

Does Ear Shape Matter?

Directions: Work with a partner to complete the investigate below.

Part A

1. Make your prediction:

Does ear shape affect how well an animal hears? _____

2. To help you answer this question, you are going to change the shape of your own ear!
Here's how:

- Roll a piece of paper into a cone shape and tape the ends in place.
- Put the narrower end of the cone up to your ear.
- Turn toward the music your teacher has playing and listen.
- Remove the cone and listen to the music.

3. Did the cone affect how well you could hear the music? Describe your observations.

4. Explain your findings. Why do you think you heard better or worse?

Part B

1. Based on what you know about animal ear shape and what you learned from the cone experiment, what ear shape do you think is most effective for hearing? Explain why you think this is so.
2. Generate ideas for varying the shape of the cone(ear). Make drawings of the shapes you'd like to test.
3. Construct at least one shape and test it.
4. Did you hear better or worse with your new ear than with the original cone? Describe your observations.
5. Explain your findings. Why do you think you heard better or worse?