

The *Learning Pit* is one way to explain why more challenge leads to enhanced learning. It helps teachers structure lessons, and students challenge themselves. It comes with associated lesson ideas, and recommended activities for each stage of the *Pit*. It has been used successfully with pupils of all ages, particularly 3 – 18 year olds.

The following is an abbreviated version of chapters 4 and 7 of Challenging Learning.¹

Background

I designed the *Learning Pit* in 1999 when working as a teacher in Northumberland, UK. At that time, I had recently appeared in a television documentary about the positive impact of Philosophy for Children (see www.p4c.com). During the filming, I had been asked how I explained to my pupils why I thought more challenge was good for them. Recalling a presentation I had heard Dr John Edwards make about organizational growth going through a storm or '*pit*,' I used the same analogy during my reply. I later developed this analogy further, turning the organizational pit into the *Learning Pit*, and adding four stages to the model: Concept, Conflict, Construct, Consider. This was first published in 2010 in Challenging Learning, and then again in 2013 in Encouraging Learning. Since then the *Learning Pit* has appeared in various articles, blogs, and books, and in English, Danish, Norwegian, Spanish, and Swedish²

Values of the *Learning Pit*

The *Learning Pit* is based on the following principles:

1. Pupils are generally more interested in learning when others around them are curious and willing to express uncertainty. The *Learning Pit* therefore assumes a willingness to say, 'I'm not sure,' or 'I'm confused'.
2. We are all fallible. The *Learning Pit* assumes we are all willing to admit, or even draw attention to, our own errors.
3. Learning is enhanced by participation in guided inquiry.
4. High quality learning comes from making connections and understanding relationships between ideas. Being in the *pit* compels us to make these links.
5. Knowledge, understanding, skills and attitudes transcend school subject categories. Therefore, attention should be given to the transferability and connectedness of what is learnt.
6. Everyone who takes part in lessons involving the *Learning Pit* should aim to be thoughtful, reflective, supportive and reasonable.
7. Though most lessons involving the *Learning Pit* result in agreement about what answers are 'right', there are occasions, particularly with philosophical questions, when no right answer is achievable. This does not make the experience any less valid. It is the process of thinking together, reflecting and giving reasons that is at the heart of learning.

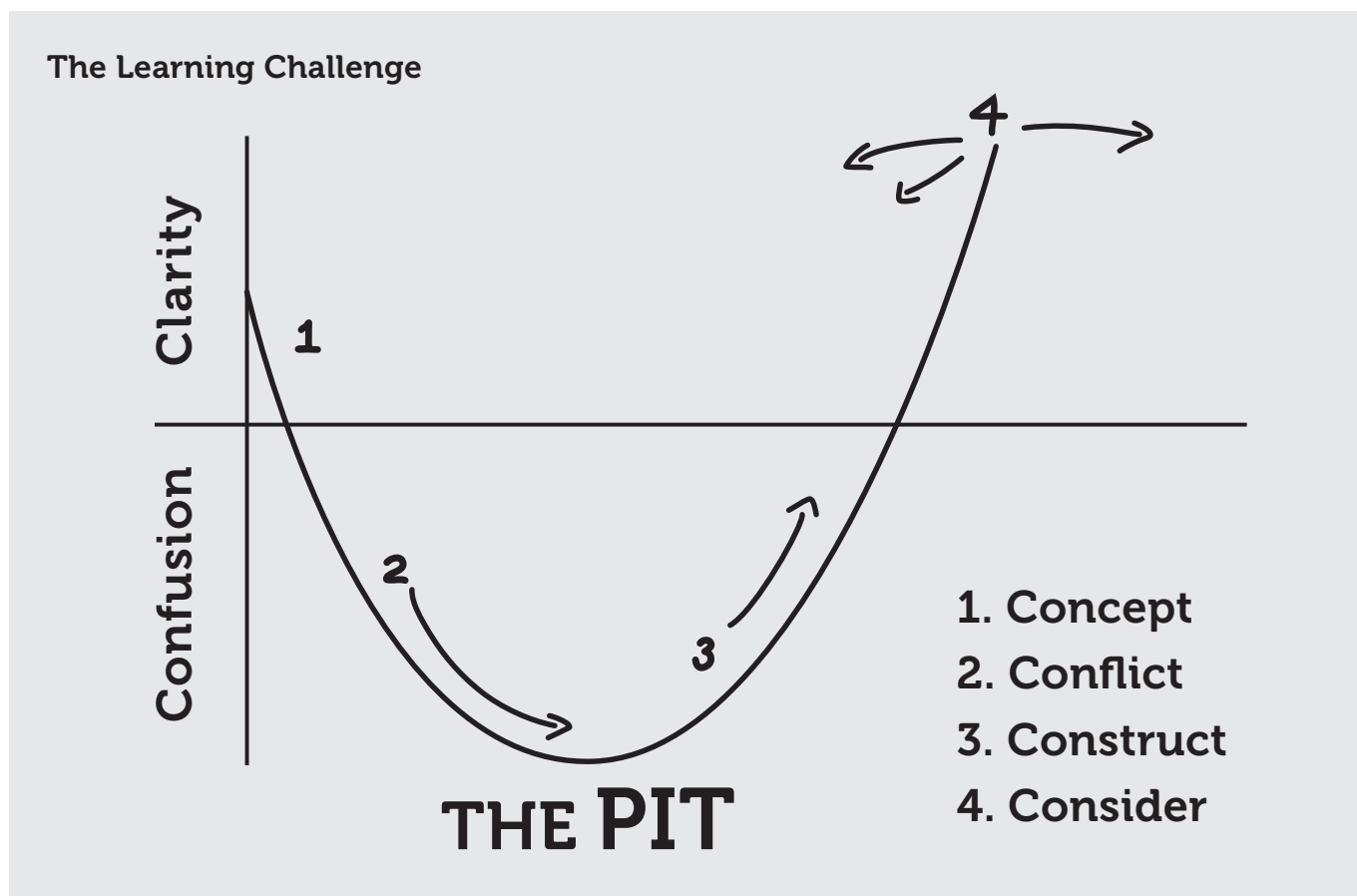
The Four Stages of the *Learning Pit*

Stage 1: CONCEPT

The *Learning Pit* begins with a concept. The concept can come from the media, conversation, observations or deliberate study. So long as most pupils have a basic understanding of the concept, then the *Learning Pit* can work. Examples of the sorts of concepts that might be suitable can be found later in this article, as well as in *Challenging Learning*.³

Stage 2: CONFLICT

As soon as a concept has been agreed, the teacher's responsibility is to create '*cognitive conflict*' in pupils' minds. Cognitive conflict arises when people have at least two opinions in their minds, both of which they agree with but that both of which are in conflict with each other. For example, I agree that stealing is wrong but I also think that Robin Hood was a good man; I agree with both statements even though they are in conflict with each other.



Stage 3: CONSTRUCT

Giving students the opportunity and reason to construct meaning for themselves is the *raison d'être* of the *Learning Pit*. After they have struggled in the *Pit* for a while, some of students will begin to make meaning. Some may even have a 'Eureka' moment. This is at the heart of the *Learning Pit* and is explored later in this article.

Stage 4: CONSIDER

The final stage encourages pupils to reflect on how their thinking has changed, been adapted, assimilated and / or constructed throughout the course of the lesson. Thinking about thinking, or metacognition, is a crucial factor in the learning process. The *Learning Pit* provides a frame of reference to help structure this metacognitive reflection for pupils.

The Learning Pit in Action

Here is an example of the first two stages of the *Learning Pit* working with 7 year olds, followed by an example with 14 year olds. Both dialogues reflect real-life discussions during a couple of recent lessons I've taught. There is an examination of each one afterwards.

The *Learning Pit* with 7 year olds:

2, 7 and 8

- TEACHER: Which number is different from the other two and why?
- ANDREW: Seven, because it's an odd number. (1)
- TEACHER: What's an odd number?
- CAROLINE: A number that can't be divided by two.
- TEACHER: So, if I have £7, are you saying it can't be divided by two? How much would each person have if I shared £7 between 2 people? (2)
- CHARLOTTE: £3.50 each.
- JAMES: So, 7 can be divided by two. Does that mean it's even then? (2)
- SERGEI: No!
- TEACHER: So what is an odd number?
- SERGEI: It can't be divided by two without leaving a remainder.
- TEACHER: But when I divided £7 by two, that didn't leave a remainder.
- DANIEL: But 50p is not a whole number. You can't divide an odd number by two without splitting a whole number.
- TEACHER: Are you telling me that 50 is not a whole number? (2)
- SUNITA: 50 pence isn't.
- TEACHER: This (holding a 50p piece) is not whole? Why not? It looks whole to me.
- SUNITA: But it's not a whole pound. It's half of a pound.
- TEACHER: So, what is an odd number then?
- BEN: It's a number that can't be divided by two without changing the units. (E)
- TEACHER: Can you give me an example?
- BEN: If I had 7 pound coins then I'd have to split one of them in half first.
- TEACHER: Does that mean anything I have to split in half, so that I can share it, is odd?
- BEN: Yes.
- TEACHER: But what if I have a £10 note? I would have to split that to share it wouldn't I? Does that make £10 odd?
- BEN: Um ...

Key to notations

(1) - concept is identified (2) - challenge begins (E) - eureka moment

The Learning Challenge with 14 year olds:

TEACHER: What is courage? (1)

JONNY: Being brave.

TEACHER: Okay, so what does 'being brave' mean?

SARAH: Facing your fears.

TEACHER: But if I'm scared to run across a motorway, but still do it, am I being brave? (2)

ELLIE: No, that's just stupid. You have to do something good to be brave.

TEACHER: Such as kill someone?

KYLE: That's not good.

TEACHER: But lots of soldiers have been awarded medals for bravery and presumably many of them killed the enemy whilst 'being brave'. (2)

KYLE: Yes, but that was their job.

TEACHER: So, if I do my job, am I being brave? I'm doing my job now – does that mean I'm being brave? (2)

VIJAY: No, sir. You're not doing your job. You're just trying to confuse us.

(It was very tempting to ask why Vijay thought trying to confuse (or challenge) him wasn't the job of a teacher, but I wanted to stick to the topic).

TEACHER: So, if you're just doing your job then you're not being brave; is that right?

SUNITA: What about firemen? They're brave.

MOLLY: My Dad's a fireman and all he does is sit around playing computer games.

TEACHER: But presumably your Dad also rescues people and puts out fires when he's asked to.

MOLLY: Of course!

TEACHER: So is he brave then?

MOLLY: Yeh, I guess.

TEACHER: Can anyone else tell me what it is about Molly's Dad's job that means he has to be brave to do it?

BEN: He puts the lives of others before himself.

TEACHER: Okay, but most mothers seem to put the lives of their kids, or at least the pleasure of their kids, before their own. Does that mean they're brave? (2)

RACHEL: No, they're stupid. Why give up everything for your kids?

TEACHER: There's that word again: 'stupid'. It sounds to me as if being brave is about being stupid. Is that right?

PUPILS: Not really.

TEACHER: So what does it mean then?

PUPILS: Why don't you tell us?

Key to notations

(1) - concept is identified (2) - challenge begins (E) - eureka moment

The Dialogues Explained

The dialogues on *odd numbers* and *courage* reflect real-life discussions with pupils. In both cases, the first thing we did was identify a key concept – marked with a (1) in each case. In the first dialogue, they chose 'odd numbers'; in the later one, I chose 'courage'. Perhaps in a perfect world pupils would choose every concept but, with a curriculum to teach, a balance between pupil choice and teacher choice is to be expected.

Once the concept had been identified, I then tried to 'stretch' the concept by attempting to set up cognitive conflict – marked with a (2) in each case. To do this, I used the *wobblers* described later.

Please note that, as with all the *wobblers*, my purpose is not to score points or to prove the pupils wrong – far from it. Instead, I try to challenge their first, easy answers so that they need to think again, to reflect more and to try harder. In my introduction to Challenging Learning, I talk about moving away from the GPS-approach to teaching.⁴ By that I mean, we should not guide students as much as a GPS navigation system guides travellers. Instead, we should sometimes put obstacles in pupils' way, blocking their normal route so that they have to find an alternative path. I am not saying their normal route is wrong (after all, we usually accept that an odd number *can't* be divided by two). Instead, it is saying 'this route is OK but for now I'm going to block it so that we can find alternative, and more rigorous, explanations.'

Many teachers ask me why we shouldn't just say 'good answer but can you find another way of explaining it,' rather than trying to block pupils' answers. My response is that when a pupil finds one answer (eg an odd number is one that cannot be divided by two) they are rarely inclined to search for another, more comprehensive one. Rather, they believe that 'if it ain't broke, don't fix it.' So, in a sense, this blocking approach is temporarily 'breaking' the answer so that pupils feel more of a need to 'fix' it.

STAGE 1: Concepts to start a *Learning Pit* lesson

The *Learning Pit* begins by identifying a key concept, as these are the foundations of thinking.

Matthew Lipman described concepts as the 'vehicles of thought'⁵ and John Hattie remarked that one of the three key factors in pupil achievement is that children be encouraged to 're-conceptualise information' so that they better understand it.⁶ When curriculum documents talk about 'Knowledge & Understanding,' this refers to facts (knowledge) and concepts (understanding). For example, a student might *know* that Paris is a capital city, but not understand the *concept* of 'capital cities.'

Good examples to begin with include: Art, Democracy, Evidence, Fairness, Food, Good, Growth, Happiness, Love, Money, Names, Number, Theory, Truth.

There is a full list of concepts on pages 222 – 230 of Challenging Learning.

STAGE 2: Creating Cognitive Conflict

Once students have a basic understanding of a concept, we can move to stage 2 of the *Learning Pit*. This means setting up cognitive conflict. This is also known as cognitive dissonance or a dilemma.

The prime reason for setting up cognitive conflict is that it encourages people to think more deeply. When pupils know, or think they know the solution to a problem, they are not inclined to think much about it. However, if they experience cognitive conflict then the tension between ideas provokes reflective thinking.

For example, consider the last time you faced a dilemma. What did you do? Did you seek solutions or alternative answers, try to identify the real problem, ask for advice, or think about the relative merits of one approach compared with another? Or did you panic and ignore the problem? Of course, both responses are common; which one you tend towards will be dependent on many factors. It is the same for pupils. But if we can help them through the panic stage when they are faced with a conflict, they should begin to think with more persistence, purpose and energy. This serves two purposes: by thinking more they work harder for their learning and often attain deeper levels of understanding; and secondly, the more they think, the 'fitter' they get at thinking and so the more they are willing to put effort into their thinking in the future.

There are many ways to set up cognitive conflict, including:

- Using dialogue, probably beginning with a question about the meaning or definition of a concept (see *Wobblers* below).
- Comparing concepts with other concepts, including the use of synonyms and antonyms.
- Reflecting on different uses of the concept in varying contexts, particularly contemporary examples.
- Using extension questions to stretch the meaning of a concept, its uses and the ways it is understood.

The ultimate aim of course is for learners to set up cognitive conflict for themselves. In the example dialogues above, you will notice that the teacher is doing the challenging. Over time though, we should expect pupils to challenge themselves – for it is this process that is the basis for reflection and contemplation.

Wobblers

Wobblers aim to create cognitive conflict in the minds of pupils by challenging their initial thoughts, making them question their assumptions and offering alternative perspectives they may not have considered.

Wobbler One: If A = B

This is a process of asking what a concept means, taking whatever the pupil says and then testing it by turning it around and adding an example.

In the second dialogue above, this happened as follows:

TEACHER: What does 'being brave' mean?

PUPIL A: Facing your fears.

TEACHER: So if I face my fears, am I being brave? For example, I'm scared to run across a busy road but I do it anyway.

This structure can be represented as:

If A = B then does B = A?

A is the concept that you are considering, in this case 'being brave'.

B is the pupils' response, in this case 'facing your fears'.

Some Examples of Wobbler One

If a friend (A) is someone I trust (B) then is someone I trust (B) a friend (A)? For example, I trust a nurse to help me when I'm sick, but does that mean she's my friend?

If a holiday (A) is taking a break (B) then if I take a break (B), am I on holiday (A)? For example, is my tea break or my half-hour game of chess a holiday?

If bullying (A) means hurting someone (B), does that mean that if I hurt someone (B) I'm bullying (A) them? For example, what if I foul someone in a football match? Or give someone some bad news?

Wobbler Two: Not A

An alternative to the first wobbler is simply to add a negative:

TEACHER: What does 'being brave' mean?

PUPIL A: Facing your fears.

TEACHER: So if I *don't* face my fears, am I *not* being brave? For example, I don't run across the busy road because I'm scared to do so.

Some Examples of Wobbler Two

If a friend (A) is someone I trust (B), then is someone I don't trust (not B) not my friend (not A)? For example, if I don't trust a friend to pay back a loan, then are we no longer friends?

If a holiday (A) is going away somewhere (B) then if I don't go away (not B), am I not on holiday (not A)? For example, if I stay at home during the school holidays, am I not on holiday?

If bullying (A) means hurting someone (B), then if I don't hurt someone (not B), am I not bullying (not A) them? For example, if I don't hit them but instead encourage everyone to ignore them, am I not bullying?

There are other techniques to get students' minds 'wobbling' on pages 93 – 103 of Challenging Learning.

Wobbler Notes

1. Wobbling, not point scoring

As you may have noted, these techniques lie comfortably in the Socratic tradition. Socrates (469–399 BC) often posed a series of questions to help a person reflect on their underlying beliefs and the extent of their knowledge. Such questioning is not about point scoring or proving someone wrong. Indeed, it is said of Socrates that he questioned his fellow Athenians not through an arrogant sense of his being right and them being wrong but through a desire to unearth contradictions and misconceptions that were blocking the way to true inquiry.

And so it is with these wobblers: they are not designed to prove pupils wrong. Rather, they are tools to help them go beyond the easy answer or first response, to identify contradictions and misconceptions and, ultimately, to form the habit of questioning their own ideas.

2. Humour and humility

Humour and humility were difficult to convey in the example dialogues, but they are key characteristics of the wobbler approach. Putting pupils on the spot in an attempt to discredit or disprove their hypotheses would be arrogant and discouraging for them. However, it seems to be far more productive if we laugh with the pupils (rather than at them) and admit we don't know what the concept means any more than the pupils do. This helps establish an expectation of co-inquiry with the teacher rather than a dependence on the teacher's authority and an anxiety about getting the answers wrong.

3. A little bit of trickery

With humour and humility still in mind, the wobbler challenge could be said to be a form of trickery. Of course, trickery has negative connotations such as the trickery of a conman. This is partly why it's worth mentioning that with these wobblers I am promoting a trickery that is positive, fun and engaging for pupils. It is also worth mentioning because the Latin root word for challenge is 'calumnia,' meaning trickery.

4. Drawing out rather than stuffing in

A more commonly known word origin, this time of 'education', is from the Latin word 'educere' meaning 'to lead or draw out.'

Wobblers attempt to do just that. Rather than giving pupils the answers, the ideas, the facts or the definitions, wobblers all strive to tease out pupils' ideas. Once 'out' they can be examined, played with, cross-referenced and, of course, challenged.

'A major purpose of education is to cultivate open-mindedness and intelligence. Defined in terms of the aptitude for acquiring knowledge, intelligence depends upon an alert curiosity. The cultivation of intelligence depends on freedom to exercise curiosity.'

Jiddu Krishnamurti, 1895–1986 (Described by the Dalai Lama as one of the greatest thinkers of the age)

STAGE 3: Building Meaning

Whilst struggling in the pit of the *Learning Pit* together, pupils begin to create an answer through social construction. That is to say, they construct a working definition, or an understanding, through dialogue. An effective example of this came from the lesson with 7 year olds described earlier in this article. We were investigating odd numbers and getting ourselves deeply into a pit. Then one of the boys, who incidentally has 'dyscalculia', said: 'I've got it; it's like odd socks, isn't it?'

I asked him to explain further: 'My mother reckons that no matter how many socks she puts in the washing machine, she always gets an odd number out.' 'What do you mean?' I asked. 'She takes them out, dries them and lays them out on the kitchen table. Then she takes one, puts it together with another and folds them. She does this until always at the end, there's one left over. Odd numbers are like that, aren't they?'

It was at this point that three children recently arrived from Poland had their 'aha' moment. Up to that point, they had been a little lost with what was going on, mainly because of the speed of conversation.

But when they heard Darren describe his mother's odd socks, they instantly knew what he was talking about. Perhaps the same phenomenon can be seen with Polish socks in the wash.

This anecdote nicely describes some of the key features of Stage 3: 1) pupils help each other to learn; 2) knowledge constructed through social interaction is often far more meaningful than knowledge that is served up on a plate by the teacher; 3) pupils who 'teach' are more likely to remember information in the long term than those who are 'taught'; 4) this sort of challenging dialogue often provokes 'Eureka' moments.

A Sense of Eureka

What the Learning Pit is designed to provoke

Eureka moments occur when someone discovers a truth for themselves. In the dialogue about odd numbers, there are two examples of this: the first, marked with an (E), is when Ben realises that units are a crucial factor in determining odd numbers ('an odd number is one... that can't be divided by two without changing the units'); the second 'Eureka' moment is when the boy talks about odd socks.

In June 2007, I was giving a keynote speech and mentioned the Eureka moment. A woman in the audience jumped up and declared she'd just been married! Baffled, I inquired as to the relevance of such a statement. She then revealed (to the 600 people in the auditorium) that her new husband was Greek so she'd been learning Greek, and that 'Eureka' was Greek for 'I found it.' Though bemused by her outburst, I was also very interested in this meaning of Eureka. It doesn't mean 'My teacher gave me the answer'; It means, 'I found it; I found my own answer to this problem and it feels great.'

It is this that I believe education ought to be about: creating the conditions for young people to feel a sense of having created their own meaning. It is not about being given answers or learning answers by rote (though learning by rote has a role to play sometimes). Inspirational education is about generating a sense of eureka so that students will be truly engaged. In this moment, they will feel as if it they have had a unique revelation that only they truly understand. Just try shutting them up when that's happened! They will want to share their profound experience with everyone. Compare this with their usual response of 'Nothing!' when parents ask what they have done at school that day!

Without wishing to sound too evangelical about this: just try creating eureka moments in your classroom without first getting students into the pit! We all have to struggle first if we are going to have any sense of achievement or eureka. Imagine if I had simply agreed with each correct answer that the students gave in the dialogues above; would that have given the same sense of accomplishment? Of course not! Students necessarily have to struggle in order to have any chance of reaching those eureka moments. And that's why the *Learning Pit* is worth it!

STAGE 4: Reflection & Metacognition

The fourth and final stage of the *Learning Pit* is to consider the learning journey. This is where metacognition, or debriefing, takes place.

In his book on Unified Theories of Cognition, Allen Newell points out that there are two layers of problem solving: applying a strategy to the problem at hand, and selecting and monitoring that strategy. Good problem solving, Newell observed, often depends as much on the selection and monitoring of a strategy as on its execution. The term metacognition (thinking about thinking) is commonly used to refer to selection and monitoring processes, as well as to more general activities of reflecting on and directing one's own thinking.

'Competent or successful learners can explain which strategies they used to solve a problem and why, whilst less competent pupils monitor their own thinking sporadically and ineffectively and offer incomplete explanations.'⁷

There is ample evidence that metacognition develops over the school years. For example, older children are better than younger ones at planning for tasks they are asked to do.⁸ However, meta-cognitive skills can also be taught. This final stage of the *Learning Pit* is designed to help with that.

The metacognitive questions that I recommend are all shaped around the learning (or thinking) journey as described by the *Learning Pit*. Thus, the first few questions will relate to Stage 1 of the model, the next to Stage 2, and so on. The conclusion of the metacognition stage might also include a reference to the answers that pupils might give if they were asked a connected question in an exam, or involve some reflection on those strategies they used that could be applied to a similar task.

Stage 1

- What did you think an odd number was at the beginning of the lesson? (eg 'An odd number cannot be divided by two.')
- What definitions did you hear other people use?
- What were the best bits and/or weaknesses of your first idea?

Stage 2

- What challenged your first idea? (eg 'When I realised that odd numbers can be divided by two.')
- How did you feel as you slipped into the pit?
- What strategies did you consider when you were in the pit?
- What were the ideas that you rejected?

Stage 3

- What helped to clarify your thinking?
- Which ideas made most sense to you and why? (eg 'The idea that odd numbers can be divided by two but we say they can't because when divided they never result in a whole number answer.')

Stage 4

- What do you think an odd number is now?
- How do your ideas differ from what you thought previously about odd numbers?
- What strategies did you find useful for dealing with, and then coming out of, the pit?
- What analogy, metaphor or example could you use to explain odd numbers to someone else now? (eg 'Odd numbers are like odd socks: there's always one left over. Also, they end in either 1, 3, 5, 7 or 9, and they do not appear as an answer in the 2x table.')

Example Lesson Plan

Concept: Reality

Stage One: Identify the concept

The concept 'real' is not at all clear, which is perhaps partly why it holds such fascination for children and adults alike. One of just a handful of concepts that children as young as four can happily discuss, it is likely to come up with pupils of all ages and within many areas of the curriculum.

Some philosophers have said that all our experience (including sleeping) is a different 'reality' from the reality of the physical world that exists independently of human experience. That said, this is not globally accepted nor is it particularly a view that we should encourage with children. However, what is clear is that we ought to be able to establish criteria for distinguishing between appearance and reality. Though children need to fantasise, imagine and dream, they also need an understanding that these activities might not be 'real'.

One way of exploring the concept is to look at different ways in which something can be unreal, for example a plastic banana, a dream, monopoly money, magic and stories. Though they are, arguably, all unreal (or fake) they seem to be unreal in different ways. And that is without bringing in such things as optical illusions that seem to be one thing despite being another, for example train tracks that seem to converge in the distance, or 'magic' mirrors at the fairs.

Starter Questions

- How do we know whether something is real or not?
- In what ways are toys real?
- Is there anything real about reality TV, since it is most often deliberately set up to provoke certain behaviours or situations?
- How do we know that life is real?

Stage Two: Problematising the concept

Getting your students into the Pit

This is a favourite of mine to introduce with 4 and 5 year olds, although it can easily be adapted for older pupils. Show the children two apples - a 'real' one and a plastic one - and ask them what they see.

CHILDREN: Two apples.

ME: Are they the same?

CHILDREN: No, one's real and the other is plastic.

ME: Does that mean the plastic one is not real?

CHILDREN: Yes.

ME: But does that mean everything that is plastic is not real, for example, this chair? This chair is plastic so does that mean it's not real?

CHILDREN: No!

YES: Then why is this plastic apple not real?

CHILDREN: It is real.

ME: So they're both real, is that right?

CHILDREN: Yes.

ME: So, what about the other apple? (pointing to an invisible apple) Is that real?

CHILDREN: No!

ME: Why not?

CHILDREN: Because we can't see it.

ME: But we can't see your teacher at the moment, can we? Let's look around the room, can anyone see her?

CHILDREN: No.

ME: Does that mean Mrs Brown is not real?

CHILDREN: Of course not.

ME: So why don't you think my third, juicy red apple isn't real?

CHILDREN: Because we've never seen your apple but we've seen Mrs Brown lots of times.

ME: So, if you've never seen something, does that mean it's not real?

CHILDREN: Yes.

ME: But none of you have ever seen my dog, Hector, and he's real, isn't he?

This is where opinion becomes divided and we talk about evidence, believability and trust.

Deepening the *Learning Pit*

Questions to ask 3–7 year olds:

- When we dress up, are we real?
- Are your dreams real?
- Are toys real? What about toy cars or plastic animals?
- Are things that we can't see, real?
- How do you know if something is real or not real?
- Is television real?

Additional questions for 7–11 year olds:

- What's the difference between being real and being alive?
- When you look in the mirror, is your reflection real?
- Do you need to be able see, touch, feel, smell or taste something to know it's real?
- When are stories real?
- Is what's real for you the same as what's real for your friends?
- Is the sky real?

Additional questions for 11–14 year olds:

- Can something be real and not real at the same time?
- What's the difference between reality and perception?
- How do you decide when to believe what you see?
- What are the connections between reality, truth and fact?
- Can something that doesn't exist be real?
- Are people who have died still real?

Further questions to ask 14–18 year olds:

- What is the difference between reality and virtual reality?
- What is real about reality TV?
- Does one enter a different reality in one's dreams?
- If something has not happened yet but is inevitable, is it real?
- What did Albert Einstein mean when he said: 'Reality is merely an illusion, albeit a very persistent one'?

Stage Three: Construct understanding

Helping your students find their way out of the Pit

The following activities should help your pupils begin to form a clearer idea of what 'real' and reality are:

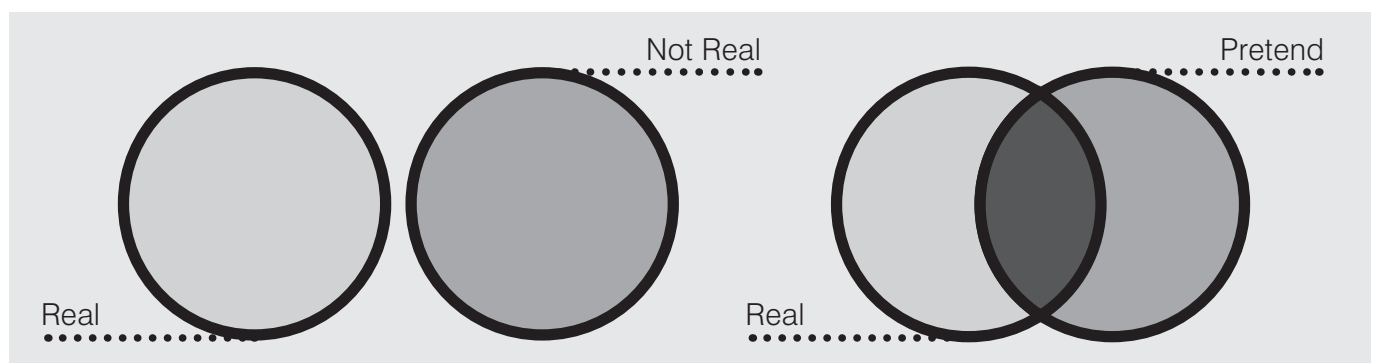
Young children (3–7):

	REAL	NOT REAL	NOT SURE	REASON
Plastic food				
Dreams				
Stories				
Monopoly money				
The Gruffalo*				
Spiderman				
Heroes				

*The Gruffalo refers to the character in a picture book (Donaldson, J. and Scheffler, A. *The Gruffalo*. Macmillan Children's Books 1999). However, you could use any character well known to your pupils.

Venn diagram

Sort a set of objects into two hoops, one representing 'real' and the other 'not real'. Keep the hoops separate to begin with and then progress to overlapping hoops, perhaps changing the labels to 'real' and 'pretend' (can things be real and pretend at the same time?)

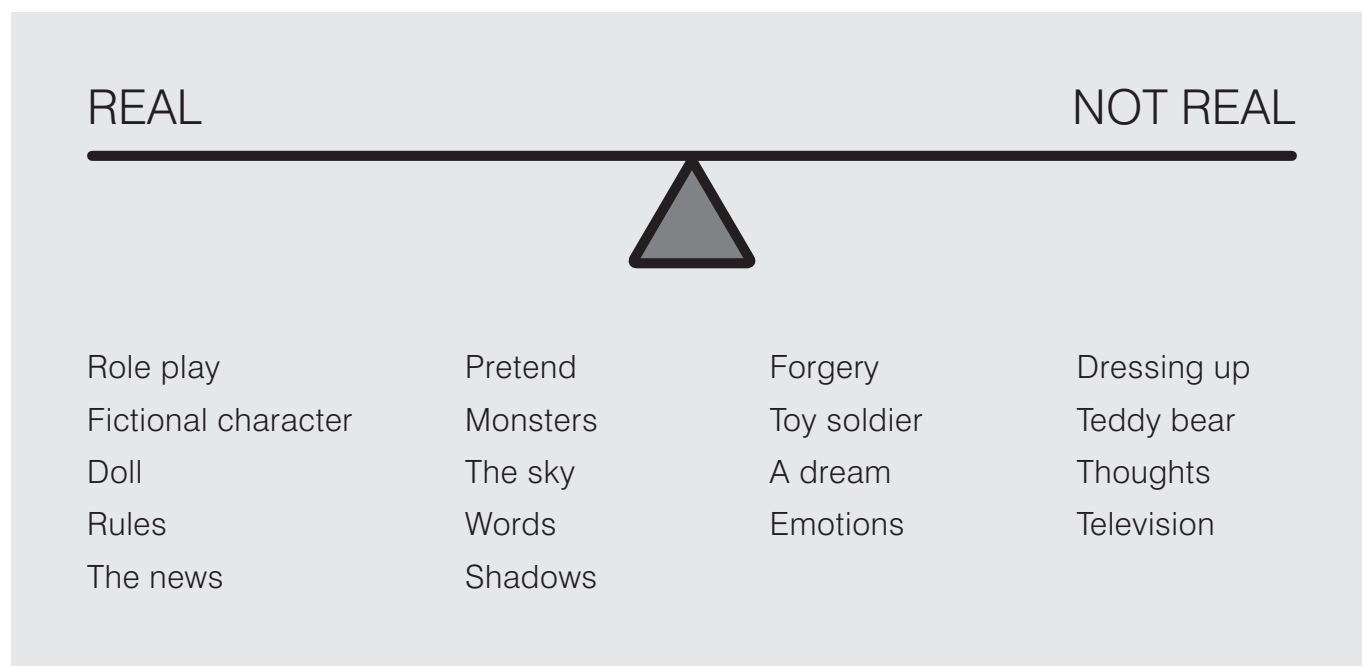


Also consider the following questions:

- What's the difference between a real fireman or nurse and when we dress up as a fireman/nurse?
- What's the difference between imaginary play and physical play?
- Is all play 'pretend'? If so, does that mean play is not real?
- What's the difference between dressing-up (eg as a monster) and getting dressed?
- If dressing up is 'pretend' then are you not real when you dress up?

Additional activities for juniors (7–11):

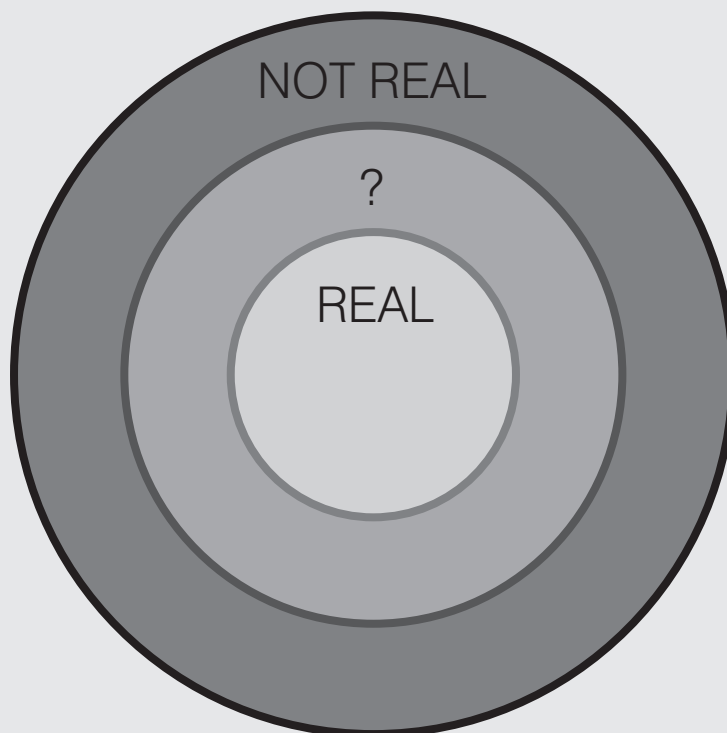
Place these words and concepts along a continuum between 'real' and 'not real'.



Concentric circles: Real

In your group, decide where these words fit in the concentric circles diagram:

- Fake
- Authentic
- Pretend
- Good
- Bogus
- Genuine
- Realistic
- False
- Bona fide
- Counterfeit
- Copy
- Mock-up



Additional comparisons for older pupils (11–18):

Pick five of these concept pairs. Describe the similarities and differences between the two concepts in each case.

- Real and not real
- Reality and truth
- Fact and fiction
- Real and imaginary
- Reality and feeling
- Reality TV and TV news
- Real and dead
- Real and supernatural
- Reality and perception
- Real and make believe
- Real and pretend
- Real and tangible
- Reality and virtual reality
- Real and alive
- Real and copy
- Authentic and real

Understanding contemporary uses of 'real'

Explain what 'real' means in the following examples:

- She's the real deal.
- The cost of food in real terms has risen by 15%.
- Is that Rolex real?
- He sells real estate.
- She's so in love, she thinks it's the real thing.
- Are you for real?
- Get real!
- We saw it happen in real time.

Stage Four: Review the Learning

Metacognition: Thinking about your thinking

Recommended metacognition questions:

- How can we tell if something is real or not?
 - Can something be real and not real (or fake) at the same time?
 - Are toys real?
 - How can we be sure that our lives are real?
 - Is the future real?
 - How does your idea of reality differ from the beginning of the lesson?
 - What questions about real are you left with?
-

The Learning Pit – some Final Thoughts

The *Learning Pit* can be a frame of reference

I have shared the *Learning Pit* with almost every class I've taught. The stages and ideas behind it became a shared language. Phrases such as 'I'm in the pit' or 'I don't understand why some people are in the pit when I'm still at Stage 1' were commonplace. Furthermore, the *Learning Pit* was a useful metaphor for explaining why I was purposefully being difficult and putting obstacles in their way.

The *Learning Pit* is self-differentiating

Since lessons that use the *Learning Pit* are collaborative, each pupil is able to work at his or her own level. In fact, it is very often the so-called less successful pupils who excel in these lessons whereas the higher achievers, to begin with at least, tend to sit back. There may be many reasons for this, and I am no psychologist, but it seems to me that the lower-achieving pupils are used to struggling, so the pit is familiar territory for them, whereas their higher-achieving peers may fear they don't have the resilience that the pit demands. That said, once the high-flyers realise that the challenge offers an opportunity to stretch their thinking, they normally involve themselves with enthusiasm (by which time the other pupils have developed more confidence and capacity to 'keep up').

The *Learning Pit* is a collaborative exercise and helps develop a community of learning

It is important to note that the challenge is designed to be a collaborative exercise. It is not about individual pupils being left in the pit with no support from others. Indeed, the practice of encouraging pupils to help each other when in the pit or to guide each other out of it can help them develop socially.

Encouraging pupils through the *Learning Pit* increases self-esteem

Self-esteem has a resilience element that is almost impossible to develop without the experience of struggling with and overcoming a challenge. That is what the *Learning Pit* is all about: creating challenge so that the pupils struggle, but at the same time teaching them ways to prevail.

References

1. Nottingham, J. A., *Challenging Learning*, JN Publishing, 2010
2. See www.challenginglearning.com/shop
3. Nottingham, J. A., 2010, op. cit. pp 222-230
4. Nottingham, J. A., 2010, op. cit. pp 3
5. Lipman, M., *Thinking in Education* (2nd Ed), Cambridge University Press, 2003
6. Hattie, J., 'Influences on student learning', Inaugural Lecture: Professor of Education, University of Auckland, August 1999
7. Newell, A., *Unified Theories of Cognition*, Harvard University Press, 1991.
8. Chi, A. and van Lehn, K., 'A Model of the Self-Explanation Effect', *Journal of the Learning Sciences*, Volume 2, Issue 1, January 1992.

Further Reading

www.jamesnottingham.co.uk/about/learning-pit

On this page, there are many links to blog posts and articles describing other people's uses of the *Learning Pit*. There are also some *PowerPoint* slides available to download and use if you wish to share the model with your colleagues.

The *Learning Pit* also appears in the following titles:

Challenging Learning

Published in the UK by JN Publishing (challenginglearning.com)

Published in Australia by Hawker Brownlow (hbe.com.au)

Læringsreisen – Norwegian version (cappelendammundervisning.no)

Utmanande undervisning i klassrummet – Swedish version (nok.se)

Encouraging Learning

Published by Routledge (routledge.com)

Published in Australia (hbe.com.au)

Nøglen til læring – Danish version (dafolo.dk)

Læringsnøkkelen – Norwegian version (cappelendammundervisning.no)

Uppmuntra lärande – Swedish version (nok.se)

Philosophy for Children through the Secondary Curriculum by Chandley & Lewis (sapere.org.uk)