

Inquiry Based Outdoor Exploration

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Growing Up WILD, “Ants on Parade,” pp. 6, 7, 12, 13, 70, 97, 110

Opportunities within current curriculum to integrate lesson

Insect unit

Family or team unit: cooperation, working together, division of duties

Animal communication

Objectives:

Students will observe ant behavior to learn the characteristics of ants, how they find food, what food they prefer, how they tell other ants where the food is located, and how they take care of their colony.

Activity components: modifications are marked with an *

Preparation

Wild About Safety, p. 7

Tips for Teaching, p. 110

Arrangements for personnel assistance during outdoor exploration

Wild Wonderful Words, p. 12: write on cards; add head, legs*

Scientific Method, p. 6: write on flip chart or white board

Ask question, create hypothesis, plan experiment, observe & record, analyze data, draw conclusion

Materials, p. 12: follow guide in book, except for these modifications*

Magnifying lenses: use bug boxes or free-standing magnifiers for children having difficulty holding the lenses*

Ant’s Eye View, p. 13: insect eye kaleidoscopes

Add plates to record data (tallies and paths), one for each child or group*

Gallon Ziploc bags to enclose food plates during transportation*

Omit Compare Ants, p. 70*

Ant Journal (possibly in shape of ant) with at least five pages and cover for each student, writing and drawing utensils*

Ant Farm, p. 13: make own if possible

Thumbprint Ant Parade, p. 13: ink pads or washable markers

Ants on a Log, p. 13: pretzel logs, cream cheese, raisins

Resources: use throughout lesson

Quick Facts, p. 12 and Other Questions to Consider, p. 70

Audio CD, p. 12: *Songs About Insects, Bugs, and Squiggly Things*, by various artists, “Ants on Parade”

Websites, p. 12

Books: specific titles are mentioned throughout the lesson and in post learning activities

Guest speakers: science teacher, entomologist, or naturalist from County Conservation, Extension, or Public Health Services

Warm Up, p. 12: use as pre learning activities

Follow guide with questions, drawing, and review of Scientific Method

Students draw and label an ant on page one of Ant Journal*

Read *Hey, Little Ant*, by Phillip M. & Hannah Hoose, non-fiction

Text has song lyrics about treating insects carefully

Play Audio CD, p. 12: *Songs About Insects, Bugs, and Squiggly Things*, by various artists, “Ants on Parade”

Procedure, pp.12 & 13:

Step 1: Follow guide, and add activities*

Write question and hypothesis on flip chart*

Graph predictions (see *Mighty Math*, p. 13)

Students write/draw own prediction on page two of *Ant Journal**

Prepare data plate for each plate of food or for each child*

Write test plan on chart*

Outdoor Exploration: steps 2 & 3, possibly steps 4, 5, & 6

Location: scouted areas with ants on school grounds or nearby park

Preparation:

Wild About Safety, p. 7: weather, clothing, safety supplies

Healthy Me! p. 13

Helping Hands, p. 13

Tips for Teachers, p. 110

Assistance by parents, associate, or older students

Assistance for children with disabilities (sight, mobility) or allergies

Guest speaker with knowledge about ants

Materials: food plates in gallon Ziploc bags, data plates, pencils,

magnifiers, camera, safety supplies, insect eye

kaleidoscopes, and possibly supplies for steps 4, 5, & 6

Step 2: as is, students use magnifiers, photographer takes photos*

Step 3: as is, except students record data on data plates*

Students make tally marks to count ants in each quadrant

Students draw lines to show established ant paths*

Step 4: as is, except add these activities*

Record data on chart and page 3 of *Ant Journals**

Graph results (see *Mighty Math*, p. 13)

Analyze data with questions (record answers on chart*)

Write conclusion on chart* and on page 4 of *Ant Journals**

Questions to encourage student investigation:

Which food do ants most like to eat? Was our hypothesis correct?

How do ants' bodies look?

How do they move before finding food and after finding food?

How do they tell each other where food can be found? (see *Quick*

Facts, p. 12: antennae, pheromones)

Describe what you saw happening in the ant colony.

Wrap Up, p. 12, #1: Describe and demonstrate the most interesting thing you saw an ant do during your observations. Possibly follow plan for *Take Me Outside!* on p. 12

Step 5: Read *Ants*, by Jenny Vaughan, Non-Fiction

Ant anatomy, behavior, and colony life

Refer to information in *Quick Facts*, p. 12, and *Other Questions to Consider*, p. 70

Write ant facts on flip chart*

Refer to *Wild Wonderful Words*, p. 12

Step 6: Sing "Head, Thorax, Abdomen," p. 13

Sing in groups of three (see first part of *Marching Ants*, p. 13)

Wrap Up, #2, p. 12:

Compare first ant drawings to what we know now.

If we would draw another picture, would it be different? How?

Ant Journals, p. 5: students do final drawing of an ant doing an interesting thing

or doing its work in the colony

Thumbprint Ant Parade, p. 13: stamp an ant parade from front cover, throughout pages, and onto back cover of Ant Journal*

Snack, p. 13: spread cream cheese on pretzel log, then put a row of raisins on top

Post Learning Activities

Ant's Eye View, p. 13

Ant Farm, p. 13: journal observations

Home Connections, pp. 13 & 97

Audio CD, p. 12: Songs About Insects, Bugs, and Squiggly Things, by various artists, "Ants on Parade"

Munching Mouths: learn about ants' jaws by using pliers or tweezers to pick up raisins or M & Ms*

"Ants Go Marching One by One" with Marching Ants, p. 13

"Over in the Meadow," p. 96: make up a verse about ants*

Take Me Outside: make pipe cleaner antennae on tag board headbands*

Quick Facts, p. 12 and Questions to Consider, p. 70: further investigation

Ants' four-stage life cycle

Importance of ants to the earth

Strength of ants compared to strength of humans

Types of ants

Literature, pp. 12 & 112:

Very First Things to Know About Ants, by Patricia Grossman

Non-Fiction, basic facts of an ant's life

If I Were An Ant, by Amy Moses, fiction, ant's point of view

Two Bad Ants, by Chris Van Allsburg, fiction, adventure of two ants

The Ant and the Grasshopper, by Amy Lowry Poole

Fiction, a retelling of an Aesop's fable about ants

Favorite Poems Old and New, by Helen Ferris:

"The Ant Village," by Marion Edey and Dorothy Grider

The Random House Book of Poetry for Children, selected by Jack

Prelutsky:

"Ants, Although Admirable, Are Awfully Aggravating," by

Walter R. Brooks

Documentation/Assessment: discussion, use of vocabulary, information on flip chart, ant journals, data, graph, photos

Head Start Domains:

1A1, 1A3, 1B1, 1B3, 2A3, 2B1, 2D1, 2D2, 3A1, 3A5, 3B1, 3C1, 4A, 4B1, 4B2, 4B4, 5A1, 5B1, 5B2, 5C2, 5D1, 5D2, 6C1, 7A1, 7A4, 7B, 7C2, 7C3, 8A3, 8C4