couldn’t figure out how to get RMarkdown to work on my computer, so I copied and pasted my script into Word instead…

instal packages (if needed)

install.packages("tidyverse")

install.packages("lubridate")

install.packages("readr")

load libraries

library(tidyverse)

library(readr)

library(lubridate)

#read in preliminary data

preliminary_data <- read_csv("_data/preliminary_data.csv")

View(preliminary_data)

##

Explore data

show structure of data set

str(preliminary_data)

Check what variables are included in the dataset:

names(preliminary_data)

Sumarize all variables:

```
summary(preliminary_data)


# Look at the first 6 rows of the dataset:

head(preliminary_data)


# Check if there are any missing values:

summary(is.na(preliminary_data))


#rename thermo-temperature column

names(preliminary_data) <- c("date",
"individual","time","pos_beh","context","substrate","hab_type","sun","therm_t","t_lo","t_hi")

names(preliminary_data)


################################################################################################
#########


# Change "Os" (out of sight) to "NA"

preliminary_data$pos_beh[preliminary_data$pos_beh == "Os"] <- "NA"

preliminary_data$context[preliminary_data$context == "Os"] <- "NA"

preliminary_data$substrate[preliminary_data$substrate == "Os"] <- "NA"

preliminary_data$hab_type[preliminary_data$hab_type == "Os"] <- "NA"

preliminary_data$sun[preliminary_data$sun == "Os"] <- "NA"

preliminary_data$therm_t[preliminary_data$therm_t == "Os"] <- "NA"

preliminary_data$t_lo[preliminary_data$t_lo == "Os"] <- "NA"

preliminary_data$t_hi[preliminary_data$t_hi == "Os"] <- "NA"

preliminary_data



#### Fix capitalization ####
```

```
## positional behavior
preliminary_data$pos_beh[preliminary_data$pos_beh == "st"] <- "St"
preliminary_data$pos_beh[preliminary_data$pos_beh == "ST"] <- "St"
preliminary_data$pos_beh[preliminary_data$pos_beh == "ABp"] <- "Abp"
preliminary_data$pos_beh[preliminary_data$pos_beh == "ABpW"] <- "Abp"
preliminary_data$pos_beh[preliminary_data$pos_beh == "Bp"] <- "BpS"
preliminary_data$pos_beh[preliminary_data$pos_beh == "SBp"] <- "BpS"
preliminary_data$pos_beh[preliminary_data$pos_beh == "qw"] <- "QW"
preliminary_data$pos_beh[preliminary_data$pos_beh == "Qw"] <- "QW"

## context
preliminary_data$context[preliminary_data$context == "FO"] <- "Fo"
preliminary_data$context[preliminary_data$context == "fo"] <- "Fo"
preliminary_data$context[preliminary_data$context == "TV"] <- "Tv"
preliminary_data$context[preliminary_data$context == "tv"] <- "Tv"
preliminary_data$context[preliminary_data$context == "SO"] <- "So"
preliminary_data$context[preliminary_data$context == "so"] <- "So"
preliminary_data$context[preliminary_data$context == "re"] <- "RE"
preliminary_data$context[preliminary_data$context == "Re"] <- "RE"

## substrate
preliminary_data$substrate[preliminary_data$substrate == "t"] <- "T"
preliminary_data$substrate[preliminary_data$substrate == "a"] <- "A"
preliminary_data$substrate[preliminary_data$substrate == "W/T"] <- "W"
preliminary_data$substrate[preliminary_data$substrate == "T/W"] <- "W"

## habitat type
preliminary_data$hab_type[preliminary_data$hab_type == "wd"] <- "WD"
```

```
preliminary_data$hab_type[preliminary_data$hab_type == "Wd"] <- "WD"
preliminary_data$hab_type[preliminary_data$hab_type == "Gl"] <- "GL"
preliminary_data$hab_type[preliminary_data$hab_type == "gl"] <- "GL"
preliminary_data$hab_type[preliminary_data$hab_type == "Bm"] <- "BM"
preliminary_data$hab_type[preliminary_data$hab_type == "bm"] <- "BM"
preliminary_data$hab_type[preliminary_data$hab_type == "ga"] <- "GA"
preliminary_data$hab_type[preliminary_data$hab_type == "Ga"] <- "GA"

## Individual Names
preliminary_data$individual <- as.character(preliminary_data$individual)
preliminary_data$individual[preliminary_data$individual == "Lp"] <- "LP"
preliminary_data$individual[preliminary_data$individual == "Bi"] <- "BI"
preliminary_data$individual[preliminary_data$individual == "Si"] <- "SI"
preliminary_data$individual[preliminary_data$individual == "Kl"] <- "KL"
preliminary_data$individual[preliminary_data$individual == "Jm"] <- "JM"
preliminary_data$individual[preliminary_data$individual == "Dw"] <- "DW"
preliminary_data$individual[preliminary_data$individual == "Bo"] <- "BO"
preliminary_data$individual[preliminary_data$individual == "Lx"] <- "LX"
preliminary_data$individual[preliminary_data$individual == "Lu"] <- "LU"
preliminary_data$individual[preliminary_data$individual == "Mi"] <- "MI"
preliminary_data$individual[preliminary_data$individual == "Df"] <- "DF"

################################################################################

## Change to factor and numeric
factor_cols <- c("pos_beh","context", "substrate", "hab_type", "individual")
numeric_cols <- c("sun", "therm_t", "t_lo", "t_hi")
preliminary_data[factor_cols] <- lapply(preliminary_data[factor_cols], as.factor)
preliminary_data[numeric_cols] <- lapply(preliminary_data[numeric_cols], as.numeric)
```

```
str(preliminary_data)


#Re-name

preliminary_data2 <- preliminary_data

View(preliminary_data2)

################################################################################


#Add time of day column

preliminary_data2$time_od <- NA


preliminary_data2$time_od[preliminary_data2$time <= 32400] <- "e_morning"

preliminary_data2$time_od[preliminary_data2$time > 32400 & preliminary_data2$time <= 43200] <-
"l_morning"

preliminary_data2$time_od[preliminary_data2$time > 43200 & preliminary_data2$time <= 50400] <-
"e_afternoon"

preliminary_data2$time_od[preliminary_data2$time > 50400 & preliminary_data2$time < 61200] <-
"l_afternoon"

preliminary_data2$time_od[preliminary_data2$time >= 61200] <- "evening"

preliminary_data2$time_od <- factor(preliminary_data2$time_od, levels = c("e_morning", "l_morning",
"e_afternoon", "l_afternoon", "evening"))

levels(preliminary_data2$time_od)


#create tidy database for analysis

write.csv(preliminary_data2, "C:/Users/nw185_000/Documents/Iowa/Dissertation/Data/individual-
project-nwackerly/_data/_tidy/prelim_data_tidycols.csv", row.names=F)
```