Let $s(t)$ be the position function.
Let $v(t)$ be the velocity function. \hspace{1cm} v(t) = s'(t)$
Speed $= |\text{velocity}| = |v(t)|$
Let $a(t)$ be the acceleration function. \hspace{1cm} a(t) = v'(t) = s''(t)$

Object is on the positive side of the origin: \hspace{1cm} $s(t) > 0$
Object is on the negative side of the origin: \hspace{1cm} $s(t) < 0$

Object is moving in the positive direction: \hspace{1cm} $v(t) > 0$
Object is moving in the negative direction: \hspace{1cm} $v(t) < 0$

Velocity of object is increasing: \hspace{1cm} $a(t) > 0$
Velocity of object is decreasing: \hspace{1cm} $a(t) < 0$

Object is speeding up if its change in speed is increasing.
Object is slowing down if its change in speed is decreasing.

Note:
\hspace{1cm} $a(t) > 0 \not\Rightarrow$ object speeding up.
\hspace{1cm} $a(t) < 0 \not\Rightarrow$ object slowing down.

Object is speeding up; \hspace{1cm} Object is accelerating: \hspace{1cm} $v(t) \cdot a(t) > 0$
Object is slowing down; \hspace{1cm} Object is decelerating: \hspace{1cm} $v(t) \cdot a(t) < 0$