Graph model representation

- We can use graphs to represent our putative causal model.

- An arrow between variables represents a potential causal effect.

x $\longrightarrow$ y

This is a Directed Acyclic Graph, a **DAG**

Elemental triads

- All DAGs can be decomposed into a set of 3 elemental motifs:

- The pipe, the fork and the collider

- We can use these to structure our thinking about our models and decide what variable to include or exclude

The pipe:

$$x \longrightarrow z \longrightarrow y$$

The fork:

$$x \longleftarrow z \longrightarrow y$$

The collider:

$$x \longrightarrow z \longleftarrow y$$