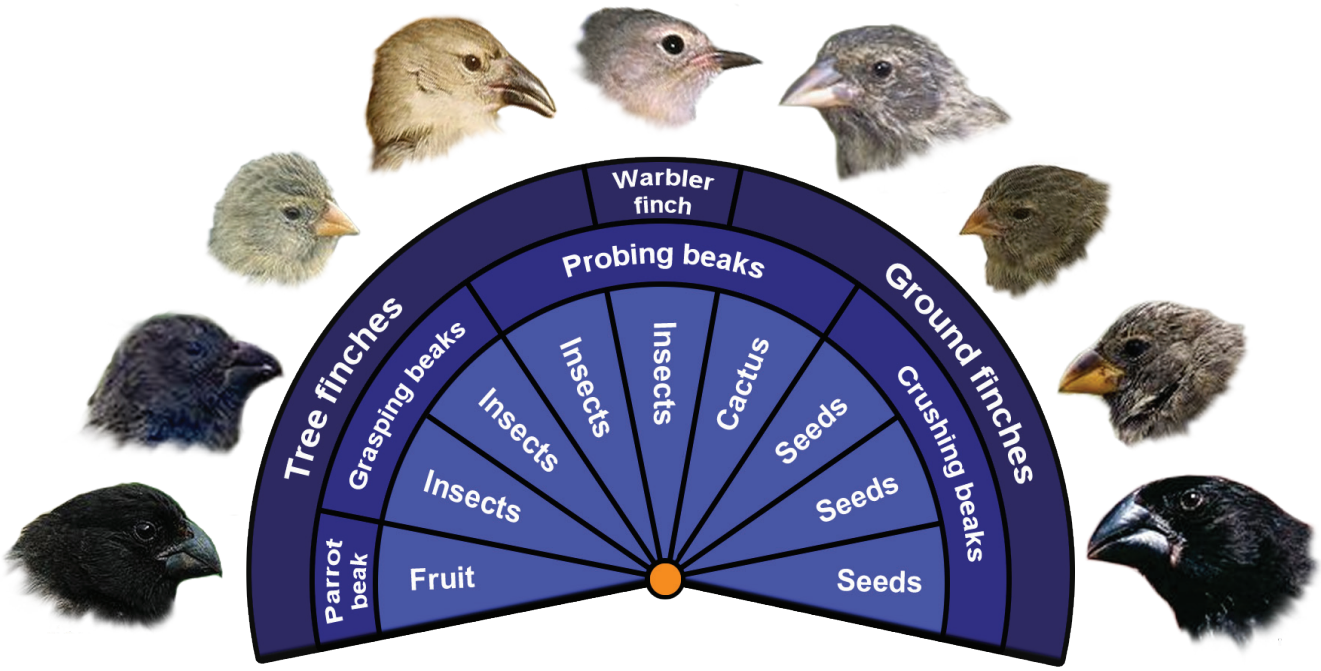
Part 2

Variety is the spice of life - at least it is if you are a finch!

The diagram summarises how the shape of the finch's beak matches the food it eats.

Use the diagram provided and the information on ARKive to put together a key which could be used by scientists in the field to identify the finch species. Remember the finches don't just look different, think about what they eat and where they are found too – this may help you to put the key together.



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Part 3 - Galapagos finches: A clue to the theory of evolution?

You have looked at some of Darwin's finches and seen their wide variety of sizes and shapes for yourself.

The variation in their beaks is because the conditions and food sources are slightly different in different habitats on each of the Galapagos Islands.

Darwin thought that these volcanic islands must have originally been colonised by small numbers of finches which were blown offshore from South America by storms. He then realised that each species of finch must have become adapted to life on its particular island – the habitat it lived in and the food available to eat.

To survive, all animals need to eat and the shape of a bird's beak is important in obtaining food. Some finches have large, powerful beaks which are ideal for eating hard, dry seeds. Others have pointed beaks which can probe for insects. One species of finch even uses a cactus spine to dig its food out of holes!

Depending on the kind of food available, birds with a particular beak shape will be more successful on some islands than others.

So what do you think the original finch's beak was like? Darwin thought that all of these beak shapes evolved from one 'common ancestor'. Draw a picture in the circle to show what you think the original finch's beak was like.

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Part 4

If you have time, why not investigate the Galapagos giant tortoise?

1. What is different about the tortoises which live on different islands?

2. What characteristics do the different tortoises share and what are the biggest differences between them?

3. Create a table that shows what each of the tortoises is like.

4. Make a simple key to differentiate between them.

You can find the Galapagos giant tortoise at:
www.arkive.org/galapagos-giant-tortoise