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How to Support the EAL learner in the Primary Science Classroom

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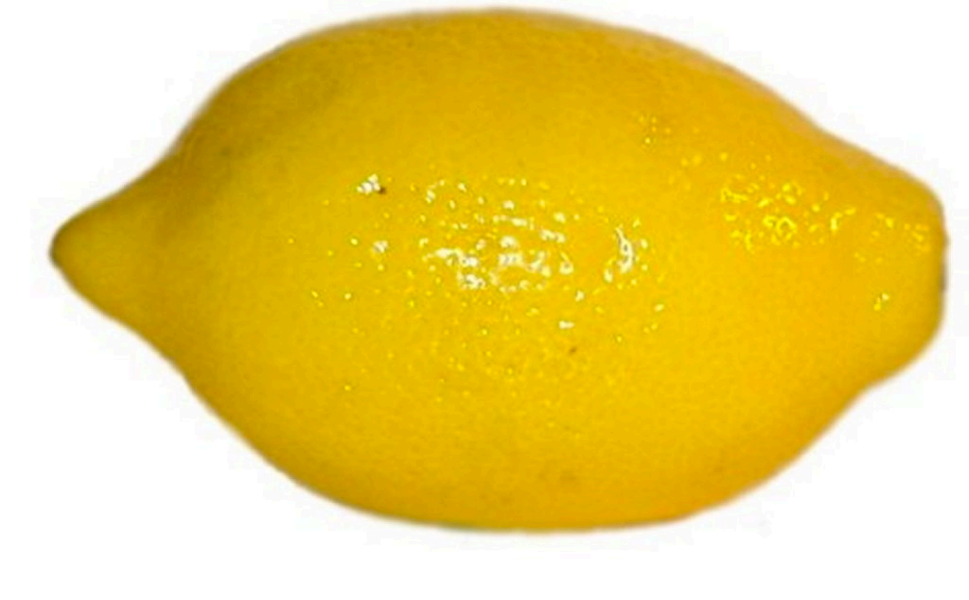

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Learning from this activity?

- Wherever possible use concrete and real objects in lessons as they will provide the greatest stimulation for vocabulary

- However, be aware that with EAL students, they may not have the vocabulary to participate so you will have to provide this when planning lessons

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Problems with Science

The language of science intimidates the outsider or the young person Science appears distant, elevated, strange.

To challenge this perception students need to TALK science (pupils spend less than 5% of classroom time talking, and more than 40% listening)

“Pupil talk in a lesson has many functions. It increases the understanding of concepts, enables pupils to learn how to communicate clearly with others, makes then active learners, gives them a diversity of view points and a critical tolerance of others” (Jones, 1888:27)

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Learning and using the language of science

Science involves using language in special ways:
Learning new vocabulary
Learning new forms of representation
Understanding analogies, metaphors and similes

“Constructing meaning from a text is not simply a process of word recognition. Rather, the words must be interpreted” (Evagorou and Osborne, 2010: 136)

For example, a trace on an oscilloscope has not meaning unless it is labeled and its meaning interpreted.

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A teacher of science is fundamentally a teacher of language.

The average science course introduces 6-8 new words a lesson (Merzyn, 1987)

The volume of vocabulary used in teaching English Science is 3,000 words up to KS3. With French this would be approximately 2,000. (Wordy William)

http://www.williamsgames.org/evidence.html

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Instigating talk in the primary science classroom – some ideas to get started

- All our food is traced back to a plant/All our food comes from a plant
- What is the one thing that all living things need?
- Sand is a liquid
- Is fire a living thing?

Don't forget to use pictures, video clips and science reports

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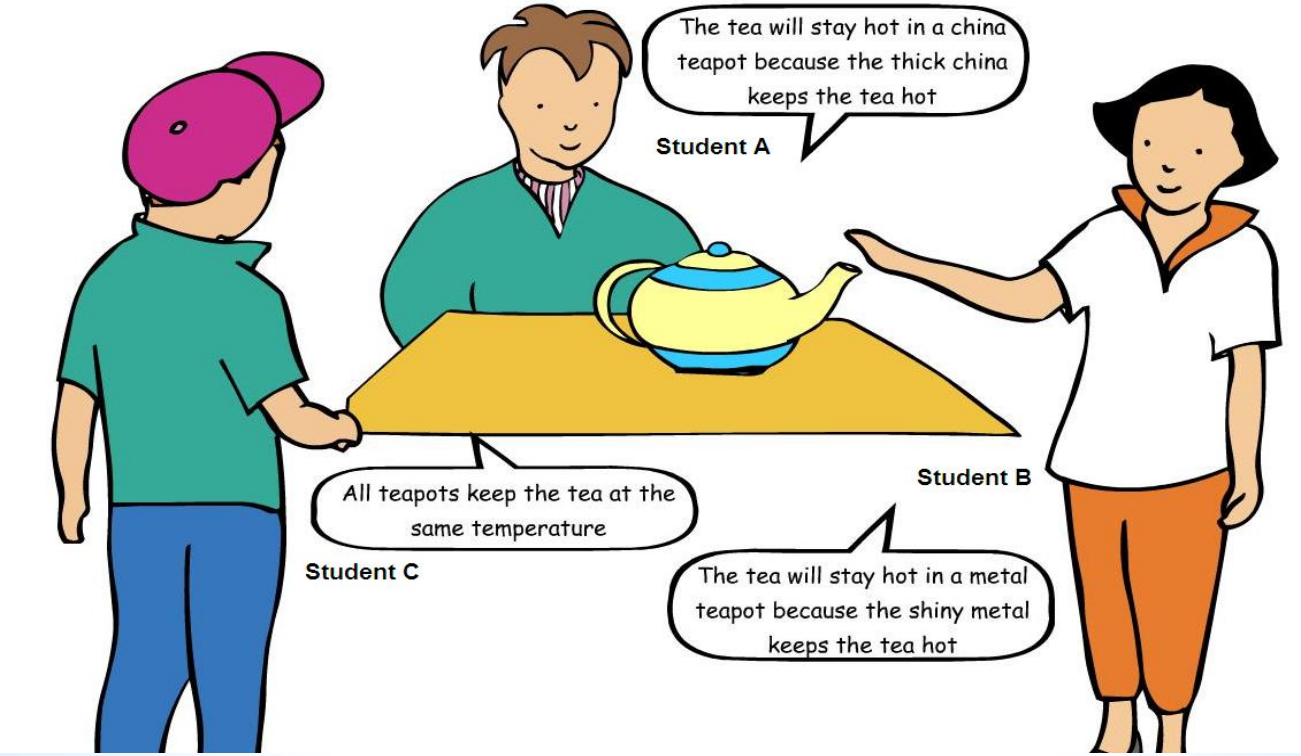
Concept Cartoons



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Classroom ideas

- Word searches and word games to develop vocabulary
- Worksheets/books prepared with vocabulary and pictures for the child, see my example, more are to be produced at www.technologytoteach.co.uk
- Develop from this structured book to then using just the words, play follow on games. Easily made on the SEN site.
- Use concept cartoons to develop talk, have the questions interpreted. Yes schools should pay for this to be done correctly

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Classroom ideas

- Encourage dual nationality presentations in PP, Photostory 3 or any other medium you use
- Do not forget to give science homework, parents may understand the concepts – see my example
- Use drama, get children to mime their planned science investigation

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Language resources

http://www.senteacher.org Don't worry too much that it is an SEN site, making word cards and other resources is simple and fairly quick.

http://www.teachers-direct.co.uk excellent site for making word searches. Premade but can also make your own.

https://itunes.apple.com/en/app/google-translate/id414706506?mt=8 this is link for ipads but they also have this on android.

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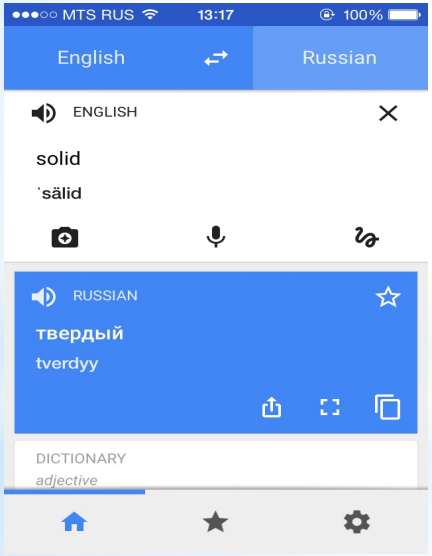
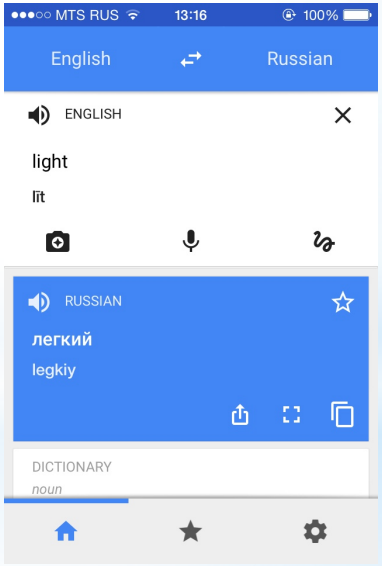
Google Translate
A powerful tool to help children but may bring up the incorrect word





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Technology to support speaking and listening

Podcasting

https://audioboom.com/CambridgeSkolkovo - Audioboom

https://soundcloud.com/ Sound cloud is another alternative

http://www.audible.co.uk/ref=hp_tloft_1_logo Audible sells audio books and there is a large collection of children's books including non-fiction

You Tube https://www.youtube.com/channel/UCoy2L2ZIm8bgIFwaQlhkIAw

BBC learning clips http://www.bbc.co.uk/learningzone/clips/

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Technology To Support Recording and Reporting

https://www.sonocent.com/en/ fabulous site that transcribes oral work into text for later editing.

Photostory 3 uses pictures taken in class so they can them be made into film clips. Excellent for dual language work and reporting on investigations

Blogging - http://aisyear5.blogspot.ru

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Professional Support

ASE – Association of Science Educators
http://www.ase.org.uk/home/

Good Book for Primary Science Teachers
Martin W Wenham
http://www.amazon.co.uk/Understanding-Primary-Science-Martin-Wenham/dp/1848601190/ref=dp_ob_title_bk#_

NALDIC – The National Subject Association for EAL
http://www.naldic.org.uk/

And of course myself – www.technologytoteach.co.uk/courses if you register for my newsletter, I will send details of when science word cards are available

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Notes

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