ACTIVITY

Starry Night

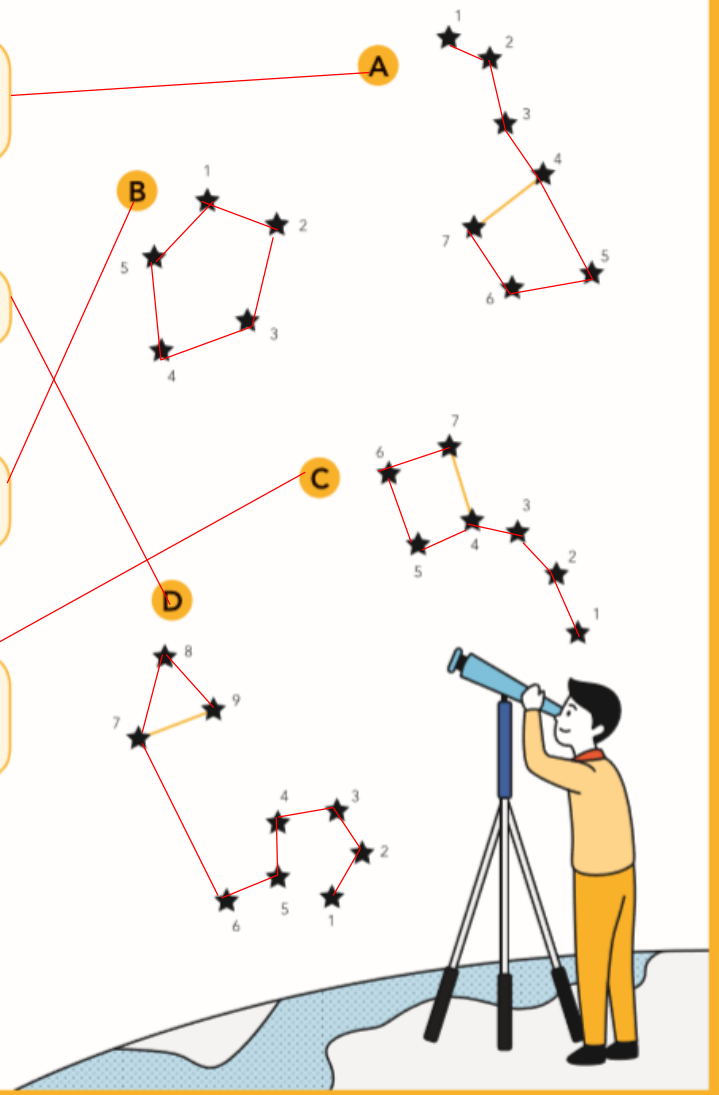
Connect the dotted lines to form the constellations and match them to their correct names!

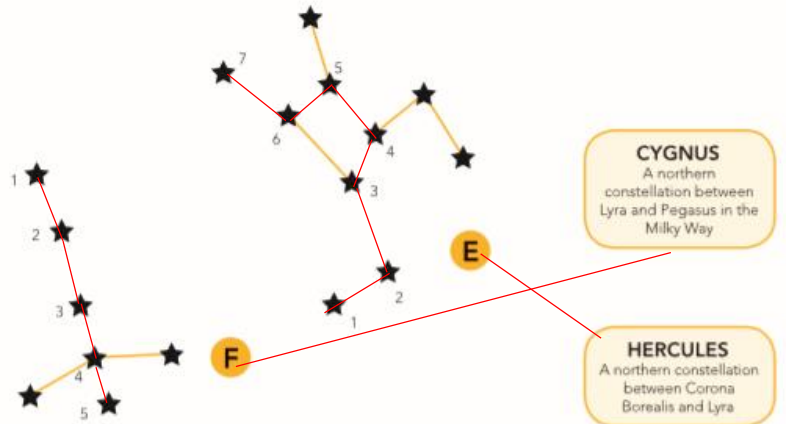
BIG DIPPER
The seven principal stars in the constellation of Ursa Major

LEO
A northern constellation east of Cancer

CEPHEUS
A constellation between Cygnus and the North Pole

LITTLE DIPPER
The seven principal stars in Ursa Minor



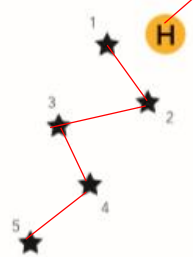


CYGNUS
A northern constellation between Lyra and Pegasus in the Milky Way

HERCULES
A northern constellation between Corona Borealis and Lyra

CASSIOPEIA
The wife of King Cepheus who gave birth to Andromeda and was later changed into a constellation

CANCER
A northern zodiacal constellation between Gemini and Leo

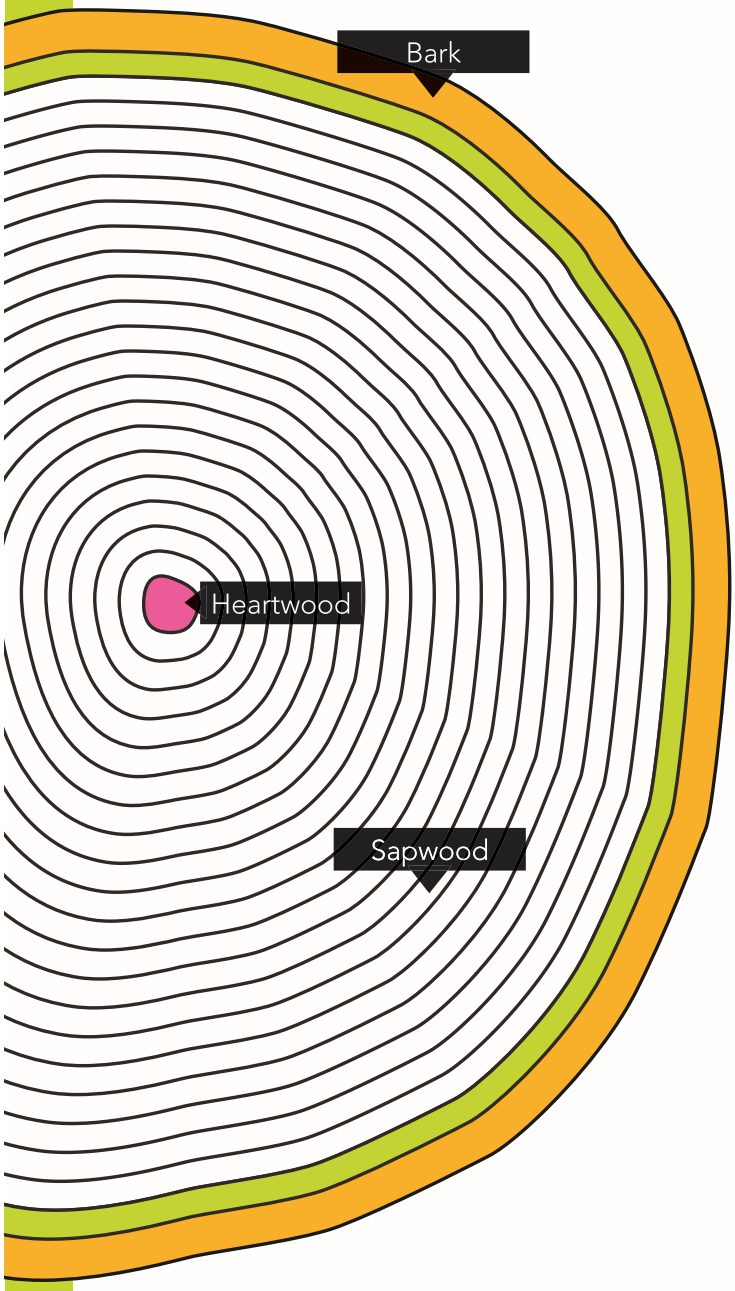


Additional references:

"Constellation Map dot to dot." *Super Colouring*, 13 January 2013, http://www.supercoloring.com/dot-to-dots/constellation-map. Accessed 27 August 2019.

"Big Dipper", "Leo", "Cassiopeia", "Little Dipper", "Cepheus", "Hercules", "Cygnus", "Cancer", *Merriam-Webster.com*. https://www.merriam-webster.com/dictionary. Accessed 27 August 2019.

ACTIVITY



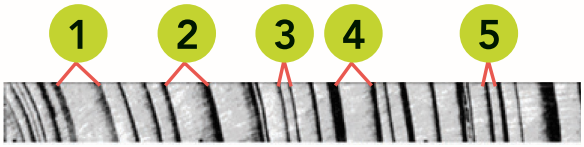
Inside the Trunk

'Heartwood' is found at the centre of a tree trunk. It is surrounded by sapwood, which contains tiny tubes that carry water from the roots to the rest of the tree.

Tree rings provide clues about the tree's history. Dendrochronology is the scientific method of measuring the history of trees as they grow outward from the centre, with a new 'ring' created around the trunk every year.

A narrow ring means that the tree grew slowly due to low rainfall or extremely cold weather. A wide ring means that the tree grew quickly.

See if you can be a dendrochronologist! Compare the relative widths of the rings marked 1 through 5 below.



Which rings might indicate years of relative abundant rainfall?

1, 2 and 4

Which rings might indicate years of drought?

3 and 5

Additional references:

"Exploring Earth: How Do Trees Record Time?". *Earth Science*, (n.d.), http://www.classzone.com/books/earth_science/terc/content/investigations/es2905/es2905page02.cfm?chapter_no=investigation. Accessed 14 August 2019.

MAKE!

Leaf Chromatography

Chromatography is a scientific technique for separating a mixture into the chemicals from which they are made. Discover what makes leaves so colourful through leaf chromatography!

YOU'LL NEED

- Leaves in different colours
- A cup for each leaf
- 1 piece of coffee filter paper (cut into 15cm by 2cm strips)
- Nail polish remover
- Pencils (1 for each cup)
- A roll of clear tape

SAFETY NOTE

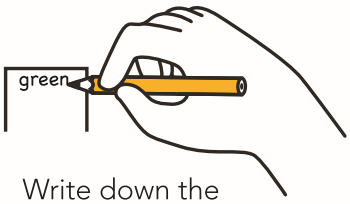
Nail polish remover is flammable; do not use near heat. It is also harmful if ingested.

Instructions:

1. Tear each leaf into small pieces.

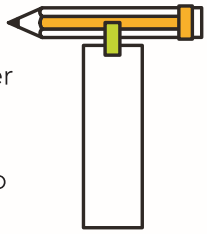
2. Put the pieces of each leaf into a cup. Each leaf should get its own cup.

3. Pour enough nail polish remover into the cups to just cover the pieces of leaves. These are your pigment mixtures.



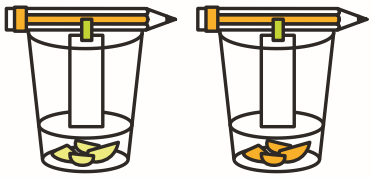
4. Write down the original colour of one leaf on the end of a strip of filter paper.

5. Tape the end of the strip of filter paper with the written colour onto the pencil.



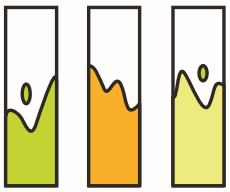
6. Suspend the pencil across the cup and let the strip just barely touch the pigment mixture.

7. Repeat steps 4, 5 and 6 for the other strips and pigment mixtures in the cups.



8. Wait for 10 minutes as the liquid travels up the paper.

9. Take the filter paper from the cup and let it dry. Compare the results for all your leaves. How do the pigments differ?



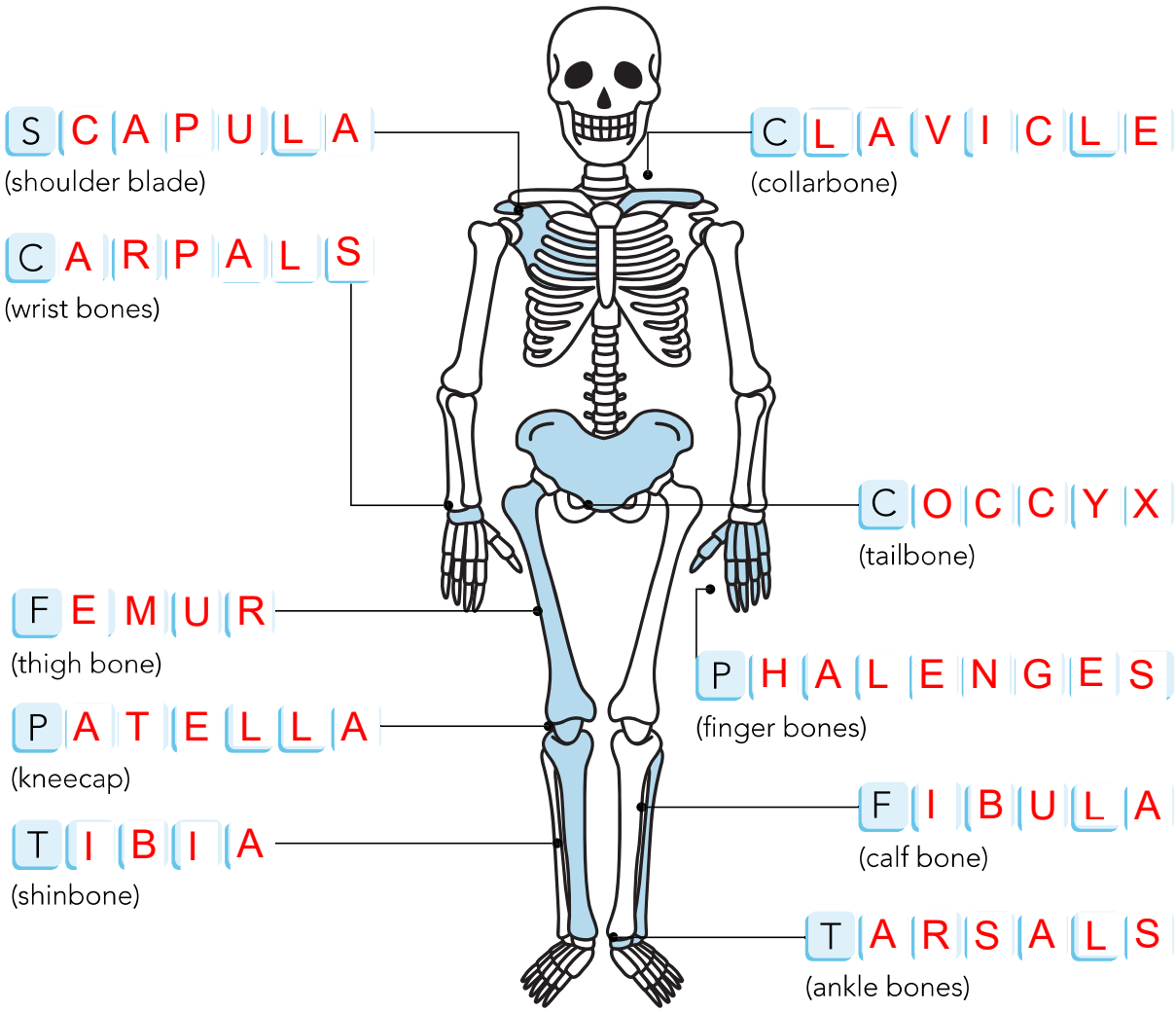
Additional references:

"Saturday Science: Leaf Chromatography." *The Children's Museum of Indianapolis*, 9 November 2013, https://www.childrensmuseum.org/blog/saturday-science-leaf-chromatography. Accessed 30 August 2019.

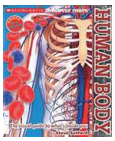
ACTIVITY

Getting to the Bone of It

Can you name these bones?



References

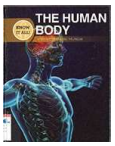


Human Body
Author: Steve Setford
Call No.: J 612 SET

All rights reserved, Scholastic, 2014.

The Awesome Body Book: The World's Most Incredible Human Body Facts
Author: Adam Frost
Call No.: J 612 FRO

All right reserved, Bloomsbury, 2016.



Know It All! The Human Body
Author: Moira Butterfield and Pat Jacobs
Call No.: J 612 BUT

All rights reserved, Super Sandcastle, 2018.

Additional references:

Davidson, S. and B. Morgan. *Human Body Revealed*. London: Dorling Kindersley, 2002.

Macnair, P. *Everything You Need to Know About the Human Body*. London: Kingfisher, 2011.