T = 1 year-

for each individual at time T

1. assess individual, naïve learning of information determined by a binomial distribution that is informed by the naïve learning probability and the proportion of age class of the individual

* Distribution: rbinom(1, 1, nl \* ageClass/maxAgeClass \* (1-curIndividual$informed))

1. assess number of interactions and probability of the transfer of information with each individual of population

* Number of interactions is determined by a poisson distribution of the max number of interactions termed si, modified by the boldness of the pair of individuals and the density of the population, the code below does this for all available social partners of an individual
* Distribution: rpois(nrow(socialPool), (si \* curIndividual$boldness \* ifelse(length(is.alive)>=K, 1, length(is.alive)/K) \* socialPool$boldness))
* Number of interactions between a pair of individuals is multiplied by the info transfer probability, infotransfer
* if successful info transfer and either is uninformed and the other is informed, change status of uniformed to informed

1. assess birth of new individual based on birth rate of individual’s age class and population density

* Distribution: rbinom(1, 1, birthRate + birthRate \* (1 - length(is.alive)/K))
* if successful birth, create new individual and determine inheritance of informed status of the mother

1. assess death of individual based on survival rate of individual’s age class and population density modified by the decrease in survival for uninformed indviduals, reciprocal of birth rate

* Distribution: rbinom(1, 1, 1- (survivalRate + survivalRate\*(1 - (length(is.alive)/K)) - ((1 - curIndividual$informed) \* h)))

T = T + 1