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Activity Handbook

Module 4
TREE FRIENDS

TUDEC – Through Upcycling
to the Design of Eco Cities

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INDEX

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4.1 Windsock Crafting

1. Type of activity

   Activity inside the classroom can be alternatively adapted for outdoor settings.

2. Topic

   Windsock Crafting and Understanding Wind Patterns

3. Learning objectives
   - Develop fine motor skills through crafting.
   - Understand basic principles of wind direction and speed.
   - Enhance creativity and artistic expression.
   - Foster teamwork and collaboration if done in groups.

4. Target group

   6–14 year-old learners

5. Necessary materials
   - Craft recycled paper
   - Markers, crayons, or colored pencils
   - Glue, tape, or stapler
   - String or yarn
   - Hole puncher
   - Scissors
   - Optional: Streamers or ribbons for decoration

6. Duration

   Approximately 45 minutes

7. Main activities

   Introduction to Wind Patterns:
   - Begin the session by briefly introducing the concept of wind and its patterns. Discuss how wind moves in different directions and at varying speeds. Keep the explanation age-appropriate and engage learners with simple examples.

   Demonstration of Windsock Crafting:
   - Provide each learner with craft paper, markers, glue, tape, scissors, string or yarn, and any optional decoration materials like streamers or ribbons.

- Demonstrate the step-by-step process of creating a windsock. Start by showing how to decorate the craft paper with colors and patterns. Emphasize the importance of bold and contrasting colors for better visibility.

Hands-On Crafting:

- Allow learners to begin crafting their windsocks. Encourage creativity and individual expression as they decorate and assemble their windsocks. Circulate the class to offer assistance and guidance as needed.

Discussion on Design Choices:

- Pause the crafting session to have a brief discussion about the design choices. Ask learners why they chose specific colors or patterns and how these choices might impact the visibility of the windsock. Connect this discussion to the practical application of understanding wind direction.

Completion of Windsocks:

- Ensure that all learners have completed their windsocks. Use glue, tape, or a stapler to help them secure the craft paper into a cylindrical shape. Attach a string or yarn to one end for hanging.

Observation of Windsocks:

- If possible, take the learners to an area with airflow, outdoors or near a fan. Hang the windsocks and observe their movement. Discuss how the windsocks react to the wind and how this can indicate wind direction.

Final Discussion:

- Bring the learners back together for a final discussion.
- Ask what they observed during the windsock activity.
- Encourage them to share insights into how the windsocks moved and whether it aligned with their understanding of wind patterns.
- Relate the experience to real-world scenarios where wind direction is important.

Closure and Display:

- Conclude the activity by summarizing key points about wind patterns.
- Allow learners to proudly display their windsocks in the classroom or a designated area. This serves as a visual reminder of their learning and creativity.

8. Final activities – drawing a conclusion
   - Hang the windsocks in an area with airflow (outdoors or near a fan) to observe their movement.
   - Conduct a final discussion:
     - What did the learners learn about wind patterns?
     - How did the design and colors influence the observation of wind direction?
     - Do you have any other observations or questions about wind and the crafted windsocks**?**

9. Reflection, review of the objectives
   - Have a reflective session where learners can share their experiences and thoughts.

- Review the learning objectives, emphasizing the combination of creativity, craftsmanship, and understanding basic scientific principles.
- Display the windsocks in the classroom or relevant areas to celebrate the learners' work.

10. Inspiration

- Repurposed materials like plastic bags, old clothes, or cardboard to create an eco-friendly windsock.
- Create a garden-themed windsock with blooming flowers, buzzing bees, and fluttering butterflies.
- Use natural materials like leaves, feathers, or pine cones to adorn your windsock.

4.2 Windsock crafting for learners with different abilities

Windsock crafting is a tool to help kids with different abilities express themselves creatively, build confidence, and strengthen their fine and gross motor skills. It can be adapted to various needs and abilities to ensure all kids can enjoy the process. The most important recommendations are:

- Incorporate different textures like fur, feathers, or ribbon to create a sensory-rich windsock.
- Provide clear instructions and demonstrations.
- Encourage creativity and experimentation.
- Make it a fun and collaborative experience.

For Limited Fine Motor Skills: Use pre-cut materials and simplify the decorating process with larger stickers or pre-painted designs.
For Visual Impairments: Use textured materials and bright colors to help with identification and engagement.
For Limited Mobility: Adapt the craft area to be more accessible, and offer assistance with tasks that require fine motor skills.

4.3 Bird Nest Observation

1. Type of Activity

Activity outside the classroom

2. Topic

Bird nests and their significance in the ecosystem

3. Learning objectives

- Identify different types of bird nests
- Understand the purpose and importance of bird nests

- Observe and appreciate the diversity of bird species
- Develop an awareness of the role of birds in the ecosystem

4. Target group

6–14 year-old learners

5. Necessary materials

- Binoculars
- Field guides on local bird species
- Sketch Pads and pencils
- Camera (optional)
- Bird identification charts or apps

6. Duration

1 hour and 30 minutes

7. Main Activities

The educator divides children into small groups.

- Group time with questions:
  What do you know about bird nests?
  Can you identify any bird species?
- Group time with stories:
  Share interesting stories about different bird nests and their builders. (links from video how different birds build nests)
- Discuss the significance of nests in the life cycle of birds.

The educator decides how to initiate the activity. One option is to introduce a specific bird species or focus on nests in the immediate surroundings.
For example, they can find a stork nest, observe its construction, and discuss how they think it's made. What time of the year-old learners do storks stay in these regions? How long does it take them to fly south?
Then, they can find a nest from another bird (a swallow, for an exp.) and do the same. Give each learner an opportunity to observe using the binoculars.

8. Final activities – drawing a conclusion

- After observing the bird nests in their natural environment, gather the children for a final discussion.
- You can ask the following questions:
  - What did you learn about bird nests?
  - How do different bird species build their nests?
  - Why are bird nests important?
- Encourage children to draw or sketch the nests they observed.
- Sing songs related to birds and their habitats.

9. Reflection, review of the objectives

- Discuss with the children what they observed during the activity.
- Reflect on the learning objectives:
- Were you able to identify the different types of bird nests?
- How did observing the bird nests improve your understanding of birds and their habitats?
- What other questions or thoughts do you have about birds and their nests?

10. Inspiration

    While observing the birds, create your own bird feeder using an up-cycled paper cup and pipe cleaners. There are many ways to make a bird feeder such as: Repurpose an Empty Wine Bottle, Reimagine Old China Pieces, Using Half an Orange etc.

4.4 Bird Nest Observation for learners with visual impairments

Begin by providing a general introduction to bird nests. Use descriptive audio recordings to describe what bird nests are, their purpose, and how different birds build them. Bird observation can be vividly experienced through other senses, turning a seemingly visual pastime into a captivating multi-sensory adventure. By immersing learners with visual impairment in the tactile world, they form a profound connection with the environment.

For Bird Nest observation is important to:

- Provide recordings of bird calls and songs to add an auditory dimension to the experience. This can be especially engaging for children who are visually impaired or have other sensory preferences
- Use large, clear images or videos of bird nests to accommodate children with visual impairments or those who might find it difficult to focus on small, distant objects.
- Use tactile materials such as replicas of bird nests made from different textures (e.g., twigs, feathers, grass) to give children with visual impairments a hands-on experience.
- Sensory bins filled with materials like leaves, twigs, and faux eggs can provide a tactile exploration of what's found in a nest.
- Provide comfortable seating and shaded areas if needed.

4.5 DIY Air Purifiers Workshop

1. Type of Activity

   Activity inside the classroom

2. Topic

   Air Purification and DIY Air Purifiers

3. Learning objectives
   - Understand the importance of air quality

- Learn about common air pollutants and their effects
- Explore the concept of air purification
- Develop basic DIY skills in creating simple air purifiers
- Foster teamwork and collaboration through group activities
- Enhance creativity through artistic expression in the final activities

4. Target group

   6–14 year-old learners

5. Necessary materials
   - Empty plastic bottles
   - Activated charcoal
   - Coffee filters or fabric
   - Rubber bands or strings
   - Scissors
   - Hole punch
   - Markers and crayons
   - Song lyrics or materials for a song

6. Duration

   45 min.

7. Main Activities

   The educator divides the learner into small groups to encourage teamwork and collaboration. This also enables a more interactive and engaging learning experience.

   To create an engaging and lively atmosphere, the educator begins the session with a song related to air quality or do-it-yourself (DIY) projects. This serves as an attention grabber and sets a positive tone for the workshop.

   The educator facilitates a group discussion where learner share their thoughts on the importance of air quality. This creates awareness and sets the foundation for understanding the relevance of the DIY air purifiers they will be created. The educator provides a brief overview of the DIY air purifier project, explaining the purpose and the materials needed. This includes discussing the function of each component, such as activated charcoal and filters, fostering understanding among the learners.

   Learners, working in their small groups, follow the educator's instructions to assemble their own DIY air purifiers using the provided materials. This hands-on activity allows them to apply their knowledge, practice teamwork, and develop practical skills. SLIKI MEGI

   Each group presents its completed DIY air purifier to the class, explaining its design choices and how it expects its purifiers to work. This sharing session encourages communication and allows learners to learn from each other's ideas and approaches.

8. Final activities – drawing a conclusion
   - What did the children learn about air quality?

- How can DIY air purifiers improve indoor air quality?
- What other activities could help further improve air quality?

9. Reflection, review of the objectives
   - Reflect on the learning objectives and discuss how each objective was met.
   - Encourage learners to share their experiences and insights.
   - Discuss any challenges faced during the activity and how they were overcome
   - Allow learners to showcase their DIY air purifiers and explain their design choices.
   - Emphasize the importance of the activity in promoting environmental awareness and practical skills.
   - Invite learners to express their thoughts on the overall workshop.

10. Inspiration

    DIY Air Purifiers for Teachers: Free Designs & Step-by-Step Instructions Online

    Link

4.6 Gardening Workshop

1. Type of Activity

   Activity outside the classroom

2. Topic
   Gardening and Plant Life

3. Learning objectives
   - To introduce learners to basic concepts of gardening and plant care.
   - To foster an appreciation for nature and the environment.
   - To develop teamwork and communication skills through group activities.
   - To encourage creativity through drawing and reflection.

4. Target group

   6–14 year-old learners

5. Necessary materials
   - Soil,
   - Plants, (Carrots, Tomatoes, Spinach, Potatoes, Bell peppers, Onions, Lettuce, Cucumbers)
   - Watering cans,
   - Gardening tools,
   - Pots,
   - Markers,
   - Drawing paper,
   - Other relevant educational materials about plants and gardening

6. Duration

45 minutes

7. Main Activities

First, the educator tells the parents that they need to bring a small garden plant for the children. During the workshop, encourage group discussion with questions about basic gardening concepts. Learners learn about different types of plants, parts of a plant, and what plants need to grow. Every child presents their plant. This interactive session sparks curiosity and encourages learners to think critically.
Next, the workshop includes storytelling time related to gardening. These stories not only entertain, but also reinforce the concepts introduced earlier, making learning more enjoyable.

As the workshop wraps up, initiate a discussion with questions such as:

- What did you learn?
- How can gardening help the environment?

Next step is to take the plants, take them out of the pots and place them in the holes in the yard that every learner digs up in front. Then they take the soil and plant the plant. Or put the seeds in the soil.
Put water on the plant.
The creative aspect is highlighted in the final activities, where learners express their learning through drawing. This hands-on, artistic component reinforces what they've learned and lets them showcase their creativity.
After this, learners could draw the plants they planted and add their names and this could be installed in the garden as a directory of what's in the garden.
In the reflection and review part, the educator helps learners think about what they've learned, the importance of teamwork, and how their activities can impact the environment.
Overall, the gardening workshop aims to teach the children about gardening in a fun and engaging way, instilling a love for nature and a sense of responsibility for the environment.
After planting the learners continuously care about the plants:

- Watering: Different plants have different watering needs. Some prefer moist soil, while others like it to dry out between waterings. It's essential to understand the watering needs of your specific plants and adjust accordingly.
- Light: Plants also have varying light requirements. Some thrive in direct sunlight, while others prefer shade or indirect light. Make sure to place your plants in locations that match their light preferences.
- Soil: Good-quality soil that is well-draining is crucial for healthy plant growth. Consider using potting mixes tailored to the type of plants you're growing.
- Fertilising: Plants benefit from periodic fertilisation to ensure they receive essential nutrients. Use a balanced fertiliser or one specifically formulated for the type of plants you have.
- Pruning: Regular pruning helps maintain plant shape, remove dead or damaged parts, and encourage new growth. Different plants may require different pruning techniques.
- Pests and Diseases: Keep an eye out for pests like insects or diseases that can affect your plants. Early detection and appropriate treatment are key to preventing significant damage.

- Temperature and Humidity: Plants have specific temperature and humidity preferences. Ensure your indoor plants are kept in environments that match their requirements.

8. Final activities – drawing a conclusion

After the gardening activities, conduct a final discussion:

- What did the children learn during the workshop?
- How can gardening improve our environment and well-being?
- What were the favourite parts of the workshop?
- How will they take care of the garden?

The educator can also initiate drawing or other creative activities so that the learners express what they learned.

9. Reflection, review of the objectives

The educator facilitates a reflection on the learning objectives:

- Did the learners understand basic gardening concepts?
- How did teamwork play a role in the activity?
- What aspects of nature and the environment did the learners gain a better appreciation for?
- How can they apply what they learned in their daily lives?

10. Inspiration

Organising the Sustainable Gardening Competition. Consists in learners taking care of an assigned parcel of land for growing plants, vegetables and flowers as much as sustainable and creative they can.

4.7 Gardening Workshop for learners with different abilities

Inclusive gardening helps enhance children's fine motor skills, problem-solving abilities, environmental awareness, and social skills. Children benefit their physical and emotional health while promoting independence.
Before you start your garden, you can read books to get your children excited about the process. In addition, you can explain the life cycle of plants in an engaging and straightforward manner. You can also create a sensory bin with seeds and plants to get your child used to the feeling of various textures when planting. It's a good sign if your child is comfortable handing the items in the sensory bin.

- Select plants that are easy to grow and maintain, such as herbs, flowers, or vegetables with low maintenance needs. Consider sensory plants like lavender or mint for children who enjoy tactile or aromatic experiences.
- Incorporate sensory experiences by allowing children to touch, smell, and even taste (if safe) different plants and soil types.
- Allow children to participate in various roles based on their abilities.
- Provide adaptive tools for children with specific needs.

It's difficult to wait for your crops to grow, so you can plan activities to keep your kids entertained while they wait. For example, you can have your children create art with nature by collecting items around the yard and arranging them on construction paper.

4.8 Shade Shelter Design Workshop

1. Type of Activity

   Activity outside the classroom

2. Topic

   Shade Shelter Design

3. Learning objectives

   - Understand the concept of shade shelters and their importance.
   - Learn basic principles of design and functionality.
   - Develop creativity and problem-solving skills.
   - Enhance teamwork and collaboration.

4. Target group

   6–14 year-old learners

5. Necessary materials

   - Drawing materials (paper, pencils, markers, etc.)
   - Small model building materials (e.g., cardboard, craft sticks, glue)
   - Reference materials on shade structures and basic design principles
   - Outdoor space for hands-on activities

6. Duration

   45min

7. Main Activities

   Begin the group time with open-ended questions to stimulate thinking about shade shelters. For example:

   - What are the essential features of a good shade shelter?
   - Where might shade shelters be needed?
   - How can a shade shelter be both functional and aesthetically pleasing?

   Follow up with group time focused on sharing stories related to the importance of shade and innovative shelter designs. Allow the learners to brainstorm and discuss ideas within their groups for their shade shelter design. Encourage creativity and problem-solving during the design process.

The educator presents different examples for designs and lets the learners decide which to develop:

1. Tensile Fabric Structure:
    - *Description:* Tensile fabric structures use a flexible membrane to provide shade. These structures are tensioned between a series of support poles, creating an elegant and modern look.
    - *Application:* Parks, public spaces, outdoor events.
    - *Features:* Lightweight, versatile, and can cover large areas.

2. Pergola with Retractable Canopy:
    - *Description:* A pergola with a retractable canopy allows users to control the amount of shade by adjusting the position of the canopy. It combines the benefits of an open structure with the flexibility of a covered area.
    - *Application:* Residential backyard, outdoor dining areas.
    - *Features:* Customizable shade levels, aesthetic appeal.
3. Bamboo Pavilion:
    - *Description:* A pavilion made of bamboo creates a natural and sustainable shade solution. Bamboo's strength and flexibility make it an excellent material for constructing lightweight structures.
    - *Application:* Botanical gardens, eco-friendly resorts.
    - *Features:* Eco-friendly, aesthetically pleasing, and biodegradable.
4. Solar-Powered Umbrella:
    - *Description:* An umbrella with built-in solar panels can provide shade during the day while also generating solar power to charge devices or provide lighting at night.
    - *Application:* Beaches, parks, outdoor seating areas.
    - *Features:* Renewable energy source, dual functionality.
5. Living Green Wall:
    - *Description:* A shade structure that incorporates a vertical green wall, utilizing plants to provide both shade and a natural aesthetic. The plants contribute to air purification and biodiversity.
    - *Application:* Urban areas, public spaces, office courtyards.
6. Trellis Tunnel:
    - *Description:* A tunnel-like structure with a trellis roof covered with climbing plants. It creates a shaded pathway with a green, natural canopy.
    - *Application:* Botanical gardens, parks, vineyards.
    - *Features:* Aesthetic appeal, integration with nature.
7. We are having learners spend some time in the shade of a tree and document the quality of the shade that the tree provides?

    What's the difference?
    What's the quality of a tree shade (a little sun comes through, the reflections of the tree, the movement, the sound of the leaves etc.).
    And then let the learners be directed by that in designing a shade construction.
    educators could also explain that this is called biophilic design, looking for orientation in nature for design and even the great architects are doing it.
    Depending on available resources and time, learners can either draw their designs on paper or create small-scale models using craft materials.

Conclude the workshop with each group presenting their shade shelter design, explaining their thought process and features of their creation.
https://www.archdaily.com/995875/biophilic-interiors-21-projects-that-blend-architecture-with-nature

8. Final activities – drawing a conclusion

Facilitate a final discussion with questions such as:

- What did you learn during the Shade Shelter Design Workshop?
- How did working in groups contribute to your understanding and creativity?
- Can you share a specific aspect of the design process that was challenging for your group, and how did you overcome it?
- Allow the learners to express their thoughts through drawing, singing, or any other creative means.

9. Reflection, review of the objectives

- Did you understand the concept of shade shelters and their importance?
- How did the workshop contribute to your knowledge of basic design principles and functionality?
- In what ways did the workshop enhance your creativity and problem-solving skills?
- How did teamwork and collaboration play a role in the design process?
- Encourage learners to reflect on their individual contributions to the group project and how these contributions align with the learning objectives.
- How do you feel about the final shade shelter design your group created? What aspects are you most proud of?
- How can you use the knowledge and skills gained from this workshop in future projects or in your daily life?

10. Inspiration

Inspiration: idea from the YouTube channel from the Eduino platform for kids
https://youtu.be/UBBa7wF998Y?si=a3cdN-qrj-V50jwr

4.9 How does it rain?

1. Type of Activity

Activity outside the classroom

2. Topic

Ecosystems

3. Learning objectives

- Introducing children to water,
- Introducing children to different forms of water and how water is formed in clouds,
- Knowing how the rain works on plants, how it works on the earth and what it serves for;
- Motoric development
- Development of creative skills

4. Target group

6 – 14-year-old learners

5. Necessary materials

- Bottles
- Water
- Bottle caps with holes in it
- Sound of thunder
- Cubes of ice

6. Duration

45 - 1 hour min.

7. Main Activities

The educator explains how to simulate the rain with the bottles.
Simulation of the rain, different types of rain at any time of the year-old learners, in spring it is light as dew and short, in autumn there are heavy rains that can last for days, in summer there are short rains with thunderstorms, and in winter the rain in the light clouds turns into the snow. The educator explains the activity in detail in front of the children and how the activity is developing, they discuss recycling and saving the planet water pollution, how it can be stopped.

- Take plastic bottles (we recycle them)
- We need the bottle cups and put holes in them, in every plug different number and size. The educator does this or the children take home some of the plugs they make the holes with the help of their parents, take out a few plugs, and make small holes on one plug, bigger on the second plug, and bigger on the third.
- Then pour some water in every bottle and start to spray with the bottle. This is where we show how the rain looks in the spring, summer, autumn, light rain, and heavy rain, show how the water runs down the bottle, then how it soaks into the ground, how it flows into the roots, how it works for the plant to grow.
- We simulate rain and water, to show how it impacts the plants, trees, and the soil.
- You can also simulate a thunderstorm audio from a phone
- Next, as the rain falls on the leaves we can see how the water is sliding down the leaves, that means that the water is watering only the roots and the leaves are little umbrellas for the people.

- Next, they put the frost cubes in more places in different piles, to simulate snow and how it melts when it is bigger and how it melts when it is in smaller piles.
- Then it is discussed how much rain is necessary for the plants to grow, and it is mentioned that if the surroundings, the air, is polluted, then rain is also polluted, which is important for the plants because then they take polluted water and get sick.

8. Final activities – drawing a conclusion

- Evaporation: Rain starts with the evaporation of water from oceans, rivers, lakes, and other water bodies due to the heat from the sun. This water vapor rises into the atmosphere.
- Condensation: As the warm, moist air rises, it cools at higher altitudes. Cool air can't hold as much moisture as warm air, so the water vapor begins to condense into tiny droplets around particles like dust or salt in the air. These tiny droplets form clouds.
- Cloud Development: Clouds continue to build up as more water vapor condenses onto the droplets. When the water droplets in the clouds combine and become heavy enough, they fall to the ground as precipitation.
- Fall to Earth: Once the droplets in the clouds become large enough, they fall to the Earth due to gravity. The size and speed of the droplets determine whether it's a light drizzle or a heavy downpour.
- Collection: The precipitation either soaks into the ground, replenishing groundwater supplies, or flows into streams, rivers, and eventually back into the oceans, completing the water cycle.
- Climate change affects rainfall in different ways. Warmer temperatures cause more evaporation, leading to heavier rainstorms. It can also change when and where rain falls, causing longer dry periods followed by intense rain. Climate change can disrupt normal weather patterns, making droughts and floods more common. Additionally, it influences ocean temperatures and currents, which impact rainfall.

9. Reflection, review of the objectives

- Investigating the themes and symbolism associated with the phrase.
- Critical Thinking: Encouraging learners to question and contemplate the message conveyed.
- Reflecting on climate change's impact on rainfall shows how interconnected our environment is. Changes in temperature, weather patterns, and ocean conditions all play a role in shaping when, where, and how much rain we get. It's a reminder of the complex web of factors that influence our planet's climate and the importance of understanding these dynamics to mitigate the effects of climate change.
- Reflecting on how the activity affects the audience emotionally or intellectually.

10. Inspiration

Frequently Asked Questions about How To Build An Outdoor Shelter

- Reflecting on climate change's impact on rainfall shows how interconnected our environment is.
- The video "Rain Catcher" inspires people can protect Planet Earth and be environmentally friendly by using natural resources.

https://youtu.be/zLVNoevQZaI?si=LLJS1NiGmg5PG3DX

4.10 Umbrella Decorating

1. Type of Activity

Activity inside the classroom

2. Topic

Creative Arts and Crafts - Umbrella Decorating

3. Learning objectives

- Enhance creativity and artistic expression.
- Develop fine motor skills through drawing and coloring.
- Encourage teamwork and collaboration in group activities.
- Provide an opportunity for self-expression and individuality.

4. Target group

6–14 year-old learners

5. Necessary materials

- Plain OLD umbrellas, from home to reuse.
- Fabric markers or paint, special permanent markers
- Brushes and water cups (if using paint)
- Aprons or old shirts to protect clothing
- Newspaper or plastic sheets to cover the working area

6. Duration

45 min.

7. Main Activities

Group Formation:
Children will be divided into small groups, promoting collaboration and diverse idea-sharing among peers.
The educator will showcase creatively decorated umbrellas as examples, sparking the children's imagination and generating excitement about the upcoming activity.
The educator will demonstrate various decorating techniques using fabric markers or paint, providing clear and concise instructions on how to handle the materials safely. These techniques could include painting, glitter, drawing etc.
The learner shares initial ideas and plans for decorating their umbrellas in their groups. This is a time for communication and collaboration among the group members, for sharing thoughts and building a collective vision.

Children will actively participate in the creative process, applying the demonstrated techniques to decorate their umbrellas. The educator will circulate and provide assistance, engaging in conversations to support the learning process.
Children will continue decorating their umbrellas, experimenting with colors, patterns, and designs. The emphasis is on expressing individuality and fostering a sense of ownership over their creations.
Children will collectively clean up their workstations, ensuring that all materials are properly stored. The educator will prepare the space for the final activities, maintaining a tidy environment.
After the activity they will suggest an area in the school yard to put the umbrellas to make shade for protection on sunny days. The school could create a shaded area from the umbrellas, this also demonstrates the importance of shade.

8. Final activities – drawing a conclusion

Facilitate a final discussion with the whole class, asking questions such as:

- What did you learn during this activity?
- How did working in groups enhance your creativity?
- What skills did you improve through this activity?
- Any challenges faced and how they were overcome?
- Conclude with a creative session like drawing, singing, or expressing thoughts about the experience.

9. Reflection, review of the objectives

- Using different colors and styles to create vibrant umbrella designs, letting your imagination run wild. Recognising the colors.
- Set small painting goals that you can achieve, which will make you feel accomplished and motivated.
- Embrace challenges as chances to learn and have fun overcoming difficulties.
- Use feedback from others to improve your painting techniques and make your feather artwork even better.
- Learn about reusing.

10. Inspiration

Umbrella Decoration Ideas- Pinterest

4.11 Raindrop Art

1. Type of Activity
   Activity inside the classroom

2. Topic

   Exploring Water Cycle and Creativity

3. Learning objectives
   - Understand the basic concepts of the water cycle.
   - Enhance creativity and artistic expression through drawing.
   - Develop teamwork and collaboration skills in a group setting.

4. Target group

   6–14 year-old learners

5. Necessary materials
   - Drawing paper
   - Markers, crayons, or colored pencils
   - Small containers of water
   - Paintbrushes
   - Watercolor paints or liquid watercolors
   - Water spray bottle
   - Blue food coloring
   - Paper towels

6. Duration

   45 min.

7. Main Activities

   Exploration Stations:
   - Station 1: Evaporation
     Discussion Points: Learners discuss how heat energy causes water molecules to gain energy, break free from the liquid state, and form vapor during evaporation. They can also talk about real-world examples of evaporation, such as drying clothes or the water cycle in nature.
   - Station 2: Condensation
     Discussion Points: Learners discuss how cooling causes water vapor in the air to lose energy and condense back into liquid form. They can relate this process to everyday occurrences like dew forming on grass in the morning or clouds forming in the sky.
   - Station 3: Precipitation
     Discussion Points: Learners discuss how clouds become saturated with water vapor, leading to precipitation in the form of rain, snow, or hail. They can explore factors that affect precipitation, such as temperature, humidity, and air pressure.
     Overall Reflection and Synthesis
     After completing all three stations, learners gather to synthesize their learning. They discuss the interconnectedness of evaporation, condensation, and precipitation in the water cycle. They can create diagrams or models illustrating these processes and present their findings to the class.
     This hands-on approach engages learners in active learning, encourages critical thinking, and helps them develop a deeper understanding of the water cycle's mechanics.

   Raindrop Art Creation:

- Watercolor paper or thick white paper: This will serve as the canvas for the raindrop art.
- Watercolor paints or liquid watercolors: These will be used to color the raindrops.
- Paintbrushes: Different sizes for varying effects.
- Water spray bottle: To create a misty effect on the paper.
- Markers or fine-tip pens: For adding details like raindrops, clouds, and the water cycle stages.
- Reference materials: Pictures or diagrams of the water cycle for inspiration and learning.
  Introduction and Explanation (Connection to Water Cycle):
- Start by introducing the concept of the water cycle to the learners. Explain how water continuously moves through the cycle of evaporation, condensation, precipitation, and collection. Emphasize that raindrops are a crucial part of this cycle, as they represent the precipitation phase when water falls back to Earth.
  Creating Raindrop Masterpieces:
  After the exploration stations, guide learners in creating their raindrop masterpieces. Follow these steps:
- Preparation: Provide each learner with watercolor paper, watercolor paints, paintbrushes, and a water spray bottle.
- Background: Encourage learners to paint a background on their paper using blue and white watercolors to represent the sky and clouds.
- Raindrops: Next, have them draw and paint raindrops of various sizes and colors on their paper. They can use shades of blue, green, and even silver or gray to depict the different forms of precipitation.
- Misty Effect: Using the water spray bottle, demonstrate how to create a misty effect by lightly spraying water over the painted raindrops. This adds a realistic touch to the artwork.
- Details and Labels: Once the raindrops are dry, learners can use markers or fine-tip pens to add details such as raindrop outlines, cloud shapes, and labels for each stage of the water cycle (evaporation, condensation, precipitation, and collection). Encourage them to be creative and include elements they learned at the exploration stations.
  Reflection and Discussion:
  After completing their raindrop masterpieces, facilitate a reflection and discussion session. Ask learners to share what they learned about the water cycle through the exploration stations and how they incorporated that knowledge into their artwork. Encourage them to explain the significance of raindrops in the water cycle and how their art represents this natural process.
  Extension Activity (Optional):
  For an extended activity, learners can create a collaborative mural depicting the entire water cycle. Each learner can contribute a section representing one stage of the cycle, such as evaporation, condensation, precipitation, or collection. This collaborative artwork can be displayed in the classroom or school to showcase learners' learning and creativity.
  By combining hands-on exploration, art creation, and reflection, this raindrop art activity provides a comprehensive and engaging way for learners to understand and appreciate the water cycle.
  Allocate time for each group to share their raindrop art with the class. Encourage learners to explain the connections between their art and the water cycle concepts. Foster a collaborative atmosphere by allowing other groups to ask questions or provide positive feedback.

8. Final activities – drawing a conclusion
   - What did you learn about the water cycle today?
   - How did working in groups enhance your understanding?
   - In what ways has your creativity improved during this activity? b. Encourage children to express their learning through drawing, singing, or other creative means.

9. Reflection, review of the objectives
   - Reflect on the learning objectives set at the beginning of the activity.
   - Discuss with the learners how the activity contributed to their understanding of the water cycle and their creative skills.
   - Evaluate the effectiveness of the group dynamics and collaboration in achieving the objectives.

10. Inspiration

    Idea is from the "Environmental Education" handbook by Eco Logic – Skopje

    https://ecologic.mk/priracnik-za-eko-obrazovanie/

    Under the influence of weather conditions, water circulates in nature.
    Ideas for Rainy Day Crafts/

4.12 Raindrop Art for learners with motor skills abilities

Art is a chance for kids to express themselves and have fun with creativity. Work with the child to adapt the activity to their preferences and abilities, such as adjusting the size of the paper or the type of materials used. Incorporate sensory elements such as the sound of rain (playing a rain soundtrack) or textured materials to enhance the experience.

For children with motor skills abilities follow these recommendation:

Assistive Tools: Provide tools like oversized paintbrushes, sponges, or even spray bottles for those who might have difficulty with traditional brushes.

- Ergonomic Brushes: For those with limited hand strength
- Larger Markers or Paint Brushes: For easier handling
- Pre-cut Stencils: For children who might struggle with freehand painting
- Pre-Cut Raindrop Shapes: For children who have difficulty with cutting, use pre-cut raindrop shapes made from coloured paper or foam sheets.
- Instead of painting, children can use sponges to dab colours onto paper. This method can be less messy and easier for those with fine motor challenges.

4.13 Weather Journal

1. Type of Activity

   Activity outside the classroom

2. Topic

   Weather observation and understanding

3. Learning objectives

   - To enhance observational skills in recognizing different weather conditions.
   - To understand the impact of weather on the environment and daily activities.
   - To encourage teamwork and communication among learners.

4. Target group

   6–14 year-old learners

5. Necessary materials

   - Journals or notebooks
   - Pencils, markers, or crayons
   - Thermometers
   - Anemometers (optional)
   - Rain gauges (optional)
   - Cloud identification guide (optional)

6. Duration

   45 min up to several weeks.

7. Main Activities

   a. Group Formation

   - Divide the learners into small groups. This can be done based on their seating arrangements or by assigning them specific numbers

   b. Group Time with Questions

   - Begin by discussing the concept of weather. Ask open-ended questions to prompt discussion:
     - What is the weather?
     - How does the weather change?
     - Why is it important to know about the weather?
   - Introduce the tools they will be using for observation, such as thermometers, and briefly explain their purpose.

   c. Group Time with Stories

- Share engaging stories or anecdotes related to different weather conditions. Use visuals or props to make the stories more vivid and memorable. Discuss the impact of weather on people, animals, and the environment.
- Encourage learners to share their own experiences with different weather conditions.

d. Educator's Choice for Activity Start

- Depending on the day and the educator's preference, they can choose how to kickstart the main activities. This could involve a brief introduction, a weather-related riddle, or a short video clip about weather. They can make a table, and draw a picture of how the weather is every day. If it is sunny, draw a sun, if it is rainy rain etc.
- Then they can collect leaves, branches, and flowers to put them in the journal.
- They can also find songs about the weather and put them in the journal.

8. Final activities – drawing a conclusion

- What did the children learn about the weather during the activity?
- How is understanding the weather important in our daily lives?
- What improvements can be made in their weather observations?

Encourage drawing, singing, or other creative expressions to summarize the learning.

9. Reflection, review of the objectives

- Reflect on the initial learning objectives.
- Discuss how well the objectives were achieved during the activity.
- Allow learners to share their thoughts on what they enjoyed and what they found challenging.
- Discuss potential follow-up activities or extensions related to weather studies.

10. Inspiration

The idea is due to the occurrence of changes in nature with the changes of the seasons. Each season has its own beauties and characteristics.

4.14 DIY Sun Hats

1. Type of Activity

Activity outside the classroom

2. Topic

Sun Hats and Sun Protection

3. Learning objectives

- To create awareness about the importance of sun protection.
- To develop creativity and fine motor skills through the creation of DIY sun hats.

- To encourage teamwork and collaboration among learners.
- To instill knowledge about the potential dangers of excessive sun exposure.

4. Target group

6–14 year-old learners

5. Necessary materials

- Plain Old hats or old balls can be used as heats
- Fabric paint/markers
- Stencils (optional)
- Brushes
- Glue
- Decorative elements (ribbons, sequins, etc.)
- Sunscreen (for a brief discussion on sun protection)

6. Duration

45 min

7. Main Activities

To kick off this fun learning experience, learners are put into small groups. The goal is that the learners work together and share creative ideas. A lively song is played to get everyone excited and subtly introduces the main topic: sun protection.
The educator starts a lively discussion about why it's important to protect ourselves from the sun. They share stories, some true and some made up, to help everyone understand why too much sun is not good. How the sun can be harmful and how we can protect ourselves from sun burns.
Children get plain hats and lots of cool decorations to express themselves. The educator tells them that these hats are not just for looks; they help keep us safe in the sun. They use our creativity to make unique sun hats.
After finishing our hats, one last talk. learners share their own thoughts and feelings about what we learned.
Finally, they proudly show off the sun hats they made. Don't forget about trees. Trees are a great protection from the sun, not only for humans, but also for all other organisms, our soil..

8. Final activities – drawing a conclusion

- After the learners finish creating their sun hats, a final discussion is held.
- The educator can ask questions such as:
    - What did you learn about sun protection?
    - How can wearing sun hats improve our well-being?
- The children may showcase their hats, sing songs related to the topic, or engage in drawing activities related to sun protection.

9. Reflection, review of the objectives

- DIY air purifiers teach kids about air quality, filtration, and hands-on skills.

- Health: It raises awareness about clean air's important for health, especially for kids with allergies.
- Safety: Ensure the purifier is safe with non-toxic materials and supervision for younger children.
- Sustainability: Use eco-friendly materials and components for a more sustainable project.
- Creativity: Encourage customization to make the project engaging and personalized.
- Responsibility: Teach maintenance habits like filter changes and cleaning for long-term use.
- Community Impact: Disuss broader effects on communities and the environment to broaden their perspective.

10. Inspiration

These videos show how to make sun hats from recycled material:
https://youtu.be/BK7BArEbuRM?si=DOJPc7c0nXfgJcvm
https://youtu.be/YHU8zn0chbk?si=v77P7tBU95jiGVtk

4.15 Bug Anatomy Exploration

1. Type of Activity

Activity outside the classroom

2. Topic

Exploring the anatomy of bugs

3. Learning objectives

- Identify and understand the basic anatomy of bugs.
- Foster curiosity and interest in the natural world.
- Develop teamwork and collaboration skills through group activities.
- Enhance observational and critical thinking skills.

4. Target group

6–14 year-old learners

5. Necessary materials

- Magnifying glass
- Bug-catching kits (containers, nets)
- Reference materials on bug anatomy
- Drawing materials (paper, pencils, markers)
- Outdoor space for exploration

6. Duration

45 min

7. Main Activities

Start by dividing the children into pairs. Start with a song related to bugs to engage the children.
Each pair is provided with a magnifying glass, bug-catching kits, and relevant reference materials. learners are encouraged to explore the outdoor space, examining bugs up close. The educator facilitates group discussions by asking questions related to bug anatomy, such as:
For the age 10 to 14 they can explore more about the biology of the bug.
For the age 6 to 10 they can explore artistically, draw the bugs and learn more about them.

- What body parts do bugs have?
- How do these body parts help bugs survive in their environment?
- Can you identify similarities or differences among different types of bugs?

Group time with stories:
To provide context and background information, the educator shares pictures of bugs with the anatomy of the bug and bug-related stories. These stories may include fascinating facts about specific bugs, their unique adaptations, or their role in the ecosystem. The storytelling aspect adds an educational and entertaining dimension to the activity.
https://www.floridamuseum.ufl.edu/educators/resource/butterfly-life-cycle/#:~:text=Metamorphosis%20is%20a%20series%20of,%2C%20pupa%2C%20and%20adult).
The children spread around and watched the butterflies flying, and bumblebee crawling. They carefully get close to the bug and examine it from a distance. After the exploration, a final discussion is held to draw conclusions and consolidate learning. The educator asks questions such as:

- What did you learn about bug anatomy during the exploration?
- How does understanding bug anatomy contribute to our overall knowledge of the natural world?
- What specific features or behaviors of bugs did you find most interesting?

8. Final activities – drawing a conclusion

- What did the children learn about bug anatomy during the exploration?
- How is our understanding of the natural world improved by this activity?
- What other interesting facts did they discover about bugs?
- Encourage children to draw their favorite bugs or specific parts they found fascinating.

9. Reflection, review of the objectives

- After teaching bug and bird anatomy activities to children aged 6 to 14, I reflected on the engagement levels and learning outcomes.
- The hands-on approach, use of visual aids, and encouraging discussions were effective in fostering curiosity and understanding.
- However, I identified the need to scaffold complex concepts for younger children and incorporate more cultural and environmental contexts in future lessons.

- Overall, the experience highlighted the importance of adapting teaching strategies to meet the diverse needs of learners and inspire a lifelong interest in science.

10. Inspiration

Idea from the " A teacher's guide for integrating experiential learning about the environment and climate change into the teaching of natural sciences from the first to the fifth grade of primary education" handbook by Eco Logic – Skopje
Link

4.16 Feather Painting

1. Type of activity

Activity inside the classroom

2. Topic

Feather Painting

3. Learning objectives

- Develop fine motor skills through painting with feathers
- Enhance creativity and self-expression
- Learn about different types of feathers and their characteristics
- Foster teamwork and collaboration within groups

4. Target group

Learners from 6 – 14 year-old learners

5. Necessary materials

- Feathers (various types and colors)
- Paint (non-toxic)
- Paper or canvas
- Brushes (optional)
- Aprons or old shirts to protect clothing
- Newspaper or plastic sheets for covering surfaces

6. Duration

45 min

7. Main activities

In the beginning of the activity there is a discussion about the birds and the feathers.

Birds are fascinating creatures! They come in all shapes, sizes, and colors, and they play various roles in ecosystems around the world. Here are some general pieces of information about birds:

- Classification: Birds belong to the class Aves, which is part of the larger group of animals known as vertebrates. They are characterized by feathers, beaks, and laying hard-shelled eggs.
- Flight: Not all birds can fly, but most of them have adapted wings for various purposes like gliding, soaring, or powered flight. Flight allows birds to access different habitats and food sources.
- Diversity: There are around 10,000 known species of birds worldwide, ranging from tiny hummingbirds to large ostriches. They are found in nearly every environment, from oceans to deserts to forests.
- Diet: Birds have diverse diets. Some are carnivorous, eating insects, fish, or other animals, while others are herbivores, feeding on seeds, fruits, nectar, or plants.
- Migration: Many bird species migrate over long distances seasonally, often following specific routes known as flyways. Migration helps them find better food and breeding grounds.
- Communication: Birds communicate through various vocalizations, including songs, calls, and alarms. They also use body language, such as displays of plumage, to communicate with each other.
- Nests: Birds build nests for breeding and raising their young. Nests can be simple structures made of twigs or elaborate constructions with intricate designs.

1. What are feathers?
    - Feathers are what cover birds. They have a middle stick (like a straw) and tiny branches that hook together to make a smooth surface.
2. Types of feathers:
    - Contour feathers: These shape the bird's body for flying.
    - Down feathers: These keep birds warm like a cozy blanket.
3. Feather colours:
    - Some feathers get their color from stuff like paint (black, brown, reds) or special light tricks.
    - Feathers can change color when old ones fall out and new ones grow in.
4. What feathers do:
    - Fly: Contour feathers help birds fly smoothly.
    - Stay warm: Down feathers are like bird jackets.
    - Look good and talk: Feathers can be pretty and help birds find mates or hide from enemies.
    - Stay dry: Birds have oil to keep their feathers dry in water.
5. Feather care:
    - Birds clean and fix their feathers by using their beaks.
    - They also lose old feathers and grow new ones.
6. Feathers in art and culture:
    - People like feathers for decoration and special meanings in different cultures.

Educator decides how to initiate the activity, whether by demonstrating techniques or providing a brief background.

Begin by gathering the learners and introducing the Feather Painting activity with enthusiasm. Highlight the excitement of working with feathers and paint.

Display the necessary materials and demonstrate basic techniques for painting with feathers. Show how to dip feathers into paint, make strokes, blend colors, and create different textures. Share tips on holding feathers and using them as tools for painting. Emphasize the uniqueness and delicacy of each feather.
Connection to Art:
Relate the characteristics of feathers to the art activity. For example, discuss how feathers have different patterns and colors, just like the colors they will be using in their paintings.
Open-Ended Exploration:
Instead of a structured demonstration, allow learners to explore the painting process with feathers on their own. Provide guidance as needed, but encourage creative freedom.
Allow learners to practice the demonstrated techniques on a small piece of paper before starting the main activity. Then they all go outside to collect the feathers; every learner collects their own feather. After that the learners go back to the classroom and paint with the feathers, using a technique of their own choice.
Ask learners questions such as:

- What did you find interesting about using feathers for painting?
- How can we use different types of feathers to create various effects?

8. Final activities – drawing a conclusion

- What did the children learn about feathers?
- How is creativity improved by this activity?
- What other interesting things did they discover during the painting process?
- Sing songs, share stories, or engage in a drawing activity related to the feather theme.

9. Reflection, review of the objectives

- Skill Growth: Notice how your painting skills have improved, from basic strokes to more intricate detailing.
- Creativity Unleashed: Explore different colors and styles, expressing your imagination through vibrant feather designs.
- Learning about Nature: Discover various feathers, birds, and their significance, expanding your knowledge of the natural world.
- Setting Achievable Goals: Reflect on achieving small painting goals, creating a sense of accomplishment and motivation.
- Fun Challenges: Embrace challenges as opportunities to learn, finding joy in overcoming difficulties.
- Feedback for Progress: Use feedback from others to refine your techniques and make your feather paintings even more captivating.

10. Inspiration

Idea from YouTube
https://www.youtube.com/watch?v=TdcMrAQk1eI&pp=ygUYZmVhdGhlciBwYWludGluZyBhY3J5bGlj

4.17 Balloon Racers

1. Type of activity

   Activity outside the classroom

2. Topic

   Balloon Racers

3. Learning objectives

   - Understand the principles of air pressure and propulsion
   - Enhance teamwork and collaboration skills
   - Develop creativity through designing and constructing balloon-powered racers

4. Target group
   6 – 14 year-old learners

5. Necessary materials

   - Balloons
   - Straws
   - String
   - Tape
   - Lightweight materials for constructing racers (e.g., paper, cardboard)

6. Duration
   45 min.

7. Main activities

   Introduction and Grouping: Begin by gathering the learners outside the classroom, explaining the exciting Balloon Racers activity. Briefly introduce the concept of air pressure and how it can be used to propel objects. Form groups, encourage collaboration.
   Start with a song: Energize the atmosphere by starting with a fun and engaging song related to balloons or racing. The song can set a positive and enthusiastic tone for the activity, making it an enjoyable experience for the children.
   Lead a discussion about air pressure and propulsion:
   What is air pressure, and how does it work?
   How can we use air pressure to make objects move?
   Initiate the activity:
   The educator can decide how to kick-start the construction process. Options include:
   Demonstrating a simple balloon racer to illustrate the end goal.
   Providing a step-by-step explanation of the building process.
   https://www.youtube.com/watch?v=TfZsGy_q9zA&ab_channel=TheDadLab
   Allowing learners to explore materials and brainstorm ideas within their groups.
   Constructing the Balloon Racers: Distribute materials (balloons, straws, string, tape, lightweight construction materials) to each group. Guide learners in constructing their

balloon-powered racers, encouraging creativity and teamwork. Walk around, offering assistance and clarifications as needed.

Testing and Adjustments: allow time for each group to test their balloon racers and make adjustments based on their observations. Emphasize the importance of trial and error, promoting a growth mindset and problem-solving skills. Let the learners race the balloon racers and have fun.

Review of Objectives

Facilitate a reflection on the learning objectives:

- Were the principles of air pressure and propulsion understood?
- How did collaboration contribute to the success of the activity?
- What could be improved or modified for future iterations?

8. Final activities – drawing a conclusion

After the children have finished building their balloon racers, a final discussion is held, and the educator asks questions, sings songs, and encourages drawing or other creative expressions:

- What did the children learn about air pressure and propulsion?
- How did teamwork play a role in constructing the racers?
- What aspects of the activity could be improved for next time?
- Any other relevant questions

9. Reflection, review of the objectives

- Reflect on whether the learning objectives were achieved.
- Review how well the children collaborated and applied their knowledge.
- Discuss any unexpected outcomes or challenges faced during the activity

10. Inspiration

The idea comes from a fun game that uses gas to move the balloon.

4.18 Exploring the Air We Breathe

1. Type of activity

Activity inside the classroom

2. Topic

Air and its importance for living beings

3. Learning objectives

- Understand the concept of air and its significance for life
- Identify components of air (e.g. oxygen, nitrogen)
- Recognize the importance of clean air for health
- Develop teamwork and communication skills through group activities

4. Target group

- learners from 6 – 14 year-old learners

5. Necessary materials

- Whiteboard and markers
- Drawing paper and coloring materials
- Mirrors

- Song lyrics or audio for a song about air
- Props or visuals related to air (e.g. balloons, bubbles)

6. Duration

45 min.

7. Main activities

Within their groups, learners engage in a structured discussion facilitated by the educator. This is a critical phase where basic concepts about air are explored. The educator poses questions like:

- What is air?
- Can you feel or see air?
- Why is air important to us?
- What gasses make up the Earth's atmosphere?
- How do human activities affect the composition of the air?
- What are the primary greenhouse gasses, and what roles do they play in climate change?
- What are some common air pollutants, and what are their sources?
- How does air quality impact human health, particularly in urban areas?
- What are some measures to improve indoor air quality?

Group discussions encourage active participation, critical thinking, and the exchange of ideas among learners.
Educator's decision on activity start:
The educator has the flexibility to decide how to kickstart the activity. This could involve a brief introduction, a relevant anecdote, or even a thought-provoking question.
The children sit on their chairs and start to breathe deeply. They put their hands on the belly and notice how the air is blowing up the lungs.
Then the educator gives them several mirrors to put under their nose to see how the air clouds the mirror.
They take balloons to blow up.
The children explore the wind outside, they look at the leaves and trees, feel the wind on their face etc.
For 6-8 year-old learners:

- What is air: Start with the basics. Air is the invisible gas that surrounds us. We can't see it, but we can feel it when it moves (like when the wind blows) and when we breathe it in and out.
- Why do we need air: Explain that air is essential for us to live. We breathe in air to get oxygen, which our bodies need to stay alive and healthy.
- What's in the air: Talk about the different gasses in the air, especially oxygen and carbon dioxide. You can do simple experiments like blowing up a balloon using your breath to show how we exhale carbon dioxide.

For 9-11 year-old learners:

- Air pollution: Introduce the concept of air pollution. Explain that sometimes the air can become dirty or polluted, which can be harmful to us and the environment. Discuss sources of air pollution like cars, factories, and burning trash.

- Effects of pollution: Talk about the effects of air pollution on health, such as respiratory problems, and on the planet, like climate change. You can discuss ways to reduce air pollution, like using public transport or planting trees.
- Air quality: Teach them about air quality indexes and how scientists measure air pollution. You can also discuss how air quality can vary from place to place and why it's important to pay attention to air quality alerts.

For 12-14 year-old learners:

- Air composition: Go deeper into the composition of air, including the different gasses and their percentages. Discuss how air composition can vary at different altitudes and in different environments (e.g., near the ocean vs. in a city).
- Climate change: Connect air quality to broader environmental issues like climate change. Discuss how human activities contribute to climate change through the release of greenhouse gasses into the atmosphere.
- Solutions: Engage them in discussions about solutions to air quality and climate change challenges. Talk about renewable energy, sustainable transportation, and other ways individuals and communities can make a positive impact.

8. Final activities – drawing a conclusion

- Conduct a final discussion asking questions such as:
- What did the children learn about air?
- How is air important for us?
- How can we improve the quality of air around us?
- Sing songs related to the learned concepts
- Encourage drawing or other creative activities related to air

9. Reflection, review of the objectives

- Reflect on the initial learning objectives:
- Were the learning objectives achieved?
- How did the group activities contribute to understanding air?
- Any improvements or modifications needed for future sessions?

10. Inspiration

Changes in the atmosphere are linked to global warming and climate change. This can lead to discussions on how our daily actions impact air quality.

4.19 Bird and Bug Relay Race

1. Type of activity

Activity outside the classroom

2. Topic

Nature and Movement

3. Learning objectives

- Develop teamwork and collaboration skills through group activities.
- Enhance physical coordination and motor skills through the relay race.
- Foster an appreciation for nature and its various elements (birds and bugs).
- Encourage creativity through the final conclusion drawing

4. Target group

- learners from 6 – 14 year-old learners

5. Necessary materials

- Cones or markers to set up a relay course
- Pictures or cutouts of birds and bugs
- Drawing materials (paper, markers, crayons, etc.)
- Music player for the song

6. Duration

45 min

7. Main activities

The educator can split the children into 2 groups.
Organize a relay race where each team has to run to a designated spot, pick up a picture of a bird or bug, and bring it back to their team. During group time, engage the children with questions about the birds and bugs they picked.
Share short stories or interesting facts about the birds and bugs to make it educational and entertaining.
Put the children into 2 rows. One row will be a bird and the other one will be a bug that flies.
Set up a relay course using cones or markers. Each team has a starting point and a designated spot where they will pick up a picture of a bird or bug.
Explain the rules of the relay race – each team member runs to the designated spot, picks up a picture, and returns to their team.
To add an educational element, each picture can have a label with the name of the bird or bug.
When they are running back, they need to make the sound of the bird or the bug in the picture.
BEE Picture (I will put pictures) Birds picture
The first team that gets more of the pictures wins.

Group Time with Questions

- After the relay race, gather the learners in their groups for a discussion.
- Ask questions related to the birds and bugs, such as:
- How can you identify this bird/bug? What is special about it? (also in terms of food, behavior, habitat)
- What do you know about it?
- How does it contribute to the ecosystem?

- Also, ask questions such as:
- What did you learn about the birds and bugs?
- How did working in a team feel?
- What is improved by this activity?
- Use open-ended questions to stimulate critical thinking and reflection.

Creative Expression

- Provide drawing materials (paper, markers, crayons, etc.) and encourage the children to express their thoughts and feelings about the activity.
- They can draw their favorite bird or bug, illustrate a scene from the relay race, or create a collaborative artwork.

Closing Activity

- Conclude the session with a brief review of the key learning points and a recap of the fun experiences.
- Optionally, end with another round of the opening song or a closing song to leave a positive and memorable impression.

8. Final activities – drawing a conclusion

- After the relay race and group activities, conduct a final discussion.
- Ask questions such as:

- What did you learn about the birds and bugs?
- How did working in a team feel?
- What is improved by this activity?
- Encourage the children to express their thoughts through drawing or in other creative ways.

9. Reflection, review of the objectives

- Reflect on whether the learning objectives were achieved.
- Discuss with the learners what skills were developed during the activity.
- Evaluate the engagement and enjoyment of the children throughout the session.

10. Inspiration

The Bird and Bug Relay Race can be a lively and creative event where participants take on the roles of birds and bugs in a whimsical race. The concept revolves around a series of challenges or obstacles that simulate the behaviours and characteristics of birds and bugs.

4.20 Build a Treehouse or Fort

1. Type of activity

Activity outside the classroom

2. Topic

Creative Construction and Collaboration

3. Learning objectives

- Foster teamwork and collaboration among learners.
- Enhance creativity and problem-solving skills through hands-on construction.
- Develop communication skills through group discussions and sharing ideas.
- Encourage imaginative thinking and planning.
- Promote a sense of accomplishment and pride in completing a group project

4. Target group

Learners from 6 – 14 year-old learners

5. Necessary materials

- Building materials such as cardboard boxes, blankets, pillows, tape, and markers.
- Outdoor space for construction (e.g., playground or open area)

6. Duration

45 min

7. Main activities

Group Discussions and Planning:
Each group is provided with a designated outdoor space and a set of construction materials including cardboard boxes, blankets, pillows, tape, and markers. The learners are encouraged to engage in group discussions to plan their treehouse or fort. This phase promotes communication, negotiation, and decision-making skills.

Construction Phase:
Once the planning is complete, learners begin constructing their treehouses or forts. This hands-on construction phase is where creativity and problem-solving skills come into play. Learners collaborate to bring their ideas to life, experimenting with different materials and designs.
Throughout the construction process, the educator actively encourages creativity and collaboration. Discussions among group members are facilitated to ensure everyone's ideas are considered, fostering a sense of inclusivity and shared ownership of the project.
The "Build a Treehouse or Fort" outdoor activity provides a rich learning experience that goes beyond traditional classroom boundaries. By engaging in collaborative construction, learners not only develop practical skills but also enhance their ability to work effectively in a team. This hands-on approach to learning fosters a sense of achievement and pride, leaving a lasting impact on the learners' overall educational journey.

8. Final activities – drawing a conclusion

- After the construction phase, hold a final discussion with the entire group.
- Ask questions such as:

- What did the children learn during the activity?
-How did collaboration contribute to the success of the project?
- What skills were improved by participating in this activity?
- Any other questions relevant to the specific objectives

9. Reflection, review of the objectives

- Reflect on the initial learning objectives and discuss with the learners:
    - How did the activity contribute to teamwork and collaboration?
    - In what ways did the activity enhance creativity and problem-solving skills?
    - Did the learners experience personal growth or learn something new?
    - Allow learners to share their thoughts and insights.
    - Review and celebrate the achievements of each group.
    - Provide positive feedback and encourage a sense of accomplishment.

10. Inspiration

The process of building a treehouse or fort is an exciting project that can be both challenging and rewarding. It's a perfect way to channel creativity and craftsmanship while creating a cherished space for years to come.