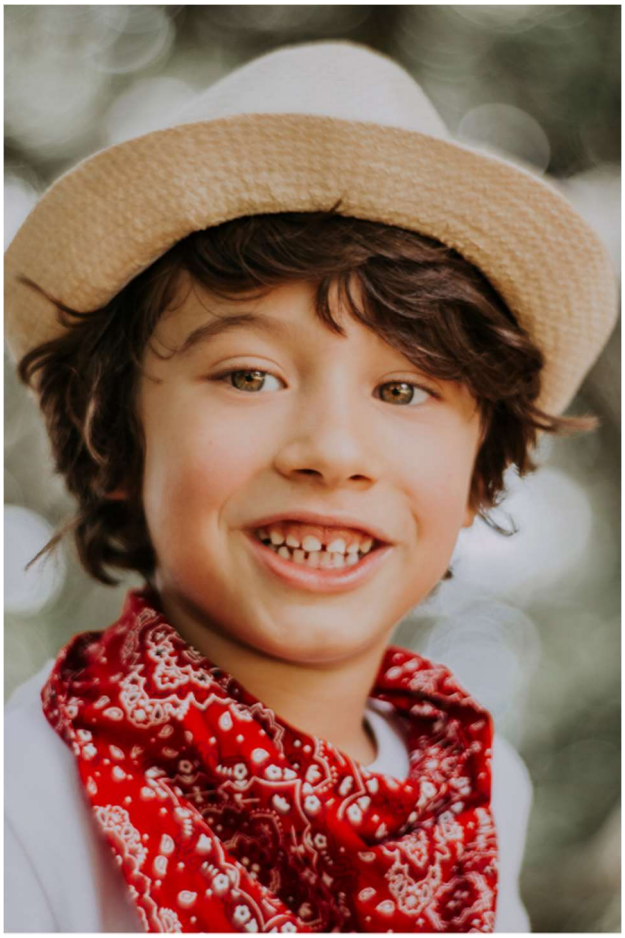


Montessori House

Lower Elementary

First Grade

Contents

Thank You

Introduce "thank you" and "you are welcome" in a simple role-playing situation. The teacher and assistant must remember to use this language during the day with the children, too.

A. Thank you for making breakfast. May I help you clean up?
B. You are welcome. Yes, please. I would love your help. Would you carry the plates to the sink?
A. Thank you for helping me carry the bag.
B. You're welcome.
A. Thank you for driving us to the library.
B. You are welcome. I hope you had a good time.

Expressing Thanks

Beyond the basic courtesies of please, thank you, and you are welcome, the teacher can provide extra dialog and situational awareness.

Take a pretend gift such as a book. Tell the child, "Let's pretend you gave me a book for my birthday." Receive the book, express thanks, look at it and read the title, and add an appropriate comment.

Examples of dialog:

- Thank you for thinking of me. "Blue Triangles" is a book I have always wanted to read.
- Thank you! This is a lovely book.
- What a thoughtful gift!

Children can try using this phrase at various times, even if one did not like the gift. The teacher explains that we want to thank the other person for thinking of us and getting a gift:

- Thank you. It was kind of you to think of me.

Yawning

The teacher covers her mouth with her hand as turns her head down and to the side. She discusses the use of "excuse me" when one must yawn mid-conversation.

Sensorial

Children continue the sensorial work from Primary Year Two and Three for the geometric plain and solid figures, focusing on the more difficult works.

For the other sensorial work, their purposes will likely have been mastered by this time. For the pink tower and brown stairs, it is nice to get the cubes and rectangular prisms the size of the smallest piece, allowing children to see how many small pieces are needed to make the larger pieces.

Children use their sensorial skills for any independent projects that appeal to them at this age, combining several disciplines in a single project. For example, they can make a playhouse, use fabric to make a tent with supporting lines, create a sewing project, make a stool, create a tile mosaic, and other works that come from their imaginations.

When children turn five, they assume the responsibility for giving short presentations to younger children, so their work with the simple Sensorial material will now be in the form of presenting it to someone else.

Boxes for the Comparison of Adjectives

Place in the Curriculum

The first two exercises for comparison of adjectives are presented after the child is comfortably reading most non-phonetic words and has worked with the Noun-Adjective Box. The third exercise is given after the child has been introduced to adverbs.

Material

There are three boxes in this set, one for each rule for the comparison of adjectives. Each box is royal blue and is labeled "Comparison of Adjectives."

Each box contains three groups of words on royal blue cards. Each group represent an inflection. The grey heading cards are “Positive,” “Comparative,” and “Superlative.”

Box 1: The General Rule

This box should include each of the types of spelling variables within this rule.

The three types of words might include the following,

nice	nicer	nicest
large	larger	largest
tall	taller	tallest
short	shorter	shortest
dry	drier	driest
sly	slier	sliest
sad	sadder	saddest
fat	fatter	fattest

Box 2: Irregularly Formed Comparatives

These words are inflected irregularly, such as:

good	better	best
many	more	most

bad	worse	worst
little	less	least
old	elder	eldest
inner	(no comparative)	innermost
outer	(no comparative)	outermost

Box 3: Comparatives Formed with Adverbs

Place in the Curriculum

This third box is presented after the introduction to adverbs.

This box is configured as earlier boxes in this category, but multiple orange adverb cards for "more" and "most" are added to combine with each adjective.

Common words for this exercise include:

awesome	more awesome	most awesome
careful	more careful	most careful
cunning	more cunning	most cunning
beautiful	more beautiful	most beautiful
terrible	more terrible	most terrible
delightful	more delightful	most delightful
miserable	more miserable	most miserable

Exercise

The teacher reads each heading card as she places across the top of the table. For "Positive," she says, "Positive. There is one of something, and it is splendid." She puts "splendid" under this header.

For "Comparative," she says, "Comparative. There are more than one of something and one of them is more splendid." She puts "more splendid" under this header.

For "Superlative," she says, "Superlative. If there are three things, we can say one is splendid, one is more splendid, and one is most splendid."

The Preposition

Introduction: Individual Object Game

Place in the Curriculum

When the child is comfortable with the noun, adjective, and verb. Remember that these parts of speech are not ordered.

Material

A green box labeled, “Preposition.” It includes 12 or more green preposition cards, and a grey “Preposition” heading card. Two interesting objects are needed. For example, the pig and the truck can be taken from the farm.

Prepositions include such words as by, on, with, above, across, against, below, behind, and under.

The box also contains sufficient numbers of word cards for making a sentence about the two objects. For example, “The pig is on the truck.”

Exercise

The teacher builds a sentence with the word cards with a blank space for the preposition. The child reads the heading card and puts it at the top of the table as before. The teacher asks the child, “You can select a preposition to put here (as she indicates the space).” Once the child has put a preposition card into the space, they read the sentence, and put the pig on the truck. The teacher says, “Try another preposition.” The child selects another preposition such as “under” and places the card in the space. The child now puts the pig under the truck.

If a certain preposition will not work in the sentence, the teacher can mention it, and the child can choose another one, or figure out a silly way to make the preposition work. For example, the child could pretend to hold the pig across the truck for “The pig is across the truck.”

Purpose

To increase the child’s understanding of the connection between the preposition and the position of a real object in the environment. To refine the child’s use of language. To prepare for composition.

Math

The first year of Junior class continues the math work from the last years of Primary class. Encourage children to continue working with these materials until they have mastered them and no longer find them interesting.

During this time, the child is encouraged to make presentations of simple math work, as well as participate in exchanging games, with younger children. Teaching is the final step in mastering a topic.

Printable stamp game pieces are in the back of the Primary Three album.

Intermediate Charts & Beads

Long Division

After the child has worked with the Golden Beads in the Banker's Game, he or she will be ready to work with long division using this set of four division boards.

You can also simplify this exercise and use fewer boards to work on short division or easier long division problems: one board for the division of units, two boards for the division of tens, or three boards for the division of hundreds.

You will notice that the colors in all the math equipment remain the same.

Material needed:

- Long division problem cards, e.g., 4882 ÷ 2 = __
- The long division set shown in the photo
- Math paper with grids, colored pencils, and an eraser
- A mat for floor work or a large table

Since the child has already worked with the Banker's Game, the presentation is very simple.

What to do:

1. Invite the child to join you in this exercise.
2. You and the child can bring all of the equipment to the table.
3. Sit on the child's non-dominant side as you make the presentation (so he or she will have greater freedom of movement with whichever hand is used most).
4. Ask the child to choose a problem card to hand to you.

5. Count out the number to be divided. For example, using the sample problem above, count out four thousand pegs, eight hundred pegs, eight ten pegs, and two unit pegs.
6. Your divisor is two, so put two markers along the top of each board.
7. Put the four thousand pegs on the thousand board under the markers. You should get two rows of two pegs (under the two markers).
8. Repeat the step with the eight hundred pegs (four rows of two), eight ten pegs (four rows of two), and two unit pegs (one row of two).
9. Write the equation and the answer on the grid paper using colored pencils for each color.
10. Put all the pegs and markers back. Let the child try the next one.
11. Let the child work independently. You can get up and go do something else so the child can focus all of his or her attention on the work.

Just as you did in the Banker's Game, work first with problem cards for small numerals that do not require changing. When the child is comfortable with these equations, introduce numerals that require changing such as 5482 divided by 2. The extra thousand gets changed into ten hundreds, so you will have 14 hundreds to divide by 2.

Also start with numbers that divide evenly with no remainder. After the child has mastered these problems, he or she can work with different numbers and simply write the remainder after the equation.

For those of you making your own equipment, this set consists of 4 color-coded division boards and a wooden tray that holds the seven racks of tubes with beads, 7 cups and 36 skittles.

Exchanging:

The process of exchanging remains the same, no matter which equipment you use. For example, if one ten cannot be divided, exchange it for ten units.

Multiplication and Division

Your skittles for each denomination are in the appendix.

Show the same relationship between multiplication and division.

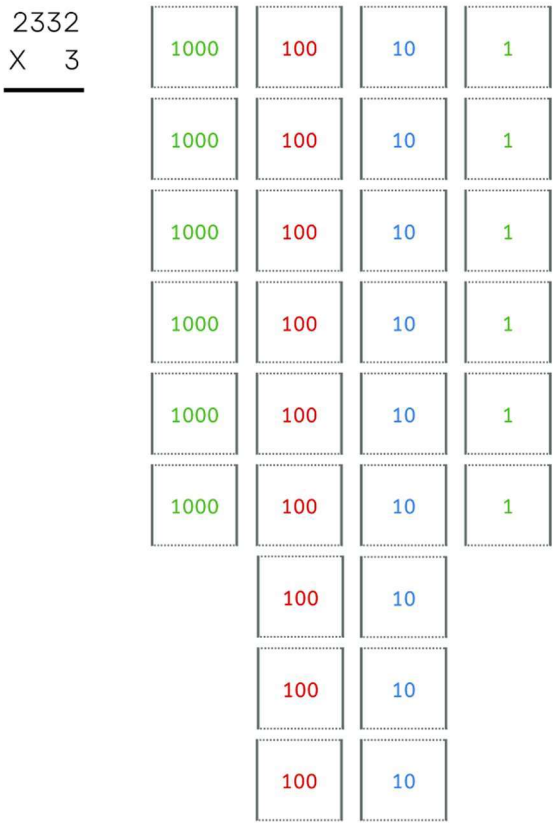
For example,

2332

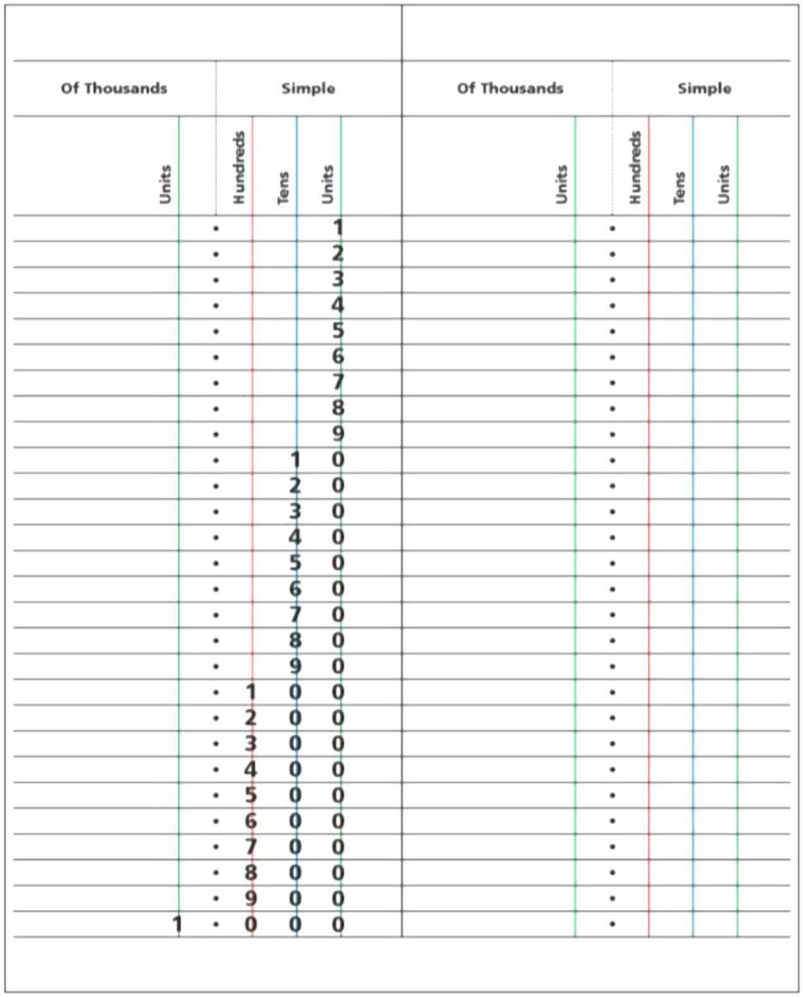
X 3

6996

÷ 3



Small Bead Frame First Exercise



Of Thousands		Simple			Of Thousands		Simple		
Units		Hundreds	Tens	Units	Units		Hundreds	Tens	Units
	•			1		•			
	•			2		•			
	•			3		•			
	•			4		•			
	•			5		•			
	•			6		•			
	•			7		•			
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	•	4	0	0		•			
	•	5	0	0		•			
	•	6	0	0		•			
	•	7	0	0		•			
	•	8	0	0		•			
	•	9	0	0		•			
1	•	0	0	0		•			

The placement of the digits, which correspond to the values of the beads in the frame, show the relationship between numbers such as 10, 20 … 90, and 100, 200 … 900.

The visual image reinforces the work the child has undertaken.

The line of zeros reinforces the exchange that has been made: units for ten, tens for hundred, hundreds for thousand.

Children can repeat this exercise with the zeros, and then without, continuing until they tire of it, at which point you introduce the next one.

On the small bead frame,

- Push a unit bead, say one unit, write 1.
- Repeat this for all the unit beads.
- At the tenth bead, push it, say ten, BUT now you slide all the unit beads back to the left. AND, slide a single 10 bead to the right. You have exchanged the ten unit beads for a single 10 bead. Write 0 because there are no unit beads. This is the 0 under the 9 in the units column.
- Repeat for tens and hundreds.
- At the end, there is only a single 1,000 bead on the right.

Sciences

One important point to remember is that information in textbooks and teacher training is frequently incorrect, especially for the cultural subjects. The most common myth about the moon not rotating is directly countered in that presentation, but we encourage teachers to explore the NASA site as they go along, https://svs.gsfc.nasa.gov/

The former translation of this curriculum binder from Dr. Montessori's Italian was "Cultural," as she presented her original cross-disciplinary approach to present an array of topics such as the teaching of time, geography, botany, and zoology. Under the current curriculum designations for the STEM curriculum, this collection of lessons falls under STEM. The "A" in STEAM has been provided in a separate binder for the study of the arts. The Arts include fine arts, crafts, and music.

This is also the section in which children will ask questions to which the teacher does not know the answer, providing the teacher with an excellent opportunity to model how one behaves in this situation. The teacher says, "That is an interesting question. I do not know the answer. I will write down your question and research it when I get home tonight. Please remind me to tell you in the morning." By this one action, the teacher demonstrates how one handles a question to which one does not know the answer. She also shows that it is okay to not know an answer. Modeling behavior is the only way to properly teach this concept.

In the Language curriculum, make sure to include the nomenclature from other curricular areas such as science in the reading lists and cards.

Flags and Music

Music Recognition and Matching

The presentation discussion here is for a school in the United States. The flags are introduced in the order of home country, neighboring countries, and then the attached countries or Europe. However, if the class will enjoy finding the flags of their countries of origin, these should be presented after neighboring countries. It is best to do the flags for all the children's countries of origins, not just those who recently arrived. Many children will not know this information, so this is useful background for them to learn from their parents. They can come back to school and share the stories.

Material

- The set of fabric flags
- Music collection of national anthems

Presentation

This is a group game that can be played by two to eight children.

The teacher says, "This is the flag of the United States of America. And the music is the national anthem, the song, of the United States," as she turns on the music.

Short Game 1

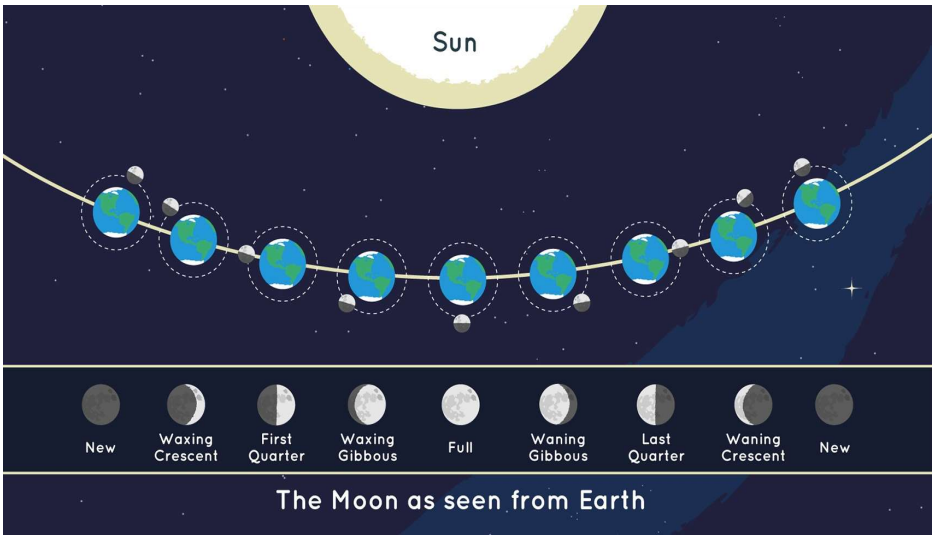
One child carries the flag. The other children follow. They all march on the line. They stop when the music stops. Children enjoy this more than one might imagine.

Presentation 2

This presentation can be a continuation of the first one, if the children's level of interest remains high. The teacher introduces the flag and national anthem of Canada or Mexico next.

Short Game 2

Once the children are familiar with several anthems, they march along the circle as soon as the music begins. When a child recognizes an anthem, they step off the circle and take that flag. If the child was correct, the teacher plays another anthem and the children repeat the process. If the child was incorrect, the child returns to the circle and the music continues until someone



Credit: NASA/JPL-Caltech

Teacher information

“An enduring myth about the Moon is that it doesn't rotate. While it's true that the Moon keeps the same face to us, this only happens because the Moon rotates at the same rate as its orbital motion, a special case of tidal locking called **synchronous rotation**. The animation shows both the orbit and the rotation of the Moon. The yellow circle with the arrow and radial line have been added to make the rotation more apparent. The arrow indicates the direction of rotation. The radial line points to the center of the visible disk of the Moon at 0°N 0°E.”

NASA, https://svs.gsfc.nasa.gov/4709

The link provides animation that the teacher can follow, but we do not recommend using the animation with the children because it is difficult to explain that it is only a simulation. A demonstration in class will be much clearer and worthwhile.

The third globe and a model of the moon can be used to demonstrate the rotation of the moon as it orbits the rotating earth. A lamp or bright flashlight can be used to show the effect of day and night.

Make sure to find a good chart with pictures and labels for the moons around other planets. Reading the names on the chart will be fascinating for the children.

Interesting events such as full moons, shooting stars, comets, various eclipses, and other happenings can be mentioned to the child. If they can be seen from the local area, children can write a note to take home so parents know to take them outside to view the event.

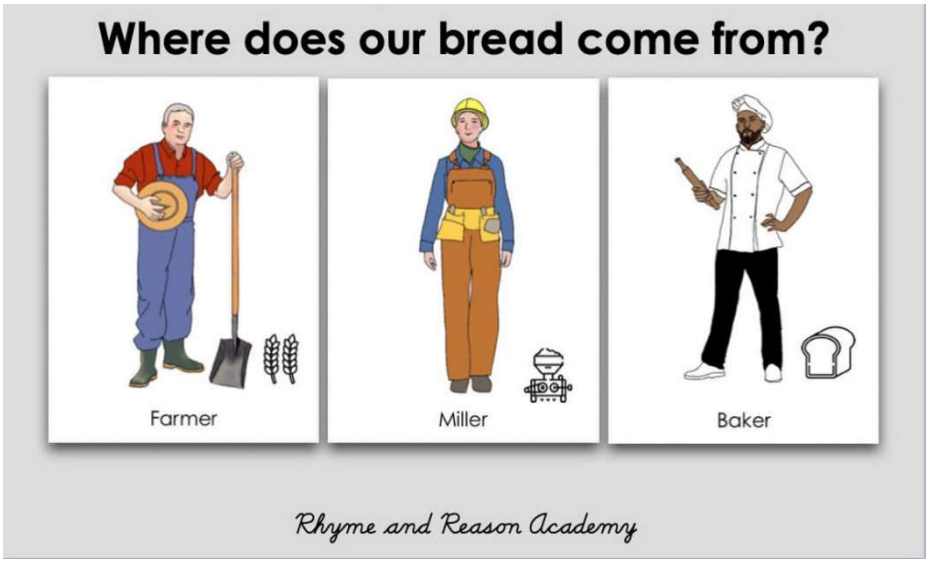


Photo: Work by Emily Counts, Etsy shop RhymeReasonAcademy

Material

A folder containing:

A set of picture and label cards for everyone involved in the production of bread such as the farmer, mechanic, transporter, miller, transporter, baker, packager, transporter, and stocker/store.

Presentation

The teacher makes this presentation to an individual child or a small group. She refers to the work with food, shelter, and clothing, saying “Our bread begins as grain on the farm” as she places the farmer card on the mat. She reads each card as she places it in sequential order for the planting, transporting, milling, and so forth. She explains the flow of the cards as some children will not know the meaning of the labels. She can also choose to add the electricity symbols from the cotton exercise. She mixes everything up. The children work alone now.

Botany

The most important aspect of the natural world is that time spent outdoors as children walk, observe, and engage with the world around them. Time spent indoors should bridge the gap between the tangible, touchable world of nature and the material representing the details of plants and animals.

During outdoor exploration, let the children guide the process whenever possible, encouraging them to stop to observe whatever captures their interest. An afternoon spent outdoors is considered time well-spent.

The teacher and children can search for items with which to stock the nature shelf in the classroom, a treasured Montessori tradition. Items of interest include such items as dried bugs, abandoned bird's nests, feathers, pinecones, leaves, seeds, shells, and shed snakeskin. The teacher is available to answer children's questions about the material they find during these nature walks.

The books for this section of the classroom supplement the formal material, as well as the nature shelf collection, created a foundation of understanding that will underpin the entire curriculum.

For the teacher, the "Nature in Education" chapter from Discovery of the Child remains a classic reference for this section.

At any point, if the teacher feels the child's enthusiasm or interest might waver shortly, the teacher must focus on the plant, encouraging the child to stroke its parts, smell the leaves, and return it gently to the water. Once the plant is in the water, the child can take it back to its place in the classroom.

A review of basic material has been included for the children's review. Once they are comfortable with this work, they will present it to younger children.

Swollen Roots

Material

- Representative root for conical, napiform, fusiform, and tuberous roots such as a carrot, a beet, a white radish, and a jicama.
- A set of three-part cards for each of the categories
- A wall chart with examples from these categories

Presentation

This presentation can be given to one to three children, more if they can read. The teacher explains that these are all examples of tap roots as she gestures to the four roots in front of the child. As she points to the carrot, she asks “What type of root is this?” Tap root. “We also call it conical. It is shaped like a cone,” she explains. She holds up the beet, “This is also a tap root. It is called napiform.” With the white radish, she says “This is also a tap root. It is called fusiform.” For the jicama, she explains “This is also a tap root. It is called tuberous.” It is important to use the same explanation for each. The first definition was slightly different. The teacher finishes the three-period lesson with the real roots.

If the children are doing well, she can introduce the cards now. The children will match them to the real roots. If the children have had enough for the day, she can continue with the roots and cards tomorrow. And, tomorrow the roots will be prepared and eaten.

Optional Exercise

If the parents are able to shop at good grocery stores, the children can look for examples of the four tap root types, perhaps bringing some in to share. Otherwise, the teacher will bring examples in to share, and everyone will eat them after they see and handle them.

Parts of a Seed

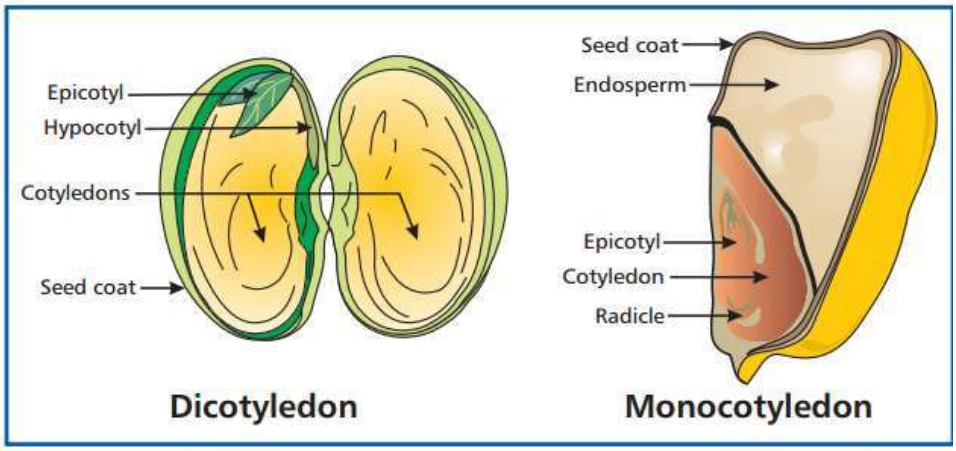


Photo: societynatureo.blogspot

The children should sprout and grow a range of both dicotyledons and monocotyledons. Beans, peas, apples, roses, and oaks are examples of dicotyledons with their two cotyledons. Garlic, onion, corn, and bulbs such as daffodils all have one cotyledon, so they are monocotyledons. Daffodils are toxic to mammals including humans, providing a teachable moment.

Material

- Real examples of each type of seed (containing the intact parts)
- A strong magnifying glass
- Cards with pictures and labels
- A wall chart for wall/folder rotation

Presentation

The teacher sits at the table where the children are examining the seed types. The children look at the different seeds, opening them carefully to observe their parts. The children use a strong magnifying glass to compare the parts on the two types of seeds, touching and handling everything. The teacher uses a pencil to indicate the parts, if her fingers are too big for the seed samples.

see how all the rotate corolla are similar to one another. They compare the rotate corolla with those of the ligulate corolla. The teacher traces the outlines of the corolla, naming each type as she traces it. She encourages the children to touch the corolla as she provides the first stage of the three-period lesson.

She uses the Botany nomenclature presentation.

Seed Dispersal

The teacher discusses seed dispersal mechanisms with the children at different times. She brings samples of plants, buys seed packets, takes the children for nature excursions, visits nurseries, and goes to gardens. The value of learning about plants is in seeing and handling the real plants, so work with the real plants must not be exchanged for work with cards and books. Children can grow a variety of sprouted seeds to eat on a regular basis, helping make the connection between seeds, nutrition, and work they do themselves.

The parent plant has many ways of sending its seeds off to start their new lives. The seeds need to find fresh soil with many nutrients and room to grow.

Some plants such as dandelions and milkweeds send their seeds into the air, attached to fibers that catch the air currents to take the seeds far away. The seeds will grow where they land.

Other plants make tasty succulent seeds that mammals and birds carry away to eat. When they eat the fruit, they excrete the seeds on the soil, leaving their own natural fertilizer to help them grow.

Some plants have spiky seed covers that stick on fur or clothing, traveling on the animal or person until it is removed and lands on the ground to grow.

Other plant such as the edible wild plant called bittercress have seed pods with unique cell walls that explode with such force that the seeds are thrown far from the parent plant.

Finally, seeds such as coconuts, tamanu, and sea beans have a thick, protective shells that allow them to float to new land, some can travel across the ocean.