Welcome!

This handbook contains ideas and instructions for activities & activity stations for a PBS KIDS Explore the Outdoors - in the park event. PBS member stations and NRPA members are welcome to use these activities to host local events that inspire children and their families to explore nature, the environment and their own local parks & facilities. These activities can be presented in any combination, and could be incorporated into classroom or after-care environments, as well.

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Finally, if you have any questions about the materials, or the use of materials, provided in this handbook or for the promotion and presentation of PBS KIDS Explore the Outdoors, please don’t hesitate to ask. Contacts for this project are:

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Thank you & enjoy the exploration!

Jennifer
Activity Overview:

Within this booklet are ideas for seven (7) hands-on activities which will have accompanying activity sheets for on-site or take away activities. The art for activity sheets will be provided in black & white for reproduction on 8.5” x 11” standard paper.

The activities are:

1) Sid the Science Kid's Weather Exploration
   a. On-site activity: Weather Station
   b. Activity Sheet: Sid's Weather Chart

2) The Cat in the Hat Knows A Lot About That! - Exploring Trees
   a. On-site activity: Tree Talk or Tree Trek
   b. Activity Sheet: Bark/Leaf Rubbing

3) Curious George's Windy Day Exploration
   a. On-site activity: Wind Exploration Station
   b. Activity Sheet: Make Your Own Pinwheel

4) Wild Kratts - Discovering Senses
   a. On-site activity: Sensory Exploration
   b. Activity Sheet: Nature Journal

5) Dinosaur Train - What Lives Here?
   a. On-site activity: Explore native plants, animals, insects & environments

6) Dash's Build Your Own Bird's Nest
   a. On-site activity - Bird's nest building
   b. Take-away Activity Sheet: Make your own bird feeder

7) Dot's Nature Poetry
   a. Activity & Activity Sheet – Create a nature poem!
Sid the Science Kid’s Weather Station and Weather Chart

Sid the Science Kid is full of questions. Like every kid, Sid and his friends ask lots of questions, and they make lots of observations. In this activity, children will explore weather and learn about making observations and predictions. They’ll also learn the scientific method of recording observations on a chart.

What you’ll need:
- A large bulletin board or similar backdrop for a large weather chart
- A large sheet of paper, or multiple sheets, to create a large grid with 3 vertical rows and as many horizontal columns as you will have hours in the event (see attached version)
- Large, printed “sunny” “cloudy” “windy” and “rainy” condition icons to fill in grid spaces.
- Tape or other material to attach conditions to the chart
- A dark marker or pen to record temperature
- A weather thermometer (Ideally, a large thermometer that can be easily seen by attendees)
- Printouts of the weather activity sheet
- Pencils, crayons or other writing instruments for children if they are to complete observations on site

To set up:
- Create the large grid for recording the weather hour by hour
- Have sufficient weather condition cut outs available to fill in the weather chart each hour
- Have the thermometer placed in a sunny location where it can be read by attendees

At the station:
- Each hour fill in the chart. Get the public involved by asking them to provide input on the observed conditions
- Explain the weather observations to children who come by:
  - Ask & explain what an observation is: a special way of looking at things in order to learn about them
  - Ask & explain what a chart is: a way to record, or write down observations
  - Ask & explain what a prediction is: a statement about what will happen in the future. Predictions are often based on observations
  - Ask kids about the weather earlier this week, and earlier in the day – what they “observed”
  - Ask kids about what they think the weather will be like later today – their “predictions”

Activity Sheet:
- Let children fill in their own weather chart and record the weather. Have accompanying adults help them by asking some questions.
  - Is it very sunny or cloudy? How many clouds are there, a lot, a few, none?
  - Is it rainy? If so, how rainy is it?
  - Is it windy? If so, is it very windy or is hardly any wind at all?
- Let the children take the charts home so that they can continue making observations about the weather all week.

Extension Ideas:
- You may also want to present additional, weather related materials like a rain gauge, a barometer, a weather map from the newspaper, etc... You can use these to talk about the weather, what kinds of weather events are happening across the country, and how meteorologists work to observe the weather and use those observations to develop predictions.
**Sid the Science Kid Weather Station Activity**  
**Weather Chart Layout: Example**

Construct a large grid on a bulletin board or other backdrop so that you can chart the conditions (Sun, rain, wind, etc...) and temperature each hour. Ask the kids about their predictions for the next hour. Will it continue to be sunny? Will it get cloudy?

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The Cat in the Hat Knows A Lot About That! - Exploring Trees!

The Cat in the Hat, Nick and Sally love to explore. You can encourage kids to learn about trees and plants through the tree exploration. You’ll set up a station by a stand of trees, or you can plan to take a “tree trek” to observe and discuss trees.

What you’ll need:
- If you’re planning to set up a table with artifacts, you will want:
  - Some tree related material: bark, leaves, seeds, pine cones, etc...
  - Illustrations of tree anatomy and life stages of trees and plants
- Leaves and bark for the bark rubbing (if you plan to do this at tables)
- Chalk or crayons for the leaf rubbing
- Printed activity sheets

At the station or on the trek:
- Talk about features of trees:
  - Roots: Trees have roots that help the trees get water and nutrients (that’s how trees “eat”)
  - Leaves: Trees have leaves that help the trees “breathe.” Leaves absorb the sunlight and air (with carbon dioxide) and release air (with oxygen) into the atmosphere - just like we breathe in air (with oxygen) and breathe out air (with carbon dioxide)
  - Bark: Trees have bark, and like our skin, bark helps protect the inside of the tree
  - Variety: Trees come in lots of different sizes and shapes - just like people
    - Some trees have leaves on them all year round
    - Some trees lose their leaves over the winter and grow new leaves in the spring
    - Some trees grow very tall, and others stay close to the ground
  - Seeds: Trees release seeds that grow into new trees. Some trees have seeds that are in pods, some in cones, and some have fruits or nuts that have seeds inside them
- Talk about trees as a habitat (that means a place where plants, animals and insects live)
  - Lots of insects and animals live in trees
  - Some trees also have other plants that live on them
  - What do the children see in the trees?

Activity Sheet: Leaf/Bark Rubbing
- Have a table available with samples of leaves and bark to do rubbings
  - Alternately, you could pass out the activity sheets as a take away activity
- Kids should use the side of the pieces of chalk or crayon to get the best rubbings
  - Encourage them to rub gently so they can see the texture
- Remind kids not to take bark off of living trees. They should use bark from branches that have fallen off trees, or bark that has fallen off of the tree - sometimes trees lose their bark and grow new bark

Extension ideas: You may want to provide kids with seeds they can plant at home to see how plants grow (developing roots, stems and leaves).
Curious George – Wind Exploration & Pinwheel Activity

It’s no surprise that Curious George is -- curious! In this activity, kids can feed their curiosity by exploring wind – both the kind they make by blowing through a straw and the naturally occurring wind that moves a pinwheel!

What you’ll need:

- For the station:
  - 2 or more large, wide tubs to hold material for wind observations (something similar to a large dish tub would be ideal)
    - Fill one tub with water
    - Fill one tub with sand, birdseed or similar substance
  - Straws
- For the activity:
  - Copies of the activity sheet
  - Crayons or colored pencils to color in the sheet/decorate the pinwheels
  - Safety scissors to cut out the pinwheels
  - Pencils with erasers
  - Push pins to secure the pinwheels to the pencils

At the station:

- Hand kids straws and have the children blow through the straws on to their hands
  - Ask them what it that feels like
  - Can they make the force of the “wind” stronger by blowing harder?
- Have the children blow through the straws into the tubs to see how the force of the wind effects the different materials.
  - Float an object on the water and have them blow on the object.
  - How does the wind effect the object?
- Talk to them about the role the wind plays in the environment.
  - Why do they think wind is important?
  - You may want to give them hints to think about things like dandelions and clouds to discuss how the wind is important for things like seeds and the weather

Activity (on site or take-away):

- Encourage each child to color their pinwheels
- Have parents (or supervising adults) work with the children to cut out the pinwheels and attach them to the end of their pencils
- Is the pinwheel spinning? What’s making it spin?
- Can they make the pinwheels spin? Can they make the pinwheels spin faster or slower?

Taking it further:

- You could host a kite display or round-up and encourage kids to bring their own kites to fly
- You could display other wind related instruments like a wind sock and weather vane to show kids how people “observe” the wind
Wild Kratts – Discovering the Senses & Nature Journal

The Kratt brothers are creature adventurers! They travel the globe, exploring the worlds of animals and nature and observing creatures in their natural habitats. Through their adventures, the Kratts learn how each creature uses its own special powers – including their senses – to do amazing things. In this activity, kids will explore their own senses and think about how animals use their senses.

What you’ll need:

For the station:
- Several boxes that will allow kids to feel material without seeing it
  - Empty small Kleenex boxes would work well for this
- Several jars/containers with lids to hold material that kids can hear but not see
  - Coffee cans or empty plastic bottles (covered) would work for this
  - Avoid potential allergens like peanut butter jars
- Several small jars/containers to hold material kids can smell
  - Small spice bottles, empty vitamin bottles or similar containers would work for this
- Material for touch, smell, and listen experiences
  - For touch – items like feathers, plastic bags, pine cones, leaves, and so on would work
  - For hear/listen – items like bird seed, pebbles, water, and sand would work
  - For smell – items like pine needles, coffee, spices (cinnamon), mulch, soil, or herbs (rosemary, lavender) would work

At the station:
- Set the station up so that kids can explore three of their five senses (hearing, feeling, smelling)
  - Explain the senses – people have five senses. What are they (hearing, seeing, feeling/touching, tasting, smelling)
    - People, animals and bugs use their senses in lots of different ways
    - Talk with kids about what are some of the ways they use their senses?
    - When do they use their sense of taste? What about their sense of sight?
  - Encourage children to experience their senses
    - Have them feel the items in the “blind” boxes and talk about what might be in the boxes - how do they know?
    - Have the children smell the items in the different bottles - what do they think each is? How do they know?
    - Have them shake different boxes/jars with items in them - what could they be? Why do they think that?
  - Discuss how they think animals and insects use their senses

Take away activity:
- Give each child a nature journal worksheet so that they can explore and make notes of observations using their own senses.
- Kids can take it further by creating their own nature journal using a bound or similar notebook

Buddy, Tiny, Shiny and Don formed a Nature Trackers Club to explore and learn about their environment. Every kid can be a Nature Tracker by joining the Dinosaur Train Nature Trackers Club. The Nature Trackers Club is a community of young children, their families and educators committed to learning about nature and doing good things for their environment. Nature Trackers enjoy exploring and having adventures, respecting their environment, collecting things, tracking and observing plants and animals, and challenging themselves to get outside and make discoveries every day. You can learn more about the Dinosaur Train Nature Trackers Club at: http://www.pbs.org/parents/dinosaurtrain/naturetrackers/

In this activity you’ll encourage kids to explore the local environment through a talk or trek that addresses the plants, animals, insects and environments in your location.

What you’ll need:
- For the trek or talk:
  o If you’re taking a trek – just leaders and participants!
  o If you’re creating a station:
    ▪ A table or area to display materials
    ▪ Pictures or examples of some of the plants, animals and environments, that are in your location – grass, shrubs, trees, flowers, bugs, etc...
    ▪ You could recreate ecosystems in terrariums (e.g. ponds and grasses, etc…) to better illustrate how bugs, animals and plants live together in the environment
- For the activity:
  o Printed Nature Treasure Hunt activity sheets
  o Pencils or writing instruments if you’re having children complete the activities on site

Talk about the park’s environment:
- Are there animals or insects found in your location?
  o Are there ants, pill bugs, birds, squirrels, salamanders, frogs, butterflies? What else?
  o What do the children see? Do they have the same or different things where they live (in their yard or on their block)?
- Are there any habitats? A rotting stump, a stream, a sunny field, and/or a shady wood?
  o How are the animals and plants in the different habitats the same or different from one another?
- How does the local climate effect the kinds of plants and animals in the park?
  o You may need to explain that climate means the range of weather conditions experienced, such as the range of temperatures, the amount of rain and the types of wind
- Will the environment look the same in a few months, or will things change?
- Remind kids that they should look but not touch so that they don’t disturb the homes of the plants and animals that live in the park

For the activity:
- Give kids and their parents the Dinosaur Train Nature Treasure Hunt worksheet and have them explore the park to find plants and animals in your park/location
Dash’s Bird’s Nest

Birds are amazing engineers, and use lots of materials in their nests. In this activity, children will have the chance to try out building their own bird’s nest using a variety of common materials.

What you’ll need:

- Example nests (if you have them available)
- Paper or similar small bowls
- Material for nests (twigs, grasses, string, leaves)
- Glue or other fastening materials like tape or staples to help the children build nests

The activity:

- Talk about how birds build their nests from materials they find in their environment, small twigs, string, leaves, and so on
  - If you have examples of real bird nests, you may want to display them (in a safe location)
    ▪ Ask the children what they see in the nests. Do they see twigs? Leaves? What else has the bird used to make the nest?
  - You can also talk about where birds build nests, in trees (on branches or hanging from branches), in caves and on buildings (ledges, eves, gutters). Some birds build their nests on the ground

- Provide each child and supervising adult with nest material (small twigs, string, leaves, grass, etc...), a cardboard/paper bowl, and glue to try to create a nest
  - They may want to anchor larger items (twigs) to the paper bowl and then use the anchor material to weave in the more pliable material (string, grasses & leaves)

- Talk to children about how to create the nests:
  - Birds weave together the different materials to create their nests, can they do that?
  - It can be tough, because birds are very good at doing this
  - They can use some glue and the bowl to help them along since they aren’t “nest experts” like birds are

Extension idea:

- You may want to send children home with a bird feeder activity sheet that they can use to create their own bird feeder at home.
Dot's Nature Poetry

Lots of writers use nature as inspiration for songs and poetry. In this activity, children will talk about nature in song and poems and complete a worksheet with nature poems.

What you’ll need:
- Printouts of nature poetry worksheet
- Pencils or other writing material to complete the activity

At the activity:
- Talk to kids about nature in songs.
  - What are some songs they know of that talk about nature?
    ▪ The Eentsy-weensy spider
    ▪ Home on the range
    ▪ Rain, Rain Go Away
  - Do they know of others?
  - Songs are poems that are set to music
  - Provide worksheet and have kids fill in the blanks to make their own poems about nature

Extension ideas:
- You could host a local songwriter to work with kids to create nature songs on site
- You could host a local librarian or writer to read nature poetry to children
  - Shel Silverstein’s poems are a great example to share with kids
  - Other books include:
    ▪ *The Hound Dog’s Haiku and Other Poems for Dog Lovers* by Michael Rosen
    ▪ *Color me A Rhyme*, by Jane Yolen and Jason Stemple
    ▪ *Poetry for Young People: Robert Frost* (Gary Schmidt, Editor)
    ▪ *A Chill in the Air, Nature Poems for Fall and Winter*, by John Frank
    ▪ *Insectiopedia, Poems & Paintings*, by Douglas Florian
- Host a nature song sing-along using well known songs