INTRODUCING
EAL-FRIENDLY MATERIALS FOR
TEACHING AND FORMATIVELY ASSESSING CORE
CURRICULUM SUBJECTS
IN PRIMARY CLASSROOMS

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This workshop session will introduce you to a set of innovative classroom-based and take-home materials aiming to support the teaching, learning and assessment of science at Key Stage 2 of the English National Curriculum.

The materials were developed as part of an intervention research project conducted over a period of 24 months (2013-2015) in four state primary schools in Sheffield with a varied density of English non-native speaking learners.

The materials were piloted with nearly 200 learners over a period of 10 months; the teachers were trained in using the materials prior to their trial.

The materials can be used equally effectively with non-native and native English speaking learners.
What components influence learner’s ability to learn effectively in the classroom and demonstrate his/her knowledge?

- FORMAL ASSESSMENT / TESTS
  - How do learners demonstrate their knowledge?

- EFFECTIVE FORMATIVE ASSESSMENT
  - How do learners make sense of what is being taught to them?

- TEACHING
  - How do teachers teach?
    - Subject matter
    - Language

- RESOURCES
  - What resources are being used to support learning (and teaching)?

- LEARNING
  - How safe and accepted do learners feel in the classroom?
  - What are their personal experiences and backgrounds?

- CLASSROOM and FAMILY FACTORS

QCA’s document ‘A Language in Common’ describes the first two Steps in terms of pre-National Curriculum Level 1 steps. QCA then divides the National Curriculum Level 1 into Level 1 (Threshold) and Level 1 (Secure). (NASSEA, 2001)

NASSEA Steps have ‘not been designed as a diagnostic (or formative assessment) tool that teachers can use to determine the learning and language needs of an individual pupil who is learning English as an additional language’. (NASSEA, 2001)
Give **ONE** feature of a penguin and describe how it helps a penguin to live in its environment.

Feature: .................................................................

How the feature helps: ...........................................

..............................................................................

..............................................................................
Implication for CP № 1

Encourage learners to use appropriate (for their age group / cognitive development) scientific language as part of their classroom discourse - both written and spoken.
The pictures below show different types of flowering plant.

Write the **THREE** missing labels to show the names of the plant parts.

- flower
- Stem / Stalk
- Leaf / Leaves
- Root(s)

Plants absorb rain water from the soil.

Name the **TWO** parts of the plant the water must travel through to get from the soil to the leaves.

1. ........................................
2. ........................................

Name the **TWO** parts of the plant the water must travel through to get from the soil to the leaves.

1. ........................................
2. ........................................
Implication for CP № 2

Expression of subject knowledge can be impeded by low/developing proficiency in English language.

Give learners opportunities to demonstrate their knowledge in various formats (i.e. vary focus, range and combination of tasks).

Carefully differentiate between the SK and LK and recognise the former when evidence is there.
The pictures below show different types of flowering plant.

Write the THREE missing labels to show the names of the plant parts.

Plants absorb rain water from the soil.

Name the TWO parts of the plant the water must travel through to get from the soil to the leaves.

1. __________________________
2. __________________________
Implication for CP № 3

When learning new material, EAL learners often compensate the lack of target language knowledge (e.g. lexical knowledge) by resorting to other available to them resources, including their first language.

Allow and encourage learners to use these resources to express their knowledge in the subject.
Teachers as material developers

Suitability of online resources: The vast majority of online resources – except for the ‘Communicate: In Print’ software – are not adapted for the needs of EAL learners.

Consistency of provision: Online materials are often fragmental – they focus on a single aspect of the national science curriculum (or a part of it) and do not provide a comprehensive and continuous learning experience for the EAL learners.

Time: Teachers often do not have enough time to prepare high quality EAL materials for their English non-native speaking learners. It can routinely take them anything between an hour to several hours to prepare for one lesson.

Teachers as material developers

**EAL versus SEN issue:** Occasionally teacher-developed EAL materials differentiate insufficiently between the learning needs of the English language learners and those of learners with special educational needs or lower-achieving native-speaking learners in the classroom.

**Materials development skills / Quality of provision:** EAL learners in the schools where teachers have ‘better’ skills in searching and development are more likely to receive a broader variety of materials with more knowledge embedded in them than learners in the schools where such good practices are not common.
Helping children acquire language means exposing them to the target language in use, engaging them with it actively and giving them plentiful opportunities to produce it on their own in different contexts and situations.

A primary goal of the materials presented in this session is to make the immediate subject content more linguistically and cognitively accessible to the learners by means of providing them with focused language support.

Support for target language development

<table>
<thead>
<tr>
<th>Date:</th>
<th>SEPARATING SOLIDS AND LIQUIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim</td>
<td>What do you want to find out?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Prediction**
What do you think will happen? Why do you think this might happen? What are the reasons?

**Sentence Starters**
- I believe that...
- I predict / think / guess / imagine that...
- My prediction / hypothesis is...
- If I use ... then I predict .... will happen
- Given ..., I predict / hypothesise that...

**Write your prediction here:**

<table>
<thead>
<tr>
<th>Method</th>
<th>In this experiment I used...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Firstly I ..., then I ...</td>
</tr>
</tbody>
</table>

**Sentence Starters**
- My experiment shows that....
- I observed
- I was really surprised when....
- I see patterns in....
- The results indicate that....
- When looking at the evidence I notice that...

**Write your method here:**

<table>
<thead>
<tr>
<th>Results</th>
<th>The evidence shows that ...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The results proved that ...</td>
</tr>
<tr>
<td></td>
<td>From my observations I can conclude that</td>
</tr>
</tbody>
</table>

**Sentence Starters**
- The evidence shows that...
- The results proved that...
- From my observations I can conclude that

**Write your results here:**

<table>
<thead>
<tr>
<th>Conclusion</th>
<th>What were your overall findings?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Sentence Starters**
- The evidence shows that...
- The results proved that...
- From my observations I can conclude that

**Write your conclusion here:**

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**Support with subject matter**

**Support with language (modelled sentence starters)**

**Learner output (evidence of understanding subject matter + opportunity to produce language)**

Support for subject knowledge development & use of L1 to enhance learning

Learning core terms

Using visuals to support learning

Using L1 to support learning

Support with subject matter.

Learner output (opportunity to produce language & can also provide evidence of learning if notes are written in L2)

Inviting learners to personalize (& internalize) information

Lower L2 ability = drawing and labelling

Higher L2 ability = writing

Informal tracking of learners’ progress: opportunities for formative assessment

Core vocabulary (terms) are in bold, italics and blue colour.

Checking comprehension of subject matter.

All questions are based on material from previous page.

Higher L2 proficiency => Opportunity for language production (in full sentences).

Lower L2 proficiency => filling in blanks (limited demand on language).

Target answers are underlined. Sentences are always provided in full.

Fun element: acknowledging achievement.

Page is folded back here (so that answers are not visible).

Reducing linguistic demands as part of informal assessment procedures

Labelling

Matching

Selecting

Filling blanks

Reducing linguistic demands as part of informal assessment procedures

Development of learner autonomy inside and outside the classroom

What else do you know about magnets?
Use this space to write (draw) what you know.

Can use your home language

Can draw or write

This space can also be used as extra space to take notes / write about experiments

Use of parental resources to support learning

Parents can help (e.g. translate into L1) since answers are provided.

Target answers are underlined. Sentences are always provided in full.

Page is folded back here (so that answers are not visible).

Fun element: acknowledging achievement (+monitoring learning)

Core vocabulary (terms) are in bold, italics and blue colour

All questions are based on material from Class Workbook

Depending on L2 proficiency can write or draw answers


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Systematic and consistent presentation of scientific enquiry in booklets


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Use of materials by learners

Developing written language

Discussing with peers – FA (peer-assessment)

Developing conceptual understanding

Discussing with teacher – FA (formative feedback)
Adaptation of materials by teachers
Publications


Website
https://sites.google.com/a/sheffield.ac.uk/eal-science-project/

EAL Science Booklets (Pilot)

Click here to download 'Class Worksheets' Booklet

Click here to download 'Homework Tasks' Booklet

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Thank you for your answers!

Thank you for your participation

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