

Seeing Is Believing

Like your hair and skin, fingernails are part of your body's integumentary system. Nails are a modification of the outer layer of the skin. Nails grow from the nail bed and will grow continuously throughout your life. In this activity, you will measure the rate at which fingernails grow.

OBJECTIVES

Measure nail growth over time.

Draw a graph of nail growth.

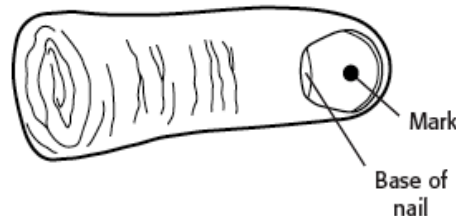
MATERIALS

- graph paper (optional)
- metric ruler
- permanent marker

SAFETY

PROCEDURE

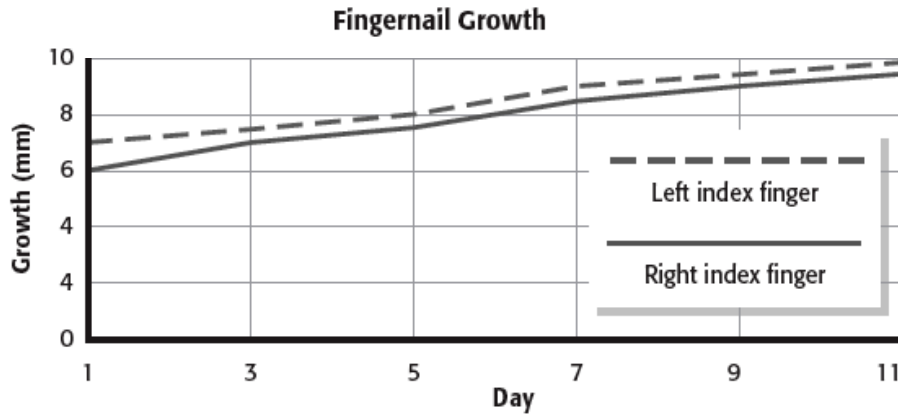
1. Use a permanent marker to mark the center of the nail bed on your right index finger, as shown in the figure below. **Caution:** Do not get ink on your clothing.



2. Measure from the mark to the base of your nail. Record the measurement, and label the measurement "Day 1."
3. Repeat steps 1 and 2 for your left index finger.
4. Let your fingernails grow for 2 days. Normal daily activity will not wash away the mark completely, but you may need to freshen the mark.
5. Measure the distance from the mark on your nail to the base of your nail. Record this distance, and label the measurement "Day 3."
6. Continue measuring and recording the growth of your nails every other day for 2 weeks. Refresh the mark as necessary. You may continue to file or trim your nails as usual throughout the course of the lab.

Seeing Is Believing *continued*

7. After you have completed your measurements, use them to create a graph similar to the graph below.



ANALYZE THE RESULTS

1. **Describing Events** Did the nail on one hand grow faster than the nail on the other hand?

2. **Examining Data** Did your nails grow at a constant rate, or did your nails grow more quickly at certain times?

DRAW CONCLUSIONS

3. **Making Predictions** If one nail grew more quickly than the other nail, what might explain the difference in growth?
