



Transfer Task - From MELs/baMELs to
Evaluating Models in Science Journals

Goals of this Session

- Introduce a transfer task which can be used to determine if students can:
 - Transfer the skills acquired from MELs and baMELs to science articles
 - Identify models and evidence in science articles
 - Based on the evidence, determine the plausibility of the model

Why Transfer Tasks?

- Although we may think we are doing a good job teaching a concept or skill...students may not realize they need more explicit instruction as to when these moments are occurring.
- They don't cue themselves into their prior learning or recognize how it relates to the new situation - i.e. free fall problem...
- The more explicit we can be with our students about the goals of transfer - it is not recall and plug and chug.
- Model this, show examples, state what they will be able to do. Do it in stages, kind of like sports (drill, game situation, game conditions, game).
- Make sure your students can cue themselves - practice this - give them a new situation/problem, see where they go, debrief.



Let's try! (visit MEL website)

- Read the article provided while annotating the important points
- Complete the transfer task questions 1-3

5/28/2019 Oxygen-rich air emerged super early, new data show | Science News for Students

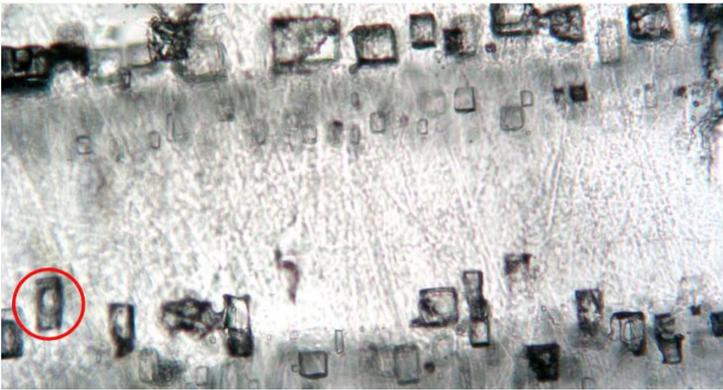
ScienceNews for Students

EARTH CHEMISTRY EVOLUTION

Oxygen-rich air emerged super early, new data show

If correct, it occurred before the evolution of animal life

BY THOMAS SUMNER AUG 21, 2016 — 7:00 AM EST



This sample of 815-million-year-old rock salt contains bubbles of ancient air (see the rectangular inclusions, one circled in red). That air indicates that oxygen was already plentiful by the time the first animals later appeared.

CHRIS LECUYER



Seeking Models and Evidence in Research Articles - Students

For this activity, you will first identify the claim or explanatory model presented in a science news article. Then, identify evidence statements that support the model. The number of evidence statements may vary depending on the article you read.

Article Title:	
Claim or Model Presented:	
Evidence #1:	
How does the evidence support the model?	
Evidence #2:	
How does the evidence support the model?	

The Transfer Task...

Small Group Discussion:

- How did the evaluation classification (Question 1) vary among your group members?
- What were the key lines of evidence presented?
- How well did each line of evidence support the research individually and when coupled with the other lines of evidence?

The Transfer Task....

Whole Class Discussion:

- How did your discussion with your group help your understanding of the content of the article?
- Did you identify additional lines of evidence after your group discussions?
- Were there any alternative models presented in this article? If so, how did you rate them? Why?



Teacher Reflection

Review student work and consider the following questions when assessing their responses.

- How do your students evaluate models and evidence when presented with evidence? In what ways might you modify this activity to help students think more critically about models and evidence?
- What did students do differently when evaluating articles compared to the MEL task? What similarities?
- What are some of the challenges for students in evaluating evidence?
- How do students consider alternative models in relationship to the model at the focus of the article?

Discussion

- Compare and Contrast the Transfer Task and MEL/baMEL
- How do you expect your students to respond?
- How else could you use this task, or something similar to assess students abilities to link models & evidence based on the plausibility of the evidence?