

Let's learn about fruit!

(ages 3 – 5)

Specific Objectives:

- To observe the fruits studied.
- To develop the five senses.
- To enrich vocabulary in relation to the activities.

The student must be capable of putting to use his observational skills to identify, name, compare and portray the fruits studied.

Materials: a fruit basket (banana, apple, pear, pineapple, nuts, lychees, orange, grapefruit, lemon, tangerines, mango, avocado, grapes, kiwi, coconut), fruit flash cards, baskets, painting, boxes.

Making Groups

Introduction to the Fruit Basket

The children are gathered in the group time corner, around their teacher and Mulotte, the classroom puppet. Today, Mulotte has brought in a gift: a magnificently-wrapped basket. "What is inside Mulotte's basket?" The students find out that the basket is filled with a whole array of fruits: a banana, a variety of apples and pears, a pineapple, nuts, an orange, a grapefruit, lemon and lime, tangerines, a mango, an avocado, different grapes, a kiwi and a coconut!

Each child will now be able to tell of his impressions. It is important to take the time to let the first perceptions and previous experiences come out.

The basket is gradually emptied out by the students, who are invited to name each fruit. This stage is fundamental in identifying the fruits that are not known to the students, or which they mix up (mango/apple, mango/grapefruit, avocado/pear, tangerine/orange). The teacher does not give the right answer immediately, but takes into account the students' prior beliefs. Later, he will come back to an exploration through the senses of the less familiar fruits, so that the children, through finer observation of the fruits, become aware of where they got mixed up.



Figure 2. Sorting the fruits by "family".

Sorting the fruits by "family"

After recalling the big event ("Mulotte's gift"), the introduction to the various fruits continues: the students place the fruits in different small baskets, by categorising them by "family" and naming each "family": apples (different colours), oranges, bananas and pears (of different kinds).

Fruit Tasting

As the sequence takes place, tasting sessions are held with the entire class, using all or part of the fruits in the basket. They are prepared in the workshop with the assistance of an adult for every group of five to six students. As they explore the tastes and smells, the students broaden their experience and redeploy what they learned from the previous tasting session. The students taste each piece of fruit, one after the other, and give their impressions (sweet/sour) or more simply speaking, "does it tingle or not?" Throughout the sequence, the teacher actually educates the students in taste, offering them a different fruit to taste each day.



Workshops

Visual Arts: Depicting the Fruits in the Basket

Draw the fruits the Mulotte brought in the basket (independent activity).

Creative Arts: fruit prints

Dip the fruits in some paint (relatively watery), then roll them on a piece of paper to produce a print of the fruit's skin, noticing the differences in texture; the aim here is to develop the sense of touch (guided activity, involving groups of four to five children).

Language: Fruit Flash cards

(The flash cards can be defined as a set of pictures showing an object or character and his name.)

This is a directed activity involving groups of six to eight children (so that each child can respond to the requests, in accordance with their level of language proficiency) carried out throughout the sequence.

During the first workshops, ask the children to place the (actual) fruits with the pictures of the same. Then, gradually, each child shall learn:

- to name the fruit held up by the adult ("show me the banana, the mango, etc.");
- to recognise the picture of the fruit designated by the adult ("now, show me the card with the apple, pear, etc.");
- to name the fruit pointed to by the adult ("tell me what this fruit is called");
- to name the fruit shown on the card ("what is the name of the fruit on this card?").

The flash cards can be produced with the students' cooperation, and available for anyone to view, or posted on a wall. The document, which shall be within reach of the students, will be conducive to "sharing" and natural "comments", independent from any stimulation from the adults.



Figure 3. Fruit flash cards.

Scientific Workshops

Preparing a Fruit-Tasting Session

This directed activity can be done with groups of five or six students, and be carried out throughout the sequence.

Prepare, with the help of an adult, a fruit-tasting session using all or some of the fruits in the basket. Here, the aim will be to develop skills in the following areas:

- motor (peeling/sharing) – the children learn about kitchen utensils and learn to choose the tool suited to the action (peeling, cutting, coring, etc.) and use it. As they cut the fruit into small pieces, the children will be able to feel the different textures involved (mango is easier to cut than apple, etc.);
- social interaction – (sharing/dividing up plates);
- science (discovering the senses, educating taste).



Making “Noise” with Fruits

- Independently, shake a variety of “noise boxes” made from boxes containing nuts and compare the sounds produced.
- Shake boxes (using the same material) containing a different number of nuts and recognise the box that contains the highest/lowest number or only one, “using nothing but your ears”, then check by opening the box (directed activity that gradually becomes an independent activity).

Let’s Sort Fruit!

Building Groups

Review of Fruit Observation and Possible Mix-Ups

Using the fruit flash cards, the teacher encourages the redeployment of the recently-learned vocabulary and ensures that the children are beginning to memorise the names of fruits and build up the corresponding mental images. He spends time on the possible mix-ups noted during the previous session: “You mixed up the apple, mango and grapefruit! Take a good look at these fruits – do you think they look like each other? What is the same? What is different?” He can then suggest a comparison of three fruits all referred to as “apples” and thereby gives the children the opportunity to identify and name the factors that led them to mix up the fruits.

Specific Objectives:

- Sort the fruit according to a variety of criteria.
- Enrich vocabulary in connection with the activities.
- Memorize the names of the fruits.

The student must be capable of:

- sorting, classifying, comparing and portraying the fruits studied;
- naming and describing the fruits;
- associating the fruit and a picture thereof.

Materials: fruits, fruit flashcards, fruit basket games, a balloon, shoeboxes, pieces of paper of different textures/ colours.



Figure 4. “Are they soft or hard?”

The group looks at the fruits: colour, size, texture, shape, weight, presence or absence of stem, etc. The group smells the fruits: “Do they all smell the same? Which has a strong smell?” The group touches them: “Are they small or hard? Can I dig my finger in easily?” The teacher can consolidate the observation by exploring the taste and smell of three fruits during a tasting session.

Determining the Fruit Sorting Criteria

The teacher asks the students to list the criteria for differentiating between the various fruits, in terms of colour, shape (large, medium, small), size (round, oval, large, small, etc.), smell (it smells, it is odour-free, etc.), texture (soft, smooth, thorny). Once that process has been completed, additional activities are suggested in small groups (scientific workshops) are offered, in accordance with the criteria listed by the students so that each student can see the use and extent of what he has just learned.



Summary of Sorting Activities

The summary of the inquiries carried out during the sorting activities (group or in workshops) can take on the form of a summary poster, produced either with the entire class, or with a small group of children.

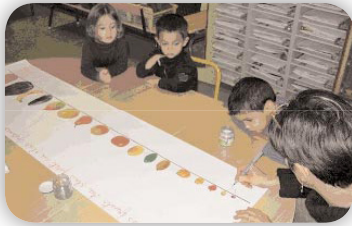


Figure 5. Summary of size-based sorting.

Workshops

Language

Fruit Flash Cards (continued)

Continue the work started previously to integrate the specific vocabulary (guided activity with groups of six to eight children).

Fruit Basket Game

The fruit basket game is designed by the teacher using fruit cards to be placed on a basket. To attach the “fruit cards” to the basket/stand, putty or Velcro may be placed both on the basket and on the back of the « fruit cards ».

During the first workshops, ask the student to match up the “fruit cards” and the actual spots in the basket. Then, gradually add other components, depending on the students’ proficiency, the skills to be implemented, the instructions and the degree of adult guidance.

- Recognising fruits: from the picture of a fruit, name the fruit, find the matching “fruit card” and place it in the fruit basket (guided activity).
- Sorting by colour: “based on a coloured ‘order form’, look for the « fruit cards » of the same colour and place them on the fruit basket (independent activity).
- Broaching quantity:
 - fill up the basket with as many fruit cards as there are spots (independently-performed activity);
 - based on an ‘order form’ where a specific quantity of fruit is drawn, for example, five apples, three pears and two mangos, produce the collection by placing the matching “fruit cards” on the fruit basket (guided activity that gradually becomes independent).

Visual Arts: Depicting the Fruits (observation drawing)

As a guided activity, in groups of six to eight children, draw fruit: choose the colour, draw the outline of the fruit, having placed it on a sheet of paper to fully view its size and shape, observe the fruit’s characteristics (stem, spots, etc.). The teacher can also note on the children’s drawings what they describe to him, “this is the apple’s stem”.

Scientific Workshops

Directed activity with groups of six to eight children, aiming to make exchange between the children more effective and generate verbalisation of the first rationale stated.

Sorting Fruits by Colour (sight)

Bring together all of the fruit of the same colour, then match each group with a label of the same colour (orange, green, yellow, brown and red). The adult takes this opportunity to have the children say the names of the fruits and colours.

Sorting Fruits by Texture (sight/touch)

Hold the fruit in one hand, run them over the palm of the hand and over the cheeks to grasp the “concepts” of hairy, rough, prickly, smooth, etc. The fruits are then classified in two categories: “smooth” and “not smooth”, each possibly being embodied by a reference material (for instance, sandpaper and a piece of velvet or satin).



To take the exploration further, a “tactile domino” can be made using materials of various textures.

Sorting Fruits by Smell (smell)

Sort the fruits according to the criteria, “smelly or not smelly?”, either “blindfolded” (if the children are willing), or using a “smell box” made of shoeboxes with the cover punctured to let “out” the smell of the fruit (whole, chopped, citrus peels, etc.), without showing what it is.

The teacher may take the first classification further (during the tasting sessions, for example, by repeating the experiment several times, so that the children memorise the smells « specific » to certain very characteristic fruits (oranges, bananas, tangerines, etc.).

Sorting Fruits by Shape (sight/touch)

Compare the shape of the fruit with that of a ball: “Does it roll like a ball or not?”. The first classification can be enhanced by an introduction to geometric shapes and volumes.

Sorting Fruits by Size (sight/touch)

Rank the fruits “from the smallest to the largest”. As an extension to the experiment, teach the children about measuring length (paper strips, string, rulers, etc.).

Sorting Fruits by Mass (sight/touch)

Rank the fruits from “heaviest to lightest”. As an extension to the experiment, have the children use the tools to measure mass (various types of scales).

Let’s Compare Fruits!

Building Groups

Observing Fruit Insides

“We have looked at the outside of fruits.... And now, let’s look at the inside of all these fruits! In your opinion, what are we going to find?”

The students describe the inside of the fruits with which they are familiar and imagine the others, then check their hypotheses by opening the fruits. They look at the various fruit insides and use their own words to express what they see, smell and feel (soft mango and lychees, hard apples and coconut, with seeds or pits, citrus fruits in wedges, etc.). By opening the coconut (using a hammer held by an adult), the children will be able to experience how hard it is and learn of the existence of “coconut water”.

Specific Objectives:

- To look at fruit chunks.
- To develop the senses.
- To enrich vocabulary in relation to the activities.
- To distinguish quantities.
- To observe the changes that arise when fruits are cooked.
- To learn about another form of writing: recipes.

Upon completing the module, the student should be able to:

- put his sense of observation to use to identify, name, compare and portray the fruit chunks;
- match a whole fruit with the appropriate fruit chunk;
- compare raw and cooked fruit;
- produce and compare collections;
- put a series of pictures in the right order;
- choose the tool best suited to the target action.

Materials: fruits (including apples), knives (round-tipped), plates, vegetable peelers, corers, pitters, mashers, forks, spoons, a hammer, sugar, the recipe for apple sauce, plaster, paint, fruit flash cards, and the fruit basket game





Back to the Raw Fruit Tasting

The teacher continues the work carried out since the beginning of the sequence in the “preparing a fruit-tasting session” (guided activity with groups of six to eight children) and during group tasting times (directed group activity).

Each child is given a plate in which there are pieces of each fruit, which he tries to recognise before eating them, thereby redeploying what he has learned about the characteristics of each fruit, by using his senses (colour, odour, appearance and texture).

“Can all fruit peels be eaten? How can I remove the peel if I do not want to (or should not) eat it? What tools can I use to peel? Can fruits be eaten whole? How can they be cut? What kinds of utensils should be used? Do all fruits taste the same?”

The teacher fosters further learning by pooling the experiences reported throughout the sequence and, in particular, exploring the tastes and smells of the fruits during the tasting sessions. The students redeploy what they have learned, both in terms of language and science, as a result of the inquiry-based sensory activities in which they have engaged.

The experiment can be taken further by making a fruit salad.

Comparing Raw and Cooked Fruits

An entire day will be dedicated to making apple sauce (learning the recipe, implementing it, cooking and eating).

The teacher posts the recipe for apple sauce and the class as a whole broaches this new form of text.



Figure 9. Applesauce recipe.

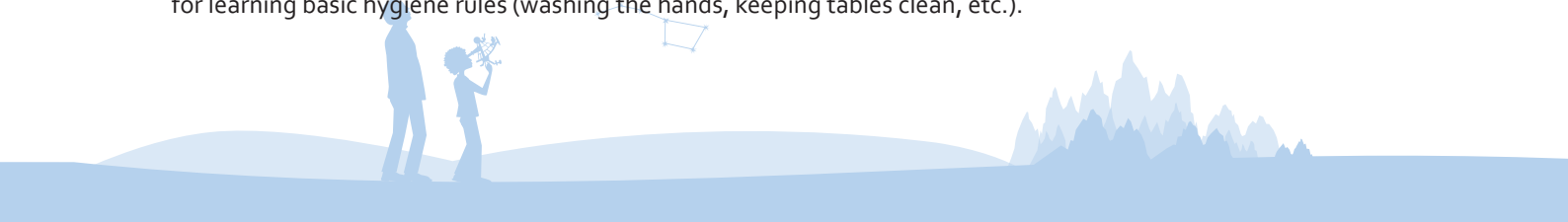
The students will:

- tell what the purpose is;
- suggest how the recipe should be carried out (“What are we going to do?”);
- describe the illustrations, verbalise the actions (“How should we proceed?”);
- list the materials and ingredients required (“What do we need?”).

The applesauce is produced as a guided activity, either in a group setting (preparing apples and adding other ingredients), or in small groups (cooking, mashing).

These activities give the children the opportunity to explore the world of matter (cutting, transferring, mixing) and observing how matter is changed when cooked (raw fruits, cooked fruits), but also to become aware of the risks in their everyday environment (safety education).

The tasting is, first and foremost, a relaxed time for learning, making it possible to continue the work carried out up to that point, by comparing the cooked and raw fruits (textures, flavours, smells, colours, etc.). It is also the time for learning basic hygiene rules (washing the hands, keeping tables clean, etc.).



Workshops

Language

Fruit Flash Cards (continued)

Work from pictures alone, without using the actual fruits to help out (directed activity with groups of six to eight children).

Fruit Basket Game (continued)

Use the materials to match the cut up fruit card with the whole fruit card, then put them in the fruit basket.

Foster independent redeployment of lessons learned, both in terms of language and science:

- using “order forms” referring to the different concepts broached during the previous sessions (colour, quantity, size, texture), the children are asked to find “fruit maps” that match the “orders” and place them on the fruit basket (independent activity);
- one child reads out the order, the other fills it, the first one checks the second’s work and then they change roles (tandem, independent activity).



Figure 10. Drawings from observation of cut fruit.

Visual Arts: Portraying Cut Fruit (drawing from observation)

Drawing cut fruit: choosing the colour, drawing the outline of the fruit set on a sheet of paper to properly determine its size and shape, observe the characteristics of the inside of the fruit (seeds, pits, quarters, etc.). The teacher can also write down what the children state on their drawing: “This is the mango pit” (guided activity with groups of six to eight children).

Creative Arts: Cut Fruit Prints

Make fruit prints, either with plaster, or with a piece of fabric dipped in paint, then use the prints to recognise the fruit (directed activity, with groups of four to five students).

Scientific Workshops: Making and Eating Applesauce

Preparing the Apples

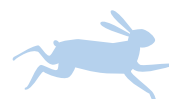
Beforehand, the teacher peels the fruits so that the children have only to cut them up (with a round-tipped knife), core them, pour them into a pot and add the ingredients – water, sugar (guided group activity).



Figure 11a. Cut the apples.

Cooking the Apples

The students come up with hypotheses about what is likely to happen during the session. Then, in small groups and with an adult, they look at what is actually happening (heat, bubbles at the surface, colour of apples, texture, etc.) and discuss the hazards present in the kitchen – safety education (directed activity with groups of four to five children).



Making Applesauce

The children handle a variety of kitchen utensils (masher, forks, spoons, round-tipped knives) to crush, mash, smooth out the mixture and remove the pieces of fruit from it.

The activity is carried out by trial and error and imitation; it allows the children to find the best way to use the tool selected and learn how it works. The teacher invites the students to look for the most effective kitchen utensil for crushing the cooked apples – the fork is better than the spoon, etc., but the masher is the best choice of all (directed activity with groups of six to eight children).

Applesauce Tasting

The students talk about their experience in terms of textures and flavours. The tasting can be enhanced by comparing a cooked apple with a raw one, then between the class' applesauce and processed applesauce (directed group activity).



Figure 11b. Add ingredients to pieces in bowl.



Figure 11c. Mash the cooked apples.

Let's Take a Look Back!

The language learning opportunities present throughout the sequence, in the various sensory inquiry activities, need to be maintained regularly, over a relatively long period of time, to ensure that the new language abilities are lastingly integrated.

During the redeployment sessions, the teacher may use:

- natural situations (snack time, parties, birthday parties, etc. where new fruits will be brought in and the already-familiar fruit served fresh or as a fruit salad, jam or in stewed form, etc.);
- the sequence of the seasons, to establish a "fruit calendar" throughout the year;
- events such as the Week of Taste;
- an extension activity can be implemented along with the "making fruit juice for 4- and 5-year-olds" session)
- designing a garden in the school courtyard or in a "seed and plant" area in the classroom.

The following instructional tools can also be used.



Individual Worksheets

The worksheets allow the teacher to assess what the students have learned



Figure 12a. Independent activity:
"I can find the cut fruit card and glue it onto the sheet next to the whole fruit"

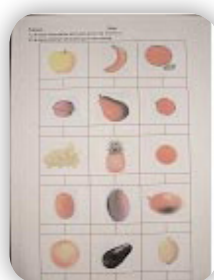


Figure 12b. Directed activity:
"I know how to recognise the fruits mentioned to me and I know how to name the fruits I am shown".



Figures 12c and 12d. Independent activity:
"I know how to read an order", then, "I know how to fill the basket, according to the "order slip".

Group Summary Charts

The charts are made by the all of the students as a group, then posted in the classroom, within the students' reach and at their eye level. They foster exchange and naturally stir comments from students, amongst themselves. They supply situations for redeploying lessons in both language and science, learned during the inquiry-based activities carried out throughout the sequence.



Figure 13. Group activity: "I know how to match the whole fruit with its name, the cut fruit and what is inside the fruit".

Materials Produced During a Sequence

The materials are produced in cooperation with the students and are available to them in the classroom's "science corner".



Figure 14. Fruit basket:
"I know how to name the fruits that I put in the basket".



Figure 15. Dominos :
"I know how to match a whole fruit with a cut fruit".



Figure 16. Lottery:
"I know how to match two identical pictures".

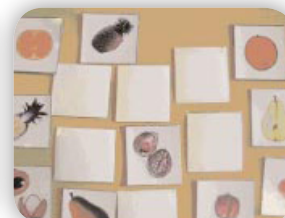


Figure 17. Memory:
"I know how to memorise where fruits lie in pairs".

