







Fairies in the Cogwork: Fairy Tale Challenge & Contraption Design Sheet

A Simple Machine is a mechanism that changes the direction and/or amount of force needed to do work.
Many Simple Machines are combined to make complex machines, sometimes referred to as Contraptions.

CHALLENGE: Identify and Describe the Fairy Tale Challenge you want to solve with a Simple Machine, or Contraption made up of Simple Machines.

SIMPLE MACHINES: Circle one or more Simple Machines to use alone or together in a Contraption to solve the Fairy Tale Challenge.

	<div>LEVER</div> 	<div>WEDGE</div> 	<div>INCLINED PLANE</div> 	<div>SCREW</div> 	<div>WHEEL and AXLE</div> 	<div>PULLEY</div> 
	A stiff board or bar across a fulcrum. Together they lift or move loads	Object with slanting sides ending in a sharp edge. Cuts materials apart or binds them together	A slanting surface connecting a lower level to a higher level. Used to raise loads	An inclined plane wrapped around an axle. Binds together or lifts materials	A wheel with an axle through it. Used to raise/move loads. If offset as a cam it can program movement.	One or more grooved wheels on axles with a rope moving between them. Used to raise, lower, or move a load.

{Turn Over}



DESIGN & BUILD: **Sketch** a picture of the Simple Machine or Contraption you will use to solve the Fairy Tale Challenge.

Include:

- **Labels** pointing out the Simple Machines used in the Contraption.
- **Arrows and Labels** showing how the Simple Machine or Contraption works to solve the Challenge.

Build your Simple Machine or Contraption using the provided supplies and your recycling.

