



PLYMOUTH CITY
MUSEUM AND
ART GALLERY



DARWIN'S VOYAGE OF DISCOVERY

24 January — 18 April

VARIATION WITHIN SPECIES For classroom-based activities

When compiling his ideas for the book '*On the Origin of Species by Means of Natural Selection*', an area that Charles Darwin studied in detail was the variation that occurs within individuals of the same species.

When two individuals from the same species reproduce, the offspring is always different in appearance from the two parent individuals. Not even 'identical' twins are exactly alike. Whilst travelling on the *Beagle*, Darwin was able to study this idea by looking very closely at beak shapes of finches from the Galapagos Islands. He found that through choosing birds with distinctive beak sizes and breeding them with one another, he was able to create offspring that showed even greater distinct variations. He called this 'artificial selection'.

Using the colour charts and museum-style labels included with this document, try classifying your pupils in the classroom.

Your pupils will all have different eye and hair colour. Using the colour charts provided, get your students to study this variation within species by classifying one another.

Start with eye colour. Determine which group each pupil belongs to, and assign a colour code using the chart.

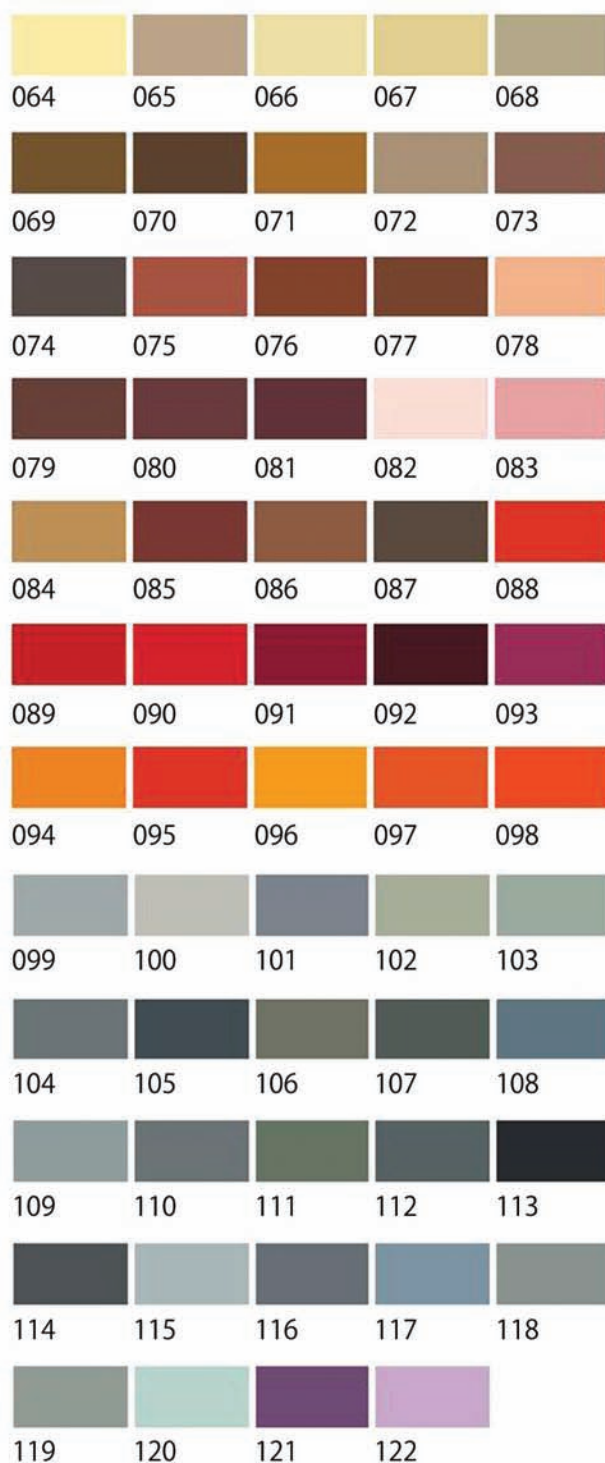
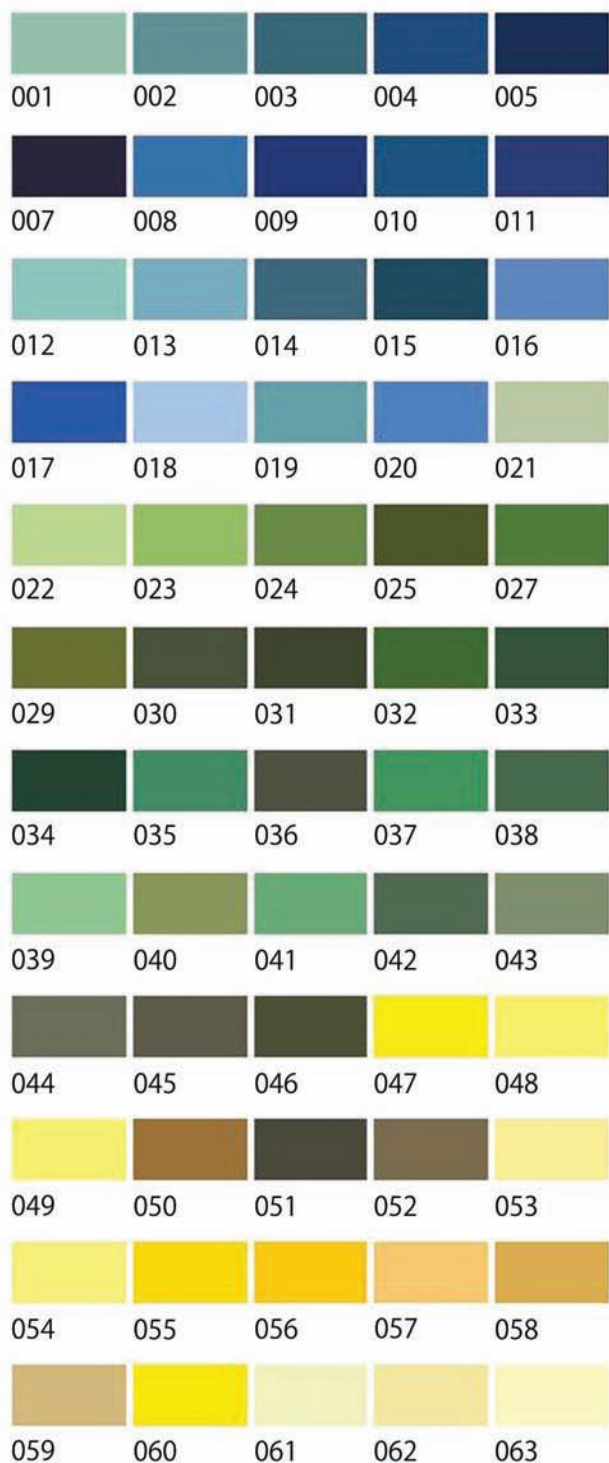
Now try hair colour. Again, ask pupils to classify each other using the colour charts.

If the actual colour does not match the colour chart, you can adapt the codes to your needs. For example, if a pupil's hair colour falls between code **056** and **057**, affix letters to the code, such as **056a**.

Following this activity, pupils should be able to collate their findings onto spreadsheets, and create graphs and charts that will demonstrate the variation with species.

Use the 'Museum' labels on page 4(?) to classify your class. To print the labels out, find 'Avery A4 and A5 sizes' in the 'Tools > Letters and Mailings > Envelopes and Labels' window, and select the code J8162. These should be 3.81cm x 9.91 cm.

Use these colour charts to classify eye colour



Use these colour charts to classify hair colour

Brunettes



001

009

Blondes



012

020

Reds



024

Highlights



032

040

Greys



043



002

010

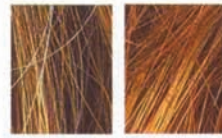


013

021



025

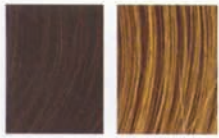


033

041



044



003

011



014

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026



034

042



045



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047



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017



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037



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007



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030



038



049



008



019



031



039



050



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Eye colour code:

Hair colour code:



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