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| **Block** | **R Code** | **Process Code** |
| 1 | names(RPMA2Growth) | inspect data |
| 2 | early <- subset(RPMA2Growth, StockYear < 2006) | filter data, relational statement, create new dataframe |
| 2 | mid <- subset(RPMA2Growth, StockYear < 2014 & StockYear > 2003) | filter data, relational statement, joined by logical (&), create new dataframe |
| 2 | RPMA2GrowthSub <- transform(RPMA2Growth, Age = as.integer(Age)) | transform to dataframe, mutate existing variable to integer, create new dataframe |
| 2 | Early <- subset(RPMA2GrowthSub, StockYear < 2004) | filter data, relational statement, create new dataframe |
| 2 | Mid <- subset(RPMA2GrowthSub, StockYear < 2018 & StockYear > 2005) | filter data, relational statement, joined by logical (&), create new dataframe |
| 3 | EarlyWeightAge <- ddply(Early, ~Age, summarise, meanWE=mean(Weight, na.rm = T)) | data summary (mean) or variable by groups of another variable, create a new dataframe |
| 3 | EarlyLengthAge <- ddply(Early, ~Age, summarise, meanLE = mean(ForkLength, na.rm = T)) | data summary (mean) or variable by groups of another variable, create a new dataframe |
| 3 | MidLengthAge <- ddply(Mid, ~Age, summarise, meanLM = mean(ForkLength, na.rm = T)) | data summary (mean) or variable by groups of another variable, create a new dataframe |
| 4 | WeightChange <- rep(NA, 9) | create variable |
| 5 | library(plyr) | load package |
| 5 | WeightAge <- ddply(RPMA2GrowthSub, ~Age, summarise, meanW=mean(Weight, na.rm = T)) | data summary (mean) or variable by groups of another variable, create a new dataframe |
| 5 | LengthAge <- ddply(RPMA2GrowthSub, ~Age, summarise, meanL=mean(ForkLength, na.rm = T)) | data summary (mean) or variable by groups of another variable, create a new dataframe |
| 6 (new) | plot(EarlyLengthAge$meanLE ~ EarlyLengthAge$Age, las = 1, ylab = "Fork Length (mm)", xlab = "Age") | scatterplot of variables, change axis labels |
| 6 (new) | lines(EarlyLengthAge$meanLE ~ EarlyLengthAge$Age) | add a line to points on scatterplot |
| 6 (new) | points(MidLengthAge$meanLM ~ MidLengthAge$Age, col = "red") | ad additional points to plot, change color of new points |
| 6 (new) | lines(MidLengthAge$meanLM ~ MidLengthAge$Age, col = "red") | add a line to additional points, change color of line |
| 6 (new) | legend(15, 600, legend = c("1998-2003", "2006-2017"), col = c("black", "red"), lty = 1:1, cex = 0.8) | add legend to plot, position legend, text to display in legend, colors to display with text, types of lines to display, thickness of lines displayed |
| 7 | #Tanner's code/help | comment on who’s code is being used |
| 7 | WeightChange <- rep(NA, 9) | create new variable |
| 7 | library(plyr) | load package, redundant, already loaded |
| 7 | WeightAge <- ddply(RPMA2GrowthSub, ~Age, summarise, meanW=mean(Weight, na.rm = T)) | data summary (mean) or variable by groups of another variable, create a new dataframe |
| 7 | LengthAge <- ddply(RPMA2GrowthSub, ~Age, summarise, meanL=mean(ForkLength, na.rm = T)) | data summary (mean) or variable by groups of another variable, create a new dataframe |
| 7 | plot(WeightAge$meanW ~ WeightAge$Age) | scatterplot of data aggregates verses variable |
| 7 | plot(LengthAge$mean ~ LengthAge$Age) | scatterplot of data aggregates verses variable, reference to non-existent variable |
| 7 | WeightChange | inspect data summary dataframe |
| 8 | Weight1 <- mean(RPMA2GrowthSub$Weight[RPMA2GrowthSub$Age == 1], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Weight1 | inspect data summary |
| 8 | Length1 <- mean(RPMA2GrowthSub$ForkLength[RPMA2GrowthSub$Age == 1], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Weight2 <- mean(RPMA2GrowthSub$Weight[RPMA2GrowthSub$Age == 2], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Length2 <- mean(RPMA2GrowthSub$ForkLength[RPMA2GrowthSub$Age == 2], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Weight3 <- mean(RPMA2GrowthSub$Weight[RPMA2GrowthSub$Age == 3], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Length3 <- mean(RPMA2GrowthSub$ForkLength[RPMA2GrowthSub$Age == 3], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Weight4 <- mean(RPMA2GrowthSub$Weight[RPMA2GrowthSub$Age == 4], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Length4 <- mean(RPMA2GrowthSub$ForkLength[RPMA2GrowthSub$Age == 4], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Weight5 <- mean(RPMA2GrowthSub$Weight[RPMA2GrowthSub$Age == 5], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Length5 <- mean(RPMA2GrowthSub$ForkLength[RPMA2GrowthSub$Age == 5], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Weight6 <- mean(RPMA2GrowthSub$Weight[RPMA2GrowthSub$Age == 6], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Length6 <- mean(RPMA2GrowthSub$ForkLength[RPMA2GrowthSub$Age == 6], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Weight7 <- mean(RPMA2GrowthSub$Weight[RPMA2GrowthSub$Age == 7], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Length7 <- mean(RPMA2GrowthSub$ForkLength[RPMA2GrowthSub$Age == 7], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Weight8 <- mean(RPMA2GrowthSub$Weight[RPMA2GrowthSub$Age == 8], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Length8 <- mean(RPMA2GrowthSub$ForkLength[RPMA2GrowthSub$Age == 8], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Weight9 <- mean(RPMA2GrowthSub$Weight[RPMA2GrowthSub$Age == 9], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | Length9 <- mean(RPMA2GrowthSub$ForkLength[RPMA2GrowthSub$Age == 9], na.rm = TRUE) | data summary (mean), filter variable, using brackets, relational statement (==), create new variable |
| 8 | x <- data.frame("Age" = 1:9, "Growth" = Weight1, Weight2, Weight3, Weight4, Weight5, Weight6, Weight7, Weight8, Weight9) | create new dataframe, new columns, column containing data summaries |