

SOUND WAVES

NAME _____ DATE _____



OBJECTIVE: Investigate how the wavelength of waves on a spring are linked to how quickly waves are produced..

METHODS:

Materials

- Slinky spring
- metre ruler
- stopwatch

Procedures

1. One person in your group will hold one end of the slinky spring so it does not move
2. Stretch the slinky spring out so the coils separate slightly. Don't overstretch
3. Measure the length of the stretched slinky spring
4. Keep this distance the same when you start each measurement
5. Move the second end of the spring forwards and backwards about once per second so compressions travel along the spring.
6. Record the number of compressions produced in 30 seconds and the wavelength (distance between each compression)
7. Repeat the experiment, but more slowly.
8. Record the number produce per second and the wavelength.
9. Graph your results

CONCLUSIONS

1. Write down the pattern you can see between the number of waves produced and the distance between compressions.
2. Calculate the speed of each compression
3. Why did you need to keep the length of the slinky spring about the same?

4. Describe ways that you kept your experiment a fair test.

5. Why was it easier to count compressions and not refractions?

6. Make a drawing of the what you observed