

# Making the Parts Whole

assessment / evaluation in transdisciplinary and  
transcontextual classrooms

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# An Assessment Approach Coherent with our Democratic Pedagogical Values

- A process to analyse and evaluate learning and teaching.
- To make visible some of the trans-contextual dynamics in learning and teaching.
- To invite different points of view.
- To support our professional development.
  - To affect and improve curriculum design and outcomes for everyone
  - To enhance our pedagogical vocabulary
  - To be confident in uncertainty

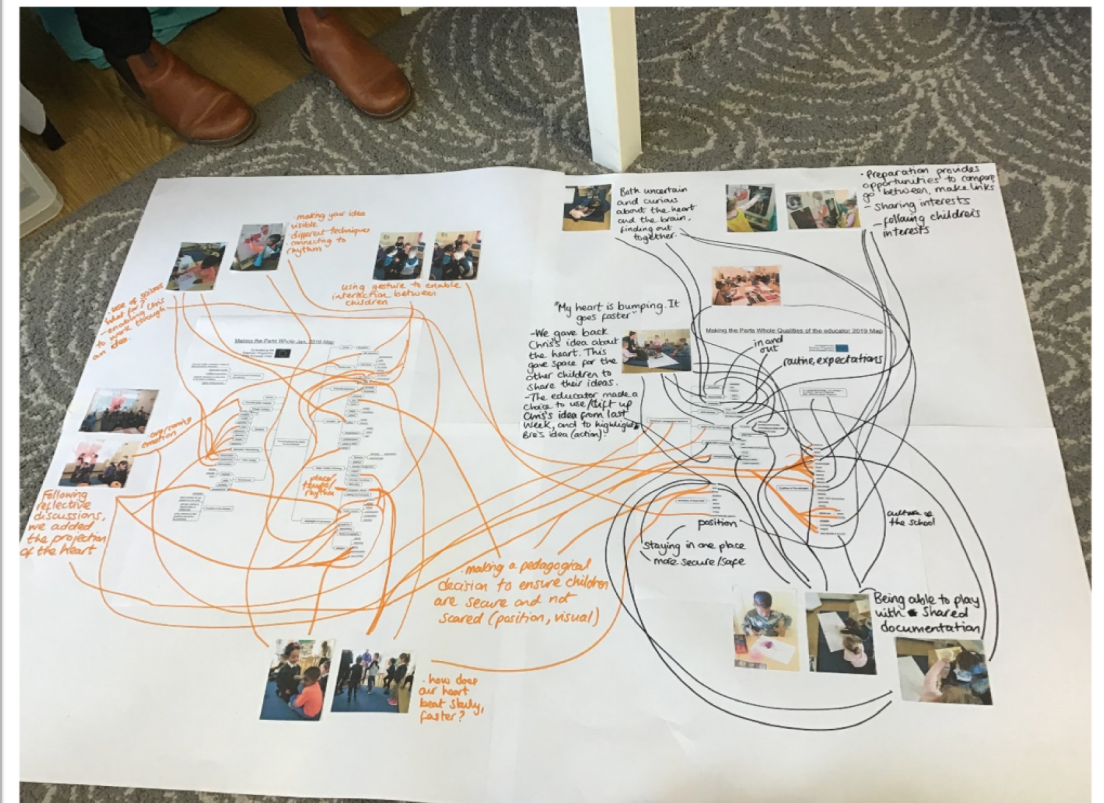


Arising from collaboration between international research partners giving multiple points of view

UK, Sweden, Romania, Spain  
3 years, 8 international study weeks



Dynamic, evolving mapping; looking for relationships and interconnectedness





# A Process that is Partial, transformable and dynamic

Maps of children,  
educators, environments  
Used individually or  
together



Practice affects the mapping,  
mapping affects the practice

# Evaluative questions to orientate educators

## analysis proposed by Helen Kärnebro

- Examples of when children transform something / a subject from an exploration in their play. Which kind of communication occurs?
- Examples of how children use their own unique metacognitive abilities to create gestalt in their exploration coming out of their own theories / hypotheses.
- Examples of when the zone of proximal development activates
- Examples of when materials/ environments mediates new questions, adds / connects / accommodates / combines / assimilates or a pattern occurs
- When do adults in interaction with children, become researchers instead of an observer, challenger or intermediary.



# Case study: from Eken/Skogsglántan preschool

Outcomes for the week

- Use the environment map
- in connection with other 2 maps.
- Work in a workshop space to reflect/ elaborate /analyse childrens questions and processes - with curated materials.
  - Polysensorial reflection (→ professional for
- Identify <sup>TRANSVERSAL</sup> ETHICAL IDEAS
  - what are they in this process

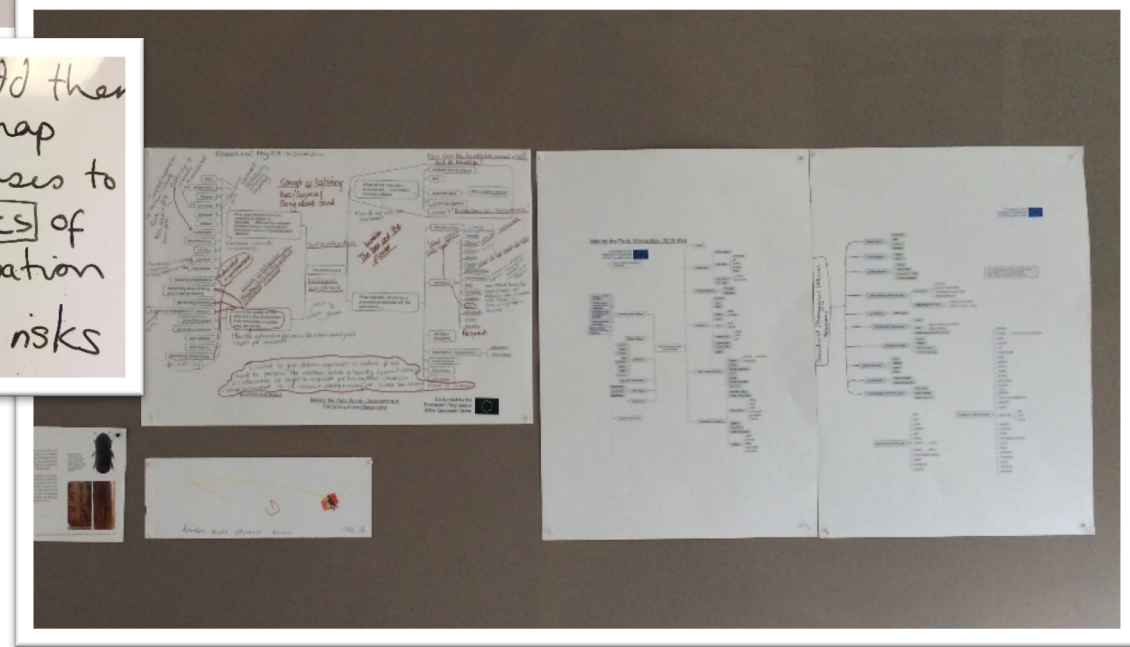
Based on classroom  
practice,  
Constant evaluation of  
the pedagogical values,  
principles of democracy



→ New words + add them  
to the map

→ New words/phrases to  
articulate our ethics of  
assessment/evaluation

→ Remembering the risks



**We build fluid maps of ideas arising from reflective dialogue  
between educators using daily traces of documentation.**



## Day 1 – From classroom notes

- The environment is prepared in advance by the educators (cloth, colours, paintbrushes etc.)
- Children between 4 and 5 years old are painting flowers (they observe and paint).
- The educator provides extra tools to further their inquiries about flowers – digital microscope.
- Boy 1 (S): - 'This is a flower with seed inside, and when the flower dies, the seeds fall on the ground and a new flower will grow from the seeds'.



Day 2 – from the afternoon reflection meeting, agreeing evaluations and continuing of mapping observations the following decisions are made

The educator decided to add extra information about seeds by cutting the flower capsule and using the digital microscope and the iPad to observe the details of the seeds with the children.

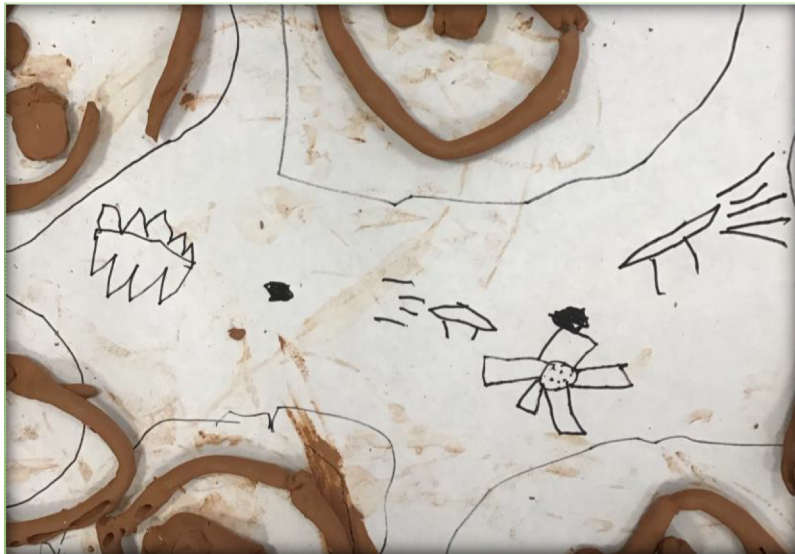
The educator prepares clay-strings and a large paper on the floor so the children can represent the seeds using another language. The educator supplies pictures of the magnified seed and leaves them on the floor so the children can observe them.

The educator asks the children to represent the seed on a large scale, using the clay on the paper. Five children represented the seed (the hairs, the pistil and the repetitive patterns inside the seeds). Boy 2 (J): - I make the seed-people, they are like knights protecting the seed from thieves.

The children first talked about the capsule with small capsules inside, and inside the small capsules are different seeds.







## Day 3 – continuing the evaluative processes from day 1 and 2

- The educator provided the children with black pencils so they could complete the capsule on the large paper.
- The educator wanted the children to use their fantasies about the enemies and the protectors of the seed-capsule.
- The educator provided no verbal instructions.



Boy 1 (S): - 'These are traps that catch the thieves when they come in to steal the seeds. When the thieves break through the door an alarm rings and the knights come and protect the seed. The thieves want to destroy the seeds so they can't grow'.

The educator thinks this new information connects to parasites about which they had talked about 2 weeks earlier.

Educator (A): - 'Do you remember when we talked about parasites and ladybugs?'

Girl 1 (M): - 'Yes, we have to add it! The children drew ladybugs and aphids.'



# Reflections / evaluations on the project made by participants

1. The educator was present and an active listener.
2. It was important that the educator gave the children the time to add new knowledge, because their new thoughts showed at the end of the sessions.
3. In this context the pencils (instead of clay) developed the fantasy in a faster way.
4. The educator made the learning visible and provided extra material (eg facts in a book about parasites for example)
5. There were symbols of good and bad. Transformation in the process of learning through fantasy and play.
6. An unexpected outcome. The educator expected the children to understand the lifecircle of a flower, instead they symbolised good and bad.
7. The value was in educators offering the time to go back and forth to the activity. Keeping the context (the clay-representation on paper) for two days – so the children could reflect on their work.

## Conclusions from the research... feedback by participants reflecting on the value of these processes

- The interspace (trans spaces between disciplines and contexts) areas also help the work team to get common inner images of what is going on, which in turn helps to see more connections that arise in everyday life.
- Also to see more opportunities which in turn can help teachers to go one step further. You are trained by the process to practice describing abstract and complex situations.
- Metacognitive processes. It has deepened our understanding of transdisciplinary learning when you have had to "quarrel" with the map for a long time. Long-term processes must take time.
- Invaluable to induction of new staff into schools and teams of collaborating teachers.

- Based on the observations collected and processed, the map was used in different ways. Since a team of staff communicates with each other all the time and not only at specific meetings the map was visible in the department. As the teacher constantly thinks about how to work on, the dilemma that arises and what it was that was transdisciplinary in everyday life in the various events, the visibility of the map became a support. What we previously separated in the children's everyday life became more connected. One example: that learning takes place and is affected in different ways based on time and space that we have not noticed before.
- We practiced a holistic view that we had not experienced before. It has also helped us to describe more detailed, analytical learning processes but also that the “working-team” is given a common language. You can see the concepts as verbs- activators of activity both in concrete by helping to prepare, select materials, make questions, describe events, analyse.
- The map has perhaps given the teachers more confidence in their professional role and in leadership. We have become better in listening and seeing and being close to the children's processes. The discovery of, and learning about how children act, think and connect with their surroundings has helped us to dare more ourselves. For example, to connect more unpredictable contexts that are closer to the children's world of experience than ourselves.



## The risks — to the value of the processes in maintaining coherence with our values



1. The map becomes fixed
2. The map becomes the truth
3. The map becomes a checklist
4. We only use the map and don't generate the the traces (pedagogical documentation)
5. The map is used to judge deficits within children or teachers
6. The map could make us skim over the surface of the complexity
7. Remember 'The map is not the territory.' – Gregory Bateson

## A pedagogy of relationships in an ethical and coherent school system – values from Madeley Nursery School

“It takes two to know one.” – Gregory Bateson

At Madeley Nursery our pedagogical understanding is based on the **delightful complexity of living systems** . A system of relationships between contexts that drive development and indicate livingness.

Stephen Nachmanovitch brings Bateson's theory into the practicalities of daily life, "**This way of seeing is not an abstraction, but a tangible experience that can be cultivated by practice. His fundamental message, of a reality compounded of relationship, communication, and a fused scientific / aesthetic truth.**"

**Ecologies and human systems form the subjects for enquiry** at Madeley Nursery School. We seek to engender a **deep respect and value through collaborative projects and practical daily interactions**. This inquiry (project) based thinking is "**thinking which develops through the connections between things. It includes environments, tools procedures.**" -  
Vea Vecchi

There are skills that we support and value through our pedagogical approach. They enable us to learn in all areas of the curriculum and are essential to support and sustain our holistic development as healthy, happy, friendly and caring people.

To compare.

To test out, check ideas and make predictions.

To estimate.

To transfer learning.

To categorise.

To see connections.

We learn and investigate the world together in groups. This **sociable learning is at the core of everything we do** .

When we learn together we are constantly practising **communication skills**.

Explaining, negotiating, arguing, deciding, defending ideas, describing, labelling, imagining, suggesting, empathising  
Friendly, sociable skills help us to be happy, healthy people and make our communities good places to live in.

We learn to work in a team, **to collaborate**, take turns, to be supportive, to include and value others who are different to us, to interact, to manage disagreement, to enjoy each- others company, to help and care so we aspire to make the world a better place.

Learning involves **creative and innovative thinking** in relationship to other domains. This happens in every area of the nursery. In this way we can value people who are flexible - inventive - poetic - adaptable - brave - experimental - innovative - playful.

**Positive attitudes** to learning help us to be successful in life. Valuing ourselves and others, with sensitivity to the incredible complexity and beauty of the world, taking responsibility for the impact of our choices and actions on all ecologies .

Website: [www.madeleynurseryschool.co.uk](http://www.madeleynurseryschool.co.uk)

References:

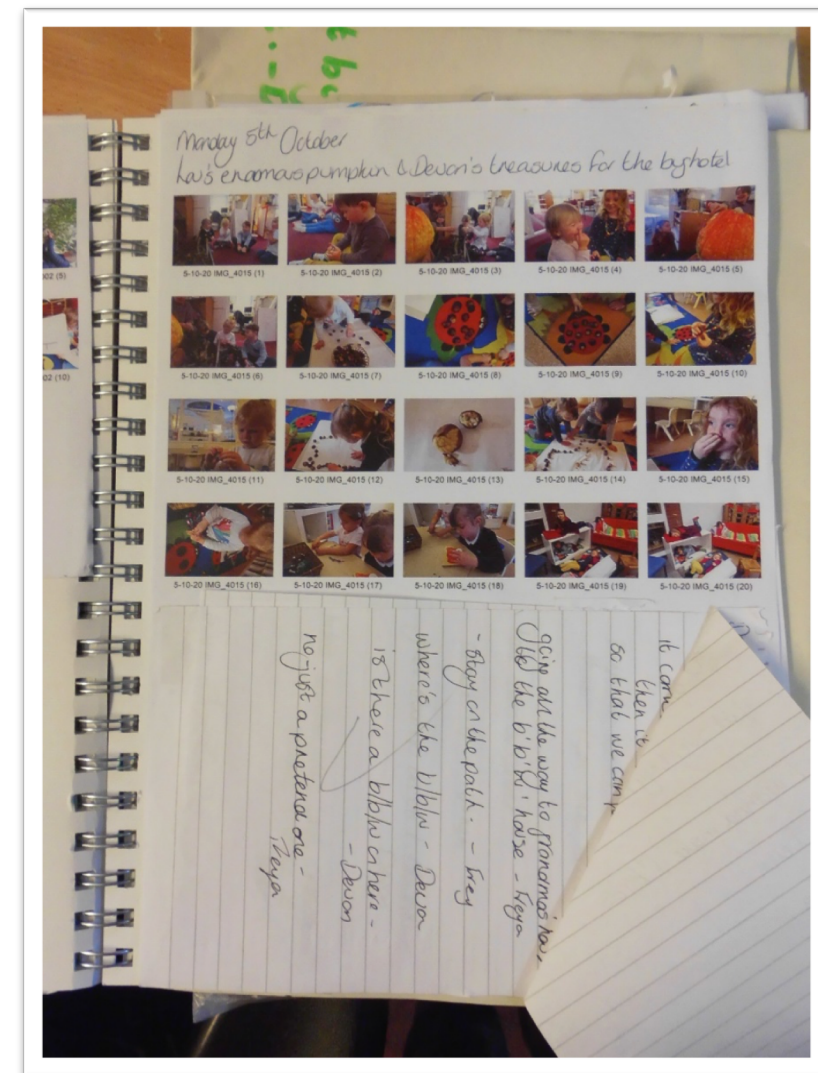
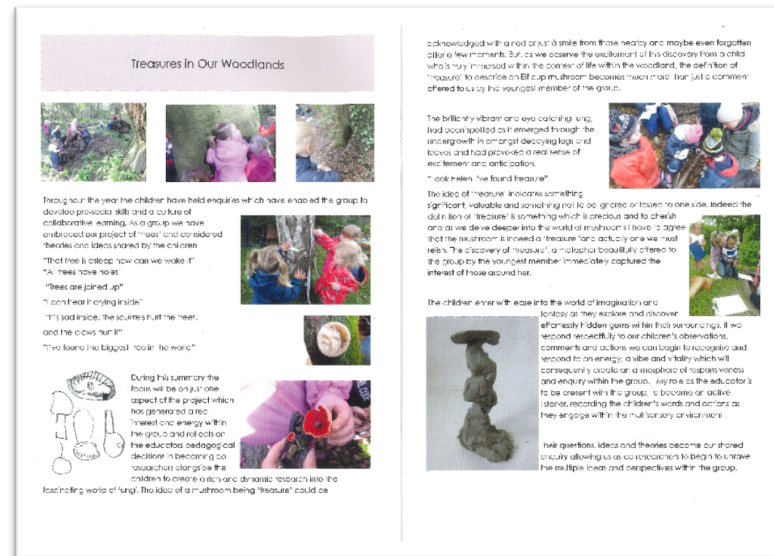
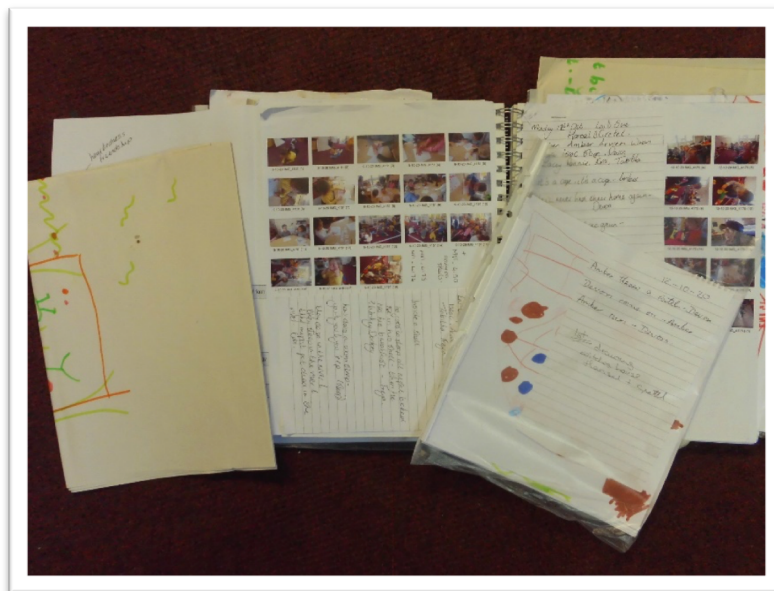
Bateson and the Arts; Stephen Nachmanovitch; Free Play Productions, Ivy, Virginia, USA

Art and Creativity in Reggio Emilia: exploring the role of ateliers in early childhood education : Vea Vecchi: Routledge.

# Current work at Madeley Nursery School 2020

- This is an example of the use of the mapping process to assess the impact of the curriculum and understand what and how children are learning.
- The map arises from the daily traces of documentation kept by small teams educators (3-5 aults)
- At intervals of approximately 2-3 weeks we analyse these traces looking for how children are making meaning, affecting cognitive change and transforming understanding.
- The first map arose from these reflective and evaluative discussions and review of the daily documentation.





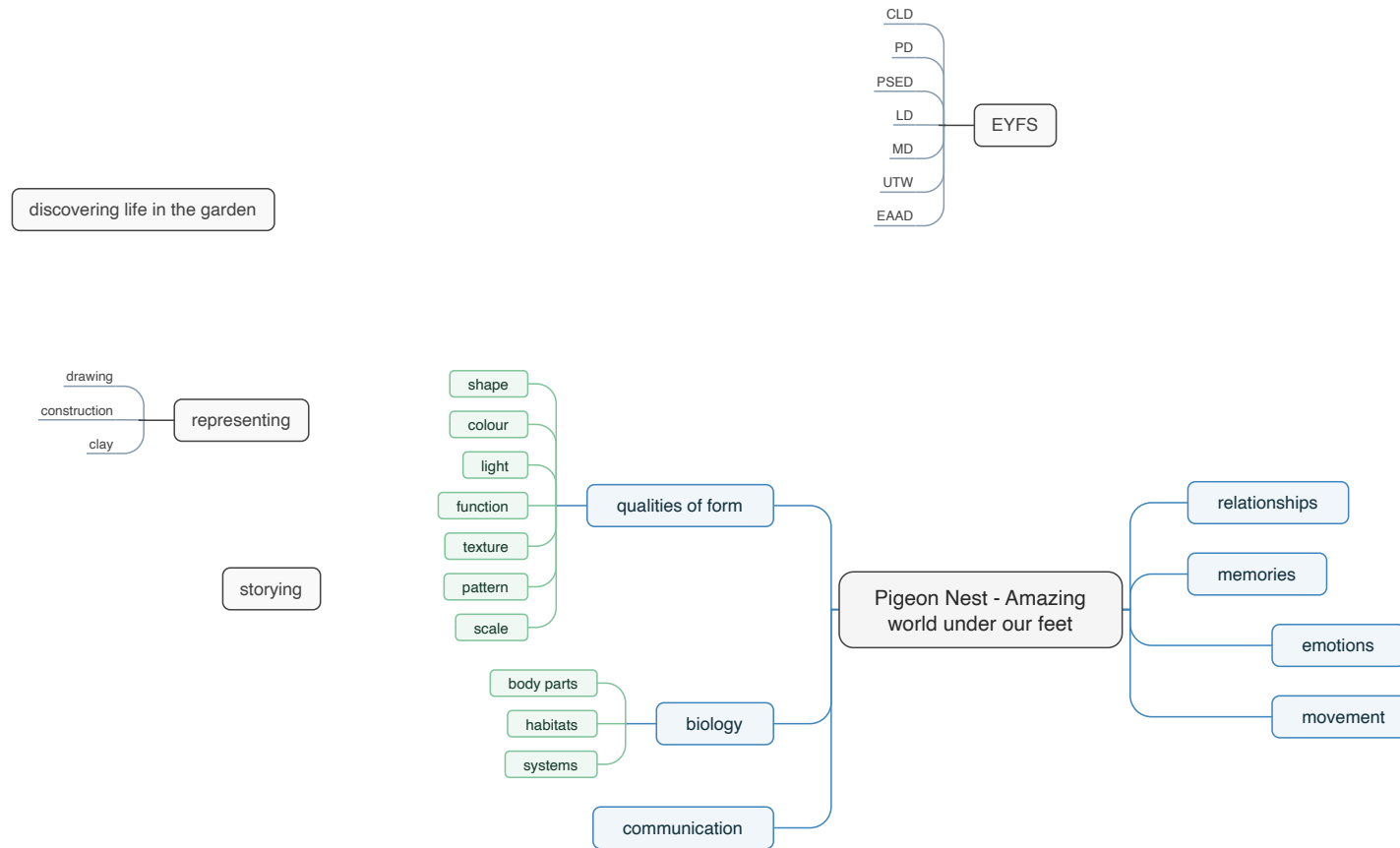
Daily traces are collected by all staff.

Documentation short stories are sometimes edited during the project and displayed.

Project summative stories are created at the end of the school year.

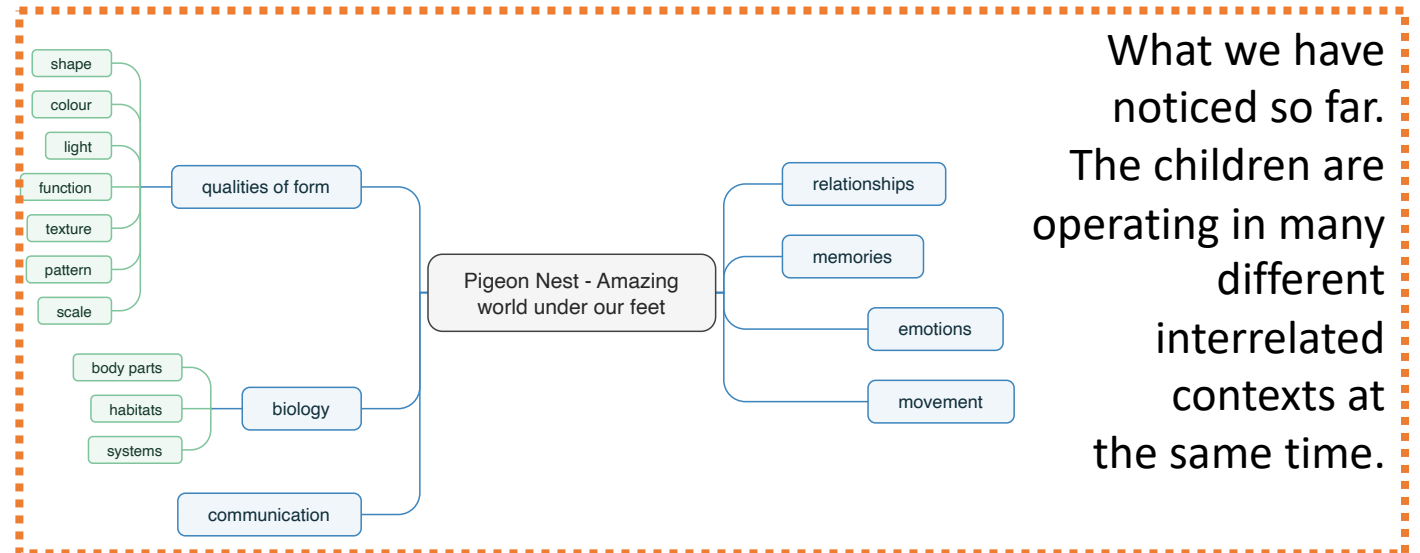
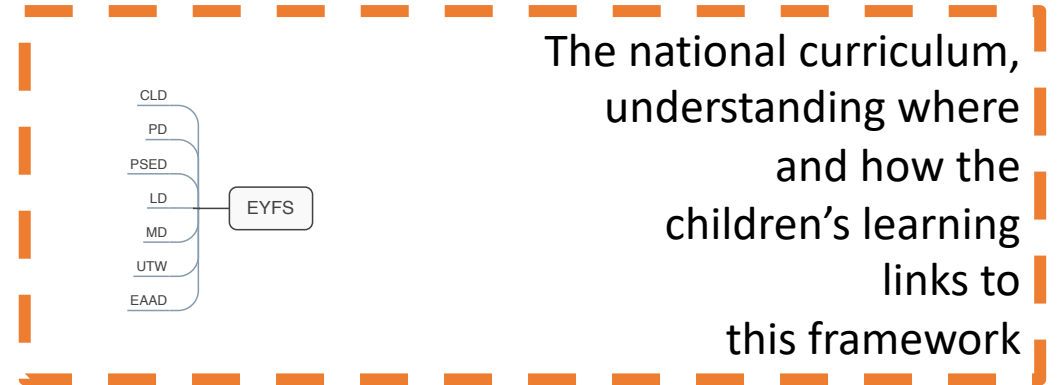
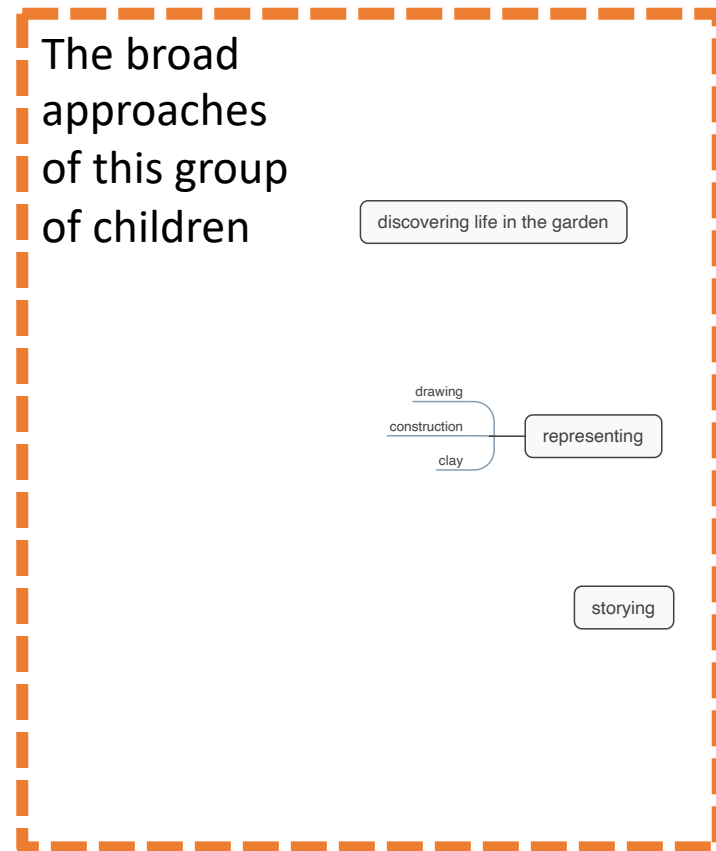
Pedagogical documentation is a dynamic, looping process: design, observe, evaluate...19.....

# First map: made from educator discussion





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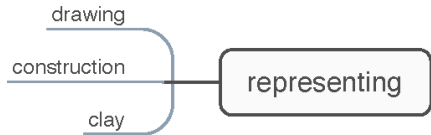


## Second map: made by staff after two weeks

- We reflected on how can we make visible the linkages between our observations and daily traces of documentation with the work we are doing as a school on developing our understanding of cognition in learning. By showing these linkages and discussing them we raise our understanding as staff and this influences our work as educators in curriculum design and in interactions with children.
- The arrangement of the different contexts has evolved based on our new evaluations, (remember this is a deliberately mobile and dynamic process).

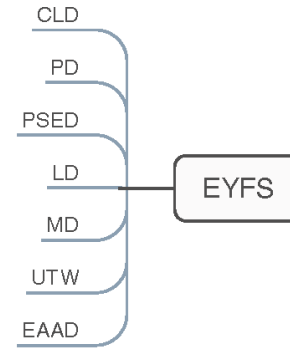
## The broad approaches of this group of children

discovering life in the garden



storying

Heartedness / friendliness



Cognitive behaviours

## cognition and learning

To compare, similarities and differences.

To test out and check ideas and predictions.

To estimate how much, how many, what size, what shape.

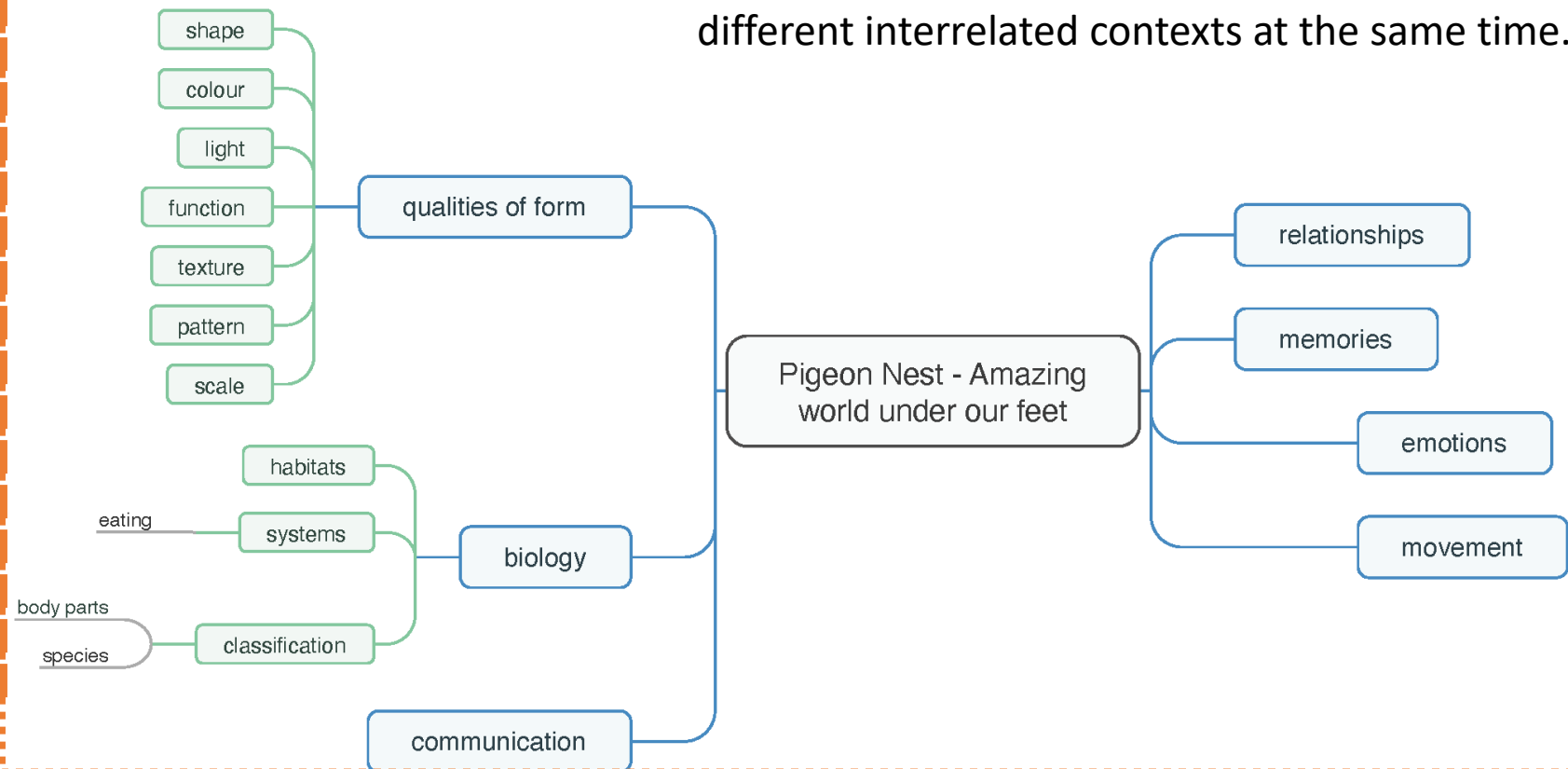
To transfer learning from one area to another.  
To categorise things based on their properties.

To see connections between things.

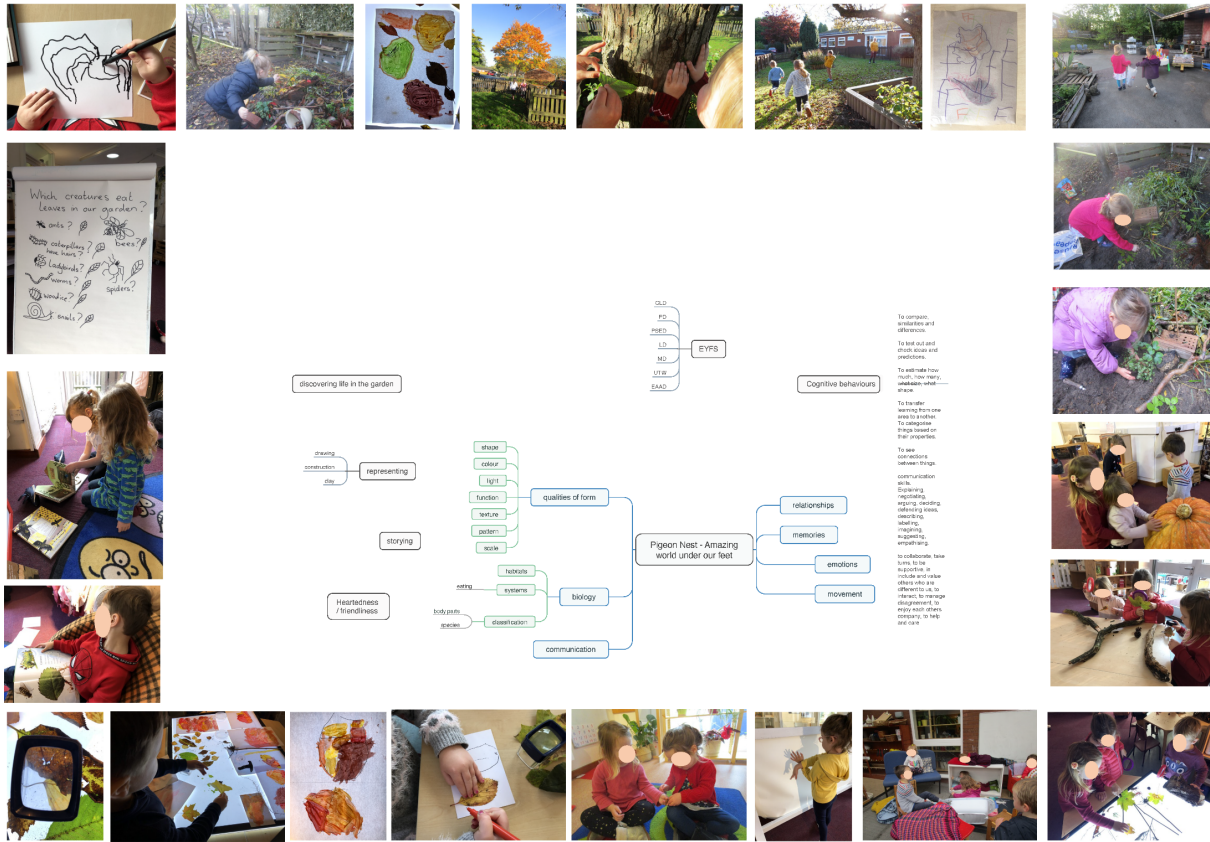
communication skills.  
Explaining, negotiating, arguing, deciding, defending ideas, describing, labelling, imagining, suggesting, empathising.

to collaborate, take turns, to be supportive, in include and value others who are different to us, to interact, to manage disagreement, to enjoy each others company, to help and care

What we have noticed so far.  
The children are operating in many different interrelated contexts at the same time.



We chose a series of images from our daily documentation and arranged them in date order around the map



These are chosen based on the reflective dialogue amongst the staff. They represent links back to the daily notes.

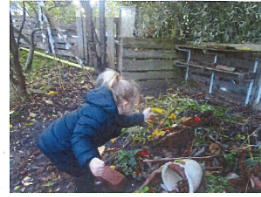
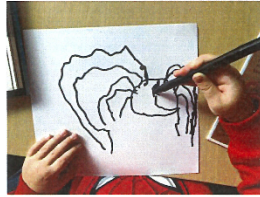
It isn't important to have a representation from each day, this process is not mechanical it is relational. We are looking for strong ideas that link with our project intentions and which capture the children's attention and where the children have been most autonomous in their learning. (remember the reflective questions from slide 5 developed by Helen Kärnebro).



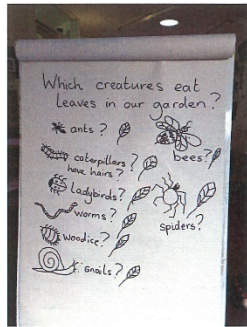
14-Oct

15th Oct

19th Oct



1st October



Embodied ideas.  
physical expression

discovering life in the garden

representing  
drawing  
construction  
clay

storying

Heartedness / friendliness

shape  
colour  
light  
function  
texture  
pattern  
scale  
habitats  
systems  
classification  
eating  
body parts  
species

qualities of form

biology

communication

Pigeon Nest - Amazing world under our feet

CLD  
PD  
PSED  
LD  
MD  
UTW  
EAAD  
EYFS

Cognitive behaviours

relationships

memories

emotions

movement

To compare, similarities and differences.  
To test out and check ideas and predictions.

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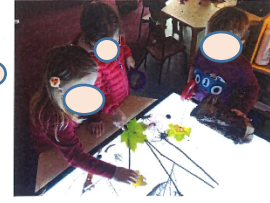
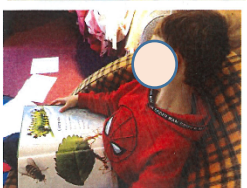
2nd Oct



5th Oct

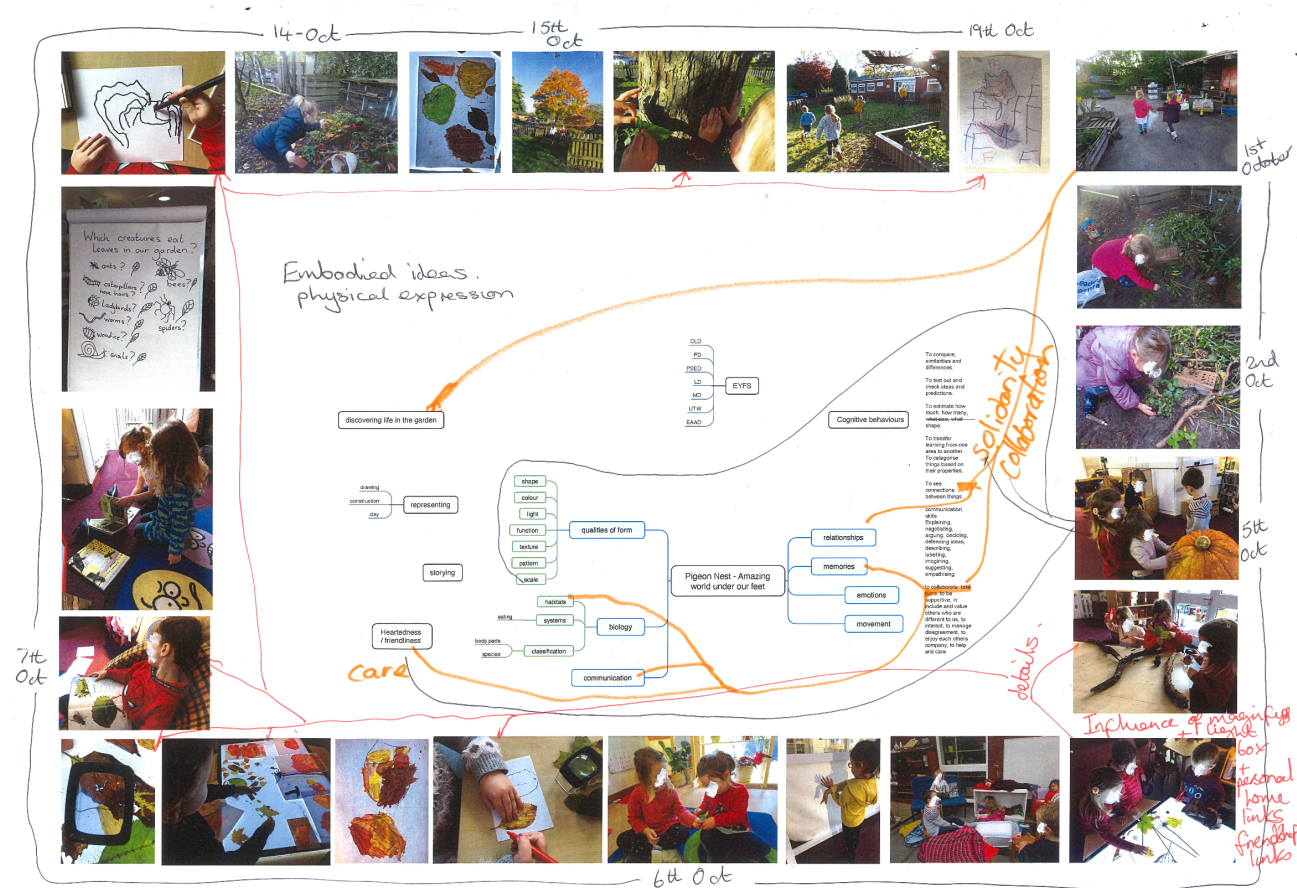


7th Oct



6th Oct

# Map with dated images under analysis showing links of possible strategies by children







The whole map of evaluative reflective discussions amongst the staff team.

3 broad lines of enquiry emerge that the educators assess and which inform changes to the classroom environment and the proposals made to children.



14-Oct

15th Oct

19th Oct

1st October

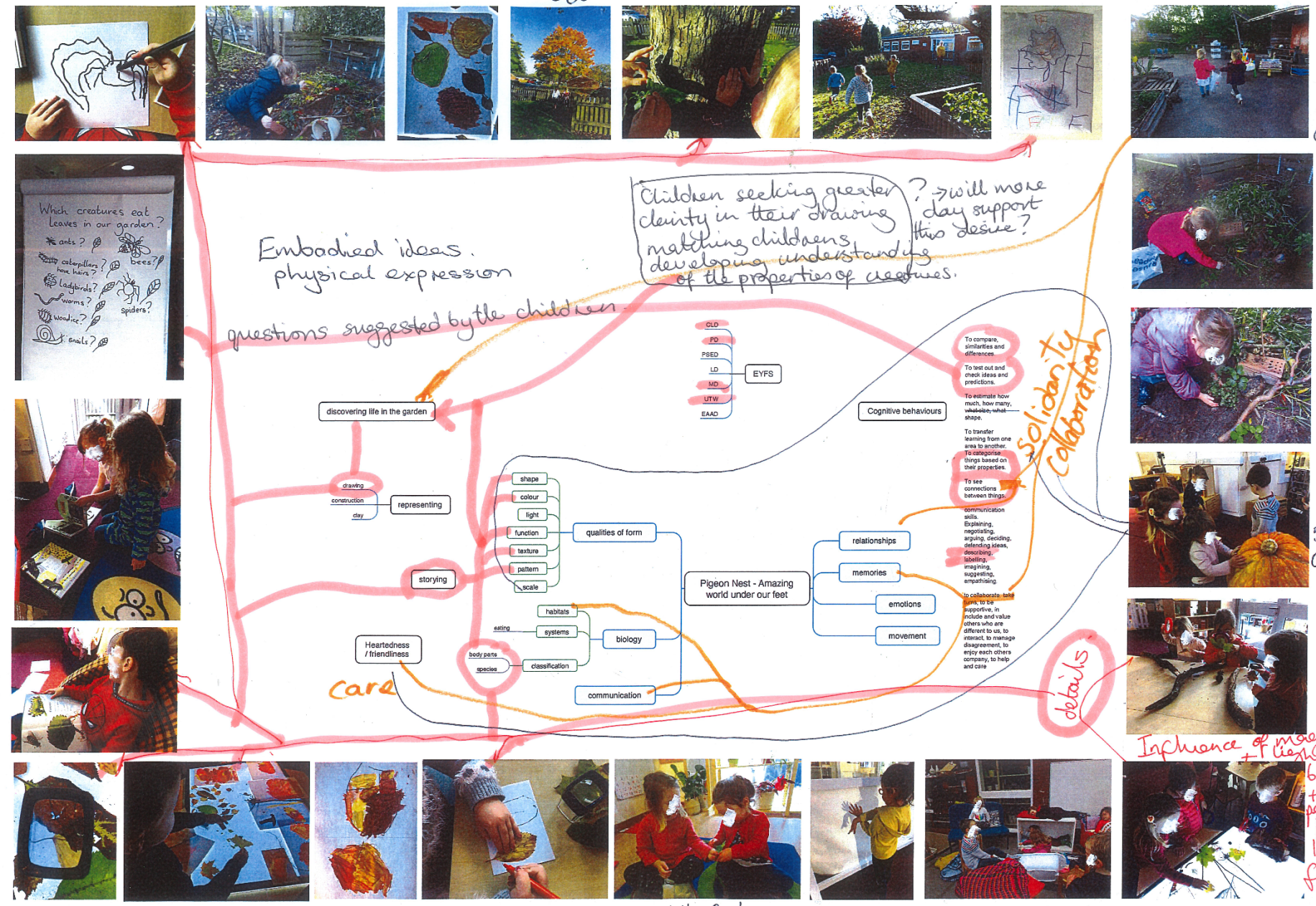
2nd Oct

5th Oct

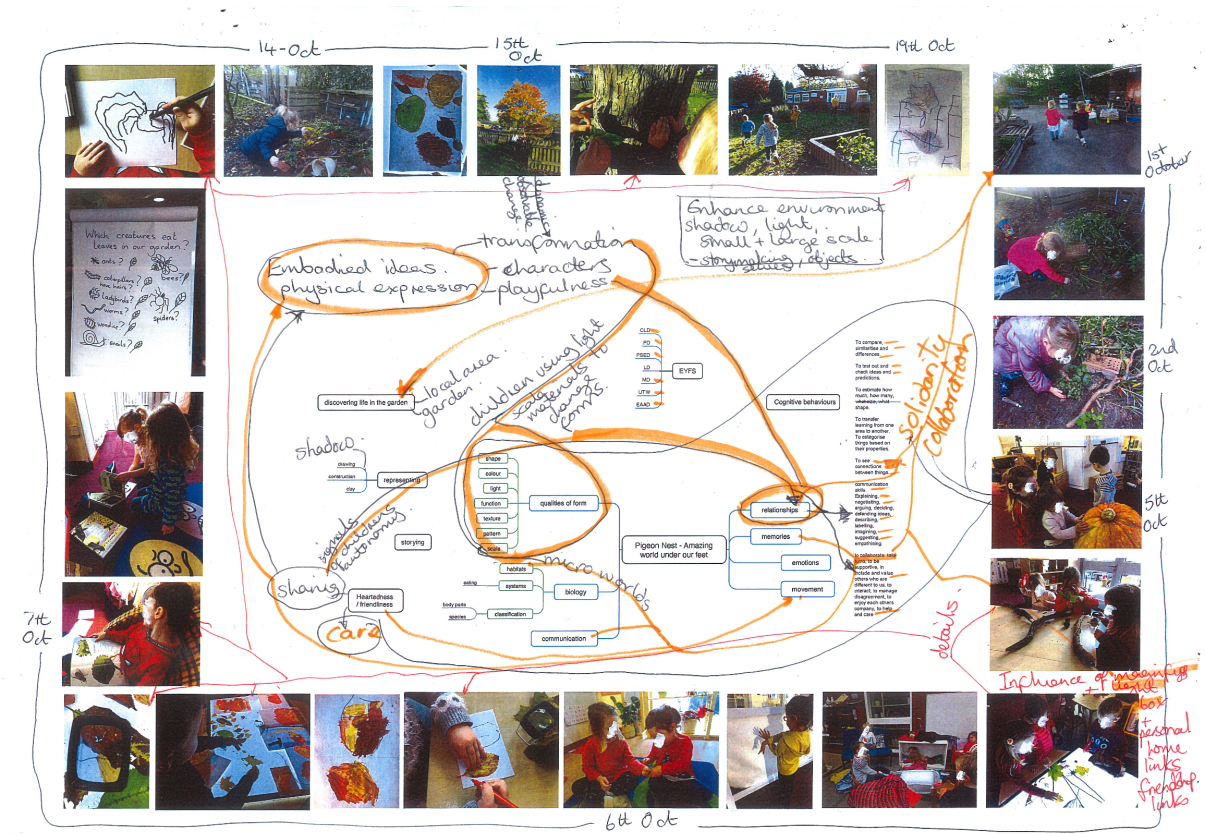
7th Oct

6th Oct

A line of enquiry arising from our assessment of children's interests in details of the environment around them and the creatures in the garden in particular (linked to their desire to make them a home), communication, form and function ... planning from here







The educators decide to bring more opportunities to explore shadow into the classroom.

Based on this line of assessment they plan explicit invitations to the children for the next day.

Children taken back to their Pumpkin tree that is losing its leaves showing its dark skeletal branches, the are invited in a small group to tell a story of a tree using a shadow screen.

Adults will be aware of what and how the children are interested in using this shadow area.

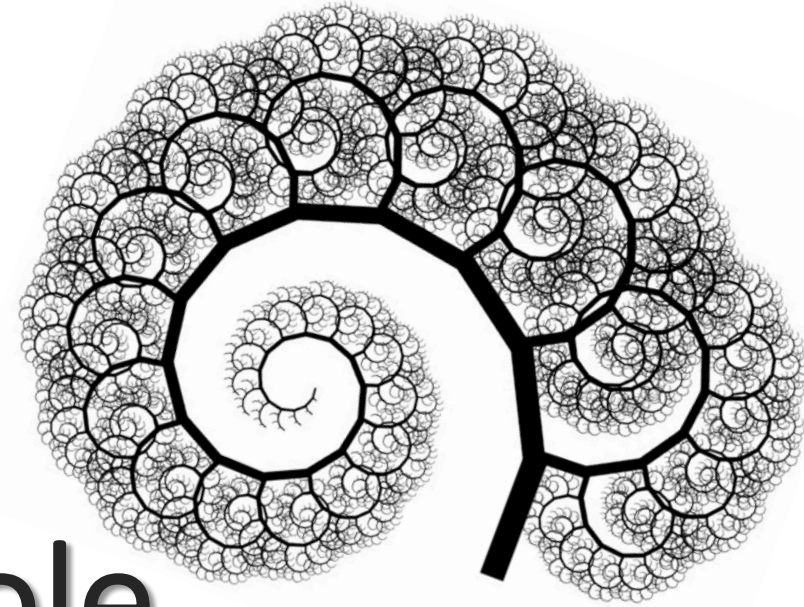
Expanded summary of one line of the evaluative discussion between using the map linking to daily documentation traces.

- Children are expressing their ideas physically and collaboratively with a spirit of fun and sharing.
- Their strategies include expanding explanations of phenomena including its form and functions through story.
- Children use small and large gestures in their communications.
- The qualities of light in the classroom enhanced by lamps and light boxes draw children's attention and hold them while they expand their theories. The qualities of the autumnal light outside have a sensitive relationship to the light and materials curated inside.
- Are the children interested in light as a potential to elaborate storying, as an exploration of transformation of scale or into an outline with no detail or colour, as a fun joke or somethings else?

Today: we begin to collect daily documentation traces of childrens explorations of a new environment of shadow and light







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