

Scatter Plots and Correlation

8th Grade

Reading a cloud of points, and the trap everyone falls into.

A scatter plot shows two variables at once, one point per subject.

1 LOOK FOR A DIRECTION

Up to the right is positive; down is negative; no pattern is none.

2 JUDGE THE STRENGTH

Tightly clustered is strong. Widely scattered is weak.

3 SPOT OUTLIERS

Points far from the rest. Ask why before removing them.

4 DRAW A LINE OF BEST FIT

Roughly equal numbers of points above and below.

THE TRAP

Ice cream sales and drownings correlate strongly.
Neither causes the other. Hot weather causes both.

A correlation shows two things move together. It never shows that one made the other happen.