



**SUSTAINING OUR  
EXPERIENCE FOR MOVING  
FORWARD**  
*focusing on Science*

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# Writing to learn

See writing as learning, not just assessment.

The process requires students to make crucial decisions for their learning:

- What should I include and what should I exclude?
- How should I organise the knowledge:
  - How is everything related?
  - What goes first?
  - What goes next?
- What visuals do I need to include?
- What more do I need to read about and what do I need to clarify?

# Writing to learn

How to provide scaffolding for writing:

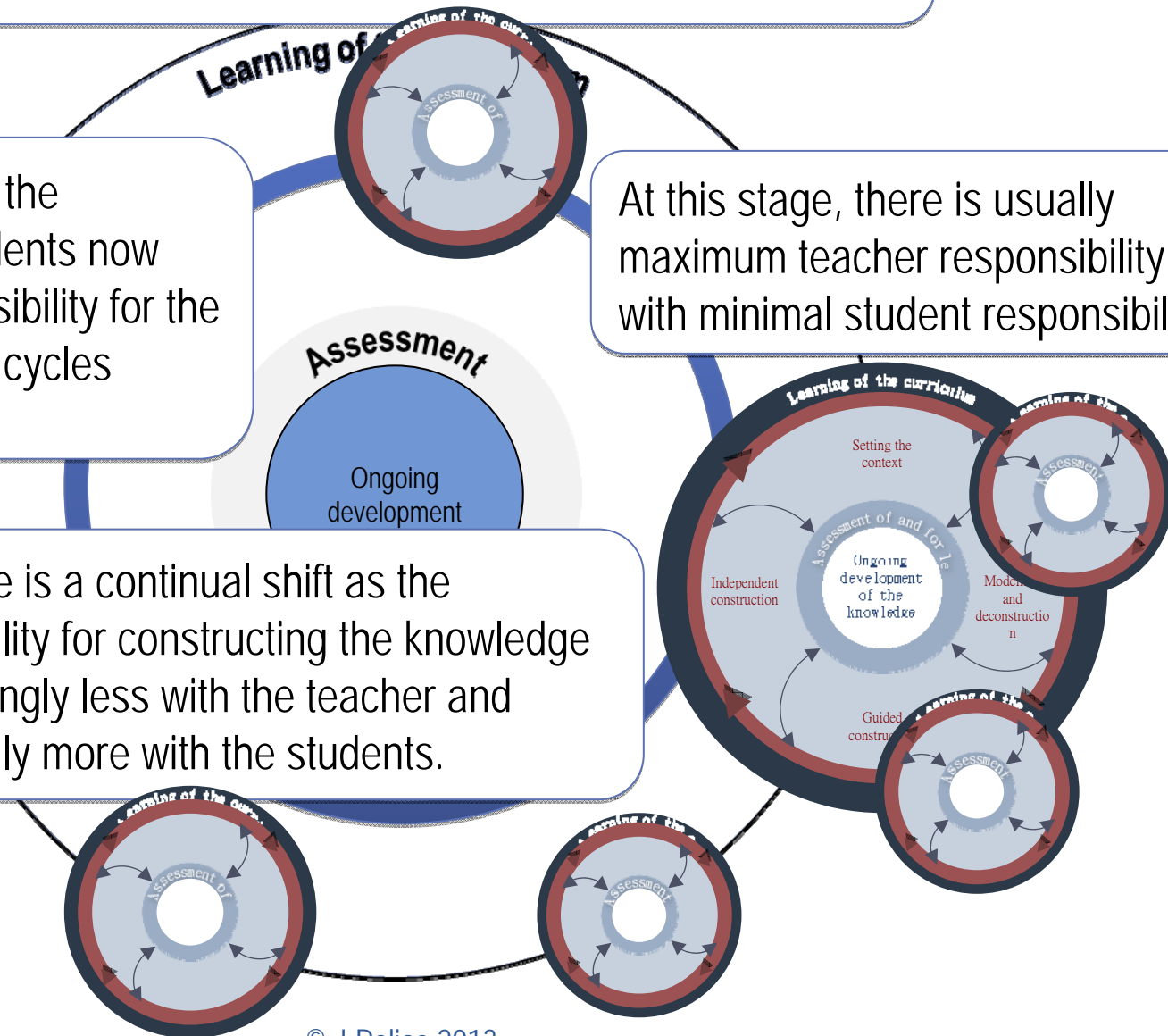
- plan all your teaching within a Teaching and Learning Cycle
- make explicit the knowledge patterns and
- make explicit how language organises the knowledge
- go from the easier to the more challenging
- break up the task into manageable bits
- set up activities that make the students work physically with the language

Starting out or, more likely, continuing – there may be strong teacher responsibility or there may be equal responsibility or strong student responsibility – it depends.

This is the other end of the continuum and the students now have maximum responsibility for the learning...and then the cycles continue.

At this stage, there is usually maximum teacher responsibility with minimal student responsibility.

Now, there is a continual shift as the responsibility for constructing the knowledge is increasingly less with the teacher and increasingly more with the students.



# Make explicit how the English language organises the knowledge

The villi of the small intestine absorb simple and soluble food rapidly into the blood.

What in the small intestine are absorbing?

What absorbs?

What happens?

What does it absorb?

The villi of the small intestine absorb simple and soluble food rapidly into the blood.

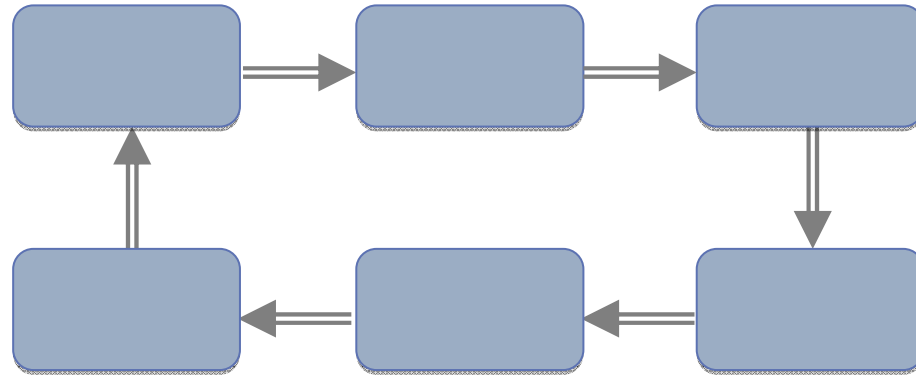
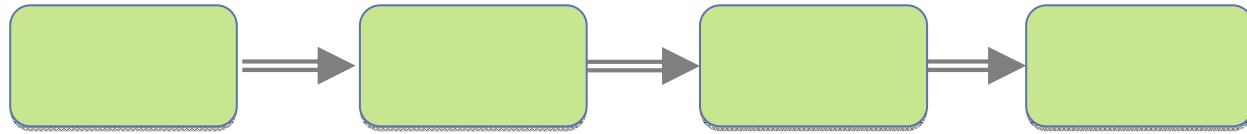
How does it absorb it?

Where does it absorb the food?

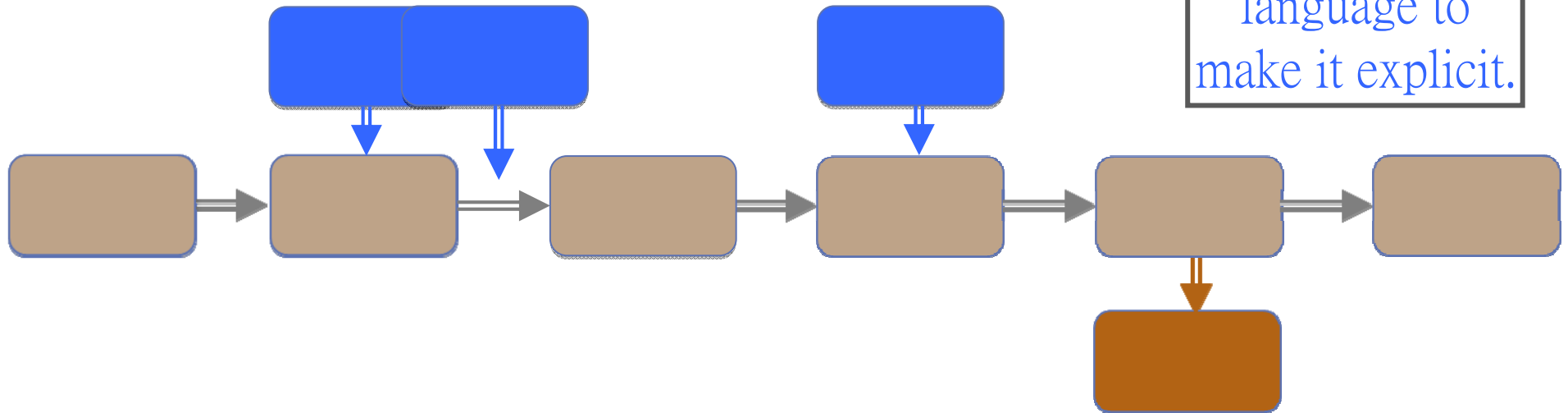
What kind of food?

# Scaffolding students in writing a causal explanation

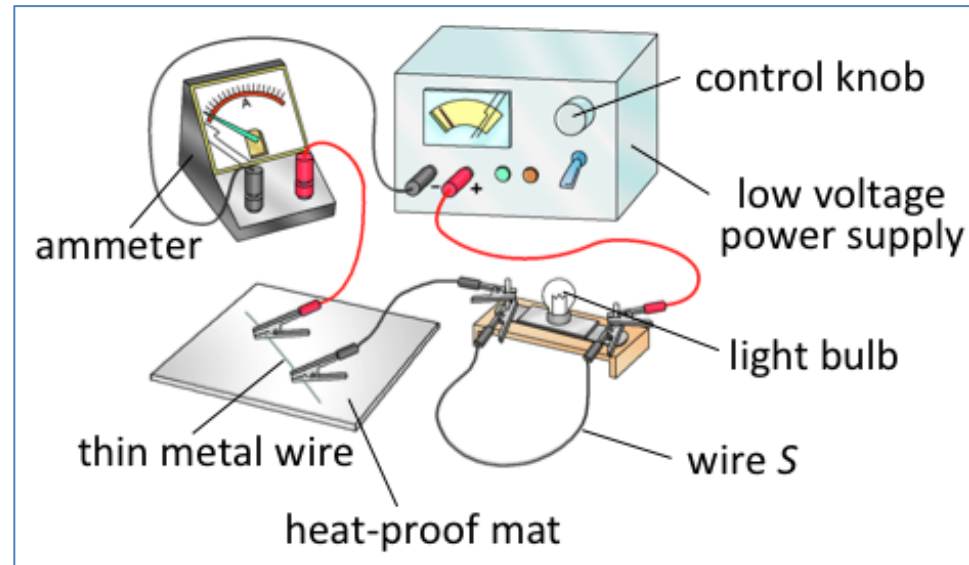
How can we explain processes in physics better?  
S2 Integrated Science



Explicit  
causality is  
invisible  
through visuals  
alone. We need  
language to  
make it explicit.







Why doesn't the light bulb glow in the circuit when we add wire S?

The light bulb does not glow because the current flowing through it is too small. Now, nearly all of the current flows through wire S since it has a much lower resistance than the light bulb.

# Why doesn't the light bulb glow in the circuit when we add wire S?

What do you observe?

The light bulb does not glow

because

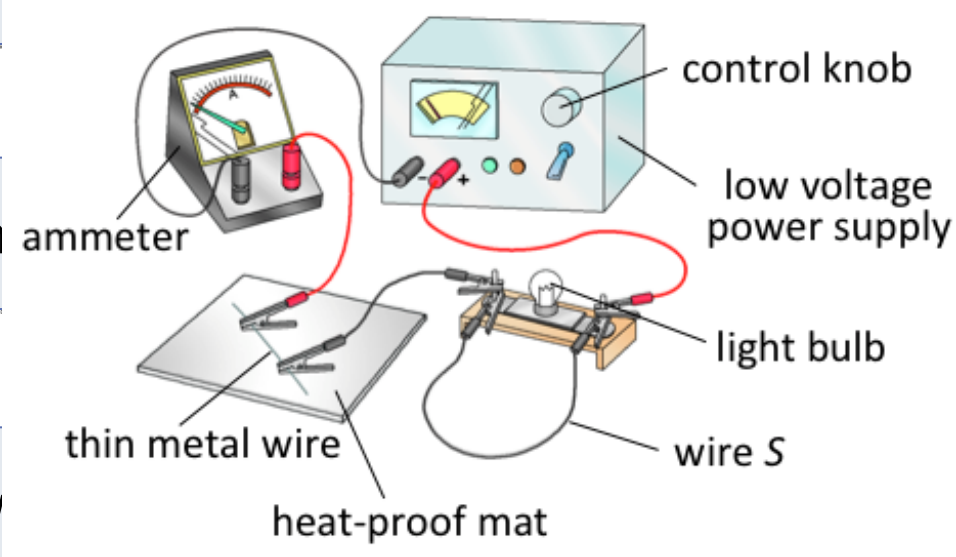
the current (th

because

now nearly

because

wire S has a much lower resistance than the (wire in the) light bulb.



the light bulb glow?

current too small?

Why does nearly all the current flow through wire S?

## Why doesn't the light bulb glow in the circuit?

The light bulb does not glow because

the current (that is) flowing through it is too small because

now nearly all of the current flows through wire S because

wire S has a much lower resistance than the (wire in the) light bulb.

The words in grey are extra. They are not always necessary for the reader to understand. So we can leave them out.

# Why doesn't the light bulb glow in the circuit?

We can make some more changes so the writing is improved.

The light bulb does not glow **because**

There is too much information in one sentence so let us stop after 'too small'. So we need a full stop and we need a capital letter for 'now'.

the current flowing through it is too small. **because**

It is better if we do not always use 'because'. For example, we can use 'since' instead.

Now, nearly all of the current flows through wire S **since**

it has a much lower resistance than the light bulb.

Also, it is better that we do not always repeat the same words when we use a pronoun. Instead of repeating 'wire S' we can use 'it'.

Let us now write it with all the changes.

Why doesn't the light bulb glow in the circuit?

And here it is all together. This is the best way to answer the question. It has all the correct information and it is written accurately and it 'flows' well.

The light bulb does not glow because the current flowing through it is too small. Now, nearly all of the current flows through wire S since it has a much lower resistance than the light bulb.

# Pedagogical resonance

Making sure that our teaching resonates with the knowledge being taught so that learning is maximised.

