

1. Place five or six marbles in a groove so that they touch each other. Roll another marble against the end of the line of marbles. The vibration of waves will be transmitted through the line and the marbles on the end will roll away. Roll two, then three and so on. A.) Observe what happens.
2. Fill the flat pan about half full of water. Place the pan on an tabletop. Fill a medicine dropper with water. Allow one drop of water to fall into the center of the pan. Allow another drop to fall near the edge. A.) Notice what happens in each. B.) Sketch the pattern of waves that are seen.
3. Fill a funnel with sand and observe patterns made when the funnel is set in a swinging motion and the paper is dragged under it. A.) Draw what the sand looks like.
4. Send a longitudinal pulse down the spring by pinching together several coils of the spring and then releasing them. A.) What kind of pulse is this? [longitudinal or compressional] B.) What happens to the shape of the pulse as it travels down the wire? Quickly pull the free end of the slinky to one side and then return it to its original position. C.) What kind of pulse is this? D.) What happens to the shape of the pulse as it travels down the string? E.) Determine the time it takes a pulse to travel down the string.
5. Students will make a wave in a bottle by filling a plastic bottle with a mixture of oil, water and food coloring. A.) Write what is going on.

(answer questions on Left side of spiral)

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