Amazing Bugs®

Earth's Birthday Project

Ants!

Volume 1

TEACHER'S GUIDE

Introduction

Overview

- Make a big "Ant Tunnel Map" of your ant habitat. Students observe ants, record data on smaller maps, count, add, measure, draw, label, and write about ants. Close by stapling work into "My Ant Book" and sending it home.

Time

- 30-60 minutes teacher prep; 2 to 3 hours class time over 14 days; brief daily observation.

Purpose

- Inspire increased interest in science and allow students multiple opportunities to practice skills measured by science and mathematics benchmarks.

National Science Standards and Math Focal Points for Grade 1

- Science Standards: Abilities necessary to do scientific inquiry (observation, prediction, data collection, and quantification); characteristics and behaviors of organisms
- Math Focal Points: ...strengthen sense of number by solving problems involving measurements and data; measuring by...counting units.

Teacher Prep

Copy pages H2 and H3 for each student; hang "Ant Tunnel Map" near your live ants in a place where it will be convenient to draw tunnels. Read this 2-page guide. Schedule activities.

Challenge—Get Started

Time: 15-20 minutes

Materials: "My Ant Book" cover for each student

Optional: Make the challenge more fun and practice predicting with the "Predict-Count-Compare" handout, online at www.earthsbirthday.org/hos/ants/.

- Ant Data: This practice lesson prepares students to collect data from live ants. On the back cover of "My Ant Book," count the number of ants in the house, "on top" and "in the tunnels." Add the numbers together to find the total number of ants in the ant house.
- Challenge: Then count all the ants on both the front and back covers. How many ants are in the house? How many ants are outside the house? How many ants are there altogether?
- **Key: There are 14 ants in the tunnels and 6 on top. There are 20 ants in the house; 91 outside the house, and 111 altogether (not counting the big one).**

Additional Activity: Read **"10 Big Ant Facts"** (on the back of the "Ant!" poster). Have students write facts on your board or flip tablet.

Ant Tunnels Map—Observe and Count

Time: 5-10 minutes per day, several days (a fun activity for your morning circle)

Materials: Plastic grid, "Ant Tunnels Map," paper, pencils, and crayons or markers

- When ants have started tunneling, **tape the plastic grid onto the front of the habitat.** This grid matches the grid on the "Ant Tunnel Map" and on handout 1 (Ant Data).

- As ants make tunnels in the real habitat, draw the tunnels on the poster. Use a pencil. Explain to students that the grid shows you where to draw tunnels and how long to make them. Demonstrate counting squares to pinpoint the right locations.
- Draw the ants' "garbage pile." What's in the pile? How big is it today? Is it growing? Are there any dead ants in the house? Where are they? How do you know they're dead? (**Note: Worker ants have natural life spans of three to six weeks.**)
- Work together to draw, color, and cut out 20 pictures of ants (or print a sheet at www.earthsbirthday.org/hos/ants/). Use masking tape to stick ants onto tunnels.
- Encourage students to move the paper ants frequently, placing them on the map wherever live ants are in the habitat. Replace tape as necessary.

Optional: Consider laminating the map and drawing tunnels with marker. When the map is complete (in about two weeks), color the spaces around the tunnels blue.

Ant Data—Count, Add, and Map

Time: Two or three 30-minute sessions on different days.

Materials: "Ant Data" sheet for each student, "Ant Tunnel Map"

- Invite students to compare the ant house with the big map. How many squares high is the house? How many squares wide? How many squares deep is the deepest tunnel?
- Instruct students to make smaller drawings on their data sheets. Start by drawing a line across the house to show where "on top" is. Count the number of squares from the top of the house to the top of the gel.
- When students have drawn tunnels, take turns looking to see where the live ants are. How many are in the tunnels? How many are on top? Have students draw ants in the tunnels and on top. How many ants are in the house?
- **Repeat this activity two or three times**, until your ants stop making new tunnels.
- Was the number of ants in the house always the same? Or did it change? How did it change? Why did it change?

Ant Math: How many tunnels did your ants make? Encourage students to use the squares on the grid to **measure the lengths of tunnels and record the numbers** next to the tunnels in their drawings.

Ant Anatomy—Color, Count, and Label

Time: 20-30 minutes

Materials: Copy of "Ant Anatomy" (handout 2) for each student, "Ant Anatomy" poster, crayons or markers, pencils

- Look at the poster together. Then color "Ant Anatomy" and write labels. Encourage students to **look closely at live ants**. How many legs? Antennas? What about hairs?

All About Ants—Draw and Write

Time: 30-35 minutes (optional: 10 minutes teacher prep)

Materials: Copy of "All About Ants" for each student, pencils, crayons or markers

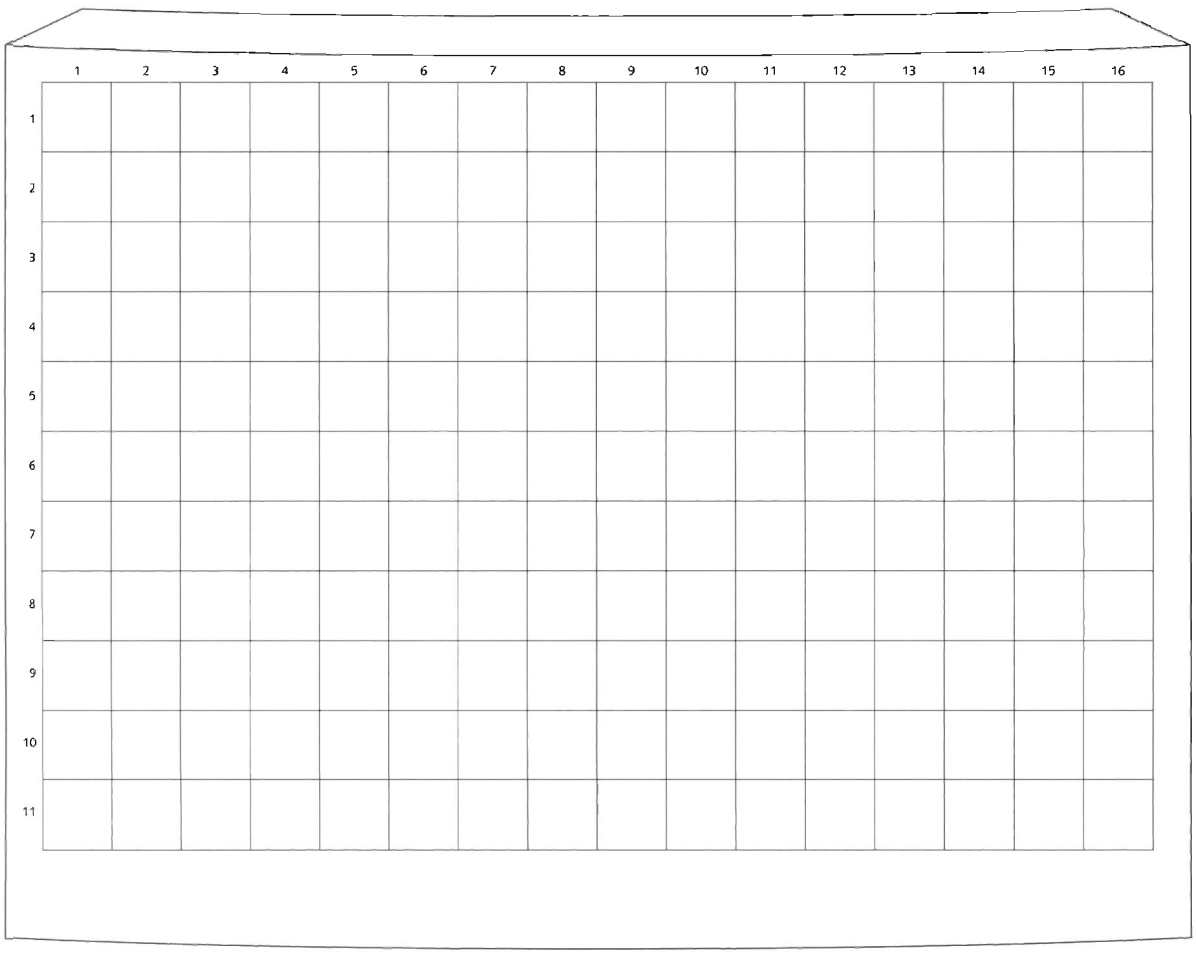
Optional Prep: Write "10 Big Ant Facts" on your board or flip chart.

- Students **draw** a picture of an ant or of ants in the ant house and **write** three or more things they know about ants on the lines below.

Web Connection MORE FREE amazing ant activities, handouts, and word-wall list at **www.earthsbirthday.org/butterflies/ants/webhunts2-3.asp**

Name _____ Date _____

ANT DATA



Look closely. What do you see in the ant house?

Draw the tunnels. Then draw the ants in the tunnels.

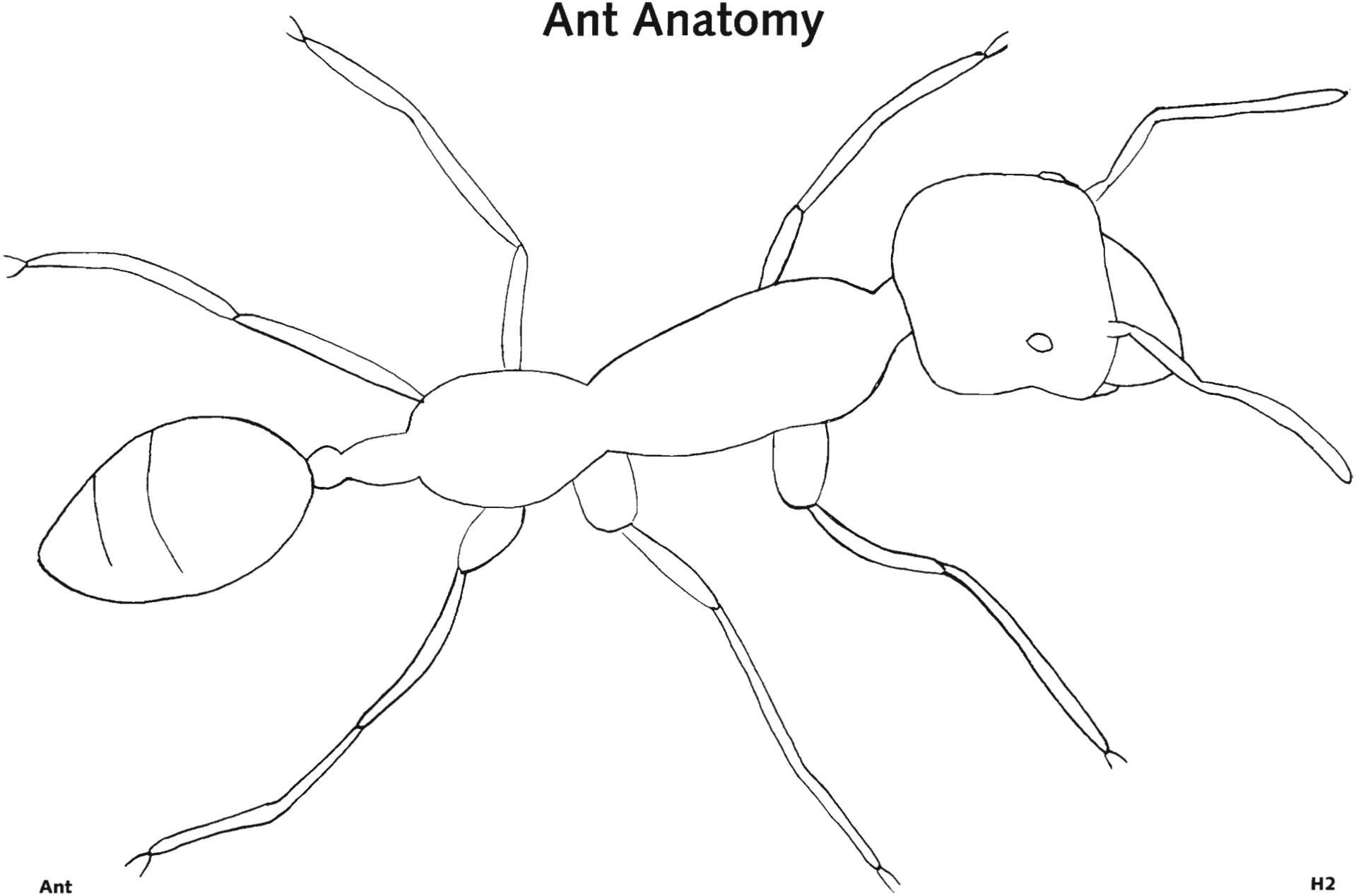
How many ants are on top? _____

How many ants are in the tunnels? + _____

How many ants are in the house? _____

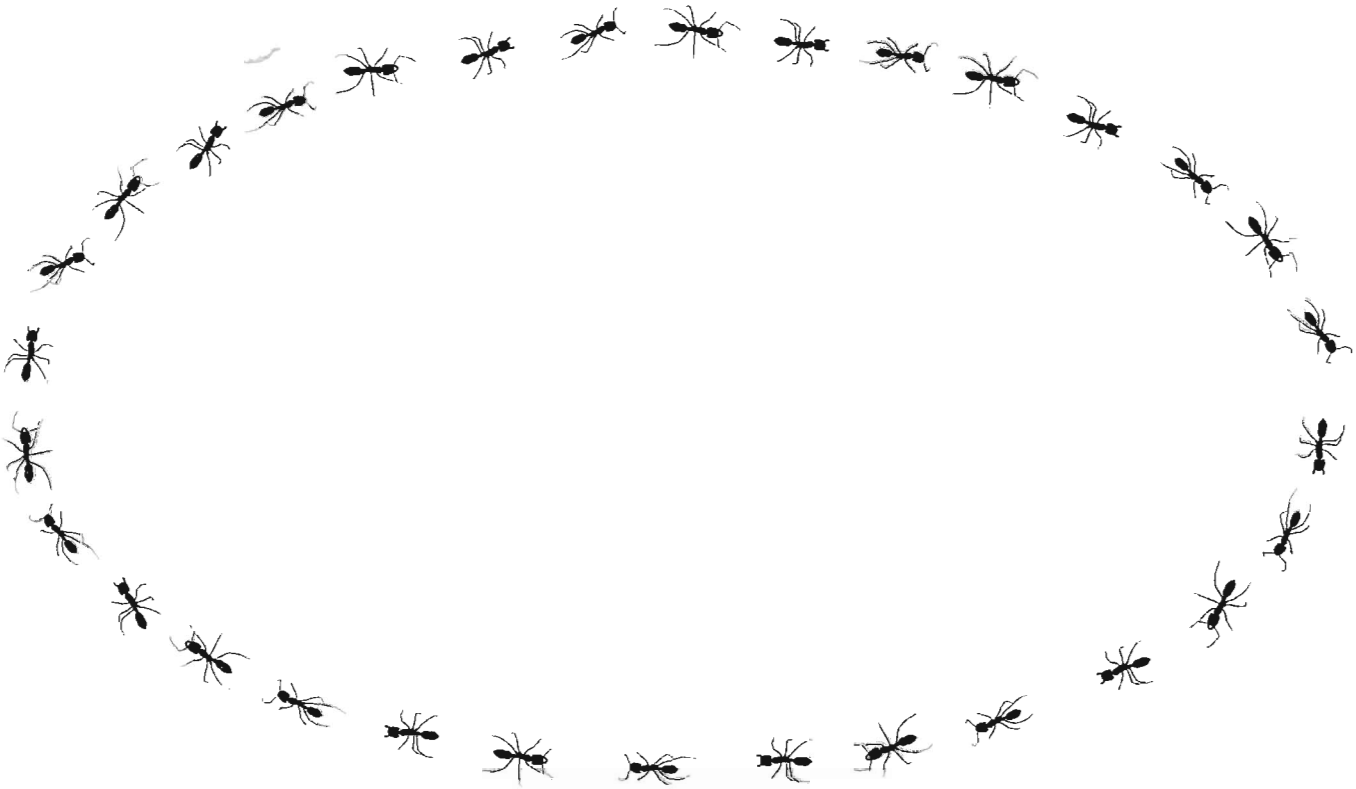
Name _____ Date _____

Ant Anatomy



Name _____ Date _____

All About Ants



Amazing Bugs®

Earth's Birthday Project

My Ant Book

with pictures and words by

_____

© Photo: Alex Wild

Ant Data

Some of the ants are on top and some are in the tunnels.

How many ants are on top? _____

How many ants are in the tunnels? + _____

How many ants are in the house? _____

Challenge How many ants are on the front and back covers of your book? _____