

Forest Forest

How It Works

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The need for the creation of this unit was two fold: 1.) To establish a creative teaching unit embedded with meaningful hands-on lessons about the forest, fauna, and flora of that special region, and 2.) The innovated component; to provide up-to-date digital learning opportunities where the computer and internet play a larger role, including experiencing and learning about video streaming and virtual forests and zoos.

Why it Works

This is an innovative and creative approach as well as a “best fit practice” for First Graders. Most of the lessons, displays, explorations, and projects have been richly planned out to give young students an opportunity to be physically up and moving around, as they explore and investigate the topic while being gently lead through science, language arts, and technology the state standards. Trees, leaves, and forest animals, children’s favorites, are easily accessible around schoolyards, parks, local neighborhoods, and also on the Internet. Examples of some of the hands-on-lessons include: 1.) Leaves and bark art rubbings and checking leaf collections under a class microscope, 2.) Shade and sun lessons which engage students to experience the properties of shade and shadows and how it helps animals and plants survive in the forest setting, 3.) Strong and icy winds lessons help explain why some trees lose their leaves in the winter, 4.) A food lesson uses banana pieces, chocolate covering and chopped nuts or raisins to become the tree “nut.” Examples of a few technology lessons include: 5.) Online virtual field trips of animals, birds, and trees in a Canadian forest, 6.) Video streaming clip of grizzly bears, 7.) Visiting and exploring a favorite author’s website and beginning a back-and-forth email conversation with the author, 8.) Student writings, drawings, and graphics experiences on Kid Pix Deluxe Studio and other appropriate grade level software programs.

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Activities

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Materials

Wired Internet connected computer(s) software programs, word processing, graphic organizers, draw/write (Kid Pix Deluxe Studio) programs and a printer.

Temperate Forest videos, resource and content picture books and reading books.

Student Impact/assessment

Specific skilled based rubrics and content tests which are State and National standards aligned are assessed in these areas: Language Arts, Science, Technology and and computer skills. Assessments also include teacher observations, oral and paper tests, and completed projects.

Student's comments after completing several Forest science experiment include: "Jan Brett showed us how to draw a bear," and "if you are a rabbit, you need good ears in a forest," Trees loose their leaves because its too hard to feed them when it snows and snow is heavy," and "I want to be a grizzle bear and sleep all winter."

State Standards

Science: 1.) Life Science. Plants and animals meet their needs in different ways. 2.) Earth Science. Weather can be observed measured described. The sun warms the land, sea, and air. 3.) Investigations and Experimentations. Students should develop their own questions and perform investigation. Mathematics. 4.) Statistics, Data and Analysis. 5.) Language Arts. 7.) Writing and 8.)Comprehension. 9.) Art and 10.)



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Hands-on-science lessons include: 1.) Leaves and bark art rubbings lessons and a lesson checking leaves under a class microscope, 2.) Shade and sun lessons which engage students to experience the properties of shade and shadows and how it helps animals and plants survive in the forest setting, 3.) Strong and icy winds lessons help explain why some trees lose their leaves in the winter, 4.) A food lesson uses banana pieces, chocolate covering and chopped nuts or raisins to become the tree “nut.” Technology lessons include: 5.) Online virtual field trips of animals, birds, and trees in a Canadian forest, 6.) Video streaming clip of grizzly bears, 7.) Visiting and exploring a favorite author’s website and beginning a back-and-forth

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Other Content Activities: Content studies and hands-on science projects as well as whole group, small group and individual student experiences into the world of digital learning includes: viewing digital videos clips, streaming videos, virtual animal sites and forest field trips, interactive blogs, and online encyclopedias. Math lessons includes; graphing and data reading, addition, subtraction and multiplication grids and word problems practice using leaves and trees. Graphic organizers lessons charting data comparisons, idea plots and surveys.

Drama and art include: plays about forest animals, trees and leaves, and art projects which reflect the lessons and learning of the forest biome.

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Materials: Wired Internet connected computer(s) software programs; word processing, graphic organizers, draw/write (Kid Pix Deluxe Studio) programs and a printer.

Additional resources could include: Temperate Forest videos, resources and content picture books, reading books, posters, terrariums, interesting community members, and community field trips and Natural History and other museums as well as the local zoo..

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Tree "Banana" Seeds

Teacher collection of various tree seeds for discussion and viewing.

Makes about twenty seeds

Materials: 8 Bananas (cut in 1/3 or 1/2)

1 cup chopped nuts or crushed pretzels

20+ paper plates

20 plastic forks

1 1/2 cup peanut butter (or honey will work too)

Baby wipes or napkins.

Peel bananas at the last minute before having student put together their seeds and then eat them. Pass out all supplies and preset plates with peanut butter, nuts, and about 2" of banana on each student plate.

To build the "seed", give each student their plate and then demonstrate how to smear the peanut butter on the banana piece and then roll it into the chopped nuts. Have fun eating your "nut".

Follow up: Graph your favorite part of you created seed, banana, peanut butter, or peanuts.



Trees: Make Shade!

Materials: Umbrellas and sunny day

Young students experience a walking field trip to explore how tree provide shade. Using umbrellas take turns to create shade and shadows. Look at shade/shadows created by the umbrellas. Discuss why shade is important to animals and plants.

If time permits look at several trees and their shade patterns, and observe any plant growing under the shaded part of the tree.

Follow up: Art project of shade and shadow shapes from the demonstrations.



Finding Your Tree

Materials: Strong paper and crayons.

Vocabulary: trunk, branches, bark, protection, Cambrian layer, hardness

Student will take several rubbings from the barks of trees to compare and discuss what bark does and why they may be different on different trees.

Follow-up: Student can create a bug that can hid in their bark rubbing. Create your own leaf as part of an art lesson. Remember to add the veins, stem, and edges of you leaf.



A Leaf is a Leaf

Materials: Various leaves, crayons, art paper, microscope

Vocabulary: Serrated, veins, stems, photosynthesize, twig, branch, limb

After a nature walk to collect leaves (or teacher provided) have students draw their leaves, remembering to add the veins and edges.

Follow up: Students view leaves and leaf parts under the microscope. Create your own leaf as part of an art lesson. Remember to add the veins, stem, and edges of you leaf.



Icy Icy Winds

Materials: Large Ice block, large strong fans, towels, bucket/tub, water

Vocabulary: Wind chill factor, ice, storms, blizzard, wind, temperature.

Students experience icy winds by first wetting their hands on blocks of ice and cold water and then standing with their hands (leaves) in front of the fan. Discuss wind chill and temperature and how they play a part in winter and how hard both are on trees, especially if they have large leaves on them.



Bark Art

Gather: Grocery bag, pictures of Aborigine art drawings, pictures of Native American bark canoes and tool holders, bark from various trees, Art paper, crayons (earth-tone colors)

Vocabulary: Aborigines, art drawings, Native American, bark canoes, tool holders, earth-tone colors

Student discussions the use of bark by the Native American for tools holders, art and canoes. Show Aboriginal art worked and demonstrate the earth-tone colors and stylized animals shapes used by these artist. Have student crumple their brown-bag art paper and then smooth out and try their hand at this media and this art style.



Anchors Away, My Tree

Materials: School yard sand, or tub of sand, trees where roots can be viewed.

Vocabulary: Tap root, root, soil, nutrition.

Students take a walking field trip to view the root patterns of several trees and then practice anchoring their fingers in the sand. Discussions should ensue about why trees need roots (anchors and get the food to the branches and leaves) and what can happens to trees when the soil is washed away or the wind blows too strong.

Follow-up: Student draw their tree and root.



Make a Tree

Students, in teams of three or four, make their own tree near the end of their study. Butcher paper is used to trace all tree parts, including: leaf canopy, branches, twigs, trunk, limb. leaf shapes, root pattern, tree shape.

Student teams start by use their bodies to trace the trunk of the tree in the middle of the butcher paper and then leaf canopy (arms and fingers) and lastly roots. (arms and fingers) Be sure to start in the middle so there is room for all parts of the tree.

Bark rubbings can be glued on and created leaves can be added and roots colored in. Animals and insects can be added as time permits.

Follow up: Tree, animal, insect, or birds plays can be created to high light new

knowledge and review learning.

Forest Forest: Technology write and draw lessons

Let's Write and Draw on the Computer!

Instructional Objectives:

Students will create an animal report page with drawing/illustrations using the Kid Pix Deluxe program or a like program.

More objectives are added as the year progresses and computer learning improves.

Estimated time: Four, twenty minute periods.

Students are divided into two groups. All students are rotated in pairs to work on the classroom computers (Kid Pix program), while the rest of the class works on hand illustrations and written reports. These writing times are four times a week for twenty minutes each.

Materials: Computer, Kid Pix Studio Deluxe program (or like program) and a storage device.

Vocabulary: (Building as knowledge builds), paint, draw, tool, tool bar, pencil, paintbrush, erase, eraser, fill, color, stamp, design, file, new, thicker, thinner, shapes, type, typewriter, paint bucket, bigger, larger, and medium.

Procedure:

Whole group for the first general lessons, then computer paired students.

Have the program open and running (Kids Pix).

- Point out the tool bar at the left of the screen and have students practice identifying and naming each tool button.
- Students are shown the typewriter button and a whole class demonstration animal report is created with teacher help.
- Students practice their own reports, rotating through the computer schedule.
- Students are shown how to click on the paintbrush vs. the pencil to draw with a thicker line which is easier for young students to control.
- Students learn how to use the erase tool.
- Students practice paintbrush and erase ring.
- Teach students to make a drawing using the color black and making sure that shapes are closed so that it will fill with color.

- Point out the color bar at the bottom of the screen and show the students how to select a color.
- Point out the "fill" tool button on the tool bar at the left. Liken this to a bucket of paint spilling.

Activities:

Have students practice on computer as often as possible.

Post student artwork on the classroom bulletin boards.

Students continue their reading together, choosing favorite Jan Brett and animal books and other favorite author books.

Students complete a Venn diagram (Worksheet D) for the assignment of compare and contrast two picture book stories.

Follow-up:

Students can practice the "Jan Brett art style" at home.

Check out from the classroom and/or school library Jan Brett and other author's books to read at home.

Team up computer partners so those students who grasp the concepts and draw ideas can share it with those students struggling with this program.

Forest Forest: Technology and web searching lesson

Surfing for More New Authors.

Objectives:

Students read, view and discuss a variety of identifiable author's writing and artistic styles and their books while visiting their web sites. These authors are compared to the body of works of other writers/illustrators and then are compared to Jan Brett. Students continue to review and learn progressively more about the computer and Internet.

Estimated time: Four, twenty minute sessions.

Materials:

Preset: Collect and read to students several picture books from other authors.

Collect a variety of authors and books for teacher discussion and demonstration.

Exceptional authors with good web sites include; Leo Lionni, Erza Jack Keats, Mem Fox, Tomie de Paolo, Eric Carle, Dr. Seuss, Grimm's Fairy Tales, Mercer Meyers, and the Magic School Bus series.

Web Sites:

[http:// janbrett.com](http://janbrett.com)

This is an exceptional web site full of down load able stories, pictures and activities for classroom use.

<http://www.seussville.com/>

This site is al things Dr Seuss.

<http://encarta.msn.com>

This web site, an extension of Encarta Encyclopedia, is a great starting place for animal and Biome facts.

<http://studyweb.com/>

This site is an extensive search engine for students and teacher. Put in any topic and you will be there.

<http://www.yahooligans.com>

This is the children's version of the search directory Yahoo!

<http://www.ask.com>

This ask any question site is a great starting place for information that is leveled for kids reading abilities.

Vocabulary: Computer, Internet, site, click, book marking, mouse, scroll down/up, URL, Web site, Picture Book author and illustrator, artist, realistic vs. abstract, borders, and design (composition, color and shape).

Procedure:

Whole Class

- Have the class sit where they can all view the computer.
- The teacher should have several picture books close by to compare and contrast pictures and stories they will find on selected authors and their web sites.
- Continue teaching/reviewing the parts of computer and Internet.
- Tell students that they will be visiting the Internet web site of several other authors like they did at the Jan Brett site. They may know or recognize several of these authors.
- Go to each site, browse and use links which will show this author's illustrations.
- Ask the students if it looks like a story book they have read recently. Hold up several books and compare and contrast the similarities between the web site and the books.
- As time permits read several articles and illustrated captions on the web site and have the class vote to download/print several of the author's activity sheets or puppets.

Assessment:

The students have achieved the objectives if they can say the author's name and simply compare what we saw on the web site and the differences between it and the classroom picture book. Technology learning is achieved if students can name several parts of the computer correctly and note the names of several Internet procedures.

Activities:

Students checkout classroom books and library books to read to each other or schedule times to read to a kindergartner.

Students read their animal reports to one another.

Follow up:

Students can finish their animal reports and drawings at home and then read their stories to family members.

Students can complete the Venn Diagram, worksheet D.

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