

# Nature Journal

Nature in the Classroom

Slater Museum of Natural History  
University of Puget Sound  
Thompson Hall Room 295  
1500 N Warner St  
Tacoma, Washington 98416

Name: \_\_\_\_\_

School: \_\_\_\_\_ Grade: \_\_\_\_\_

Start date: \_\_\_\_\_ End date: \_\_\_\_\_

# Table of Contents

Page 3	Lesson 1: Nature Journals—Naturalists-in-Training
Page 7	Lesson 2: Urban Bird Diversity—Birdiversity!
Page 11	Lesson 3: Tooth Sleuth—Mammal Puzzler
Page 15	Personal Nature Journal Pages

*The curriculum and journal were authored by Kathryn True and Slater Museum of Natural History staff. The Slater Museum of Natural History's goals are to preserve and provide a collection of specimens to be used for research, education and inspiration. The museum houses one of the largest collections of Pacific Northwest bird, mammal, reptile, amphibian and plant specimens. We appreciate the support of the Institute of Museum and Library Services and Wells Fargo Foundation in the development of these materials.*

# Lesson 1:

## Nature Journals—Naturalists-in-Training

### Goal

Students will hone their powers of observation and develop their naturalist skills using their senses and the tools provided.

**Write the definition of the following vocabulary words:**

**Specimen:** \_\_\_\_\_

\_\_\_\_\_

**Naturalist:** \_\_\_\_\_

\_\_\_\_\_

**Lesson 1: Nature Journals–Naturalists-in-Training**  
**Specimen Observation**

Describe your specimen in detail using the four senses as demonstrated. What shapes, sizes, and colors do you see? What does it smell like? Does it make any sounds? What textures can you feel? Look at it closely from all angles—does its shape remind you of any other object? Have you seen anything like it before? Using complete sentences, write at least one observation for each of the four senses.

**Observations using my sense of...**

Sight:

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Smell:

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Touch:

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Hearing:

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**Lesson 1: Nature Journals–Naturalists-in-Training**  
**Scientific Sketching**

Draw your specimen in the first box. In the second box, draw how it looks under magnification or from a different angle. Fill up as much of the space inside the boxes as possible.

What is always included in a scientific sketch?

1. \_\_\_\_\_

3. \_\_\_\_\_

2. \_\_\_\_\_

4. \_\_\_\_\_

Figure 1. Sketch of specimen

Figure 2. Specimen magnified or from a different angle

**Lesson 1: Nature Journals–Naturalists-in-Training**  
**Specimen Hypothesis**

*A **hypothesis** is a prediction or suggested explanation for an observation or scientific problem that can be tested by further investigation. A hypothesis always includes a reason for the prediction.*

Write a hypothesis about your specimen. Your hypothesis can be about anything about your specimen, but here are some examples of what to focus on:

What is it and where do you think it could be found? Give a reason.

How did it get there? Give a reason.

What was it used for? Give a reason.

Was it part of an animal or plant—if so, what kind, and how did it “lose” this part of itself? Give a reason.

**My hypothesis:**

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**My specimen is:** \_\_\_\_\_

**My favorite fact that I learned about my specimen is:**

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## **Lesson 2: Urban Bird Diversity—Birdiversity!**

### **Goal**

Students will compare beaks and feet of bird specimens to understand how adaptations allow birds to get different foods and live in a variety of habitats.

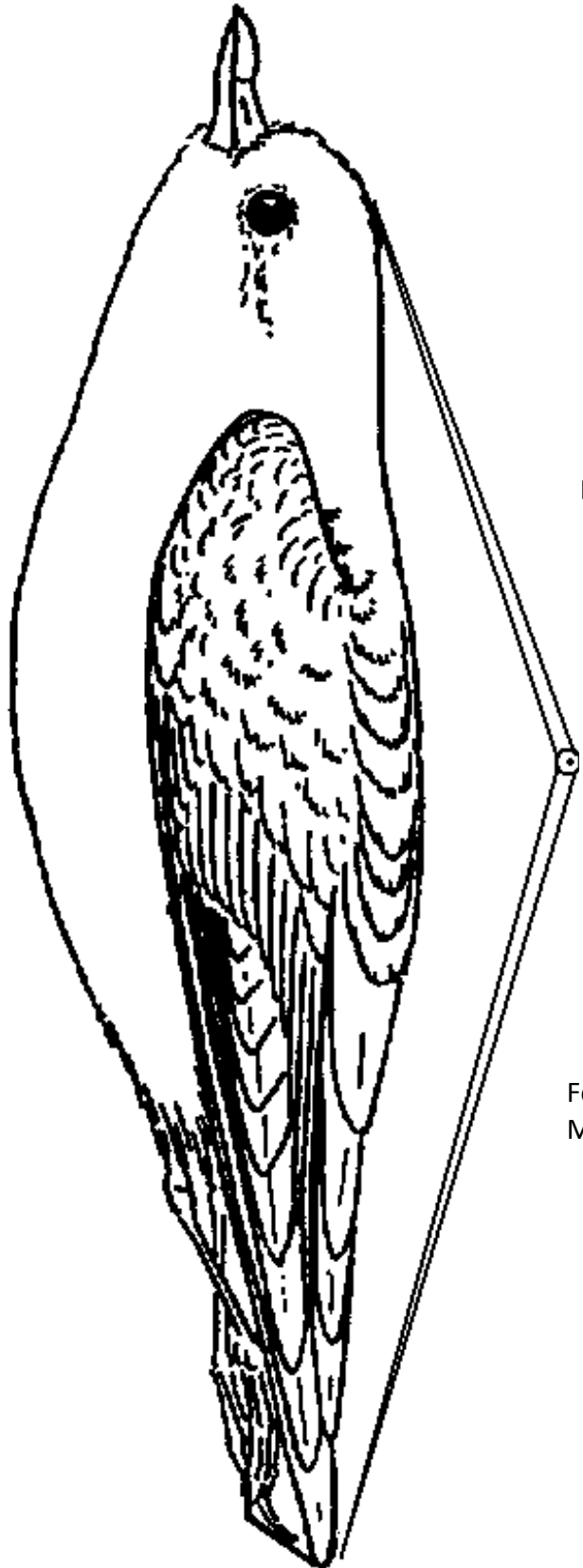
**What are some things that birds might eat?**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

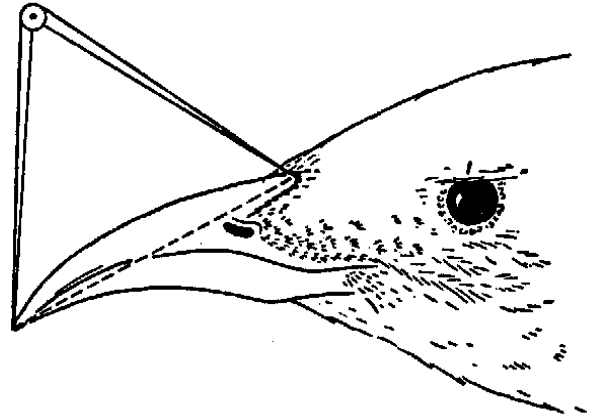
**What are some habitats that birds might live in?**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

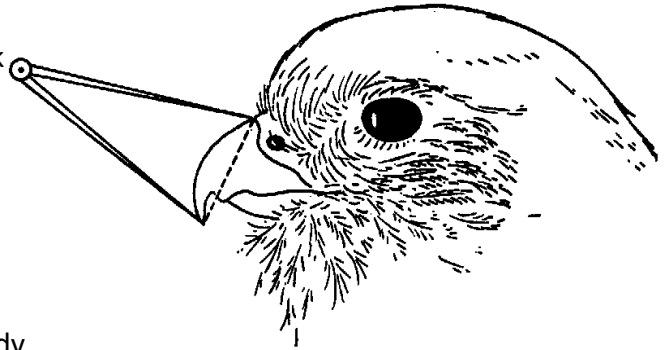
Lesson 2: Urban Bird Diversity—Birdiversity!  
Bird Measuring Guide



Length of Beak

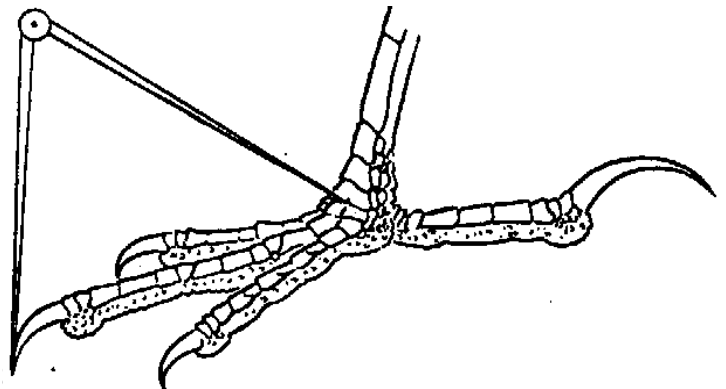


Length of Beak



Length of Body

Foot Measurement: Length of Middle Toe





**Lesson 2: Urban Bird Diversity—Birdiversity!**  
**Bird Specimen Data and Hypothesis**

**Specimen #** \_\_\_\_\_ (fill in number shown on bird specimen tag)

**Measurements and Tool Types (from Beaks and Feet Background Sheet)**

Measure your bird as shown on the previous page. Using the Beaks and Feet Background Sheet, write the beak and foot type from that matches your bird. If your bird does not fit one of the tool types, write in a tool that the beak/feet reminds you of.

Beak length: \_\_\_\_\_ centimeters                      Beak type: \_\_\_\_\_

Body length: \_\_\_\_\_ centimeters

Foot length: \_\_\_\_\_ centimeters                      Foot type: \_\_\_\_\_

**Sketches**

<i>Beak</i>	<i>Foot</i>

Using the Beaks and Feet Background Sheet, write a hypothesis about what your bird eats or what type of habitat your bird lives in. Be sure to give a reason!

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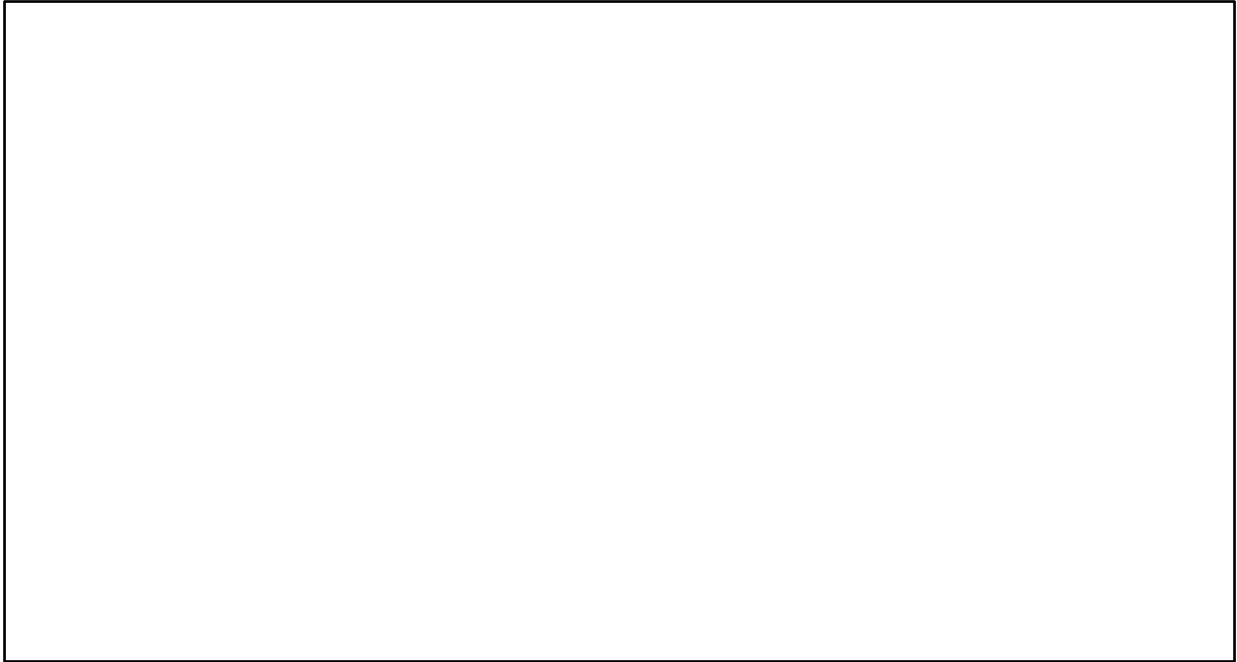
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**Lesson 2: Urban Bird Diversity—Birdiversity!**  
**Bird Specimen Facts**

Now that you have written a hypothesis about your bird, draw your bird in the habitat that you think it lives in. Don't forget to include the food that you think it eats!



After using the fact card or field guide to learn more about your bird, check to see if your hypothesis was correct and fill in the sections below:

**My bird is a:** \_\_\_\_\_

Three facts about my bird:

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

## **Lesson 3:**

# **Tooth Sleuth—Mammal Puzzler**

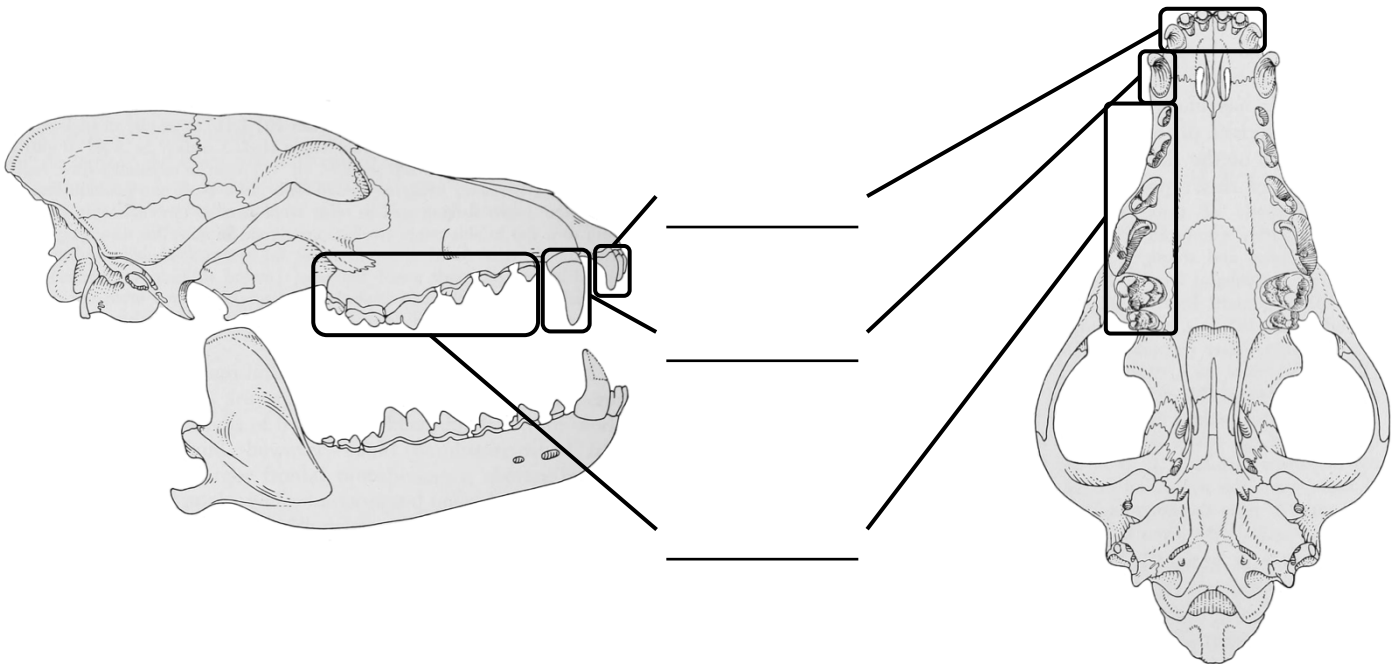
### **Goal**

Students will use a dichotomous key to identify a mammal skull, and learn that teeth provide information about whether the animal is a carnivore or herbivore. Observing the different types of teeth and their different uses, students will notice how structure relates to function.

**What do most mammals have that other animals don't have?**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Lesson 3: Tooth Sleuth—Mammal Puzzler**  
**Tooth Type Diagram**

**Lesson 3: Tooth Sleuth–Mammal Puzzler**  
**Skull Observations**

By observing the teeth and skull characteristics, do you think your skull belongs to a carnivore or herbivore, and why? What sort of food do you think this animal eats?

*Our hypothesis:*

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Sketches of teeth and skull:

Sketch and label the different kinds of teeth you observe, then sketch the entire skull. *Your animal may not have all of the types of teeth.* Remember to include all the parts of a scientific sketch!

Incisor	Canine	Molar
Skull		

**Lesson 3: Tooth Sleuth–Mammal Puzzler**  
**Identifying your Skull**

Use the dichotomous key to identify what species your mammal skull belongs to by measuring the skull, observing its shape, and counting the different types of teeth.

**Skull #** \_\_\_\_\_

*After using the dichotomous key, what animal did you determine the skull to be from?*

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Once you have identified your first skull, continue to identify as many skulls as you can. Remember that we are not identifying any omnivores because their teeth look similar to carnivores, so we will focus on whether the animal is *mainly* carnivorous or herbivorous.

**Skull #** \_\_\_\_\_

*After using the dichotomous key, what animal did you determine the skull to be from?*

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*Is the animal mainly an herbivore or a carnivore? Why?*

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**Skull #** \_\_\_\_\_

*After using the dichotomous key, what animal did you determine the skull to be from?*

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*Is the animal mainly an herbivore or a carnivore? Why?*

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*After using the dichotomous key, what animal did you determine the skull to be from?*

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*Is the animal mainly an herbivore or a carnivore? Why?*

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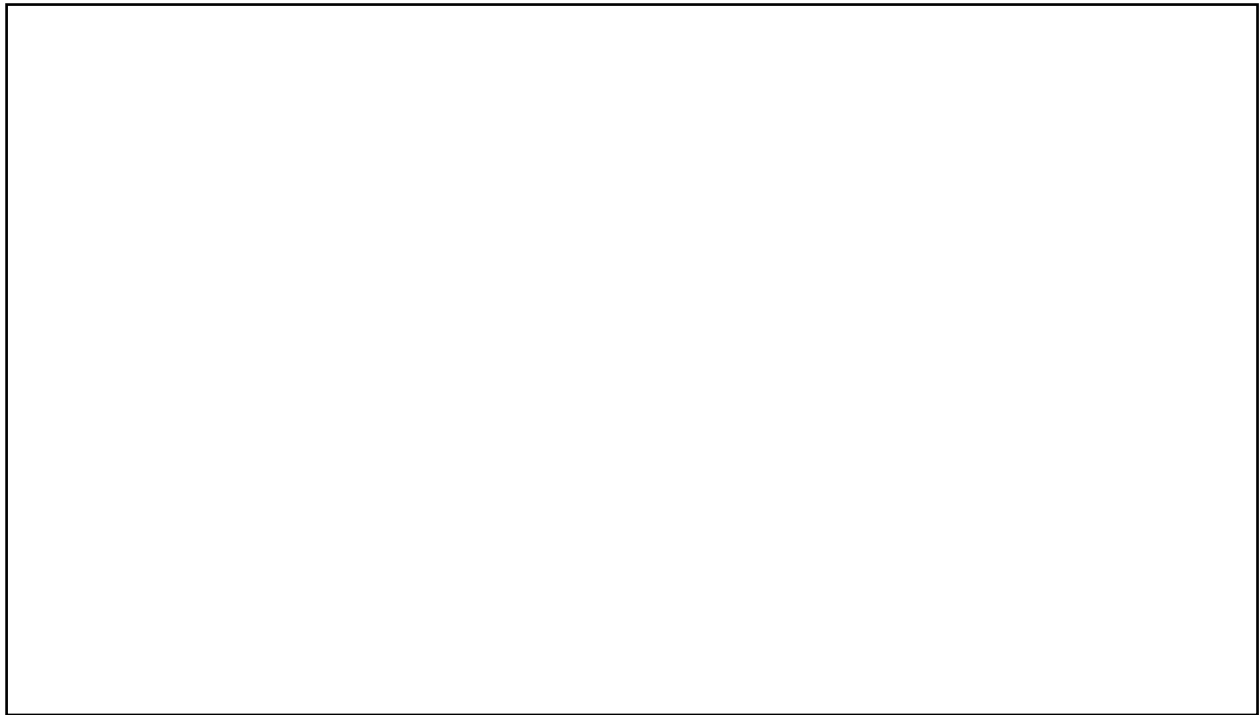
## Observation Pages

On the remaining pages you can practice your naturalist skills. For each journal entry, begin by writing down the date and time, location and weather. Sketch, write, doodle and explore!

Date and Time: \_\_\_\_\_

Location: \_\_\_\_\_

Weather: \_\_\_\_\_



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Date and Time: \_\_\_\_\_

Location: \_\_\_\_\_

Weather: \_\_\_\_\_



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Date and Time: \_\_\_\_\_

Location: \_\_\_\_\_

Weather: \_\_\_\_\_



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Date and Time: \_\_\_\_\_

Location: \_\_\_\_\_

Weather: \_\_\_\_\_



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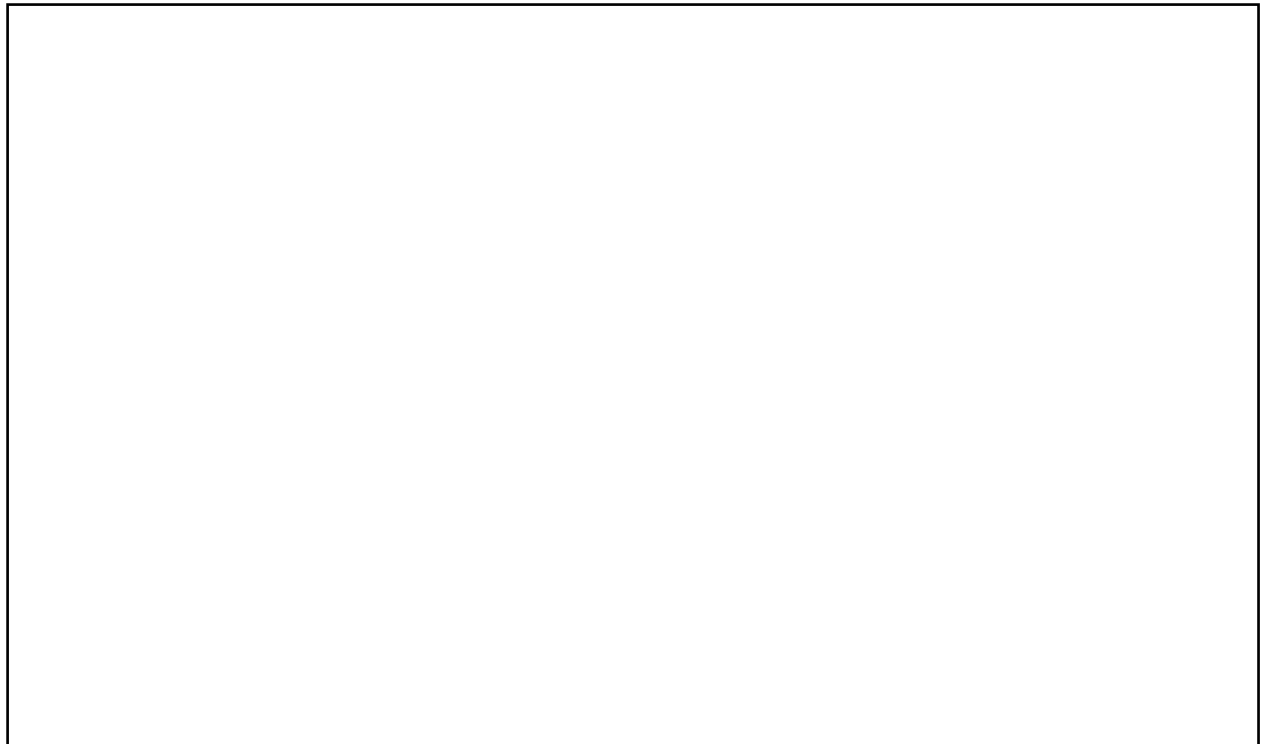
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Date and Time: \_\_\_\_\_

Location: \_\_\_\_\_

Weather: \_\_\_\_\_



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