**Notes for video 2.2.:** <http://tinyurl.com/rr480/videos/layouts>

**### Create experimental layout**

dat1 = expand.grid(SITE=c("S1","S2","S3"),

 TREAT=c("A","B","C"),

 REP=c(1:3))

View(dat1)

**### Randomize repetitions of treatments within sites**

dat1$REP = rnorm(27)

dat1 = dat1[order(dat1$SITE, dat1$REP),]

View(dat1)

**### Add ORDER and ID (you would establish your trial in**

**### that order and later take measurements in that order)**

dat1$ORDER = 1:27

dat1$ID = paste(dat1$ORDER, dat1$TREAT, dat1$SITE, sep="-")

View(dat1)

write.csv(dat1, "My Experiment.csv", row.names=F

**### If you enter data, this table is ready for analysis**

**### Some simulated height measurements and to check it**

dat1$HT=round(rnorm(27)\*3+15)

boxplot(HT~TREAT\*SITE, dat1)

anova(lm(HT~TREAT\*SITE, dat1))