

STRONG AND STABLE STRUCTURES STUDY GUIDE

<https://www.drooker.ca/strong-and-stable-structures.html>

A **structure** is something with a definite size, shape, purpose, and can hold a load.

A **material** is something that is used to make an object or structure. Most structures are made of many materials.

The **stability** of a structure is its ability to balance and stay fixed in one spot

The **strength** of a structure is its ability to support a load. Humans have invented different ways of making materials and structures stronger (E.g., triangulation, twisting/braiding, adding layers, folding, etc.)

Triangulation means using a triangle shape to make a structure stronger and more stable.

Durable means a material or structure will not get damaged easily.

Flexible means a material or structure can bend without breaking.

A **force** is a push or a pull. A force can affect the shape, balance, or position of a structure.

Compression is a force where something is squished down or pushed together

Tension is a force where something is pulled apart or stretched.

A **strut** is a rod or bar that helps a structure resist pressure. A tent pole is a strut.

A **tie** is a beam or wire that supports a structure with tension. A tent cord is a tie.

Natural materials/structures can be found in nature (e.g. a spider web)

Human-made/Built materials/structures: Natural material + tools + skill = human made

STRONG AND STABLE STRUCTURES STUDY GUIDE

<https://www.drooker.ca/strong-and-stable-structures.html>

A **structure** is something with a definite size, shape, purpose, and can hold a load.

A **material** is something that is used to make an object or structure. Most structures are made of many materials.

The **stability** of a structure is its ability to balance and stay fixed in one spot

The **strength** of a structure is its ability to support a load. Humans have invented different ways of making materials and structures stronger (E.g., triangulation, twisting/braiding, adding layers, folding, etc.)

Triangulation means using a triangle shape to make a structure stronger and more stable.

Durable means a material or structure will not get damaged easily.

Flexible means a material or structure can bend without breaking.

A **force** is a push or a pull. A force can affect the shape, balance, or position of a structure.

Compression is a force where something is squished down or pushed together

Tension is a force where something is pulled apart or stretched.

A **strut** is a rod or bar that helps a structure resist pressure. A tent pole is a strut.

A **tie** is a beam or wire that supports a structure with tension. A tent cord is a tie.

Natural materials/structures can be found in nature (e.g. a spider web)

Human-made/Built materials/structures: Natural material + tools + skill = human made