

Learning Journey: Ema and her food preferences

Age group: 4-5

Learning activities:

Observing, gathering evidence through measuring, recording, explaining evidence

Creative dispositions:

Motivation, Imagination, Ability to work together, Develop thinking skills, Sense of initiative

Synergies:

Motivation and affect,

Dialogue and Collaboration, Questioning and curiosity

Background Information



School setting: Bucharest, 5th ward

School policy for science: The science lessons respond to the educational policy of the kindergarten, in accordance with the National Curriculum. The school is committed to a unique and holistic multidisciplinary approach (care, nutrition, education). The teacher is an adult partner in play who knows all details of the play and the rules to be followed. Parents cannot be missing from this educational circle; they are the key partners in the children education and the relation family-kindergarten- community is decisive. Science lessons are very much considered by the school.

Curriculum links:

- Develop the capacity for observation
- Establish causal relationships and using appropriate language in conducting an experiment.

Setting the Scene

Focus

- Encourage children to engage in exploration/investigation
- Stimulate collaboration by working in groups
- Increasing children's curiosity and creative thinking by asking questions

Rationale:

I wanted to motivate children to explore the natural world in a way as close as possible to the scientific inquiry. I noticed that they like to make observations and I used this to encourage them to formulate questions and make connections.

Implications for planning and teaching

- To provide an interesting subject for the investigation and the necessary resources to make them curious and stimulate their thinking.
- To provide opportunities for children to ask questions, explore and take decisions as a result of my planning and designing investigations.
- To promote children motivation in taking part to the scientific inquiry and to talk and collaborate for gathering evidence and measuring.

Overview of science inquiry activity

- Telling a story – how to take care of Ema while Daria is away
- Observing Ema (a small Guinea Pig) and her behaviour
- Suggesting some vegetables to feed her
- Investigating the most suitable food for her
- Drawing conclusions about results and
- Sharing with parents and other colleague teachers.

Developing the Learning Journey

Starting Point

The beginning of the activity was a story I told the children about Ema, a small Guinea Pig who is cared by Daria, my daughter. Daria will go to holiday and she wants to leave Ema to a very good friend together with all the instructions for taking care of her, including feeding. But we, the class, we do not know what is the best for Ema, in order for her to feel well and comfortable in another location.



Developing the learning sequence

Activity 1: Initial questions, observations and explorations

The proposed investigation intends to find out what Ema likes to eat; children chose two vegetables for the investigation: carrot and celery. What Ema will prefer? Children were very curious to explore.

Rationale:

The purpose of this activity was to motivate children to explore and develop thinking skills and to increase children's ability to work in groups and share ideas.



Children's responses

Children are asking many questions as they do not have enough knowledge about such an animal and her behavior. Children discuss and through reflection and dialogue come up with their own opinions stating that for Ema to be happy during Daria's absence she needs to:

- be offered the food she prefers
- have a picture of Daria in her box
- play with her new host the same way as with Daria

Reflections and Implications

I made different vegetables available to the children. This caused the children to put forward ideas based on their experiences of rodents, especially the similarities between the rabbit and the guinea pig.

I was very happy to see children being involved in discussion that generates a lot of new questions

Activity 2 : Predictions

As in any other investigations, children made predictions regarding Ema's food preferences. Every child has his/her own stamp which can be easily recognized by each of them. On a worksheet which contains a table with the two vegetables offered to Ema (carrot and celery) children recorded their predictions by stamping in the chosen column.

The investigation took place for a duration of two days.

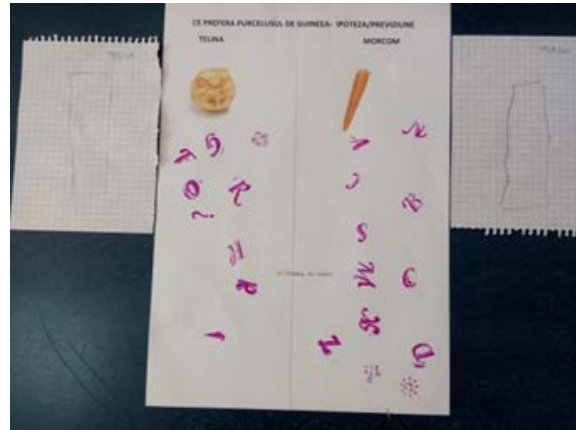


Activity 3: Predictions and measuring

Children thought at the beginning that Ema should like carrot more than celery. But how to measure this in a scientific way? With my help they started by offering Ema two almost identical slices of each vegetable.

Children's responses

Children draw the shape of each slice before starting the investigation



The carrot is much more sweet than the celery. Ema will eat all of it.



I try to draw the line very close to the celery

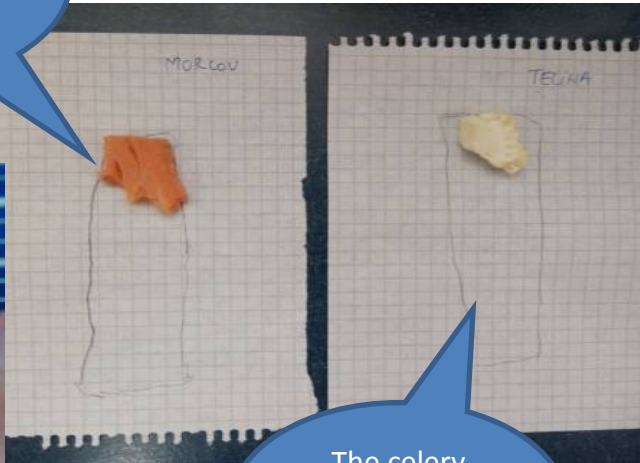
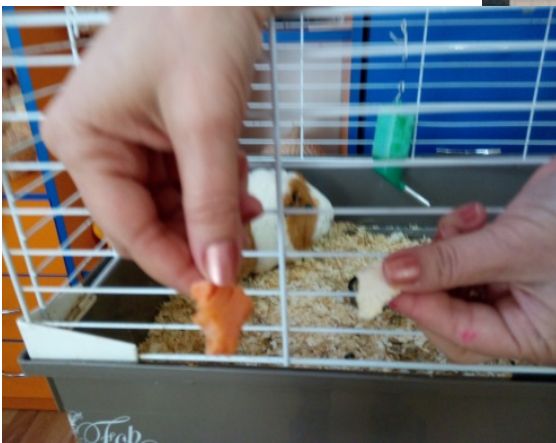


Activity 4: investigating and measuring

At the end of two days of investigation the results were obtained by comparing the remaining small pieces of carrot and celery with the initial shape of slices drawn by the children. Celery is what Ema prefers!



The carrot covers 13 squares.



The celery covers 9 squares.

Reflections

Children's progress

- The children were motivated and involved in all stages of the activity trying to find solutions for the problem they faced.

- The children asked many questions addressed to me and also to their peers, both at the beginning of activity (when the subject was introduced) and throughout the learning journey, prompted by observing the Guinea pig and its behavior.
- The children were very curious to know more about an animal they had not met before.
- I was very pleased to see their collaboration in proposing investigations to be followed to find out what to feed Ema.
- Based on the results of the first day of Investigation (Ema ate more celery), many children changed the predictions they had made at the beginning.
- Formative assessment throughout the activity was based on children's by questions and discussions.

Unexpected results

- The children proposed to extend the activity and investigate not only about the food that Ema prefers, but also about the environment where she lives: if she likes to have pictures in her cage or if she likes to listen to some music or to play with children.
- The children were very happy about the lesson already performed and this gave me the courage to continue with inquiry activities about the surrounding world.

Teacher's role

- I encouraged children to ask questions and helped to formulate them. Observing the Guinea pig prompted the children to come up with questions concerning her habitat (Where is she living? In what country? In a forest?), her feeding (Does she like fruit or vegetables, or seeds?), her behavior (When is she sleeping? When is she looking for food?)
- As the result of children's interest on the subject I looked for more information about Guinea pigs on the internet and showed children pictures and videos presenting various species, how they became domestic, how to care for pet Guinea pigs. We discussed all these in the second day of our investigations.
- Dialogue and collaboration were very much developed during the inquiry activity.
- My role was important in introducing ways to measure how much carrot or celery Ema is eating. I wanted to give children the opportunity to know about scientific measurements and not only to have a qualitative result at the end of the investigation.

Reflection questions for the reader

- How do you structure a science lesson using inquiry?
- How do you make enough time for investigations during science lessons?
- How do you challenge the children to take their own decisions during investigations?
- In what ways can investigations lead to the development of children's creativity?



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