# Stage 3 STEM Incursion

## Engibear’s Bridge

### Outcomes

ST3-7MW-T

Explains how the properties of materials determines their use for a range of purposes.

ST3-9PW-ST

Investigates the effects of increasing or decreasing the strength of a specific contact or non-contact force.

**ST3-1WS-S**

Plans and conducts scientific investigations to answer testable questions, and collects and summarises data to communicate conclusions.

**ST3-2DP-T**

Plans and uses materials, tools and equipment to develop solutions for a need or opportunity.

**ST3-3DP-T**

Defines problems, and designs, modifies and follows algorithms to develop solutions.

### Inquiry questions

How do the shapes used in construction affect the strength of a bridge?

In what ways does a design process allow us to make a better design?

Which parts of the bridge are in compression?

Which parts are in tension?

### Incursion description

Incursion workshop runs for 2 hours.

Group reading of the picture book **Engibear’s Bridge** by Andrew King.

Undertake the challenge of designing, constructing and evaluating a bridge. Students will assess their design against pre-determined criteria.