The pulse of life

Background knowledge
When your heart beats, it pumps blood to parts of your body through vessels called arteries and veins. Arteries carry blood away from your heart to the rest of your body, while veins return blood to your heart. Where an artery crosses a bone, you can press a finger against your skin to feel the blood pumping. This is called your pulse. It is a measure of how fast your heart is beating. A child’s pulse is usually about 70 to 80 beats per minute.

Science activity
A doctor found that a girl’s pulse was 80 beats per minute. After running slowly for 1 minute, her pulse went up to 120 beats per minute. After skipping for another minute, her pulse was 170 beats. After resting for 2 minutes, her pulse was 140 beats.

Using the chart below, draw a bar graph of the results. What effect does exercise have on the girl’s pulse?

| Pulse (number of beats per minute) | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 |
|-----------------------------------|---|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|
| Resting                           |   |    |    |    |    |    |    |    |    |    |     |    |    |    |    |    |    |    |
| Running slowly                    |   |    |    |    |    |    |    |    |    |    |     |    |    |    |    |    |    |    |
| Skipping                          |   |    |    |    |    |    |    |    |    |    |     |    |    |    |    |    |    |    |
| Resting                           |   |    |    |    |    |    |    |    |    |    |     |    |    |    |    |    |    |    |

Science investigation
Find your pulse by pressing your first two fingers against the underside of your wrist, below the thumb. Design and conduct an experiment to see how your pulse rate changes after exercise.
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Science activity
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Using the chart below, draw a bar graph of the results. What effect does exercise have on the girl’s pulse? It makes her pulse go up.

Science investigation
Exercise makes the heart beat faster, providing more oxygen and food to muscles. The pulse rate is the same if felt on different parts of the body, such as the temple and neck.

Children with respiratory ailments should be careful when exercising.