Best Evidence Science Teaching

Usage guidelines and FAQs

The **Best Evidence Science Teaching (BEST)** project aims to transform science education research into practice by making research-informed resources freely available to science teachers.

The project provides an online, open access collection of resources developed from research by the **University of York Science Education Group** (www.york.ac.uk/education/research/uyseg), which is part of the Department of Education at the University of York. The development of the resources is funded by the **Salters' Institute** (www.saltersinstitute.co.uk), except where indicated otherwise.

All of the BEST resources are hosted online by **STEM Learning** at www.stem.org.uk/best-evidence-science-teaching. Copies of the resources hosted or obtained elsewhere may have been edited by third parties and are not endorsed by the BEST project team or its sponsors.

All BEST resources are © University of York Science Education Group. They are distributed under a Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) license. All of the resources are free to download and use in accordance with the terms of the license. This means that:

You are permitted to:	Provided that you:
• freely download and use the BEST resources • copy and redistribute the BEST resources • adapt the BEST resources or create derivative works.	• attribute Best Evidence Science Teaching as the original source • do not use any of the BEST resources, or adaptations or derivatives of them, for commercial purposes • indicate if you have made any changes to the original resource(s) • do not imply that you, or any adaptations or derivative works made by you, are endorsed by the BEST project team or its sponsors.

Further information about the CC BY-NC 4.0 license is available at:
creativecommons.org/licenses/by-nc/4.0/

Enquiries about the BEST resources and their use should be directed to:

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Frequently asked questions

Where is the best place to get copies of the BEST resources?

All of the BEST resources are hosted online by STEM Learning at www.stem.org.uk/best-evidence-science-teaching. Copies of the resources hosted or obtained elsewhere may have been edited by third parties, are not endorsed by us, and may be out of date (as we occasionally update selected resources). Follow us on Twitter (@BestEvSciTeach) to find out when new resources have been published and when existing ones have been updated.

Where can the BEST resources be used?

Anywhere, provided they are used for non-commercial purposes and in accordance with the other terms of the license. For example, you are free to download and use the BEST resources in homes, schools, colleges, universities and other educational environments, anywhere in the world.

Can I copy and redistribute the BEST resources in school?

Yes. For example, you can copy and redistribute BEST resources within your department, school or academy chain, and can upload them to a VLE or similar, provided you attribute Best Evidence Science Teaching as the original source.

Can I adapt BEST resources for use in my particular school?

Yes. You know your students better than we do, so you may – for example – want to edit the language, artwork or demand of a resource to make it work better for them. The vast majority of BEST resources are provided in editable Word and PowerPoint formats.

Can the BEST resources be incorporated into an app or other platform to make them interactive or to facilitate the collection of response data?

We hope to explore this kind of functionality ourselves in the future, but for now we are only able to provide the Word and PowerPoint versions of the resources. You may do this yourself for use within your own school, for example via Google Forms or similar. However, if you do so and the BEST diagnostic questions or other BEST resources that you incorporate will be publicly accessible please let us know in advance by emailing uyseg@york.ac.uk.

Can I develop and run a training course that makes use of BEST resources? And can I charge for it?

You are free to make reference to or incorporate BEST resources in a training course or session provided you attribute Best Evidence Science Teaching as the original source; we also ask you to include a link to the BEST web pages so that participants can engage further with the resources after the course.

If you run a public training course or session that is largely or entirely focussed on BEST, please let us know in advance by emailing uyseg@york.ac.uk (however this is not necessary for sessions run within school departments for the purposes of disseminating information about BEST).

We understand that you may have to charge attendees to help cover your administrative or travel costs. However, attendees must not be charged for copies of the BEST resources.

Surveying the research literature and using it to develop the BEST resources has been a massive undertaking over many years; neither we nor our sponsors are profiting or collecting any royalties from BEST, so we politely ask that you don't either.

I've created some resources based upon BEST that I think others may find useful. Can they be hosted on the BEST web pages?

No, unfortunately we cannot host any resources created by third parties on the BEST web pages. But we would love to find out about what you've done, so please let us know via Twitter by including our Twitter handle @BestEvSciTeach.

I work for a large organisation or company that would like to create some materials based upon, incorporating or derived from the BEST resources. Is that permitted?

Yes, provided the resources you create are used for non-commercial purposes and in accordance with the other terms of the license we have applied to the BEST resources. Please let us know what you would like to do in advance by emailing uyseg@york.ac.uk, so that we can explore ways to collaborate.

If you would like to develop a commercial product based upon, incorporating or derived from the BEST resources, please contact us to discuss the possibility of alternative licensing arrangements.

How should I cite BEST in a published piece of writing?

In blogs and non-academic articles, please refer to "Best Evidence Science Teaching (BEST)" and include a link to the BEST web pages. If you tweet about BEST please include our Twitter handle @BestEvSciTeach.

In academic works, please include the following information in citations: author (Best Evidence Science Teaching), year (2019 for all BEST 11-14 resources; 2020 for BEST 14-16 resources), the resource title prefixed with the resource type, publisher (University of York Science Education Group), place published (York, UK), and URL.

For example:

Best Evidence Science Teaching. (2019). *Diagnostic question: Moving through the digestive system* [Online]. York, UK: University of York Science Education Group. Available at: https://www.stem.org.uk/best/biology/big-idea-cellular-basis-life.

Best Evidence Science Teaching. (2019). *Key concept: CSU1.1 Substance* [Online]. York, UK: University of York Science Education Group. Available at: https://www.stem.org.uk/best/chemistry-earth-science/big-idea-substances-and-properties.

Best Evidence Science Teaching. (2019). *Article: Teaching energy* [Online]. York, UK: University of York Science Education Group. Available at: https://www.stem.org.uk/best-evidence-science-teaching.

Are there any plans to develop BEST resources for other age ranges?

Thanks to the generosity of our sponsors, we have funding to develop BEST resources to cover the complete 5-year secondary science curriculum from age 11 to 16. BEST resources for the 11-14 age range were published between 2018 and 2020. BEST resources for the 14-16 age range are being developed from the best available research evidence, and will be published on a topic-by-topic basis throughout 2021 and 2022.

A pilot project to explore the feasibility of developing BEST resources for primary schools began in autumn 2020, in collaboration with primary teachers and primary science education specialists from the Centre for Industry Education Collaboration (CIEC) at the University of York.