

Green Learning Environments

Activity Pack



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Nevladne organizacije



Šole za otroke s posebnimi potrebami



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1. FREE ART

Author: Sefton Booth

Bluebell Park School, United Kingdom



SHORT DESCRIPTION

Activity illustrates and teaches, how to use natural resources outdoors and how to use them for the development of basic motor abilities. These activities and exercises use sensory perception and proprioception in a natural environment.



GOALS

Pupil:

- Develops basic motor abilities, such as push, pull, shaping and dexterity in an outdoor environment.
- Builds different art activities which can promote manipulative skills and imagination and develops creativity.
- Gains sensory experience, touch different natural material, breaking branches, feel the structure, material, shape.



DURATION

**1 hour
and half**



NUMBER OF CHILDREN

5-10



AGE RANGE

8+ years





PREPARATION

Pupils: should wear suitable dress and shoes for safe and comfortable movement.

Teacher: should choose and get acquainted with the place (safe and stimulating). Teacher should try all activities themselves before hand.



MATERIALS

All materials you can find in natural environments. Also a large sheet of paper or large branches to frame the work, baskets/bags for collection, camera or tablet, pictograms ☺ and ☹, symbols or photographs of natural materials, works by artists.



DESCRIPTION

Have a variety of natural resources ready in a bucket or basket. Enjoy sharing the contents with the pupils: "What is this? What colour is it? How does it feel? How does it smell?" Model making a small scale piece of free art, aided by the pupils.

Pupils are encouraged to explore the surroundings – feeling the different textures, touching trees, looking for colours and shapes, looking for stones and collecting them, picking up interesting leaves and branches. The pupils chose a variety of materials to make pictures of their own design.





Collection – Pupils are encouraged to collect items that they like (but many).

Framing – Pupils are asked, where their art work will be framed in the wood (should be their choice). It's up to the pupil if they need a clear paper frame or if they require large branches.

Placement – Encourage placement of all the pieces. Let pupils work on the picture at the same time. Encourage pupils to tell you, what the placement of their forest objects mean.

Introduction – Ask each member to introduce the picture and talk about it.



BACKGROUND

Pupils can begin by looking at a certain artist before they leave for the woods: e.g. Andrew Goldsworthy.



KEYWORDS

Natural environments, basic motor abilities, art, free, shape, meaning.





Art:

- They may also take some items that will create shape in the picture e.g. plates to help with adding circles.
- Draw out something they like in the forest. Have the pupils 'colour' it in with forest items (see Maple leaf, page 6 below).
- Follow up by holding an art exhibition with the finished pieces with photos and captions of the process.
- Look for a known artist emerging from their work. Allow this artist to be known to the pupils. Explain who they are and where they have come from.

Media:

- Take a photo every 30 seconds to 1 minute. Put the photos into a movie making app, and enjoy a time lapse video of the art being made. Hang the Ipad with a forest frame around it, and play the movie on repeat.

Information and Communication Technology - ICT:

- Make a forest art book companion to share with some of the pupils, who might find the process hard. Make a step by step guide or a list of items you might find.
- ICT/Speaking and Listening: Present the art work in a PPT format giving an explanation to what they have found.

English/Communication:

- Have the student explain their picture. Have the student name items used and why.

Science:

- Classify items used e.g. stone, wood, plant etc.

Maths:

- Shapes that they notice in the art and in nature. Count them and choose if big or small.

Cookery:

- Identify some of the edible art items, find recipes relating to them. Cook these items.

Design and technology - DT:

- Mount the work on to wood, hang them within the main hall.
- Press the art work in a glass press to keep framed and preserved.

Personal, social, health and economic education - PSHE:

- Describe how the picture makes you feel. Explain the picture to a friend and allow your friend to explain, what it means to them.



Religious education -RE:

- Ask the young people to relate them to a known current yearly story (Christmas, Easter, etc).

Physical education - PE:

- Work as a team, obtain the art materials and make further pictures under time constraints.



SPECIFIC GROUPS OF LEARNERS:



PMLD
LEARNERS

This item can be done inside or outside the class room, if outside the learners can still be aided to gather the items. Once gathered, put up a table or use something that has a higher level so the learners can contribute to the 'Free Art'. Make sure you help the learner place items either with hand over hand or hand under hand. Possibly glue items to maintain the picture for the learners to take back to school. Be careful the learners do not eat the items.

What we would look for:

Responsiveness: To being touched with the forest items.

Curiosity: To explore the forest items.

Discovery: Of what the forest items can do.

Anticipation: Of dropping the items and flinching when dropped.

Persistence: Working with a member of staff to place the items in the picture.

Initiation: Picking the item up to place or throw in to the picture.



ASC

Encourage the tactile exploration of resources from the natural environment, used to make the picture. Allow the learner to be attracted to whatever takes their interest and encourage (bear in mind learner's sensory needs and adjust access to natural resources accordingly). Try this activity beforehand and take photos at different stages adding to a group picture.

Some Complex ASC learners would concentrate on the sensory aspects of the materials and surroundings. Exploring the materials and in affect addressing and developing sensory integration issues (less concentration on the finished piece of 'Free Art' and more on the processes and materials).

Less complex ASC learners - a work program to support the process may be need, as may an example of a finished 'Free Art'. Use symbols and photographs were necessary to aid language, understanding and development. Activities may briefly comprise of a short exploration of the materials with a view to 'choosing' set number of objects (so they are not overwhelmed) to create their 'Free Art'. Consider using a set of instructions or a checklist (perhaps symbolised) to encourage independent work.

Some ASC learners will need to focus on the exploration of the forest. Use intensive interaction in the woods - copy the children's movements, sounds and responses to engage with them. Model play, model exploring the materials and encourage the children to copy. Work hand over hand if the child is comfortable with this and then encourage independent work. Use simple language; maybe just one or two words at a time to allow for maximum understanding. Show the children 'Free Art' that have already been created and encourage them to copy or to point at features and label them (verbally, with a picture or by pointing to the same place on their face). Follow their interests - let the children show you what they find interesting and go with that; engagement and being at ease with the natural environment are the highest priorities.



HARD TO
REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling story. The learner may lead the story by showing their likes and dislikes.



EARLY YEARS

Explore the natural resources used to make a picture. Encourage exploration and discussion of the different textures, sizes etc. Share children's literature before entering the forest, to colour the characters or scene they might make, e.g. circle time before, story about home Mum/Dad.

Source of photographs: Sefton Booth

The text of additional activities and activities for specific groups of learners: Lynne Ledgard and Sefton Booth

2. MUD MAN IN THE WOODLAND

Authors: Alyson Bothroyd and Sefton Booth

Bluebell Park School, United Kingdom



Bluebell Park School



SHORT DESCRIPTION

Activity illustrates and teaches how to use natural resources outdoors and how to use them for the development of basic motor abilities. Make a clay face in the bark of a tree and develop imagination, fine motor control, speaking and listening.



GOALS

- The main goal is development of basic motor abilities of children, such as push, pull, shaping and dexterity in an outdoor environment.
- Nature observation, when searching for suitable material for Mud Man.
- Use of sensory perception and proprioception in a natural environment. Children should enjoy the sensory aspect of working with material. Children who are tactile defensive have opportunities to experience the texture in a different environment.
- Smelling of natural materials such as moss, sticks, bark.
- Build different art activities which can promote and manipulative skills, imagination and teach children to utilize them quite naturally.
- Developing creativity.
- Focused listening.
- Cooperation between pupils. The pupils looked at the Mud Man from classmates, comparing them in order to make better their own Mud Man.
- Make suggestions to improve others work in a supportive manner.



DURATION

45-60 minutes



NUMBER OF CHILDREN

5-10



AGE RANGE

4+ years



PREPARATION

Pupils should wear suitable dress and shoes for safe and comfortable movement.
Teacher should choose and get acquainted with the place, safe and stimulating. Teacher should try all activities themselves before hand. **The activity is appropriately also for the moving disabled pupils.**



MATERIALS

You will need clay (at least a golfball size per student) and all materials you can find in natural environments. Also a mirror to view own face, symbols for feelings (happy, sad, funny etc.), facial features (eyes, nose, eyebrows, beard ...) and some photos of completed Mud Man.



DESCRIPTION

Sit in a circle and ask the pupils to share with the group how they are feeling (use of symbols to support if necessary). Use mirrors so they can see their own happy/sad/angry face.

Children are encouraged to explore the surroundings - feeling the different textures, touching trees, looking for colours and shapes, looking for stones and collecting them, picking up interesting leaves and branches. Explain to the pupils in the woods that there lives a family of Mud Man. It is up to them to decide if they are kind, or nasty, happy, sad etc. They will then choose a tree to make their Mud Man on. Introduce the children to clay - feel and squeeze it, talk about its properties. Some children may need hand over hand support to do this.





MUD – Model making the first round Mud Man face from mud.

FACE – Pupils can spend some time looking at their own face if they need (with mirror) identifying parts of the face.

FOREST – The pupils will then begin to make their own Mud Man using clay. Use the forest resources to add to the face.

NAMING – Name the Mud Man and anything else you may know about him/her

INTRODUCING – Each person will introduce their Mud Man to the rest of the group.

Q&A – Question and answer session from the pupils about the Mud Man.



SUGGESTION
FOR
ADDITIONAL
ACTIVITIES

Art:

- The group could make one huge mud face to finish the story.
- Tree rubbings with crayons, leaf/twig imprints in the clay.
- Art/PSHE: Children can make small figures out of clay and then makes home/dens for them out of natural materials.
- Art/Media/ICT: The group leader could print out the photos, and add real materials from the forest to it for framing on the wall. Or the group leader could place on laptops/lpads and the pupils can learn the technology of how to change images.
- Performing Arts/Music: The group could perform the story they have made either back in the forest (as a walking story) or as a performance in the hall. Songs could be written using wooden instruments either found or resourced in school to go with their Mud Man based on the tempos the forest gave them that day.

English:

- The group could make stories based on the framed photos.
- Reading/telling a story about Mud Man in the forest.

Maths:

- The group could count the facial features each pupil has and compare to their own face using more and less.

Modern foreign languages - MFL:

- The group could decide the language of the Mud Man – either 'Grammerlo' (non-sensical language), or give it a local language or dialect, or a neighbouring country language.

Cookery/Science:

- The group could make mud pies for the Mud Man.
- The group could choose a menu they could cook back in class.

Design and technology - DT:

- The group could make the faces from wood (e.g. cut the end of the log off and add wooden shapes to the round face based on their first Mud Man as a design). They could use pyrography to apply the facial features.

Personal, social, health and economic education - PSHE:

- The pupils could explain their choices of why their Mud Man looks the way they do. They could share how their Mud Man is feeling (example: 'This is a sad Mud Man because'...)

Religious education -RE:

- The basic principles of RE could be taught by looking at if there is a leader to the Mud Man, and acts of worship. When getting close to a known religion this could be taught back in class or develop this in respect of the known religion.





BACKGROUND

Pupils can begin the story of the Mud Man in class. They can then change as we meet each Mud Man they have created. This is cross over from art to mother tongue.



KEYWORDS

Natural environments, natural materials, basic motor abilities, art, story, Mud Man, happy, sad, angry

SPECIFIC GROUPS OF LEARNERS:



PMLD LEARNERS

PMLD learners will focus on the sensory exploration of all materials above. They will make efforts on aided searching for sensory items.

Responsiveness: To the found materials.

Curiosity: About the new found items.

Discovery: Of what with the forest resources can be done.

Anticipation: Of playing with the stick 1:1 with adult. Of the grass falling on their tray.

Persistence: By explore the mud - even though it is messy play. Of grasping the long strands of grass.

Initiation: Of looking at an adult, when interacting with sensory objects.



ASC

Encourage the tactile exploration of resources from the natural environment used to create a Mud Man (bear in mind pupils' sensory needs and adjust access to natural resources accordingly). Take a selection of visuals to green learning environment and take photos at different stages of creating the Mud Man. Encourage the pupil to re-create the Mud Man at each stage.

Some complex ASC pupils would concentrate on the sensory aspects of the materials and surroundings. Exploring the materials and in effect addressing and developing sensory integration issues (less concentration on the finished Mud Man and more on the processes and materials).

Less complex ASC pupils - a work program to support the process may be needed, as may an example of a finished 'Mud Man'. Use symbols and photographs were necessary to aid language, understanding and development e.g. Use facial feature symbols as prompts to encourage creativity. Activities may briefly comprise of a short exploration of the materials with a view to 'choosing' set number of objects (so they are not overwhelmed) to create their 'Mud Man'. Consider using a set of instructions or a checklist (perhaps symbolised) to encourage independent work.

Some ASC pupils will need to focus on the exploration of the forest. Use intensive interaction in the woods - copy the children's movements, sounds and responses to engage with them. Model play, model exploring the materials and encourage the children to copy. Work hand over hand if the child is comfortable with this and then encourage independent work. Use simple language; maybe just one or two words at a time to allow for maximum understanding. Show the children photos of Mud Man that have already been created and encourage them to copy or to point at facial features and label them (verbally, with a picture or by pointing to the same place on their face). Follow their interests - let the children show you what they find interesting and go with that; engagement and being at ease with the natural environment are the highest priorities, the Mud Man can come later!



HARD TO REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling story (only if required). The learner may lead the story by showing their likes and dislikes.



3. ONE MILE A DAY

Authors: *Veerle Claeys, Gudrun De Grauwe and Eveline Heyndrickx*
Original idea *The Daily Mile: Elaine Wyllie, Scotland*

Sint Gregorius Buitengewoon Basisonderwijs (BuBaO), Belgium



SHORT DESCRIPTION

The goal of 'one mile a day' is simple, breaking the long inactive blocks into school with a short, but daily, full-class exercise activity. Primary school children **walk/run together with their teacher** 1 mile (1,6 km) in the fresh air. Afterwards, class activity is simply resumed.



DURATION

About 15 min or more*



NUMBER OF CHILDREN

1-99



AGE RANGE

3-99 years

*depend if you walk or run.



GOALS

10 benefits of one mile a day:

1. The children can lose their energy.
2. Social interaction with classmates and teachers.
3. Stay in the fresh air for a while.
4. The teacher chooses the starting point.
5. It only takes 15 minutes.
6. Dressing is not needed, just straight and START!
7. No specific location or material required.
8. 'One mile a day' is completely free.
9. Provides better fitness for the children.
10. Stimulates the concentration of children.





PREPARATION

No preparations are necessary.



MATERIALS

A timer such as a stopwatch.



DESCRIPTION

Start!

It is advisable to let the children walk/run outside in a specific loop around the playground. The distance can be clearly determined and the overview will always be kept. Choose a free-time, depending on your students' dip moments or build a fixed one mile a day moment. Everything is possible.

- Keep it simple.
- The most important thing is that children can complete their extra moment every day, together with their classmates in the open air.
- A specific warming up is not necessary, every child starts at his or her pace.
- Sportswear is not necessary, the children start immediately from the classroom with the activity. Sporty shoes, on the other hand, can be an added value.
- The children are encouraged to run, but most will combine walking and running which is good.
- The main goal is that this motion switch is performed daily. This allows the children to concentrate more after the running. Daily exercise also maintains the health-related benefits of this project.
- Finding links with other groups creates a positive vibe throughout the school and supports the overall continuation of the project.
- Consider using a reward system or visual chart to motivate reluctant pupils.

Children with special needs will require more time for walk/run, it is necessary to adjust activity to their potential physical and health condition.



BACKGROUND

The project was launched by **Elaine Wyllie in Scotland** (The Daily Mile). It has shown that after the mile, the children resume learning activity with more energy and concentration.

Official web page for UK:

<https://thedailymile.co.uk/word-from-elaine/>

Official web page for Belgium:

<http://www.onemileaday.be/>



KEYWORDS

Movement, learning, relaxation, health, children, fitness, run, walk, jog.





SUGGESTION
FOR
ADDITIONAL
ACTIVITIES

Art:

- What art can they make on their full range of movements and bodies?

Media:

- Camera to be placed on their body when running. Learning about POV (point of View) shots. Use these as the basis for the beginning of a film.

ICT:

- Use a pedometer and input the data into a computer to create graphs and bar charts.
- Geography/ICT: Look at Google maps to discover what speed they think you could walk at.

English:

- The tortoise and the hare story. Stories with themes of exercise and persistence.

Performing Arts/Music:

- Method acting. Make music looking at tempo – fast/slow.

Science:

- Looking at the effects of exercise has on the body. Full body cast out and look at which areas does what.

Maths:

- Time: how fast did each of them run. Put the times in order (digital). Discover the speed at which they walk. Reinforce common units of time.

- Maths/Geography: Discover which places you may be able to walk to doing the speed they are currently walking at and how long it would take them.

Modern Foreign Languages - MFL:

- Vocab based on exercises.

Cookery:

- Which foods are healthy and why? Which of these foods could be grown in the forest?

Design and technology DT:

- To create exercise equipment to use during the morning run.

Personal, social, health and economic education - PSHE:

- To look at how exercise affects our bodies.

Religious education - RE:

- To look at the religion of ancient Greece, including the Greek gods.

Physical education - PE:

- Look at various outdoor activities we can do instead of running, e.g. hurdles, climbing, crawling. Make an assault course (let students design) and run it.

SPECIFIC GROUPS OF LEARNERS:



PMLD
LEARNERS

Allow the PMLD learners to enjoy travelling in their chairs or with support from 1:1 adult walking at speed. Make sure the staff members try to go as safely and swiftly as possible. This will ensure amazement for the learner and staff alike.

- **Responsiveness:** To the wind moving through their hair.
- **Curiosity:** To what it feels like to move at a faster speed.
- **Discovery:** Of different walks, different runs, and different speeds – fast and slow.
- **Anticipation:** Of stopping during a count down on the mile run/walk.
- **Persistence:** Of moving further.
- **Initiation:** A learner may have switches to describe the speed at which they want to go at!
- **Investigation:** Of the world around them.





ASC

Less complex ASC pupils - a work program to support the process, explaining the order of what they may expect out in the environment. Use symbols and photographs where necessary to aid language, understanding and development. Activities may briefly comprise of a short exploration of the materials with a view to 'choosing' set number of objects, so they are not overwhelmed.



HARD TO REACH SLD

Modeling through the activity for learners is often extremely helpful. The learner may lead the movement by showing their likes and dislikes.



EARLY YEARS

Begin by only doing short runs, and build the runs up. Give the pupils a focus of a place to run to, to get something, and to run it back. Make sure you know the route for safety.

The text of additional activities and adaptations for specific groups of learners: Lynne Ledgard and Sefton Booth

Lined writing area consisting of 18 horizontal lines.



4. SOUNDS OF NATURE

Create sound and music with natural materials

Authors: Jef De Vroe, Jan Verhavert

MPIGO Heemschool 1, Belgium



SHORT DESCRIPTION

Activity illustrates and teaches how to use nature for creating music and sounds.



DURATION

1 hour



NUMBER OF CHILDREN

5-10



AGE RANGE

4+ years



GOALS

Pupil:

- Uses natural materials to create sounds, rhythms, music or noise.
- Learns to be aware of the sounds of nature around them.
- Raises awareness of which materials can be left in nature after the activity (natural materials) and which should be taken with afterwards (recycled materials).
- Increases and stimulates creativity and awareness.
- Enjoy sounds they make themselves.
- Stimulate self-esteem.





PREPARATION

Pupils: should wear suitable dress and shoes for safe and comfortable movement.

Teacher: should choose and get acquainted with the place (safe and stimulating). Use of photographs and symbols to support concepts and help with instructions (more able used verbal instructions). Be aware that if some of the children are sound sensitive and need to wear ear defenders this will dull the sounds in the following activities.



MATERIALS

First of all everything you can find in nature and manmade materials like plastic bottles, tape, string and toilet rolls and symbols for loud/fast/quiet/slow, MP3 recorder, MP3 player and speaker.



DESCRIPTION

Go on a sound hunt. "What sounds can you hear/find?"

Ask the pupils to gather natural materials of which they think they could make music with. Practice making sounds and music e.g. using sticks as drumsticks, scrunching leaves, grating pine cones, rubbing a stick against the bark. Pair the children up with the same or similar instruments. Can one child make music and their partner copy?

Link this to letters and sounds and tap out words e.g. "p-a-tpat", "t-a-p...tap". For more able you could use syllables.

Show them the things we brought and ask them if they could make some sort of musical instruments with the help of the manmade materials (bottles, boxes, rolls). Is this better than the natural materials? How is it different? Discuss the difference between manmade and natural – perhaps have a sorting activity first.

Throughout the activities, give the children opportunities for flexibility of thought and problem solving e.g. give the pupils one piece of wood to make sounds with. They then have to find another item to make a sound.

Derivations:

- Ask the pupils to find things to make a louder/quieter noise.
- Ask the more able pupils to see if they could make the sound change by making it in a different place. Explore how loud or quiet the sound gets if you are further away/nearer or in an open space/enclosed space.
- Make some instruments e.g. wind chimes or a stringed instrument.
- Use milk bottles and different amounts of water, to create different sounds.



BACKGROUND

Hearing in children can consciously develop in nature by listening to natural sounds. In the forest, despite the fact that space gives us a sense of silence, it is never silent. However, natural sounds have yet another advantage; children will calm down more quickly when listening. The sounds of nature are pleasant for the human ear (Györek, 2014).



KEYWORDS

Natural environment, observe, music, team work, sensory activity.





SUGGESTION
FOR
ADDITIONAL
ACTIVITIES

Music:

- Music/ICT: Recording natural sounds: wind, birds, moving of trees – play 'guess the sound'.
- Singing along to known songs with the natural instruments.
- Imitation of sounds which can be heard in nature.
- What is the loudest sound you can make with natural material? Maybe blowing on an acorn?
- Made sensory bottles (filled with leaves, stones, sticks etc.) as well as wrist chimes and leaf scrunching.

Media:

- Make a music video of the new forest band.

Information and Communication Technology - ICT:

- Use sound editing software to extend the sounds they have made from the forest.

English:

- Write a poem, or use a poem for the lyrics to a song.

Performing Arts:

- Put movement/dance to the song.

Science:

- Measure the level of sound and look at how vibration works. Look at the ear.

Maths:

- Counting in 4's ready for a straight pop song.

Modern Foreign Language - MFL:

- Learn common Italian words in conjunction with music e.g. piano – quiet, forte – loud etc.

Design and technology - DT:

- Choose their favourite musical instruments and make them from the wood found in the forest.

Personal, social, health and economic education - PSHE:

- To choose which music is happy, which music is sad, which music is angry.

Religious education - RE:

- Look into famous world music that is related to RE experiences.

SPECIFIC GROUPS OF LEARNERS:



PMLD
LEARNERS

With support, the learners will make the instruments and the groups will sing forest songs led by the staff e.g. Jungle Book songs, the Lion Sleeps Tonight, Mr Blue Sky etc. The young people will play along, as the leader will use their voice (and a guitar if possible) to sing the songs. Some additional songs may be brought along also. Sometimes the PMLD learners might require a story to structure the different newly made sensory instruments made.

- **Responsiveness:** The different levels of sound.
- **Curiosity:** To track the sound as it moves in front of them.
- **Discovery:** Discover new songs and to show if they like them or not.
- **Anticipation:** Of different speeds of the music.
- **Persistence:** Of trying to use the instruments (with support).
- **Initiation:** Who will begin/activate the song?





ASC

Encourage the tactile exploration of resources from the natural environment (bear in mind pupils sensory needs and adjust access to natural resources accordingly). Try this activity beforehand and take photos at different stages of creating the instrument. Encourage the pupil to re-create sound at each stage.

Some complex ASC pupils would concentrate on the sensory aspects of the materials and surroundings. Exploring the materials and in effect addressing and developing sensory integration issues (less concentration on the finished instrument and more on the processes and materials). Simple activities may be included such as copying a beat.

Less complex ASC pupils - a work program to support the process may be needed as may require an example of a finished 'instrument'. Use symbols and photographs where necessary to aid language, understanding and development. Activities may briefly comprise of a short exploration of the materials with a view to 'choosing' set number of objects (so they are not overwhelmed) to create their 'instrument'.

Some ASC pupils will need to focus on the exploration of the forest. Use intensive interaction in the woods - copy the children's movements, sounds and responses to engage with them. Model playing, and allow the students to 'write' the composition, model exploring the music and encourage the children to copy. Work hand over hand if the child is comfortable with this and then encourage independent work. Use simple language; maybe just one or two words at a time to allow for maximum understanding. Show the children instruments that have already been created and encourage them to copy or to make sounds with them.



HARD TO REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with modelling a story (only if required). The learner may lead the story by showing their likes and dislikes.



EARLY YEARS

Explore the natural resources used to make an instrument. Encourage exploration and discussion of the different sounds etc. It may be possible to link this activity to emotions- i.e. happy sound, sad sound. Working in the theme is recommended. Kids can walk/run back and forth and collect things, e.g. nuts can be picked up on one side and transferred to the basket on the other side.

The text of additional activities and adaptations for specific groups of learners: Lynne Ledgard and Sefton Booth

Reference: Györek N. 2014. Otraci potrebujemo gozd: (gozdna popotnica); Institute for Forest Pedagogy and Kindergarten Antona Medveda Kamnik, Kamnik.



5. SHADOW INHABITANTS OF THE FOREST



Authors: Ana Leban, Ana Zabukovnik, Mentor: Ph.D. Mojca Vrhovski Mohorič

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SHORT DESCRIPTION

During this activity, pupils recreate various shadows of animals, fairy tale creatures, fictitious characters, etc. by using their own shadows and the natural materials they have found in the natural environment. By doing so, the pupils develop their imagination and creativity, and improve their verbal expression.



GOALS

The goal of this activity is for pupils to develop their imagination and creativity, and practice their skills of verbal expression and observation, in the process of getting to know the potential uses of various natural materials. Non-formal goals are cooperation, socialising, reaching agreements, and strengthening interpersonal relationships.



PREPARATION

Suitable shoes and clothes that enable pupils to move around in a forest or other natural environment safely and comfortably are required. If you are going to spend a longer period of time outdoors, they should pack a snack and water.

The teacher should be familiar with the place where they are heading. The site should be safe and at the same time appealing to the pupils. The place and time of departure should be adapted to the weather conditions.

In the event that the group includes a child with severe or profound mobility impairment, make sure that the site can be accessed by wheelchair. In the event of a pupil with diminished arm function, he/she should be assisted by a classmate or escort when carrying out the activities. Pay special attention to chronically ill children, those with severe allergies (e.g. hay fever) or asthma, if the path is steep. Adapt the activities to the children's age, condition and potential deficits.



DURATION

30-45 minutes



NUMBER OF CHILDREN

10*



AGE RANGE

7+ years

*we divide them into 2 groups (we can also adapt the activity for smaller groups or for working in pairs).





MATERIALS

Work with the natural materials you have found in the natural environment. Woodland animal symbols or photos.



DESCRIPTION

Through this activity we encourage children to explore an area and discover the potential uses of various natural materials. During this activity the pupils observe and use their imagination.

Begin by having a nature walk. Focus on observing trees and discovering the shady and sunny areas. Find a nice spot to stop and read a story focussing on woodland animals. Have a wider discussion about the animals that are found in the forest, if the story does not include a good variety (use of woodland animal symbols or photos can be used to reinforce understanding). More able or older pupils may not need a story. Instead the woodland animal discussion could be about habitats, food sources, sleeping habits etc.

Continue on the nature walk and ask the pupils to gather natural materials. Model how you can use the natural resources to recreate various shadows of animals. These shadows appear on the ground. Let the pupils explore this freely and encourage them to comment on each other's creations (positively!). The shadows can be made by one pupil or several pupils together (e.g. one is standing while the other(s) makes a shadow with natural materials, with the first pupil giving the other pupil(s) verbal directions). Pupils can try to guess what animal the shadows belong to.

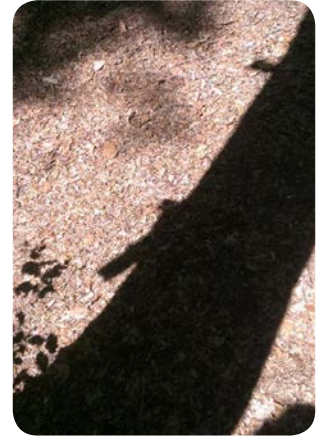
The pupils can also recreate shadows using their own bodies and/or natural materials (a tree, cones, ferns, bark, etc.).

- E.g. split into teams and the first team can start by making a shadow with their bodies, which appears on the ground, and the second group outlines it using natural materials.
- E.g. the group agrees on which animals they will show and the materials they will use. The group tries to compile a description of the animals. This is followed by a report from each group, which includes the making of a shadow and a verbal description – the opposite group has to find out which animal has been shown.

Variations: fictitious characters/fairy-tale creatures



Bird



Squirrel



Showing the material for the shadow of a bird



Showing the material for the shadow of a squirrel





BACKGROUND

Pupils choose the forest animals they are familiar with. They develop their imagination and creativity. They simultaneously come to know different natural, forest materials and their characteristics. They also come to know the shapes and movements of shadows. They practise their visual-motor coordination, and their social and verbal skills.



KEYWORDS

Natural environment, forest animals, shadows, natural forest materials, imagination, cooperation.



SUGGESTION FOR ADDITIONAL ACTIVITIES

Media:

- Making a film about the ghost of the lynx. Find each shadow of each animal, but never find the lynx.

Performing Arts/Music:

- Shadow puppetry show.

Science:

- In addition to the shadows of animals, we can try to recreate the sounds of the animals presented. We can start by using interjections (e.g. a bear “grrr”, a bird “cheep-cheep”, etc.).
- Getting to know the human body. The materials can be used to show the inside of a human body. They outline the shadow of a human body using natural materials and then learn about the shape and location of organs within that outline.

Maths:

- Clocks, and sun dials.

Cookery:

- Learn about meat eaters and vegetarian foods – why we eat what we eat.

Design and technology - DT:

- Create cardboard cut outs of their own bodies and favourite forest animals.

Personal, social, health and economic education - PSHE:

- Understand about positive and negative experiences e.g. play a game where each pupil says a sentence of the story one being positive (every body cheers with thumbs up), next person must say negative sentence (everybody boos with thumbs down).

Religious education - RE:

- Diwali – the light festival.

Physical education - PE:

- Out run your own shadow. Tag – only if you have a shadow, no shadow no one can tag.

Geography:

- Understand day and night/which countries have light and which not.



SPECIFIC GROUPS OF LEARNERS:



PMLD
LEARNERS

Staff will support the items and being portrayed by shadow. We will look for interaction with the shadow itself. To do this a white sheet or a white umbrella may be required to bring the shadow off the floor where we could see it.

Responsiveness: To the image under their control.

Curiosity: To show the shadow may move.

Discovery: Of how items might make other shapes on the canvas/umbrella.

Anticipation: Of movement and animal sounds of the forest.

Persistence: Of holding an item to project on.

Initiation: Of the story with shadow puppets – using what the learner does – respond if there is movement with the sounds of the animal.

Investigation: Of how the shadow moves (track it).

PMLD learners might also like to look at mirror images of themselves. Step two might be putting the mirror below their eyes to look up at the trees. If this doesn't work and they are in a wheel chair, lean the wheel chair back to view the trees properly. If they do not have a wheel chair, allow the student to lie beneath the branches and look at the shadows.



ASC

Encourage the tactile exploration of resources from the nature. Take a selection of visuals to green learning environment and take photos at different stages of creating the shadows. Encourage the pupil to re-create shadows at each stage.

Some complex ASC pupils would concentrate on the sensory aspects of the materials and surroundings. Exploring the materials and in effect addressing and developing sensory integration issues (less concentration on the finished shadows and more on the processes and materials).

Less complex ASC pupils - a work program to support the process may be needed as may an example of a finished 'shadow'. Use symbols and photographs were necessary to aid language, understanding and development. Activities may briefly comprise of a short exploration of the materials with a view to 'choosing' set number of objects (so they are not overwhelmed) to create their 'shadow'. Consider providing pupils with a set of instructions or checklist to encourage independence – this may need to be symbolised.

Some ASC pupils will need to focus on the exploration of the forest. Use intensive interaction in the woods – copy the children's movements, sounds and responses to engage with them. Model play, model exploring the materials and encourage the children to copy. Work hand over hand if the child is comfortable with this and then encourage independent work. Use simple language; maybe just one or two words at a time to allow for maximum understanding. Show the children shadows that have already been created and encourage them to copy. Follow their interests – let the children show you what they find interesting and go with that; engagement and being at ease with the natural environment are the highest priorities, the shadows can come later!



HARD TO
REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling a story (only if required). The learner may lead the story by showing their likes and dislikes.



EARLY YEARS

Explore the natural resources used to make a shadow. Encourage exploration and discussion of the different textures, sizes etc. It may be possible to link this activity to shapes big and small.

Source of photographs: Ana Leban and Ana Zabukovnik

The text of additional activities and adaptations for specific groups of learners: Lynne Ledgard and Sefton Booth

6. SOCIAL GAMES FOR SOCIAL SKILLS DEVELOPMENT I

Authors: Jan Čibej, Valerija El Habashy

Special School Ljubo Šercer Kočevje, Slovenia



SHORT DESCRIPTION

It is a sensory activity: barefoot pupils discover natural materials (tactile detection), discover the mysterious sounds of the forest and connect them with pictorial material (hearing sensation), connect the activity with tactile sensing, and connect smell with feeling (smell sensation).

**Physically impaired pupils are included in activities according to their needs.*



DURATION

45 minutes



NUMBER OF CHILDREN

6-10



AGE RANGE

6-12 years



GOALS

Pupil:

- Learns to feel their body and nature with different senses.
- Builds mutual respect and cooperation in the implementation of activities.
- Loses their preconception of touching natural materials.
- Moves in the natural environment and perceives it through the senses consciously and unconsciously.
- Spontaneously expresses feelings.
- Gains social skills and positive attitudes towards nature and peers.
- Learns how to spend time with their peers in the natural environment.





PREPARATION

Teacher: should choose and get acquainted with the place (safe and stimulating). The teacher should be prepared to lead the activity, which includes learning about the location and, if necessary, adjusting the prepared activity. Appropriate footwear: boots, running shoes or walking shoes, and tick spray. Pre-select an appropriate place to make a sensory path.



MATERIALS

- Hand puppet as a motivator for activities.
- Rope or tape to limit the space.
- Symbols/images which represent certain sources of natural sounds – leaves, birds, branches, rocks, grass, bees, crickets.
- Some pieces of natural materials that have a pattern (branch, stone, moss, etc.).
- Canvas bag or backpack.
- Scarf to cover the eyes.
- Sitting cushions and a bottle of water.
- Feelings symbols e.g. happy, sad, angry etc.
- Symbols for warm, cold, hard, soft, rough, smooth spiky, wet.



DESCRIPTION

Tactile perception

In order to carry out the activity, choose a suitable place that enables the collection of natural materials.

We all sit down in a circle and with the help of the puppet talk about feelings, how we perceive soft, warm, cold... (use of symbols: warm, cold, feelings e.g. happy, sad, angry,... if necessary). From the backpack, we take a piece of moss, pupils smell it, touch it and try to find it in the natural environment.

From the backpack we take a natural material (patterns) - branch, stone, leaf, grass, cone and show it to the pupils. Pupils look for the natural material in pairs and with help, if necessary.

Move to the area that has been selected to make a sensory path. Pupils use their collected natural materials to form the sensory path. Encourage them to take off their shoes and try the natural materials barefoot. If the materials hurt their feet, they can sit down and place their feet without putting their weight on them. Continue to encourage the pupils to talk about how the materials feel beneath their feet (use of symbols: hard, soft, spiky...).

Hearing perception

Find a nice spot to sit, perhaps on a pillow or a broken tree. Encourage the pupils to close their eyes and listen. Talk about what can be heard.

Take out the puppet and the symbols/images which represent certain sources of natural sounds (e.g. a bird, fallen leaves, a bee) from the backpack. Listen for sounds and pupils can match the sounds they hear with the puppet's symbols/images. Consider asking the pupils to make some noise e.g. scrunching leaves, tapping pebbles, while another pupil finds the matching image and so on. Continue to encourage the pupils to share their feelings. You may well find that those pupils who had negative feelings at the beginning of the session are now starting to feel more positive.

Pupils could also draw/write sounds on an old 'CD' or provide paper circles. Everyone gets a paper circle. The centre of this circle is you. If you hear a sound from behind, you draw it behind the centre, if it comes from the left, you draw it to the left of the centre,...

Sensing fragrance

To carry out this activity use the materials from the previous activities. The puppet will teach us how we smell. Each pupil covers their eyes and tries to figure out which scent the puppet has offered them. If they cannot recognise the smell, they can also touch the material. Continue to encourage the pupils to share their feelings. You may well find that those pupils who had negative feelings at the beginning of the session are now starting to feel more positive.





BACKGROUND

The activity is based on the needs of pupils of special education programmes in Slovenia, which have deficits in certain areas of sensory perception, and a lack of personal experience in living and working. In the natural environment, we can provide them with a new experience of perception.

These activities promote: mutual cooperation, building mutual social contacts, expressing feelings, communication, following instructions, behaving appropriately and having a sense of responsibility to oneself and others.



KEYWORDS

Multi-sensory approach, SEN children, the natural environment, movement, learning, play.



SUGGESTION FOR ADDITIONAL ACTIVITIES

English – Speaking & Listening: Hearing game:

- Children stand in a circle with one child blindfolded and listening. Another child makes noise using leaves, twigs, rubbing bark etc. The blindfolded child tries to guess who made the noise and tries to describe what he/she heard.

Art:

- Using our senses to make art: e.g. touch – hand and feet prints.

Media:

- Make a film about a journey through their forest to school.

Information and Communication Technology - ICT:

- Make a booklet or presentation about their senses.

Science:

- Our senses lessons.

Maths:

- Measure the space they require for the sensory corridors.

Physical education PE:

- Is the corridor in the woods more of an assault course?

SPECIFIC GROUPS OF LEARNERS:



PMLD LEARNERS

The learners can follow the above program and may only require 1:1 support to access e.g. take the learners' shoes off and place the items underfoot.

Responsiveness: To the presented sensory stimuli.

Curiosity: To what the sensory stimuli can do.

Discovery: Of what the forest has to offer.

Anticipation: Of entering the sensory corridor after repeated visits.

Persistence: Of acceptance.

Initiation: Of choosing from 2 which stimuli they would like to engage with.

Investigation: Of the stimuli.





ASC

Encourage the tactile exploration of resources from the natural environment used to create the sensory corridor (bear in mind pupils sensory needs and adjust access to natural resources accordingly). Take a selection of visuals to green learning environment, try this activity beforehand and take photos at different stages of creating the sensory corridor. Encourage the pupil to enter the corridor.

Some complex ASC pupils would concentrate on the sensory aspects of the materials and surroundings. Exploring the materials and in effect addressing and developing sensory integration issues (less concentration on the finished corridor and more on the processes and materials).

Less complex ASC pupils - a work program to support the process may be needed as may an example of a finished 'corridor'. Use symbols and photographs where necessary to aid language, understanding and development. Activities may briefly comprise of a short exploration of the materials with a view to 'choosing' set number of objects (so they are not overwhelmed) to create their 'corridor'.

Some ASC pupils will need to focus on the exploration of the forest. Use intensive interaction in the woods - copy the children's movements, sounds and responses to engage with them. Model play, model exploring the materials and encourage the children to copy. Work hand over hand if the child is comfortable with this and then encourage independent work. Use simple language; maybe just one or two words at a time to allow for maximum understanding. Show the children the corridor that have already been created and encourage them to copy or to point down the path (verbally, with a picture or by pointing to the path).



HARD TO REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling story (only if required). The learner may lead the story by showing their likes and dislikes.



EARLY YEARS

Explore the natural resources. Encourage exploration and discussion of the different textures, sizes etc. It may be possible to link this activity to journeys.

The text of additional activities and adaptations for specific groups of learners: Lynne Ledgard and Sefton Booth



7. NATURE TALKS

TEACHING MOTHER LANGUAGE WITH THE HELP OF NATURE I



Authors: Nika Košmelj, Vesna More, Marjeta Šmid
Special School Jela Janežiča Škofja Loka, Slovenia



SHORT DESCRIPTION

Activity illustrates and teaches how to use the natural environment for the development of mother language for children with special educational needs who attend elementary school programs. Described activities promote speech and language development, the ability to express, articulation and a meaningful follow-up.



GOALS

Pupil:

- Speaks or communicates in other ways.
- Develops readiness for oral presentation.
- Oral presentation within their capabilities.
- Creates a short description text or a story with assistance.
- Assesses and evaluates his/her text.
- Develops logical thinking, language and expressive abilities.
- Improves critical points in the use of grammar.
- Practices the formation of the text by example.
- Practices clear speaking and correct uttering.
- Uses alternative communication.
- Gaining sensory experience.



DURATION

30-60
minutes



NUMBER OF CHILDREN

5-10



AGE RANGE

9-16
years

Blank horizontal lines for writing notes or observations.





PREPARATION

Teacher: should choose and get acquainted with the place (safe and stimulating). The teacher shall be prepared to lead the activity, which includes learning about the location and, if necessary, adjusting the prepared activity. It is important that also the companions are prepared substantively and organizationally, who will be in the role of assistant and, if necessary, help the pupils and the teacher.



MATERIALS

All materials you can find in natural environments.

Natural items in the vicinity, if necessary, a basket or bag for gathering the material, a sheet or a large piece of white cloth, self-adhesive leaves, "cube assistant", on which they stick adhesive leaves with tipstips, pictograms ☺ and ☹, symbols or photographs of natural materials, symbols to describe colours and textures, table.



DESCRIPTION

INTRODUCTORY MOTIVATION:

- The game "**Sounds of the natural environment**" – the pupil chooses an object or several objects from the environment and creates sounds with them. Others try to imitate them as much as they can, either physically with objects or with their voice, each according to their abilities. Everyone should have the opportunity to first perform the sounds – someone will imitate the cuckoo, the other will beat with bars.
- The game of associations. They answer the question: "**What do you think of first when you hear the word FOREST / MEADOW (or the name of the environment in which they are located)?**" Brainstorming method – there are no wrong answers.

ACTIVITY 1 (easier):

Pupils explore the surroundings well: they choose natural items that they look at, touch, sniff, determine the material and the sound that the items produce, test the strength of the material (with a suitably strong grips/punches so that the material is not destroyed). The collected items are deposited on the cloth so that they do not get lost - contrasting background facilitates observation, highlights the details and draws attention to the items themselves.

Using the method "**finger trio**" they help themselves in describing the items. With the method we use three fingers: the thumb represents the naming of the object, **the index finger** - the location where it is found, and **the middle finger** - a description / use / or meaning in the environment (you choose according to the capabilities of the group or individual). After multiple repetitions of the categories, the pupils help and guide themselves in their descriptions non-verbally with fingers. Some pupils may need a word bank to describe the items. Pupils with major communication problems only express one of these categories in the verbal or non-verbal terms. (Use symbols for 'what', 'where' and 'describe'. Symbols available to describe e.g. colours and textures)

We can also use a cube with symbols as an orientation of speech or self-adhesive leaves for pupils who laboriously remember the words. When they find the words, they write them down, so that they do not forget them. When they throw the dice, and the sign is for example the location, they say something about the location where the object was found. In several repetitions, the pupils improve their narrative and praise themselves for the one they think was the best. Difficulty level and teacher's expectations are adapted to the individual's abilities.

Conclusion of activity. In the end, everyone chooses their favourite word that they themselves used or heard from someone else. In the conversation, they do their best to explain to others why they like that word.





ACTIVITY 2 (harder):

Activity is a description of objects using the method of "**walking through the gallery of the forest or other natural environment**". The method is particularly suitable because it promotes co-operation, vocal activity, and at the same time involves learning using motion.

The activity has several parts or tasks that are in strategic locations. These are pre-determined by the learner themselves or by the teacher, but they are continuously updated. Strategic points can be any special points: e.g. a special tree, a water, a pile of wood, an animal, etc., placed at a suitable distance. Pupils travel in small groups or individually from location to location. We make sure that pupils cooperate and talk about subjects in selected locations. Pupils first describe in an unstructured manner by telling the subject what they want and can do. The following is a description of the subject in a structured way: what (in doing so, they help with all the senses), why and how (use), and in conclusion, what the pupil wants to say about the subject. Better learners create more complex sentences and help the weaker in speaking. At the end pupils evaluate the activity in the forest in two ways. They first describe their feelings and evaluate how they spoke. Pupils who do not speak communicate with the help of gadgets (communicator, pictograms) or with mimicry. Teacher progresses students with observation sheets.

Variation

When they master the activity, they say one atypical sentence about each item and connect different items into a story. Atypical means not as normal as "A branch grows on a tree." The sentence should be unusual; it can highlight any feature or can be completely imaginary. "A curved branch is moving in the angry wind." The others physically illustrate/dramatize the story or partially repeat it in the game "telephone" (a short sentence is whispered from pupil to pupil, the last one says it out loud).



SUGGESTION FOR ADDITIONAL ACTIVITIES

Art:

- To outline the item and record some of their findings on a sheet of paper to return to school with. For lower ability children perhaps there is some guidance on the sheets e.g. the trio could already be categorised. For lower ability, the items could be printed at the bottom of the sheet, and the pupils could cut and stick them into the correct area.
- Bring the items that you prefer back and make them from clay.

Media:

- When feeling more confident, record the presentation by each learner. If even more confident share the findings with the school and play during assembly. Further to this have the students talk in assembly and make presentations about the forest.

Information and Communication Technology - ICT:

- Take photos of the items and print out on a 3D printer.

English:

- Write about their favourite items above.

Performing Arts/Music:

- Use the items in support of making a sensory corridor in the school, or perhaps a back drop for a set within the school play (e.g. the mouse and the apple/Midsummer nights dream).

Science:

- Classification using the finger trio.

Maths:

- Working out the percentages of how many of them would be in the forest to work out if they are common or rare. Using data tallies to see who else in the group/school likes their item, and what this says about the item.

Modern foreign languages - MFL:

- Translate the words for the finger trio 'What' (is it), 'Where' (is it), and play a game of hot and cold using translated words for this.

Cookery:

- Re-use the finger trio in cookery lessons to work out which utensils are needed.

Design and technology - DT:

- To make the item they have found have a functional use for the rest of the trip e.g. stick to walk with, flower to decorate.

Personal, social, health and economic education - PSHE:

- Use finger trio to decide what they feel about their item - 'What' do they feel about it, 'Where' did they find it (how did they feel in this place), describe how others might feel about it.

Religious education - RE:

- Relate the finger trio to the Catholic understanding of the Trinity (The Father, The Son and The Holy Spirit).

Physical education - PE:

- Ask the learners to go and hide in the forest and use call and response of the animals to find one another.





BACKGROUND

With the described activities we want to encourage pupils that in the forest or in other natural environments, where there is a relaxed atmosphere, they would talk more, communicate with each other more, form structurally more accurate sentences, and expand their vocabulary which is richer and more original. Pupils successfully use the devices for a replacement communication and overcome their deficits. In the forest or in other natural environment we also expect more spontaneous speech of pupils. Pupils concentrate easier, their attention and concentration are longer, and thus they participate more successfully and are able to listen to each other.



KEYWORDS

Natural environments, mother tongue, speech and language development, movement, sensory experiences.

SPECIFIC GROUPS OF LEARNERS:



PMLD LEARNERS

- To access the forest - carrying in a backpack (companion) or for heavier pupils an old wheelchair, which is useful for forest paths, if necessary, arrangements are made for transportation by school van.
- An old blanket and an old cloth (plastic/wax, which is impermeable to moisture), or at least groundsheet to enable independent movement in the forest.
- A bag and a backpack for easy carrying of items.
- Part 1: The learners will listen to the forest sounds with staff members being silent. We would encourage vocalisations of the learners, if and where we do, we would use some 'intensive interaction' with the learner to encourage the learner to vocalise and begin elements of communication.
- Part 2: give the learner a choice of woodland/forest animal. As a group, put their hands on to your throat/voice box area. Count down from 5 and staff members make the sound very loudly for as long as possible, and then silence. During the silence listen for vocalisations.
- Part 3: A set of switches*** are required to be taken also. When the pupil has explored the item they will either identify the item by matching the picture stuck on the switch to the forest resource. Or they can use a choice of two or if we like the item or not.
- Part 4: Staff members go in different directions, do the voice call for animals (with the pupil's hands on voice box) and re-find one another.
- **Responsiveness:** To forest intensive interaction, to vocalisations from staff members.
- **Curiosity:** Of feeling the staff members voice box.
- **Discovery:** Of the forest animals and items.
- **Anticipation:** Of the sound of the voice from staff member's throats.
- **Persistence:** At using the switch to identify the animals/sounds they like.
- **Initiation:** Use the switch to activate other people's vocal sounds.
- **Investigation:** Of voice coming out of staff and their mouth under intensive interaction.





ASC

- If possible, a companion who directs their attention, and repeats, if necessary, the explanation/ instruction, and pays attention to their well-being and the interaction with others.
- They carry with them a small block with "SOS" phrases, which they use when in need, instead of behavioural outburst (I would like to withdraw, I am bothered with .../I cannot touch .../ I need to go to the bathroom and I do not know how to do it in the woods .../ I'm hungry now and I cannot ...).
- Before leaving, the action must be defined as much as possible, and the plan should include a possibility of something that was not agreed, so that the pupil is slightly encouraged to accustom to the unknown (an expert and a person with autism Temple Grandin says "We must stretch out their comfort zone").
- In particular communication difficulties:
 - The pupil takes with him a fully charged communication tablet with the relevant program uploaded (e.g.: JabTalk).
 - This program includes a sufficient number of suitable images (pictograms).
 - We need to provide the pupil with enough time to be at peace when communicating via the communication tablet.
 - Some pupils with speech difficulties use vocalization as communication (letting out individual sounds), touching the item, pointing with a finger, and an oriented gaze to the item/eye contact.



HARD TO REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling Finger Trio (only if required). The use of In Print symbols/pictures for matching to the forest item. Symbols to show whether we like them or not. Use of gesture and prompt to point "Where did they come from?" Asking the pupil to lead you to the place in which they got the item.



EARLY YEARS

Explore the natural resources and try to keep a long cord for selecting an area in which to work. Encourage exploration and discussion of the different textures, sizes etc. It may be possible to link this activity to Pecs (Picture Exchange Communication system).

Source of photographs: Gregor Podviz

The text of additional activities and activities for specific groups of learners: Nika Košmelj, Vesna More, Marjeta Šmid, Lynne Ledgard and Sefton Booth

****Adaptive switches allow the physically challenged and special needs user to activate assistive technology devices in their environment. What appears as simple as a button, the proper switch will open up worlds of access to communication devices, environmental controls, computer software and mobile devices.*



8. SHADES OF WATER

TEACHING MOTHER LANGUAGE WITH THE HELP OF NATURE II



Authors: Nika Košmelj, Vesna More, Marjeta Šmid

Special School Jela Janežiča Škofja Loka, Slovenia



SHORT DESCRIPTION

Activity illustrates and teaches how to use the natural environment for the development of the mother language in children who attend elementary school programs. Described activities promote speech and language development, the ability of expression, articulation and a meaningful follow-up.



GOALS

Pupil:

- Relaxed and spontaneous speech.
- Is talkative (eloquent).
- Communicates with classmates and teachers.
- Listens to classmates.
- Cooperates with classmates and teachers.
- Uses alternative communication.
- Expands and enriches vocabulary.
- Is motivated to speak.
- Gaining sensory experience.
- Learning through movement.



DURATION

30 minutes



NUMBER OF CHILDREN

5-10



AGE RANGE

9-16 years



PREPARATION

Teacher: should choose and get acquainted with the place (which is safe and stimulating). The teacher shall be prepared to lead the activity, which includes learning about the location and, if necessary, adjusting the prepared activity. It is also important that the companions are prepared substantively and organizationally, who will, if necessary, help the pupils and the teacher. Before leaving for the environment, where there are ticks, they themselves or with the help of a teacher should protect against ticks (teacher provides the spray).

Pupils: should wear suitable dress and shoes for safe and comfortable movement.



MATERIALS

All materials you can find in natural environments.

In this activity we will use the natural resources offered by the environment - water. In further activities, we will use different materials that can be found in the forest or in ONE (other natural environments).

Natural objects in the surrounding area, if necessary basket or bag for collecting material, sheet or a large piece of white goods, low plastic water container, bandage for eyes, pictograms ☺ and ☹, symbols or photographs of natural materials.

Symbols/words for descriptions e.g. smooth, rough, hard, soft, wet, dry.



DESCRIPTION

INTRODUCTORY MOTIVATION:

On their way to the forest, pupils collect various objects from nature (stone, cone, leaf...). When we arrive at a certain place in the forest, these objects are placed in a low container filled with water. Each student, with a bandage over his/her eyes, reaches with his/her hand in the water and touches the object, then describes his/her feelings in doing that (wet, smooth, ...) and tries to describe this object to classmates. Then he/she takes the object out of the water, removes the eye bandage and looks at the object in her/his hand.

Pupils, who do not speak, communicate with the help of accessories (communicator, pictograms) or with facial expressions. Some pupils feel the object and then choose words or symbols that match it. They express their feelings with one or more words. The teacher observes the reaction of the pupils and records it.

ACTIVITY:

Activity is a description of items using the method of "**walking in the gallery of forest or other natural environments.**" The method is particularly suitable since it promotes cooperation, speech activity, and also includes learning through the use of kinaesthetic.

The activity consists of several parts or tasks that are at the strategic locations. These are predefined by the pupils themselves or by the teacher and they are located at a reasonable distance. You can do a simple polygon. Strategic point is water (stream, puddle, pond). By water (stream), we locate several strategic points (one is listening to the rustle of the water with our closed eyes, the other is touching the water and smelling wet hands, also determining the temperature of the water, the third is observation - watching the water and searching for living beings/stones of certain colours in the water, ...). Pupils are travelling in small groups, in pairs or individually from location to location. We make sure that pupils participate at selected locations and describe and narrate to each other. Pupils first describe in an unstructured way by telling each other about their perception and feelings of what they want and what they can do.

Pupils, who do not speak, communicate with the help of accessories (communicator, pictograms) or with facial expressions. Some pupils feel the object and then choose words or symbols that match it.





Teacher's observations; Teri King, Green Lane Community Special School, United Kingdom:

Touch – Pupils enjoyed collected leaves and twigs etc from forest and putting them into water. They enjoyed handling the objects in water and they were able to describe how the object felt in the water in simple descriptive terms (with prompting from adult).

Sound – Pupils listened carefully to the sound of water being poured into the bowl or over their hands. They liked the splash noises made when objects were dropped into the water.

Sight – Pupils were interested to see changes in how materials looked in water, one child describing leaves as 'shiny' and 'floppy'.



SUGGESTION
FOR
ADDITIONAL
ACTIVITIES

Art:

- After the occasion the pupils could draw a picture based on the different strategic locations. They could choose on colour themes. They can pick only one colour base, and perhaps use other indoor materials to make a picture based on what they liked e.g. blue wool for the river because of its colour and warmth.

Media:

- To create a short film on the differences in nature.

Performing Arts/Music:

- At the end have the group come back together and using mime to describe which location they are in. The others must suggest which this is.
- Decide if they were going to do a story/performance in those locations what would be different. Where would they have the audience, what would their play be about. How could they make the location integral to the performance? Try out within the group.
- Using string/ropes/tarpe create a den in those locations (if they want – it could be woodland/historical/or a place of their imagination).

Science:

- To use thermometers to measure the different temperatures of air and water within the forest.

Maths:

- To number the locations and ask everyone to run to location number 1 – then shout out what they know about the location.

Modern foreign languages MFL:

- When they have collected the words that describe each location, do this in another language for descriptions.

Cookery:

- Decide which natural sources we can use to cook with and cook something. E.g. Fire for heat, water to boil.

Design and technology - DT:

- Choose a location that suits them best to make a house location; either make a huge place they can stay in (e.g. beverwak/den) or a small example house.

Personal, social, health and economic education - PSHE:

- To decide, if the group at a location were a family/government, what roles would they take this time around. To run a meeting based on their roles. To present their findings.

Religious education - RE:

- To discover which religions came from which locations in the world. Does the location affect this? Research.

Physical education - PE:

- To create a stepping path to each location (that can be moved back later).

Geography:

- Map out the location. Decide a key for the map.

Natural Science/History:

- Possibilities for strategic points instead of water can be a special tree, a stump, a mushroom, a pile of firewood, animals...Name the trees and plants in their location. What is the story behind the trees and plants?





BACKGROUND

With the described activities we want to encourage pupils that in the forest or in other natural environments, where there is a relaxed atmosphere, they would talk more, communicate with each other more, form structurally more accurate sentences, and expand their vocabulary which is richer and more original. Pupils successfully use the devices for a replacement communication and overcome their deficits. In the natural environments we also expect more spontaneous speech of pupils. Pupils concentrate easier, their attention and concentration are longer, and thus they participate more successfully and are able to listen to each other.



KEYWORDS

Natural environments, mother tongue, speech and language development, sensory learning.

SPECIFIC GROUPS OF LEARNERS:



PMLD LEARNERS

- To access the forest - carrying in a backpack (companion) or for heavier pupils an old wheelchair, which is useful for forest paths, if necessary, arrangements are made for transportation by school van.
- An old blanket and an old cloth (plastic/wax, which is impermeable to moisture), or at least groundsheet to enable independent movement in the forest.
- A bag and a backpack for easy carrying of items.
- Support feeling the difference in each area. Support staff to take pictures of each item, and to gather items to bring back to the school. The learners to be able to experience all of their senses and choose which environment they like best. With the items to run the same activity indoors, and look for differences from the learners. To create a sensory corridor within the school based on their finding.
- **Responsiveness:** To the different environments within the woods.
- **Curiosity:** At what they can do with the natural environment items e.g. water splash.
- **Discovery:** Of what it can do, and do it again e.g. show preference.
- **Anticipation:** Of what the natural environment can do.
- **Persistence:** Of helping make a den in the area.
- **Initiation:** If switches are brought, they can list/command others what they or others should do in the environment.
- **Investigation:** Of sensory items.



ASC

- If possible, a companion who directs their attention, and repeats, if necessary, the explanation/ instruction, and pays attention to their well-being and the interaction with others.
- They carry with them a small block with "SOS" phrases, which they use when in need, instead of behavioural outburst (I would like to withdraw, I am bothered with .../I cannot touch .../ I need to go to the bathroom and I do not know how to do it in the woods .../ I'm hungry now and I cannot ...).
- Before leaving, the action must be defined as much as possible, and the plan should include a possibility of something that was not agreed, so that the pupil is slightly encouraged to accustom to the unknown. An expert and a person with autism Temple Grandin says "We must stretch out their comfort zone".





Communication:

- The pupil takes with him a fully charged communication tablet with the relevant program uploaded (e.g. JabTalk). This program includes a sufficient number of suitable images (pictograms).
- We need to provide the pupil with enough time to be at peace when communicating via the communication tablet.
- We prepare two pictograms ☺ ☹ for pupils, to express their feelings, important are also the observations of the teacher and the assistants about pupil responses (comfort, discomfort).
- Some pupils with speech difficulties use vocalisation as communication (letting out individual sounds), touching the item, pointing with a finger, and an oriented gaze to the item/eye contact.



HARD TO REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for areas in the forest (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling story (only if required). The learner may lead the environments by showing their likes and dislikes.



EARLY YEARS

- Explore the natural resources used to identify an area as a group. Encourage exploration and play in those areas, do not be scared to get dirty or to roll in the leaves ☺. Share children's stories of the forest. Let the children lead with what they have found and help them to write a story together going from person to person to have a sentence each.
- Working in themes is recommended.
- Kids can walk/run back and forth and collect things (e.g. nuts can be picked up on one side and transferred to the basket on the other side).

Source of photographs: Gregor Podviz

The text of additional activities and activities for specific groups of learners: Nika Košmelj, Vesna More, Marjeta Šmid, Lynne Ledgard and Sefton Booth



9. FOREST LETTERS

GETTING TO KNOW THE LETTER E IN A FOREST



Authors: *Martina Škrlec, Katja Letnik*, Mentor: *Ph. D. Mojca Vrhovski Mohorič*

Faculty of Education; Department of Special and Rehabilitation Pedagogy
University of Ljubljana, Slovenia



SHORT
DESCRIPTION

This activity presents various activities in a natural environment, during which pupils learn how to write the letter **E** using natural materials.



DURATION

45-60
minutes



NUMBER OF
CHILDREN

10
or less



AGE RANGE

6-8
years



GOALS

Pupil:

- Listens to and understands individual words; recognises and repeats sounds and their sequences in words.
- Recognises certain letters and words (e.g. his/her name, a classmate's name, etc.).
- Writes down sounds with the correct capital letters in the agreed direction, shape and size; performs graph motor exercises to practise the elements of capital letters and the skilful and correct use of a pencil; comes to know strategies for remembering and recalling the graphic form of letters.

Additional goals

Pupil:

- Builds a positive and respectful attitude towards the forest and the materials within it; observes the rules of conduct in a forest.
- Practises phonological awareness using materials in the forest.
- Recognises the shape of the letter E based on the shape of natural objects in the forest.
- Finds objects (words) in the forest which contain the letter E.
- Practises precise observation.
- Develops creativity.
- Expands vocabulary.





PREPARATION

The teacher should be familiar with the place where they are headed. The site should be safe and at the same time appealing to the pupils. Suitable shoes and clothes that enable pupils to move around in a natural environment safely and comfortably are required. If you are going to spend a longer period of time outdoors, they should pack a snack and water. The place and time of departure should be adapted to the weather conditions.

In the event that the group includes a child with a severe or profound mobility impairment, make sure that the site can be accessed by a wheelchair. In the event of a pupil with diminished arm function, he/she should be assisted by a classmate or escort when carrying out the activities. Pay special attention to chronically ill children, those with severe allergies (e.g. hay fever) or asthma, if the path is steep. Adapt the activities to the children's age, condition and potential deficits.



MATERIALS

All of the **natural materials** found in a forest or other natural environment.

A **set of symbols of natural items** that can be found in the forest.



DESCRIPTION

- 1) After arriving in the forest, tell the pupils that they will be getting to know the **letter E** in the forest. Practice sounding out the letter E and ask which words have the E sound. Ask them to find as many objects as possible that contain the E sound, and encourage them to find diverse objects or even concepts. They should name these objects. For lower ability pupils or non-verbal pupils have a set of symbols of natural items that can be found in the forest. Can the pupils select or point to those with the E sound?

The photographs below give examples of a few names of objects and concepts.

Image 1: Stone

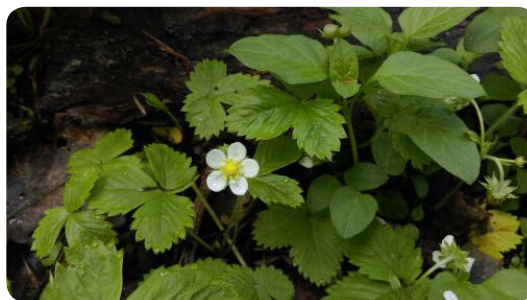
Image 2: Flower

Image 3: Needles

Image 4: Branches placed in the shape of the letter E.

Image 5: The letter E made up of leaves.

Image 6: Finding objects with the letter E - looking for rocks (steen) in the soil.





- 2) For easier visualisation, offer the pupils a tool – **a stick and a small stone(-s)**. Tell each of them to find their own stick and one or more small stones in the forest. Invite them to find the location of the letter **E** in a word (**at the beginning, middle or end**). The stick represents the word and the small stones represent the **E** sound in that word. Place the stick on the ground, while the pupil holds the small stones in his/her hand. The pupil starts on the left and moves his/her hand along the stick and puts the small stone down where he/she has heard the **E** sound.

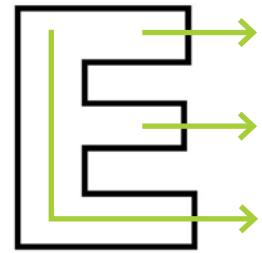
Example: In the word “needles”, the letter **E** is at the beginning of the word; the pupil places the small stone at the beginning. In the word “flower”, the letter **E** is at the end of the word; the pupil places the small stone at the end of the stick. If the word contains **more than one letter E**, the pupil uses **several small stones**.



Image 7: A stick and small stone.

Image 8: Where do you hear the O in FOREST (FOREST = BOS in Dutch)?

- 3) The teacher shows how to write the letter **E** by making the letter **E** out of large branches (the teacher can also write it on the ground with a stick and verbalise it). Invite the pupils to walk on the branches as if they were writing the letter **E** (how it is written in shown in the diagram below).



- 4) Invite the pupils to find as many objects as possible in the forest whose shape reminds them of the shape of the letter **E** (shapes of trees, placement of leaves on a branch, shadows, etc.).



- 5) Ask the pupils to form or assemble the letter **E** in as many different ways as possible from materials found in the forest.

Example: A pupil finds cones and assembles them into the letter **E**; a pupil draws the letter into the sand with a stick; a pupil forms the letter **E** using bark.



Image 9: Creative: make the letter E with nature materials.





BACKGROUND

Pupils come to know the **E** sound and the letter **E** in a visual, auditory and kinaesthetic way, making it easier to remember. Pupils work together to find objects whose names contain the letter **E**. They watch one another closely when walking on the shape of the letter and learn by imitation.



KEYWORDS

Learning letters, letter E, forest, natural materials, creativity, Slovenian, English, Dutch language.



SUGGESTION FOR ADDITIONAL ACTIVITIES

WE CAN USE A SIMILAR SYSTEM OF LEARNING LETTERS FOR ALL THE LETTERS.

Art:

- Create the outline of the letter E with stones and fill with leaves or flowers. Can the pupils make any other letters or spell out any words?

Media:

- Film the letters or words being made, to show the different stages of construction. Can the pupils record their voices using the E sound to play over the video?

Information and Communication Technology - ICT:

- Focus on the word 'web' as it has the E sound. Search for examples of webs in the forest. Do any have spiders in? Photograph different examples using the iPad and make a pic collage, print off and surround with a picture frame made of sticks.

English/Communication/ Speaking and Listening:

- Pupils build simple sentences with the words they have mentioned.
- After pupils come to know all of the letters, they use natural materials to write an entire word.
- Pupils write words on the ground or in the air with a stick or finger.
- In the forest, pupils gather as many sticks as there are words in a given sentence. Longer sticks represent longer words, shorter sticks represent shorter words, and a stone represents a full stop.
- Have a sensory walk where the children are paired and one is blindfolded. The other child must guide their partner from one location to another using their voice.

Science:

- Classify different trees using their leaves. Which tree names have the E sound?

Maths:

- Sorting items, those with the E sound, those without.

Cookery:

- If possible find a Hazel tree (E sound). Discuss how it can be recognised and its anaesthetic properties. With appropriate levels of supervision, cut some Hazel and whittle the end to make a toasting stick. Use the sticks to toast some bread on the campfire.

Design and technology - DT:

- The word 'nest' has the E sound. Pupils spot nests in the trees. They then build their own nests using natural resources. How can they strengthen the nest? Could they use clay or weaving? What could they put inside the nest to make it soft and warm?

Personal, social, health and economic education - PSHE:

- Give pupils a challenge to work collaborately together e.g give a team a set of resources to get from one location to another without stepping on the ground.

Religious education - RE:

- Can some of the words identified with the E sound be used to write a poem or reflective piece of writing about their time outdoors.

Physical education - PE:

- Can the pupils make a giant letter E or word using the letter E with larger, heavier resources?



SPECIFIC GROUPS OF LEARNERS:



PMLD
LEARNERS

Preparation in the class room is key, hopefully get some E letters either sensory letters or make some. Show the pupils the letters and link them to real objects, link to the items we will look for within the forest/woods. When outside the learners can still be aided to gather the items. Once gathered, put up a table or use something that has a higher level so the learners can contribute to the 'Forrest E's'. Make sure you help the learner place items either with hand over hand or hand under hand. What we would look for:

Responsiveness: To being touched with the forest items.

Curiosity: To explore for the forest items.

Discovery: Of what the forest items being placed in to E shapes.

Anticipation: Of dropping the items and flinching when dropped.

Persistence: Working with a member of staff to place the indoor items and forest items together.

Initiation: Picking the item up to place or throw next to the E shape.

Investigation: Of what the items and the shape of the E.



ASC

Encourage the tactile exploration of resources from the natural environment used to make the E. Allow the learner to be attracted to whatever takes their interest and encourage (bear in mind pupils' sensory needs and adjust access to natural resources accordingly). Try this activity beforehand and take photos at different stages adding to a group picture. Make sure the learners can place all the E items next to the E that they construct. Bring some alphabet letters that you can put around leading up to E, e.g. C, D, E, F, G. See if they are able to make the whole alphabet next to a paper copy of the alphabet so it has some context for the learner.

Some complex ASC pupils would concentrate on the sensory aspects of the materials and surroundings. Exploring the materials and in affect addressing and developing sensory integration issues (less concentration on the finished 'E' and more on the processes and materials).

Some ASC pupils will need to focus on the exploration of the forest. Use intensive interaction in the woods – copy the children's movements, sounds and responses to engage with them. Model play, model exploring the materials and encourage the children to copy. Work hand over hand if the child is comfortable with this and then encourage independent work. Use simple language; maybe just one or two words at a time to allow for maximum understanding. Show the children 'E' shape that they have created and encourage them to copy or to point at features.



HARD TO
REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling what we are looking for (only if required). The learner may lead the 'E' letter finding by showing the similarities.



EARLY YEARS

Explore the natural resources used to make the shape of the letter. Encourage exploration and discussion of the different textures, sizes etc. Share children's letters before entering the forest.

Source of photographs no. 1,2,3,4,5,7: Martina Škrlec and Katja Letnik; Slovenia; Source of photographs no. 6,8,9: Veerle Claeys and Evelin Hendrickx; Belgium

The text of additional activities and adaptations for specific groups of learners: Lynne Ledgard and Sefton Booth

10. SYMMETRY

Author: Lynne Ledgard

Green Lane Community Special School, United Kingdom



SHORT DESCRIPTION

Pupils explore symmetry using natural resources found outdoors.



GOALS

Pupil:

- Searches for and collects similar natural resources (matching).
- Completes a symmetrical pattern by reflecting natural resources in a mirror line.
- Creates similar patterns using the natural resources.
- Focused listening.
- Carefully observes the natural environment (experiencing nature).
- Recognises natural resources by touch.
- Experiences movement in natural and uneven terrain.



DURATION

Up to 2 hours



NUMBER OF CHILDREN

Up to 12



AGE RANGE

4+ years





PREPARATION

Pupils: should wear suitable dress and shoes for safe and comfortable movement.

Teacher: should choose and get acquainted with the place (safe and stimulating) and give clear instructions and his/her expectation. It is recommended the designation of an area suitable for exploration (boundaries).



MATERIALS

- Natural resources such as sticks, leaves, flowers or berries.
- A flat surface to work on such as a tree stump, path or groundsheet.
- Clay.
- Tools for rolling such as a rolling pin or small log.
- Mirrors.
- Photos of leaves common to the local area.
- Pictures of a symmetrical pattern to recreate using locally found natural resources (e.g. feathers, leaves, sticks,...).



DESCRIPTION

- Have a nature walk focussed on finding examples of symmetry in the natural environment. Lower ability pupils could have photos of leaves common to the local area that they could match. The teacher could then demonstrate the symmetrical properties by folding (line symmetry) or turning (rotational symmetry).
- Explore the area and ask the children to collect natural resources, ensuring that they have more than one of each item. You could give the children specific items to collect e.g. one pair collects leaves, another pair collects flowers, another collects feathers etc.
- Sort the natural resources into matching sets e.g. matching leaves (size, shape and colour), matching flowers etc.
- Model making a symmetrical pattern using the natural resources that the children have collected. This should be done on a flat surface such a tree stump, flat ground or ground sheet. If it is windy then roll out some clay and press the natural resources into the clay.
- Pair the children up and explain that they are going to now make their own symmetrical patterns. Mirrors can be used to check the symmetry of the pattern.
- When the patterns are complete, the pairs can be rotated onto another symmetrical pattern and they can add more detail using more natural resources.
- You could then have a challenge activity where one child from each pair creates half of the symmetrical pattern and then their partner must complete the other half using reflection.
- Lower ability pupils could be supported by adults or by having mixed ability pairs. To work independently, lower ability pupils could have pictures of patterns that they have to recreate.



Line symmetry



Rotational symmetry





BACKGROUND

The act of creating something is central to the thinking process. Outdoor work can facilitate alternative forms of self-expression through the practical nature of many activities (Juliet Robertson, Dirty Teaching 2014).

This can be used as a stand alone activity or could follow on from a symmetry topic in class where the basic concepts are taught.



KEYWORDS

Symmetry, symmetrical, reflection, pattern, size, rotate, leaves, feathers, flowers, sticks, colour.



SUGGESTION FOR ADDITIONAL ACTIVITIES

Art:

- Take some items that will create 2D shapes in the picture e.g. felt circles, paper squares. Glue the symmetrical patterns onto fabric and then use natural paints to add further detail – natural paints could be made with mud, tumeric, plant dye.

Media:

- Take a photo every 30 seconds to 1 minute. Put the photos into a movie making app, and enjoy a time lapse video of the art being made. Hang the Ipad with a forest frame around it, and play the movie on repeat.

Information and Communication Technology - ICT:

- Make a pic collage using an ipad, print off and surround with a picture frame made of sticks.

Information and Communication Technology - ICT/Speaking and Listening:

- Present the art work in a PPT format giving an explanation to what they have found.

Performing Arts/Music:

- Take a photo of each picture made. Use them as a storyboard in making a play or a film.

English/Communication/ Speaking and Listening:

- Have the pupil explain their pattern. Why is it symmetrical? Do the other pupils agree? Are there suggestions about how it could be further improved? Can the pupil name the items used?

Science:

- Classify items used e.g. stone, wood, plant. Create symmetrical patterns made with a mixture of natural and manmade resources and get the children to categorise which is which.

Maths:

- Sorting items, repeating patterns, naming shapes, counting.

Modern Foreign Languages:

- Counting, naming shapes, learning some words for natural items in another language.

Cookery:

- Use edible natural resources. How can we cook with them? Do they taste the same raw and cooked (where appropriate). How is the raw and cooked item different?

Design and technology - DT:

- Mount the work on to wood, glaze it with glue, hang them within the main hall. If the symmetry pattern is made in clay, allow it to dry then paint and glaze. Display it or use it e.g. a tile or place mat.

Personal, social, health and economic education - PSHE:

- Work collaboratively with another pupil. Share ideas, take turns. Talk about what you like or dislike. Make suggestions to improve it.

Physical education - PE:

- Obtain the natural resources and make further patterns under time constraints. Race to get the resources. Make a giant pattern with larger resources such as bigger, heavier sticks, rolling logs.



SPECIFIC GROUPS OF LEARNERS:



PMLD
LEARNERS

Will focus on the sensory exploration of all materials above. The PMLD learner will make efforts on aided searching for sensory items, their responsiveness – to the materials found, the PMLD learners could try to make symmetry from mud hands. Try to get the learner to place their hands into some found mud (put into a tray so the learner can reach) and use some white paper to place the hand shapes equally on a piece of paper. Clean the learner's hands. Look for the symmetry. Count the two hands. Then take the found items in the forest and return to the class room to make symmetrical art/and grouping objects. Group them at first and then help the learner count the items, and lastly begin placing them with the learner in to a symmetrical pattern. Lastly check this with the mirror.

- **Responsiveness:** To the mud sensory activity on the hands.
- **Curiosity:** To leaving a pattern on a piece of paper.
- **Discovery:** Of what the found items can do.
- **Anticipation:** Of the items dropping on to the paper in the class.
- **Persistence:** Begin a rubbing of the item on to paper with a crayon and use a mirror to check.
- **Initiation:** Of how reaching towards the forest items, and or to the placement of the object. Also use the mirror for students to look for facial reactions in the mirror and look for initiation of this.
- **Investigation:** Of any of the above sensory experience and showing a choice of what we like or don't like.



ASC

Encourage the tactile exploration of resources from the natural environment used and take the mirror for use with all the items (bear in mind pupils' sensory needs and adjust access to natural resources accordingly). Take a selection of visuals to green learning environment, try this activity beforehand and take photos at different stages of showing the symmetry. Encourage the pupil to see where the symmetry is and remind the learner 'Same'. Show the learner with your hands and with certain leaves try to fold down the centre and explain 'Same'.

Some complex ASC pupils would concentrate on the sensory aspects of the materials and surroundings. Exploring the materials and in effect addressing and developing sensory integration issues (less concentration on the knowledge of symmetry but more on looking for the knowledge of 'SAME'. Allow lots of time to process the materials).

Less complex ASC pupils - a work program to support the process may be needed as may an example of a finished 'similar' or 'same' item e.g. 'look, these leafs are the same' and put them side by side. 'These leafs are different', and move them apart. Use symbols and photographs were necessary to aid language, understanding and development. Activities may briefly comprise of a short exploration of the materials with a view to 'choosing' set number of objects (so they are not overwhelmed) to create their 'Symmetry'.

Some ASC pupils will need to focus on the exploration of the forest. Use intensive interaction in the woods – copy the children's movements, sounds and responses to engage with them. Model play, model exploring the materials and encourage the children to copy finding the 'Symmetry'. Work hand over hand if the child is comfortable with this and then encourage independent work. Use simple language; maybe just one or two words at a time to allow for maximum understanding. Show the children symmetrical examples that have already been created and encourage them to copy or to point at where it is the same, and where it is different (verbally, with a picture or by pointing to the same place within the picture/object). Follow their interests – let the children show you what they find interesting and go with that; engagement and being at ease with the natural environment are the highest priorities, the symmetry can come later!



HARD TO
REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling story (only if required).





EARLY YEARS

Start by looking at the symmetry of the body. Use the mirror to look for this. Put our hands together. Put our feet together, knees etc. Explore the natural resources used to make some symmetry. Encourage exploration and discussion of the different textures; sizes etc. and where it is the 'Same'.

Source of photographs: Lynne Ledgard

The text of additional activities and activities for specific groups of learners: Lynne Ledgard and Sefton Booth



11. OUTDOOR MATHEMATICS: MEASURES



Author: Teri King

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SHORT
DESCRIPTION

The activity illustrates and teaches how to use the natural world to measure items according to size. These activities involve using sticks to measure, compare and order. To compare and measure materials and objects using non-standard and standard units.



GOALS

Pupil:

- Develops mathematical skills with the focus on measures and developing understanding of concepts of longest and shortest, biggest and smallest.
- Measure with standard and non-standard units.
- Strengthens sensory integration.
- Observes and explores the natural environment.
- Stimulates tactile experiences (touching earth, stones, branches, moss, leaves, spruce needles).
- Strengthens the balance while walking and running on uneven terrain.
- Cooperates with other pupils.
- Solves problems through games and research.



DURATION

1
hour



NUMBER OF
CHILDREN

5-10



AGE RANGE

4+
years





PREPARATION

Pupils: should wear suitable dress and shoes for safe and comfortable movement.
Teacher: should choose and get acquainted with the place (safe and stimulating).



MATERIALS

- Natural materials such as twigs, sticks, leaves, stones and logs.
- Measuring tools such as metre sticks, rulers, tape measure or trundle wheels.
- String, wool or rope.
- Symbols to support understanding such as long, short, big, small, order.



DESCRIPTION

Introduce lesson:

Children are encouraged to explore the surroundings – counting and touching trees, pace measuring and estimating of distances, looking for stones and collecting them, picking up interesting leaves and branches. You can build a long snake line of twigs. Who can build the longest line of twigs? Pupils make a collection of twigs from forest ground.

Sorting - Pupils sort twigs into two groups, biggest twigs and smallest twigs. Pupils take turns to place their twigs in each cohort.

Ordering - Pupils order their twigs according to size, starting with shortest and one end, placing each twig according to size until largest twig is at the end.

Cutting to size - Pupils given a non standard measure (e.g. a stick) or standard measure (e.g. a 30cm length ruler) and pupils to cut sticks or long grass to match the measure using tools such as secateurs.

Comparing - Compare distances with non-standard e.g. Compare the distance with branches and with pine cones. Pupils could compare their height with the heights of trees and find 3 trees that are taller etc. Use children to measure the girth of a tree by seeing how many can stand around the outside.

Measuring in metres - Pupils are given a metre length piece of string, wool or rope. They have to find an object that is same length, longer than or shorter than. Use the string to make shapes, numbers or letters.





BACKGROUND

Children can work on previous formal class based mathematics lessons on measuring to transfer measuring skills to the outdoor environment. Pupils can explore the natural environment to collect objects to measure or measure with sticks, twigs, leaves, logs and stones. Pupils can explore measuring in non standard units for example matching objects of similar size or length or ordering objects according to size or length. They can also use standard measurements (cm and metres) to measure objects.



KEYWORDS

Measure, longest, shortest, biggest, smallest, size, order, sort, cm's, metres.



SUGGESTION FOR ADDITIONAL ACTIVITIES

Art:

- Use sticks to make a wooden frame and string to turn it into a weaving loom. Use grasses and larger leaves or trails of ivy to weave.
- Assembling of a Christmas tree - sticks - shorter, longer.

Information and Communication Technology - ICT:

- Create a route for a remote controlled car to navigate through. Encourage problem solving skills such as using the vehicle to transport heavy items or finding a route over or round a puddle.

Performing Arts/Music:

- Use sticks to make a rhythm by tapping on tree stumps. Pair the children up, can they copy each others rhythm? Can the full group follow one persons rhythm?

Science:

- Use sticks to make dens then use torches to investigate how the light changes inside.

Maths:

- Explore directional language by having a treasure hunt where pupils must follow instructional clues. Use sticks and twigs to make 2D shapes. Identify right angles in shapes and mark the right angles on a shape with cubes.

Cookery:

- Toasting bread on the campfire. How does the bread change as it is heated. How does it taste if it is burnt?

Design and technology - DT:

- Build a bridge. You may need to dig a ditch first! Can a child use the bridge? Can an adult? Can a wheelchair user?

Personal, social, health and economic education - PSHE:

- Cooperation and problem solving games e.g. Can the children fill a large container with water using leaking buckets. Put a time limit on it. Can they plug the holes. If they run does it help?

Religious education - RE:

- Encourage the children to consider their relationship with the outdoors. Help develop the understanding that we are part of nature and must help to look after it.

Physical education - PE:

- Play rabbits and foxes. The fox chases the rabbits. If the fox tags a rabbit it turns into a fox. The last rabbit is the winner. Assembling a fish - sticks - shorter, longer.



SPECIFIC GROUPS OF LEARNERS:



PMLD
LEARNERS

With support, the learners will place the sticks in order and with groups. They will require hand over hand or hand under hand for the placement working on their fine motor skills. Take with you a large box and a small box and encourage placing the items in for big and small. Encourage staff members to use large deep voices for large long items, and small high pitched voices for small items. Help the pupils measure distance with counting as a whole group as we step forward introducing the game – what is the time Mr Wolf, and step together.

Responsiveness: To the tactile element of the forest items.

Curiosity: As how to hold and the weight of the larger items compared to the small items (beware of mouthing the small items).

Discovery: That size matters! What can we do differently with large to small items?

Anticipation: Of dropping the item into the correct box.

Persistence: Of choice between small or large.

Initiation: Allow choice of two items and choice of two boxes. Could we go even further to 3 choices?

Investigation: When the boxes are complete, allow the learner to explore all of the large items, and all of the small items separately.



ASC

Encourage the tactile exploration of resources from the natural environment (bear in mind pupils sensory needs and adjust access to natural resources accordingly). Take a selection of visuals to green learning environment and take photos at different stages of collecting different sized items. Encourage the pupil to re-create the stick line. Allow processing time, and begin the first three sticks. After this allow time for the learner to keep finding a larger stick for the line.

Some complex ASC pupils would concentrate on the sensory aspects of the materials and surroundings. Exploring the materials and in affect addressing and developing sensory integration issues (less concentration on the finished small to large or length and more on the processes and materials).

Less complex ASC pupils - a work program to support the process may be needed as may require an example of a finished size picture. Use symbols and photographs where necessary to aid language, understanding and development. Activities may briefly comprise of a short exploration of the materials with a view to 'choosing' set number of objects (so they are not overwhelmed).

Some ASC pupils will need to focus on the exploration of the forest. Use intensive interaction in the woods – copy the children's movements, sounds and responses to engage with them. Model playing, and allow the students to get it wrong, model exploring size and length and encourage the children to copy. Use simple language; maybe just one or two words at a time to allow for maximum understanding. Follow their interests – let the children show you what they find interesting and go with that; engagement and being at ease with the natural environment are the highest priorities.



HARD TO
REACH SLD

Be aware symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling a story (only if required). The learner may lead the story by showing their likes and dislikes to big and small, long and short etc.



EARLY YEARS

Explore the natural resources used in length. Encourage exploration and discussion of the items, who can get something very heavy – is it small or is it large. Allow pupils to bring items to the circle to consider what they have found. Make a small fire, and find out which piece of wood would work best for the fire (e/g/ small to begin, large for after). It may be possible to link this activity to fire building within Forest Schools. Working in theme is recommended. Kids can walk/run back and forth and collect things (e.g. nuts can be picked up on one side and transferred to the basket on the other side).

Source of photographs: Teri King

The text of additional activities and adaptations for specific groups of learners: Lynne Ledgard and Sefton Booth

12. SOCIAL GAMES FOR SOCIAL SKILLS DEVELOPMENT II

Authors: Andreja Erjavec, Jan Čibej, Marijana Šarić

Special School Ljubo Šercer Kočevje, Slovenia



SHORT DESCRIPTION

- I. **WHO IS MISSING?** – finding the pupil missing from the group.
- II. **HOT/COLD** – searching for a hidden object that does not belong in nature.
- III. **HUMAN OBSTACLES** – overcome obstacles blindfolded.



DURATION

- I. **10 minutes**
- II. **15 minutes**
- III. **15 minutes**



NUMBER OF CHILDREN

6-8



AGE RANGE

10-14 years



GOALS

- Learning/meeting group members.
- Building mutual respect and cooperation.
- Pupils express their emotions freely.
- Training social skills: socializing, mutual respect, cooperation, proper communication, trust.
- Developing a sense of responsibility to oneself and others.
- Developing appropriate behaviour toward their peers.
- Following the instructions and rules.
- Respecting the teacher's authority.
- Team leadership.
- Respecting the general behavioural norms.
- Controlling their behaviour and possible sudden impulses.
- Learning to spend quality leisure time with their peers in nature.



PREPARATION

Appropriate footwear (boots, running shoes, walking shoes) and a spray against ticks.





MATERIALS

- I. Rope or tape to limit the space, symbols for 'who' and 'hide', photos of those playing the game.
- II. A bottle, cloth/scarf or any other object that does not belong in the natural environment, stopwatch, team leader hat or sports bib, symbols for 'near' and 'far' or 'sun' and 'ice' to represent 'hot' and 'cold'.
- III. Two kerchiefs for covering the eyes, branches and other natural materials.



DESCRIPTION

I WHO IS MISSING

To carry out the activities, we first need to limit the space (with rope or tape). Explain to the pupils that the activity is taking place within a confined space (we could also walk with the children along the boundaries and use a stick to touch the trees/plants/soil that form the boundary). When selecting the area to carry out the activity, ensure that it is suitable for hiding (children can also design the space for the activity by themselves).

Explain the rules of the game:

- Pupils will walk, jump or otherwise move around the space.
- On the teacher's signal, all will kneel down and close their eyes.
- Then the teacher will touch one of the pupils on the shoulder to let him/her know that he/she will be hiding.
- This pupil will then hide.
- On the teacher's signal, the pupils open their eyes, identify who is missing, and search for the missing classmate.

Pupils will be supported as necessary. Symbols for 'who' and 'hide', as well as photos of the children, may be needed to aid communication.

II HOT/COLD

To carry out the activities, we first need to limit the space (with rope or tape). Explain to the pupils that the activity is taking place within a confined space (we could also walk with the children along the boundaries and use a stick to touch the trees/plants/soil that form the boundary).

Explain the rules of the game:

- Pupils are divided into two groups. Among them they independently determine the group leader (have an object that symbolizes the team leader e.g. a special hat or sports vest).
- One of the groups decides on an object to be hidden and then hides it. At the same time, another teacher takes the second group a little farther from the area where the game is taking place and where the object will be hidden.
- When the object is hidden, the leader of the first group calls for the second group to find it. During the search for the object, the leader of the first group directs the second group using only the words hot (near the object) and cold (distant from the object).
- One of the teachers can measure the time the second group needed to find the hidden object - members of the group doing the hiding can help with the timing.
- Then the groups change roles.
- The game ends with proclaiming the winner. The winner is the group which has found the hidden object faster.

Pupils will be supported as necessary. Children with communication difficulties may need symbols for 'near' and 'far' or 'sun' and 'ice' to represent 'hot' and 'cold'.

III HUMAN OBSTACLES

To carry out the activities, we first need to limit the space (with rope or tape). Explain to the pupils that the activity is taking place within a confined space (we could also walk with the children along the boundaries and use a stick to touch the trees/plants/soil that form the boundary).





Explain the rules of the game:

- Pupils are divided into two groups.
- The first group sets “live” obstacles (standing foot, front/rear support ...). They can also include natural material (branches). One of the pupils shows the other group how to overcome the obstacles.
- The second group is divided into two pairs. One of the pair is blindfolded with a scarf, and the other partner directs him/her through the obstacles using speech (lift a leg...). Then they change places.
- The groups change roles; the mission is the same, but with different obstacles decided by the other group. Afterwards the children can discuss which group had better solutions for overcoming the obstacles and why.

Pupils who are physically impaired could be involved in the first two activities without major difficulties. For them, the natural environment would be somewhat more adapted to contain fewer obstacles that would limit movement (maybe in the meadow, backyard, park). All activities would require an additional person who would monitor and guide the activities of the child. In such a form, the Human Obstacles activity would not be suitable for children with mobility problems (if in a wheelchair). For otherwise disabled children, it is feasible with the help of a companion teacher.



BACKGROUND

The activity stems from the curriculum and the objectives of social learning. These activities promote: mutual cooperation, building mutual social contacts, expressing feelings, communication, following instructions, behaving appropriately and having a sense of responsibility to oneself and others.



KEYWORDS

Social learning, pupils, natural environment, movement, play, trust, sharing, taking turns, explaining.



SUGGESTION FOR ADDITIONAL ACTIVITIES

Art:

- In the Human Obstacles game, use sticks or logs to make a maze and then see who can find the centre.

Media/Information and Communication Technology:

- Use an iPad to film each other carrying out the Human Obstacles activity and then discuss how the instructions or actions could have been carried out better.

Speaking and Listening:

- In the Hot/Cold game, give clues to the identity of the object and the location of the object.

Music:

- In the Who Is Missing game, the child that is hiding could use a stick to tap out a tune and the seekers could try to follow the sounds.

English/Communication/Speaking and Listening:

- In the Hot/Cold game, the group waiting to find the object could tell stories. E.g. use a lucky dip story bag where each child will add a sentence to the story using an object from the bag as inspiration.

Science:

- Classify items as natural and manmade.

Maths:

- Creating a route to follow using directions and turns, e.g. turn 90° clockwise then take three steps forward.

Modern Foreign Languages – MFL:

- Count out in another language when playing hide and seek.

Cookery:

- Collect natural and manmade objects and decide which are edible and which are not. Which are edible for insects or small animals?

Personal, social, health and economic education – PSHE:

- Work collaboratively with another pupil. Share ideas, take turns. Talk about what you like or dislike. Make suggestions for improvement.
- After each game ask the pupils to think of something that another pupil did well.

Physical education – PE:

- In sports, an activity such as Human Obstacles could be used in such a way that pupils lie down on the ground, with each pupil being parallel to the previous one and at a distance of one step. Pupils skip live barriers. Pupils who are poorly motorized and have problems with coordination and balance are assisted by a teacher in overcoming live barriers.

The text of additional activities: Lynne Ledgard and Sefton Booth

13. TRUST THE SENSES

Author: Saša Vochl

Slovenian Forestry Institute, Slovenia



SHORT DESCRIPTION

Activity illustrates and teaches how to use our senses, mainly touch, smell and hearing with a help of a pine tree.



GOALS

The main goal is to activate senses of touch, smell and hearing and to develop a certain level of trust in our senses even when we can't use our eye vision. These activities and exercises use sensory perception and proprioception in a natural environment. The task is to teach children how to rely on their senses (smell, touch and hearing), learn to use them separately and without using eye vision.



PREPARATION

Pupils: should wear suitable dress and shoes for safe and comfortable movement.
Teacher: should choose and get acquainted with the place (safe and stimulating).



MATERIALS

Find a pine tree and cut a young sprout, collect also some bark or tree resin and 2 pine cones. Symbols for 'touch', 'smell' and 'see'. Symbols or photos of a pine sprout, pine cone and selection of other natural objects.



DURATION

About 30 minutes



NUMBER OF CHILDREN

5-10



AGE RANGE

4+ years





DESCRIPTION

Ask the children to make a circle around you. It is important that children trust you and also state clearly that they do not have to worry. Ask children to close their eyes and reach with their both hand in front of them. Then use the pine sprout and gently touch each hand in the circle. Hide the pine sprout and ask children to open their eyes. Ask them to describe what they felt with their hands. Do the same with pine resin, only this time children used their smell and again with the two pine cones, rubbing them together, and children will use their hearing. At the end somebody will also recognize the tree.

To further support pupils you could give them a choice of three live objects or photos to select from e.g. when feeling the pine sprout and opening eyes they could choose between a pine sprout, a pine cone or a leaf.

More able pupils could feel the shape of a leaf and identify the tree with visual support e.g. is it a pine sprout, a maple leaf or a holly leaf?



BACKGROUND

Children learn to trust their senses without using their eye vision. They learn to describe what they feel, smell or hear. They learn to associate senses to memories (pine smell - vacation at sea or having fun in the forest etc.).



KEYWORDS

Nature environments, natural exercises, using senses, smell, touch, hearing.



SUGGESTION FOR ADDITIONAL ACTIVITIES

Hint: You can use other tree species, wet or dry moss, animal fur (for example rabbit fur) etc. You can also put one or more "secret objects" (coin, moss, empty snail house, spruce branch etc.) in a box with a hole or in a bag and children try to identify it using only their hands. You could also give the pupil an object to find e.g. show a symbol/photo of a snail shell and say 'find me the snail shell'.

Art:

- Explore which natural items make the best paint brushes e.g. fir sprout, pine cone, grass.

Information and Communication Technology - ICT:

- Use an iPad and the kaleidoscope feature of photobooth to explore natural shapes and patterns.

Performing Arts/Music:

- Place the pupils in small groups and explore making music with natural items. Sit in a circle and listen to the sounds around. Can they mimic them using their voices? E.g. can they mimic the woodpecker or seagull? Using a recording device play 'guess the sound'.

English/Communication/ Speaking and Listening:

- Go on a scent trail with the pupils collecting items as they go. Ask the children to sort their items into those they like and those they dislike. Do they agree with each other? Which is their favourite? Encourage respect, turn taking and patience.

Science:

- Focus on wind: what can we see, hear and feel? Use wind chimes, feathers, kites and bubbles to explore.

Maths:

- Which natural items are heavier/lighter? Make predictions, then use scales to measure.

Design and technology - DT:

- Make a leaf boat using large leaves and twigs. Explore which will float and which won't. How can we they be improved?

Personal, social, health and economic education - PSHE:

- Use colour cards from the local DIY stores to match colours to natural items. Place the pupils in small groups or pairs. Ask them to bring back to base examples that they have found. Discuss findings, take turns, share, work collaboratively and allow peer support.

Religious education - RE:

- Sit children in a circle and ask them to close their eyes. Listen to the sounds around them What can they hear? With their eyes open, what can they see? How does it make them feel?

Physical education - PE:

- Play target board. Use a target board with pictures of natural objects. Pupils must throw a beanbag at the target board. They must then run and collect the natural object that their bean bag landed on.



14. WHAT IS MOVING BENEATH THE SOIL?



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SHORT
DESCRIPTION

Through this activity, pupils will be exploring the forest floor. They will learn about floor composition and what we can find in it.



DURATION

**45
minutes**



NUMBER OF
CHILDREN

**Under
10**



AGE RANGE

**5+
years**



GOALS

- The main goal of this activity is independent exploration of the forest floor.
- Promoting observation, sensibility to living organisms in nature, curiosity, creativity, flexibility of thought and solving simple problems.
- Practising making comparisons and inferences.



PREPARATION

Suitable shoes and clothes that enable pupils to move around in the forest safely and comfortably are required. If you are going to spend a longer period of time in the forest, they should pack a snack and water.

The teacher should be familiar with the place where they are headed. The site should be safe and at the same time appealing to the pupils. The place and time of departure should be adapted to the weather conditions.

In the event that the group includes a child with a severe or profound mobility impairment, make sure that the site can be accessed by wheelchair. In the event of a pupil with diminished arm function, he/she should be assisted by a classmate or escort when carrying out the activities. Pay special attention to chronically ill children, those with severe allergies (e.g. hay fever) or asthma, if the path is steep. Adapt the activities to the children's age, condition and potential deficits.





MATERIALS

A pupil finds the material for carrying out activities in the forest on his/her own. The pupil can make use of simple identification keys to identify the animals he/she has found - identification key Small Animals/Colours of Nature of the Institute for Forest Pedagogics. They can also bring a magnifying glass.



DESCRIPTION

ACTIVITY 1:

Encourage the children to explore by asking them what is hiding beneath the leaves on the forest floor. We then tell them that we will be exploring the forest floor.

We encourage them to find a suitable spot in which to explore it.

The important thing is that each of them looks for a suitable place for digging and exploring the floor. It should be dry, remote from the path, with little undergrowth and not under a tree) on their own (or together in the case of severe mental disabilities).

It is also important that the pupils choose what they will be using for digging. **We do not bring tools with us; they search the forest for the materials which they anticipate will be needed. Pupils can move leaves aside with their arms or legs and then look for various harder branches or stones to use as tools.**

We encourage the pupils to:

- dig slowly and persistently;
- observe what can be found above the soil (tiny animals, fruits, leaves, small stones, branches, plants, etc.);
- notice the first, dark layer of soil and what is in it;
- dig around in the soil; listen to the cracking of branches; observe animals and branches.

Pupils count how many tiny animals they can spot; they observe the animals with a magnifying glass and touch them. By using an identification key, they name them and read interesting facts about them in books about animals.

Images 1 and 2 show photographs of the animals that were found while observing the darker layer.

Pupils continue digging up soil. After digging up around 5 cm, they notice another layer of soil. They compare both layers according to the following criteria:

- colour (dark/light),
- hardness (softer/harder),
- wetness (dry/damp).

Older and/or more capable pupils try to infer why the two layers are like that. Through a guided discussion we discover that the darker layer contains organic matter and mineral particles, which were created by decomposition, while the lighter layer no longer contains them because organic particles and other plant nutrients have been washed away.



Image 1: Mole cricket larva



Image 2: Earthworm and a flat-backed millipede



Image 3: Digging with a thicker branch



Image 4: Difference between the darker and lighter layer



We can also take a look in a children's encyclopaedia or attach a photograph on the back. More capable pupils may discover on their own that by digging with the materials found in the forest they were able to uncover only the top three layers (if not, we guide them to that discovery through a discussion). If the pupils had wanted to discover the bottom two layers, they would have had to use a shovel. This activity does not anticipate that because it focuses on pupils being able to use the materials found in the forest (branches, stones) or their own body parts (arms, legs).

After finishing our observation, we return the animals to their natural environment.



BACKGROUND

Emphasis is on accustoming pupils to independence and resourcefulness, and on encouraging their thirst for knowledge. We enable them to choose objects, which they think will be useful to them based on deductive reasoning, and to test them. Pupils experience the animate and inanimate nature in a forest in a multisensory way. If we want to develop cooperation among the pupils, make them perform this activity in pairs.



KEYWORDS

Soil, inanimate nature, animate nature, forest.



SUGGESTION FOR ADDITIONAL ACTIVITIES

ACTIVITY 2: Lynne Ledgard Green Lane Community Special School, United Kingdom

- Hid 20 photos of common insects around the woods. In pairs (with an adult attached) the children have to go and find the photos and bring them back to base. This allowed familiarisation with the woods. Each photo had a number on the back. Made a number line and this also allow the children to see if any photo missing.
- Matched and named the bugs.
- In two groups the children were then instructed to go on a bug hunt and dig without the use of tools. They were given buckets to collect if they wanted to but were instructed to put some leaves in their bucket to make the bugs feel at home. Each group had an IPads to take photos.
- Meet back at base and the group share their findings with the IPads and the bugs in their buckets. Some children are brave enough to hold the bugs – they encouraged to be gentle. This turned into the centipede challenge (challenge to hold the big hairy centipede).
- Made bug houses and topped up the bug hotel.
- Washed hands, had a drink and a biscuit and a bug based story.



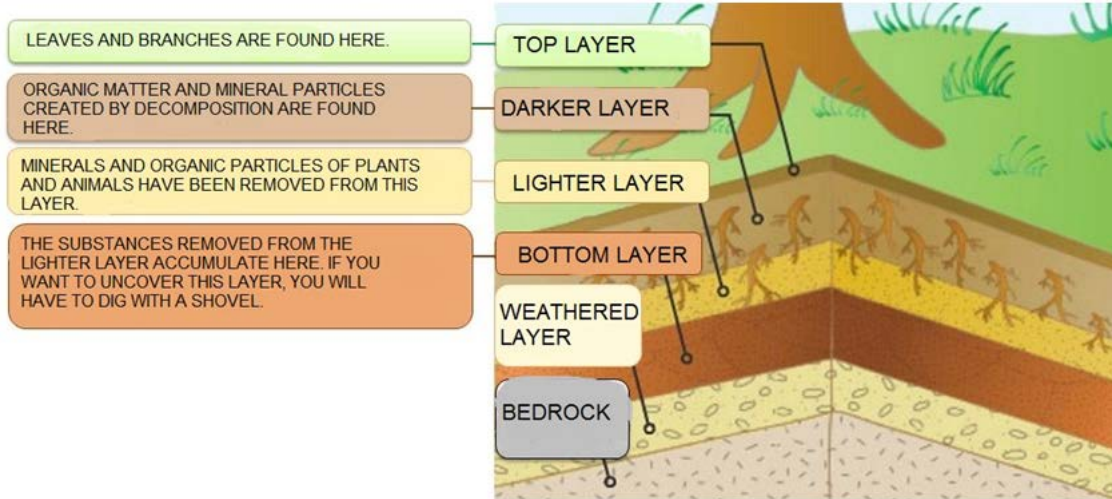
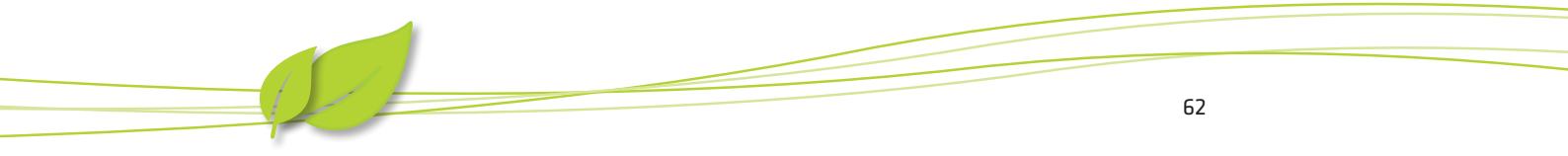


Image 5: Soil profile. Adapted from: Kralj Serša, M., Jeršin Tomassini, K. and Nemec, L. (2015). GEOGRAFIJA 1, i-učbenik za geografijo v 1. letniku gimnazij. Ljubljana: Zavod RS za Šolstvo. Retrieved from <https://eucbeniki.sio.si/geo1/2514/index3.html>.

Source of photographs: Lara Hodej, Julija Šiško



15. NATURAL SCIENCE- LEARNING ABOUT LEAVES IN A NATURAL ENVIRONMENT



Authors: Veerle Claeys, Gudrun De Grauwe and Eveline Heyndrickx

Sint Gregorius Buitengewoon Basisonderwijs (BuBaO), Belgium



SHORT DESCRIPTION

Activity for spring – summer – early autumn, when the leaves have their original colour and shape.

Learning about the structure of leaves.



DURATION

1 hour



NUMBER OF CHILDREN

5-15



AGE RANGE

6+ years



GOALS

The goal is to gain knowledge about the physical appearance of leaves and the differences between different leaves. These activities use sensory perception, children have to see, touch and think.



PREPARATION

Pupils should wear shoes and clothes adapted for a stroll through the park or forest. Teacher should pick out a place where you can find different kind of leaves. The teacher has to know which leaves can be found.



MATERIALS

- magnifying glasses,
- paper and crayons,
- printed paper: "Leaves - natural shapes and arrangements", best printed in colour and laminated (see Appendix 22).





DESCRIPTION

1. OBSERVING LEAVES

If you walk in the park or forest, you will see many different leaves. Take a magnifying glass, collect some leaves, and observe these leaves with kids. Observing and investigating is the fundamental science research skill and it is never too early to cultivate the skill in children. While looking at the leaves, you can ask kids questions, such as:

Where do you see leaves?

What do you notice about the leaves?

What do you notice about the trees?

Do all the trees have the same kind of leaves?

Are all the leaves the same?

Are there any features that all the leaves have in common?

How are the leaves different?

Do the leaves have a specific smell?



2. PLAY LEAF MATCHING GAME

After kids learned leaves are all different with different shapes and colors, you are ready to play a leaf matching game.

- Let the children walk in pairs through the forest.
- Give them the overview of the leaves.
- They have to find leaves and draw them or make a leaf rubbing.
- Then they tell each other how the leaves look like (veins, shape, edges, ...).



BACKGROUND

The leaf is one of the most important parts of a plant. Leaves produce food for the plant. The leaves of different plants vary widely in size, shape, and color. With these exercises, children learn to observe, use their sensory abilities and run around in nature.



KEYWORDS

Natural environment, observe, leaves, teamwork, sensory activity, natural science.



SUGGESTION FOR ADDITIONAL ACTIVITIES

- Let the children run around while looking for different leaves. Give them a checklist of the types of leaves they have to find (Appendix 23).
- Let them make a leaf gallery in the forest. They can show all the leaves they have found.

Source of photographs: Veerle Claeys, Gudrun De Grauwe and Eveline Heyndrickx



16. WRITE – ERASE

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SHORT DESCRIPTION

Through this activity, pupils will come to know different types of forest floors, write on them using natural materials, and sort them into groups.



GOALS

- Pupils discover which natural materials are suitable for writing on a specific forest floor.
- Pupils correctly sort objects based on one property.



PREPARATION

The teacher should be familiar with the place where they are headed. The site should be safe and at the same time appealing to the pupils. Suitable shoes and clothes that enable pupils to move around in a natural environment safely and comfortably are required. If you are going to spend a longer period of time outdoors, they should pack a snack and water. The place and time of departure should be adapted to the weather conditions. In the event that the group includes a child with severe or profound mobility impairment, make sure that the site can be accessed by wheelchair. In the event of a pupil with diminished arm function, he/she should be assisted by a classmate or escort when carrying out the activities. Pay special attention to chronically ill children, those with severe allergies (e.g. hay fever) or asthma, if the path is steep. Adapt the activities to the children's age, condition and potential deficits.



MATERIALS

All of the materials required for carrying out this activity can be found in a forest or other natural environment. For this activity you will need sticks, stones, cones, branches, leaves, etc. of various sizes.



DURATION

**30
minutes**



NUMBER OF CHILDREN

5-10



AGE RANGE

**6+
years**





DESCRIPTION

For the pupils, we mark the area in the forest where the activity will be taking place. Their first task is to find different types of floors in that area and as many suitable materials as possible that could be used as pencils or erasers. A few examples of different floors and objects are shown in the photographs below.

FLOORS:

We used the term floor, because activity does not directly relate to the forest soil, but treat them as a basis for writing.



Photograph 2: Floor covered with leaves



Photograph 4: Stump



Photograph 1: Soft forest floor



Photograph 3: Floor overgrown with roots



Photograph 5: Smooth bark on a felled tree

MATERIALS:

Pupils then sort the gathered objects into groups according to their shared characteristics. A few examples are shown in the photographs below.



Photograph 6: Examples of potential materials for pencils





Photograph 7: Smaller branches and leaves



Photograph 8: Sticks



Photograph 9: Cones



Photograph 10: Bark of different trees

The pupils' second task is to choose three different floors, and to choose three different pencils and three different erasers from the materials. They are then given an empty table in which they write the materials they have chosen to work with.

The pupils then try to write on all of the different floors they have chosen with all of the chosen materials (e.g. the word 'forest'), and then erase what they have written. That way they see which materials are suitable for writing on a specific forest floor and which materials are best for erasing what has been written. They enter the data into the table.

AN EXAMPLE OF A FILLED IN TABLE:

TYPE OF FOREST FLOOR	WET FLOOR	TRUNK	LEAVES
TYPE OF PENCILS AND ERASERS			
PENCILS:			
wooden stick	x		x
stone	x	x	
cone	x		
ERASERS:			
leaf			x
branch	x	x	x
moss			x





BACKGROUND

Through this activity, pupils develop their observation skills, orientation in space and in a plane, fine motor skills, creativity, sensorimotor skills, graphomotor skills, and cooperation (working in pairs).



KEYWORDS

Natural materials, sorting, forest floor, writing, learning.



SUGGESTION
FOR
ADDITIONAL
ACTIVITIES

These activities can be built on by telling pupils to find e.g. branches, leaves, trunks, or cones of specific tree species.

Source of photographs: Kaja Halas, Ajda Hiti



17. MEASURING WITH FRANK THE FORESTER



Authors: Nina Dobrovič, Tadeja Heric; Mentor: Ph. D. Mojca Vrhovski Mohorič

Faculty of Education; Department of Special and Rehabilitation Pedagogy
University of Ljubljana, Slovenia



SHORT DESCRIPTION

The learning topic is measuring. Through this activity we are teaching children to measure with natural or non-standard units of measurement.



GOALS

The main goal of this activity is for pupils to compare standard and non-standard units for measuring with natural materials.

The goal from the Mathematics curriculum for the 4th grade of primary school with an adapted programme with a lower educational standard (in Slovenia): Pupils measure with selected units (with standard and non-standard units); pupils compare two quantities expressed in the same unit of measurement.



PREPARATION

Suitable shoes and clothes that enable pupils to move around in a natural environment safely and comfortably are required. If you are going to spend a longer period of time outdoors, they should pack a snack and water.

The teacher should be familiar with the place where they are headed. The site should be safe and at the same time appealing to the pupils. The place and time of departure should be adapted to the weather conditions.

In the event that the group includes a child with severe or profound mobility impairment, make sure that the site can be accessed by wheelchair. In the event of a pupil with diminished arm function, he/she should be assisted by a classmate or escort when carrying out the activities. Pay special attention to chronically ill children, those with severe allergies (e.g. hay fever) or asthma, if the path is steep.



DURATION

45 minutes*



NUMBER OF CHILDREN

10



AGE RANGE

8+ years

**or more if we include the building of a bivouac and getting to know tree species.*





MATERIALS

All of the materials can be found in the forest; the teacher should bring enough tape measures (paper tape measures) and worksheets with a table.



DESCRIPTION

Measuring with Frank the Forester

The teacher reads or performs the following:

This weekend, Frank the forester will be making a bivouac in the forest, where he will be spending a few days. The bivouac will be made up of materials he will find in the forest: leaves, branches, wood, stumps, trunks, etc. He will need your help with measuring to be able to build a bivouac that will not collapse.

The stones and sticks should be about the same size that we can provide a comparison (see examples on the photos). We suggest that children collect small stones and, for example, sticks that extend from the elbow to the tip of the fingers.

>> **The teacher hands out worksheets to the pupils : WORKSHEET - see Appendix**

When pupils finish measuring with natural materials, the teacher gives the following instruction:

Use a tape measure to measure the natural materials and compare these measurements with the others.



Examples of measuring and natural materials



After all pupils have finished their work, the teacher says:

"Frank the forester is immensely grateful to you.

Look at the beautiful bivouac he has built!" - the teacher shows a photograph of a bivouac.

"Could you make one too?"





If we have more than one period available, the children build a bivouac, which promotes cooperation and mutual help. The bivouac should be made up of:

- 5 branches as long as your arm;
- 10 sticks, 20 cm long;
- 5 sticks or branches as long as you;
- 15 stones and
- 7 fern leaves.

The pupils build it on their own as best they can.



BACKGROUND

Pupils should work independently and search for natural materials in pairs. When working in pairs or groups, it is important that they cooperate and search for common solutions. When searching for materials, they should explore the forest as much as possible, because by doing so they practise their motor skills and gain a multitude of sensory experiences.



KEYWORDS

Natural materials, non-standard units of measurement, standard units of measurement, forest, tree species.



SUGGESTION
FOR
ADDITIONAL
ACTIVITIES

Pupils pile up the measured materials and make a bivouac in groups of five. While searching for leaves, they get to know the tree species in the forest.

Source of photographs: Nina Dobrovič and Tadeja Heric



18. NATURAL MOVEMENT

Authors: Jef De Vroe, Jan Verhavert

MPIGO Heemschool 1, Belgium



SHORT DESCRIPTION

Activity illustrates and teaches how to use natural exercises outdoors and how to use them for the development of basic motor abilities.



DURATION

About 1 hour



NUMBER OF CHILDREN

5-10



AGE RANGE

6+ years



GOALS

The main aim is development of basic motor abilities of children, such as speed and quickness, power and strength, mobility and dexterity, endurance and persistence in an outdoor environment.

These activities and exercises use sensory perception and proprioception in a natural environment. The task is to build up a large store of outdoor locomotor activities and manipulative skills and teach children to utilize them quite naturally.



PREPARATION

Pupils: should wear suitable dress and shoes for safe and comfortable movement.

Teacher: should choose and get acquainted with the place (safe and stimulating).



MATERIALS

All materials you can find in natural environments.





DESCRIPTION

Children are encouraged to explore the surroundings at an increased pace that is appropriate to the individual. They explore a variety of movements in the natural environment.

Running - various types of running or gait, running between trees and around them, along the paths, polygons.

Running

- 1. as fast as possible
- 2. as far as possible

Jumping - jumping, hopping or skipping over stones and logs, brooks or streams, among them, around them, in created pictures.

- 1. long jump
- 2. high jump
- 3. multiple jumps

Throwing - throwing various objects (cones, stones, branches) long throw, target throw.

Climbing - overcoming low and high vertical and horizontal barriers - logs, beams, big stones, benches, walls, rocks, and trees.



BACKGROUND

Children with special needs love to observe and carry out natural forms of movement in the natural environment. This positively influences on the emotional, motoric, sensory, tactile and other dysfunctions.



KEYWORDS

Nature, natural movement, special educational needs children.





SUGGESTION
FOR
ADDITIONAL
ACTIVITIES

Media:

- Can the pupils film the motion of life around them. Either POV's (point of view shots as they run through the forest) or the movement of the trees, the leaves, the animals. Can the pupils film one another imitating the movements.

Information and Communication Technology

- ICT:

- Can the pupils edit the motion films together within an editing program with cross fades from animal to student.

English:

- Can the students write a the story with the opening sentence 'Forest (being the character) and so I said to him... Run Forest Run!' E.g. ' Forest... climbed in the trees, up until the highest branch, when he heard a bear growl... and we shouted... Run Forest Run!'

Performing Arts/Music:

- Vocal exercises in the forest including running as far as possible from one another and then Boomerang Voice – throwing words of mean, mine, moan, moon, main, changing pitch and level. Standing close to one another saying the words 'I am who I am', both take a step back 'I am who I am' etc. And Forest sounds (very much like sea sounds exercise).

Science:

- Testing items in flight.

Maths:

- Functional maths e.g. how many steps, how many trees, how many items in the assault course. Tally chart of who did what in the forest.

Design and technology - DT:

- Making items in the forest that can display motion e.g. paper airplane, leaf falling etc. Making this within DT room.

Personal, social, health and economic education - PSHE:

- What do we do if someone falls and first aid.

SPECIFIC GROUPS OF LEARNERS:



PMLD
LEARNERS

PMLD learners can experience all of the above in the following ways:

Responsiveness: First walk and then run through the pathed areas of the forest to feel the fast motion as trees pass us by.

Curiosity: Feel all the items collected within discovery.

Discovery: Walk from one side of the path area forest, to the other, and go to anything that peaks the learner's interest. If possible collect this item.

Anticipation: Put the small sticks/branches down for the learner to bump over as if they were jumping. After running the same section does the learner anticipate this?

Initiation: Switch activates the staff: if learner presses the switch, staff must follow instruction e.g. jump/run on tree logs.

Investigation: Of forest items in the way. Instead of climbing, allow a branch to be in the way and see if the learner will touch it, or bend it so he/she can get passed.





ASC

Encourage the pupil to try all balancing/walking running, throwing activities.

Some complex ASC pupils would concentrate on the sensory aspects of the materials and surroundings. Exploring the materials and in affect addressing and developing sensory integration issues (less concentration on what the forest can do and more on the processes and materials).

Less complex ASC pupils - a work program to support the process may be need as may an example modelling what you do in the forest or a picture of what we can do. Use symbols and photographs where necessary to aide language, understanding and development. Activities may briefly comprise of a short exploration of the materials with a view to 'choosing' set number of objects (so they are not overwhelmed) to create their 'assault course'.

Some ASC pupils will need to focus on the exploration of the forest. Use intensive interaction in the woods – copy the children’s movements, sounds and responses to engage with them. Model play, model exploring the materials and encourage the children to copy. Work hand over hand or hand under hand if the child is comfortable with this and then encourage independent work. Use simple language; maybe just one or two words at a time to allow for maximum understanding. Show the children the assault course that have already been created and encourage them to copy or to point at features and label them (verbally, with a picture or by pointing to the same place in the forest). Follow their interests – let the children show you what they find interesting and go with that; engagement and being at ease with the natural environment are the highest priorities, assault courses can come later!



HARD TO REACH SLD

Be aware that symbols/pictures may be required to prompt the learners to look for items (mix and match). Modelling through the activity for learners is often extremely helpful. Often we would accompany this with a modelling story (only if required). The learner may lead the story by showing there likes and dislikes.



EARLY YEARS

Explore the natural resources used to make an assault course. Encourage exploration and discussion of the different textures, sizes etc. It may be possible to link this activity to tasks of quickest one find a branch, quickest person to get on the tree etc.

Source of photographs: Natalija Györek

The text of additional activities and activities for specific groups of learners: Lynne Ledgard and Sefton Booth

