

CURRICULUM

CURRICULUM CONNECTIONS

This section is for educators who want more specific information regarding the Grade 4 curriculum connections for each activity in the *Wanted! Engineers for Salazar Carnival* crate.

Grade 4: Table of Knowledge Outcomes

GLE 4-6: Demonstrate a practical understanding of wheels, gears and levers by constructing devices which energy is transferred to produce motion.

Activity	Unit	STS-Knowledge Outcomes
Job No. 1 - Ferris Wheel	Wheels and Levers	<p>SLE 3: Construct devices that use wheels and axles, and demonstrate and describe their use in: pulley systems, gear systems.</p> <p>SLE 4: Construct and explain the operation of a drive system that uses one or more of the following:</p> <ul style="list-style-type: none"> • wheel to wheel contact, • a belt or elastic, • a chain, • cogs or gears.
Job No. 2 – Merry Go Round	Wheels and Levers	<p>SLE 5: Construct and explain the operation of a drive system that transfers motion from one shaft to a second shaft, where the second shaft is: at a 90° angle to the first. (Including the awareness of changes in speed and direction that result from different ways of linking components.)</p> <p>SLE 3: Construct devices that use wheels and axles, and demonstrate and describe their use in: gear systems.</p> <p>SLE 4: Construct and explain the operation of a drive system that uses one or more of the following:</p> <ul style="list-style-type: none"> • wheel to wheel contact, • a belt or elastic, • a chain, • cogs or gears.

Job No. 3 - Swing Ride	Wheels and Levers	<p>SLE 5: Construct and explain the operation of a drive system that transfers motion from one shaft to a second shaft, where the second shaft is: parallel to the first. (Including the awareness of changes in speed and direction that result from different ways of linking components.)</p> <p>SLE 3: Construct devices that use wheels and axles, and demonstrate and describe their use in: gear systems.</p> <p>SLE 4: Construct and explain the operation of a drive system that uses one or more of the following:</p> <ul style="list-style-type: none"> • wheel to wheel contact, • a belt or elastic, • a chain, • cogs or gears.
Job No. 4 - Drop of Doom	Wheels and Levers	SLE 3: Construct devices that use wheels and axles, and demonstrate and describe their use in: pulley systems.
Job No. 5 - Airborne Acrobats	Wheels and Levers	<p>SLE 6: Demonstrate ways to use a lever that:</p> <ul style="list-style-type: none"> • applies a small force to create a large force, • applies a small movement to create a large movement. <p>SLE 7: Predict how changes in the size of lever or the position of the fulcrum will affect the forces and movements involved.</p> <p>SLE 8: Construct models of levers; and explain how levers are involved in such devices as: teeter-totters, scissors, pliers, pry bars, tongs, nutcrackers, fishing rods, wheelbarrows.</p>
Job No. 6 - Ghost Carts	Wheels and Levers	<p>SLE 1: Explain how rollers can be used to move an object, and demonstrate the use of rollers in a practical situation.</p> <p>SLE 2: Compare the wheel and the roller, and identify examples where each are used.</p>

<p>Job No. 7 - Creature Crate Tool</p>	<p>Wheels and Levers</p>	<p>SLE 6: Demonstrate ways to use a lever that:</p> <ul style="list-style-type: none"> • applies a small force to create a large force, • applies a small movement to create a large movement. <p>SLE 7: Predict how changes in the size of lever or the position of the fulcrum will affect the forces and movements involved.</p> <p>SLE 8: Construct models of levers; and explain how levers are involved in such devices as: teeter-totters, scissors, pliers, pry bars, tongs, nutcrackers, fishing rods, wheelbarrows.</p>
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