### **Key Questions:**

- What are organisms and what are they made of?
- How do organisms grow and reproduce?
- How do organisms stay healthy?
- How do organisms live together?

### **Key Themes:**

- Structure related to function
- Interdependence

# Who should I follow on Twitter?



There does not seem to be an abundance of Biology teachers posting on Twitter, however below you will find people whose ideas are relevant in all classrooms:

Biology Coach Online: 'Your source for virtual biology education'
@heybiologycoach

Teach Like a Champion: Doug Lemov & team, strategies for closing the gap <a href="mailto:@TeachLikeAChamp"><u>@TeachLikeAChamp</u></a>

Tom Bennett: founder of researchED, a grass-roots organisation that raises research literacy in education.

@tombennett71

Tom Sherrington: A former head teacher who explores current ideas in education.

@teacherhead

David Didau: Education writer and speaker.

@DavidDidau

Unity Research Schools @UnityResSch

# Biology 'on a Page'

#### What should I read?

In terms of teaching Biology, a couple of books are particularly helpful. Firstly, Teaching Secondary Biology by Michael J. Reiss (Hodder 2011), covers pupil's expected prior knowledge, suggested teaching sequences, useful tips and activities as well as a look at common misconceptions. Secondly, Making Sense of Secondary Science: Research into Children's Ideas by Rosalind Driver, Ann Squires, Peter Rushworth & Valerie Wood-Robinson (Routledge 1994), draws on research into children's ideas about natural phenomena and provides a useful insight for teachers in terms of where misconceptions come from, to enable us to address them in lessons and teach with children's thinking in mind.

Regarding curriculum development, the paper produced by the Royal Society of Biology is a really useful read and helps to pull together the key questions and themes within the subject (<a href="https://www.rsb.org.uk/images/SSR">https://www.rsb.org.uk/images/SSR</a> September 201 8 23-29 McLeod.pdf)

A key area for development in teaching is metacognition and self-regulation; understanding how we learn and applying these principles in order to maximise the learning process. Biologists are in a somewhat unique position to tackle this as understanding how the brain works is central to understanding how we learn. A good read to begin grappling with this field is David Didau & Nick Rose's book: What Every Teacher Needs to Know About Psychology.

# On The Blogosphere

A good starting point for all things biology. The Royal Society of Biology blog has some interesting articles.: <a href="https://blog.rsb.org.uk/">https://blog.rsb.org.uk/</a>

Curriculum development:

https://www.ase.org.uk/system/files/SSR September 2018 23-29 McLeod 0.pdf

Lots of excellent resources and links for teaching biology:

https://thescienceteacher.co.uk/biology-teaching-resources/

A biology teacher's blog, particularly useful if you are teaching iGCSE or have an interest in flipped learning:

https://www.mrexham.com/

A biology teacher's blog, aimed at her students but with lots of useful links & resources for other practitioners:

http://lphsbiology.blogspot.com/

This blog is about a day in the life of a high school biology teacher. Useful resources, although many you have to purchase:

https://www.amybrownscience.com/

A useful guide to all things neuroscience mapped onto different syllabi and complete with excellent links and resources:

https://www.bna.org.uk/aboutneuroscience/neuroscience-in-schools/

Not a blog but loads of really excellent, fun & useful resources (if you haven't made a brain hat you are missing out!):

https://ellenjmchenry.com/



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