Hokey Pokey: Music Meets Science Worksheet

**Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
**Date:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
**Class:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Section 1: Understanding Musical Notes and Patterns**

**1. Identifying Musical Notes**

Using the song **“Hokey Pokey”**, answer the following questions:

a) What are the **basic musical notes** mentioned in the worksheet?

b) What does the number **4** indicate when written next to a musical note?

c) How many **octaves** are there on a standard piano?

d) What is the **first and last note** on an 88-key piano?

e) What is **middle C** referred to as in musical notation?

**Section 2: Converting Music Notes to Python Frequencies**

**2.1. Understanding Note Patterns**

Look at the following musical notation and describe the pattern you see.

**Example Notation:**

* C4 QUARTER
* D4 HALF
* F4 EIGHTH

a) What does “QUARTER” represent in terms of beat duration?

b) How do you interpret the number after the note (e.g., C4)?

c) Try to write a pattern for the next set of notes in **Hokey Pokey**:

**Section 3: Hands-on Music and Coding**

**3.1. Convert Music Notes into Python Code**

Find a **beginner-level piano music sheet** of “Hokey Pokey” and use the following steps:

1. **Download** or **take a screenshot** of the music sheet.
2. **Convert** the notes into Python Note Frequencies.
3. **Write a Python code** to store the musical notes using variables.

**Example Python Code:**

Note\_C4 = 261.63 # Frequency for Middle C

Note\_D4 = 293.66

Note\_F4 = 349.23

Now, write your own code snippet for another section of the song:

# Write your code here

**Section 4: Reflection and Analysis**

**4.1. Observing Musical Patterns**

a) What patterns do you see in the conversion of musical notes to code?

b) How does programming relate to music?

c) Why do you think we use **octaves** to classify musical notes?

**Conclusion:**

This worksheet explores the **intersection of music and science**, helping you learn how to **translate musical notes into coding sequences**. Keep practicing and experiment with different songs to enhance your understanding!