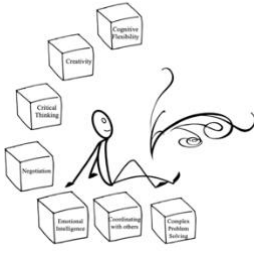


Scaffolding Visual Information in Strips (Pre-School)



Donna Lee Fields, Ph.D.



theory behind scaffold...

One of the most common go-to words to explain scaffolding is 'chunking'. Chunking is the strategy of breaking down material into digestible proportions in order to avoid cognitive overload. If you accept the studies (and there are a lot of them and they are consistent in this conclusion) that the human mind is able to only process seven new elements at a time, chunking information gives students the emotional and cognitive space to transition more easily into new knowledge. When we add strategies in activities that promote critical thinking, collaboration, negotiation and prediction - all through visual means - we've created a powerful means of presenting new ideas to our students.

This scaffold technique also includes categorisation which, according to Morton Hunt*, one of the pioneers of the study of the mind, has been proven to yield educational efficiency and helps the brain process information more fluidly. Depending on the topic, making the effort to categorise new knowledge can help students feel more connected to the world around them, and make sense out of what can feel like chaos at times.

In this case, students work in pairs (or groups of three) to piece together the meaning of an image that has been intentionally divided into chunks (strips). They verbalise what they see and predict what they believe will appear on the next strip. The study, negotiation, conversation, and deliberation of this process leads to a deeper understanding of the underlying concept. When text is included in the activity, linguistic categories are added to the complexity of their conversations and predictions.

The strategy of making predictions actively engages students. It helps them to make connections between prior knowledge and the information they see before them. With activities such as this scaffold, students will learn the habit of thinking ahead, refining, revising, and verifying their predictions. Further, embedding opportunities for suppositions in activities is a valuable way to assess student comprehension of subject matter (formative assessments).**

The example given here is from a lesson on the differences between wild and domestic animals, and you'll see how you can easily adapt it to any unit you're about to begin.

** Hunt, Morton (1982). [*The Universe Within: A new science explores the human mind.*](#) Simon and Schuster.

MINI-LESSON:

LASSOING/ CALMING DOWN	<i>Lassoing Technique:</i> Choose one from pages 4-8. <i>Calming Down Technique:</i> Choose one from pages 9-13.
SCAFFOLDING	Scaffolding Visual Information in Strips
BODY OF LESSON	Project, lesson, song, video, art, music, P.E.
FORMATIVE EVALUATION/ REFLECTION QUESTIONS	Is there a difference between domestic and wild animals? Are humans animals? Are we domestic or wild? Which animals are in the left-hand column in your journals? Which are on the right-hand column? Who would you like to be friends with more - a child who likes wild or domestic animals? When is alright to bring an animal home? Where do wild animals live? Where do domestic animals live? What would you do if you found a wild animal in your bedroom? How do wild animals take care of themselves? Why are we learning about wild and domestic animals? Imagine your grandparents asked you to explain the difference between domestic and wild animals. What would you say?

step by step:

1. Choose an image from the lesson you're about to begin. (3-year-olds without text, 4- and 5-year-olds with a few large words).
2. Paste it onto an A4 piece of paper.
3. Print enough copies for each pair of students. (If possible, on different coloured pieces of paper so as to sort and order them more easily.)
4. Cut the photocopies into either vertical or horizontal strips with a cutting board. (See example below.)



5. Give one set to each pair of students and take the time to show them how to divide the strips up evenly between themselves.

*(If you've never done this before, this is the perfect opportunity for the cross-curricular inclusion of mathematics and the concept of dividing up something equally. Each time you do an activity, you can monitor how they progressively absorb the concept. This fosters **self-efficacy**, which according to [John Hattie](#) is the 11th highest educational practice (out of 250) that we can use to heighten the power of learning in the classroom.)*

Possible conversation to model dividing up strips evenly between students, and the concept equanimity.

- 'If I give one strip to Paul and one strip to Fahmina, do they have the same number of strips?'
- 'They have the same number of strips, so we have divided up the strips evenly.'
- 'If I give one strip to Julio and two strips to Raija, do they have the same number of strips?'
- Raija has more strips than Julio, so we haven't divided up the strips evenly.'
- 'If I keep 5 strips and I give 2 strips to Fionna, does Fionna have the same number of strips as I do?'
- 'I have more strips than Fionna so we haven't divided up the strips evenly.'
- 'Clarissa is my partner. She takes 4 strips and gives me 4 strips. Do we have the same number of strips?'
- 'Clarrissa has divided up the strips evenly.'
- 'Now, how long do you think it will take you to divide these 10 strips evenly with your partner?'

6. You can interact with the strips in the following way:
- Hold up one strip of the set you have. Ask students to find the same strip in their set.
 - Ask students in pairs to whisper to each other any word that comes to mind about the strip they are holding.
 - Ask Group 1 to tell their classmates what words they think of when they see that strip.
 - Ask Group 2 to add any words about the strip.
 - Ask Group 3 to repeat what Group 1 and 2 said.
 - Ask Group 4 name all the colours in the strip.
 - Ask Group 5 if they forgot any colours and to add any not said yet.
 - Ask Group 6 to predict what might be on the strip next to it.
 - Pick up the next strip and go through the same dynamic, including whether they guessed accurately what was missing from the strip before.
 - Continue this dynamic until the image has been put back together.
6. *Formative Assessment:* In their journals, students draw a vertical line down the center of one page. For 3-year-olds, they write the letter 'W' on the left column and 'D' on the right column. For 4-5-year-olds, they write 'Wild' on the left column and 'Domestic' on the right column. Then, they draw 2-3 animals in each column. You ask students to share their drawings and the others give feedback as to whether they've drawn animals in the appropriate column.



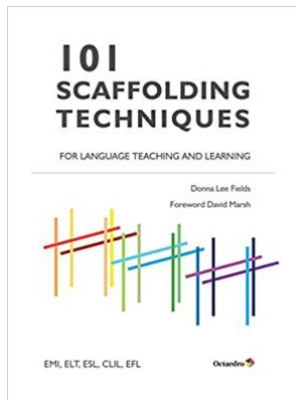
(4-5-year-olds can write the name of the animals if they are motivated to, but we don't need to put emphasis on this.)

7. *Reflection:* Use Question Continuum to formulate questions about the activity. Remember to include some questions about content and some about methodology. This also augments [self-efficacy](#) - recognising the learning process and becoming conscious of how we learn best.



- Yes/No Is there a difference between domestic and wild animals? Are humans animals? Are we domestic or wild?
- Which Which animals are in the left-hand column in your journals? Which are on the right-hand column?
- Who Who would you like to be friends with more - a child who likes wild or domestic animals?
- When When is alright to bring an animal home?
- Where Where do wild animals live? Where do domestic animals live?
- What What would you do if you found a wild animal in your bedroom?
- How How do wild animals take care of themselves?
- Why Why are we learning about wild and domestic animals?
- Imagine Imagine your grandparents asked you to explain the difference between domestic and wild animals. What would you say?

Find more scaffolds here:



video explanation of the scaffold...

SCAFFOLDING VIDEO 3

Scaffolding Visual Information in Slips



Donna Lee Fields, Ph.D.
scaffoldingmagic.com



transcript of the video explanation...

Hi! I'm Donna Fields and welcome to CLIL Scaffolding 3. It's a series of webinars designed to give you quick, easy and adaptable scaffolding ideas.

We can say that scaffolding is giving a helping hand to students when they are transitioning from past knowledge to new knowledge.

Today, we're going to go over how to use Scaffolding Technique #6 from my book *101 Scaffolding Techniques for Language Teaching and Learning* that's also been translated into Spanish.

The objective for this session is to show how easy it is to adapt Scaffolding Technique #6 to primary and secondary lessons. Don't forget to post your objectives every day in your classes. It helps students feel more respected and integrated in the learning process.

Scaffolding technique no. 6 is called 'Striptease'. It's a play on words because we're going to be talking about a type of puzzle that uses strips of paper. If you don't know what 'striptease' means, this is a great opportunity for you to look it up and have a laugh!

Let's start with a secondary social science lesson. You've come to the chapter on population pyramids. You know that it's important that your students understand them, but your experience has been that it's difficult to engage them. You can see cognitive overload in their eyes the minute they come to the chapter that introduces them. What can you do?

Take the topic out of the textbooks, get away from worksheets, don't introduce definitions yet. Present something really different and intriguing that will help them first form their own ideas about representations of the topic before being told what they mean. If students see that their ideas are respected and have a place in lessons, they will be more willing to hear the ideas of other's.

So, scaffolding the images gives students the opportunity to verbalise what they see and lets them predict what the different shapes mean. Verbalise thought processes is a skill that is known to help students move forward in their learning.

Making the puzzle is simple. We take this page from a chapter on population pyramids, use the graphics, print out one image for each pair of students and then cut them up into preferably an even number of strips.

You need to be conscious of where you cut. The information needs to be divided so as to challenge your students but also to give them enough clues that they can make justifiable predictions. In this case, I've decided to cut the image horizontally, because I want the students to focus on the significance of the graduation of each pyramid.

Next, I'd give a set of strips to each pair of students and each student takes half of the strips. (I mix up the sets before I hand them out so that they don't have one determined half of the image.)

Now, one student in each pair puts one strip down, verbalizes what s/he sees and then makes a prediction about what's missing on either side.

This is followed by the other student in the pair looking at the strips s/he has, putting down the appropriate one to the right or left, and then describing both. That student also makes predictions about what is missing.

To help students be more fluent in their discourse, you can post the beginnings of sentences such as:

In this strip I see...

I see a part of...

Based on what I see so far, I predict that the strip above...

Based on what I see so far, I predict that the strip below...

I'm not sure...however...

It seems to me that...

You were justified in your prediction that...

Here is an example:

Student 1: I see three images divided by a yellow bar. I see red and green lines on either side of the numbers. The numbers are divided by four - 20-34, 25-29, , 35-39, etc. I don't have enough information from the figure in the middle to predict what is above or below and I don't know what the numbers mean, but based on what I see so far, I predict that the image on the strip below will have numbers 20-24, 15-19, 10-14, and the red and green lines will be longer than in this strip.

Student 2: I see that you were justified in saying that... Based on what I see, the image in the middle of the strip above the 49% could equal 100% so it could be 25%...

Students can talk specifically about the numbers, but they can also talk about the colours, about the size of the lines, about what they think the images mean - anything that occurs to them. We want them to interact with the material in any way they can, using past knowledge to predict what might complete the puzzle.

The activity continues in this way until all the pieces have been described, predictions have been made, justifications for the predictions are stated, and all the strips have been placed on the table.

Now is when you explain what the graphs really mean and they can work in their textbook to understand it more fully.

META TALK:

Effective teachers think aloud on a regular basis to model the process for students. Think-aloud strategies encourage students to say aloud what they are thinking when trying to problem solve. Verbalisation of their thinking helps them to discern what may be valuable in their thought processes and what may be leading them astray when looking for solutions. Teachers can model efficient thinking techniques when they verbalise their inner speech as they think their way through a problem. By thinking aloud, students learn how to learn.

Let's go to a primary health class. We need to teach about food plates. It's an opportunity to review vocabulary of food while scaffolding (introducing new concepts gradually) what category the different types of food fall into.

Just as before, we take the image and cut it up into strips.

We give each pair of students a set of the strips and each student takes half. One student in each pair puts down one strip, describes what's in it, predicts what information the strip to the right or left might have, and the other student joins in at the appropriate moment.

At the end, they'll have reviewed important vocabulary, reminded each other of words they may have forgotten, focused on how different types of food are grouped together, and will have seen proportions of these categories. You've encouraged them to think aloud and verbalise their thought processes. Now they're ready to understand the topic more fully and see how their thinking aligns with the rest of the information they'll be exposed to in the chapter.

So that's it, that's technique number 6, another type of puzzle, and all of you SUPER TEACHERS out there thanks so much for joining and I hope to see you soon. Please send me any comments at my [Linkedin.com](#) page or my Facebook page ([GivingaHelpingHandBook](#)) and I look forward to seeing you again soon. Bye!

You can find me at these sites:

<https://scaffoldingmagic.com/>

and

[Pinterest](#)

[Instagram](#)

[Tiktok](#) (scaffoldingscaffolds)

*Hunt, Morton (1982). *The Universe Within: A new science explores the human mind*. Simon and Schuster.