

# Survival of the Flattest

## Summary

In this activity students will model natural selection. They will do this by acting as a predator and collecting "dots" in different environments. They will see how different characteristics allow some organisms to survive and reproduce in different environments.

## Time Frame

1 class periods of 60 minutes each

## Group Size

Small Groups

## Materials

- [student worksheet](#)  
(attached)
- 250 (50 of 5 different colors) paper dots per group of 4 students
- tweezers (1 per student)
- clock
- small paper cups
- 36, 60 cm x 60 cm pieces of fabric (any colors or scraps will work, however it is best to have a solid, and a very busy pattern, try to punch dots that will blend in with the fabrics ex. If you have a red swatch make sure you have red dots) You will also need to decide if you want all groups to have the same or if all groups will have different fabrics.

## Background for Teachers

This is a good introductory activity to natural selection.

## Instructional Procedures

- Obtain needed supplies (ask your Sewing teacher for scraps he/she may be able to help you)
- Pass out student sheet
- Have student collect their supplies.
- Read through the background and purpose with the students.
- Allow students to make their predictions
- Have students complete the lab by reading through and completing the procedures with their groups
- Discuss results with the class when all groups have finished.

## Answers to Analysis Questions:

1. *Answers will vary. The dots that were picked most were those that stuck out in some way, maybe the color stood out or the texture was easy to pick up.*
2. *Answers will vary. The dots that were picked up the least were those that blended into the surface. They were best fit for survival in the environment.*
3. *Answers will vary.*
4. *Natural selection is the survival and reproduction of individuals which are best fit for the environment. They pass on their genes with greater frequency, thus overtime the population will display the trait. It is driven by the environment because that is what allows some to survive. If an animal is born with longer fur in a cold environment it is better fit and will most likely live*

*longer and have more offspring. If the environment were not cold the animal would not be more fit.*

- 5. Answers will vary. Possible topics include: farmers select for bigger flowers in plants, dog breeders select for larger noses, shorter legs, better sight etc.*
- 6. The colors in the fabric and the patterns in the fabric.*
- 7. Answers will vary. They could include diseases like AIDS, malaria etc.*
- 8. These things are not as pertinent because as humans we can control them for the most part. We build shelters, have heaters and air conditioners, wear clothing etc.*
- 9. Answers will vary but could include things like migration or natural disaster.*
- 10. Answers will vary.*

Answers to conclusions:

*Answers will vary but should include a detailed description of natural selection.*

Assessment Plan

Scoring Guide:

Prediction.....2 points  
Data Tables.....4 points  
Analysis questions..... 2 points each (20 points)  
Conclusions.....4 points  
Total.....30 points

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)