

## LEGO WeDo Knowledge Organiser – Pulleys and Sensors

	<b>Key Learning</b>
Lesson 1: <b>Y4 - CS1 (KPI)</b> , Y4 - CS2, Y4 - CS3, Y4 - CS5, Y4 - CS6, Y4 - CS7	Kit refresher and creating a pulley based system
Lesson 2: <b>Y4 - CS1 (KPI)</b> , Y4 - CS2, Y4 - CS3, Y4 - CS5, Y4 - CS6, Y4 - CS7	Creating a mechanical kicker
Lesson 3: <b>Y4 - CS1 (KPI)</b> , Y4 - CS2, Y4 - CS3, Y4 - CS5, Y4 - CS6, Y4 - CS7	Evaluating, improving and developing my design
Lesson 4: <b>Y4 - CS1 (KPI)</b> , Y4 - CS2, Y4 - CS3, Y4 - CS5, Y4 - CS6, Y4 - CS7	Building a mechanical goalkeeper
Lesson 5: <b>Y4 - CS1 (KPI)</b> , Y4 - CS2, Y4 - CS3, Y4 - CS5, Y4 - CS6, Y4 - CS7	Evaluating, improving and developing my design



1:1



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4537292



x1



x2



x4



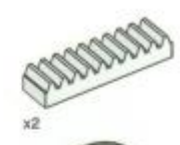
x1



x6



x2



x2



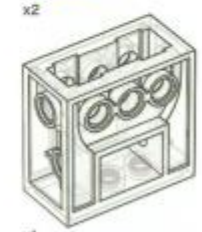
x2



x2



x2



x1



x1



x6



x2



x1



x4



x2



x1



x4



x2



x1



x1



x2



x1



x1



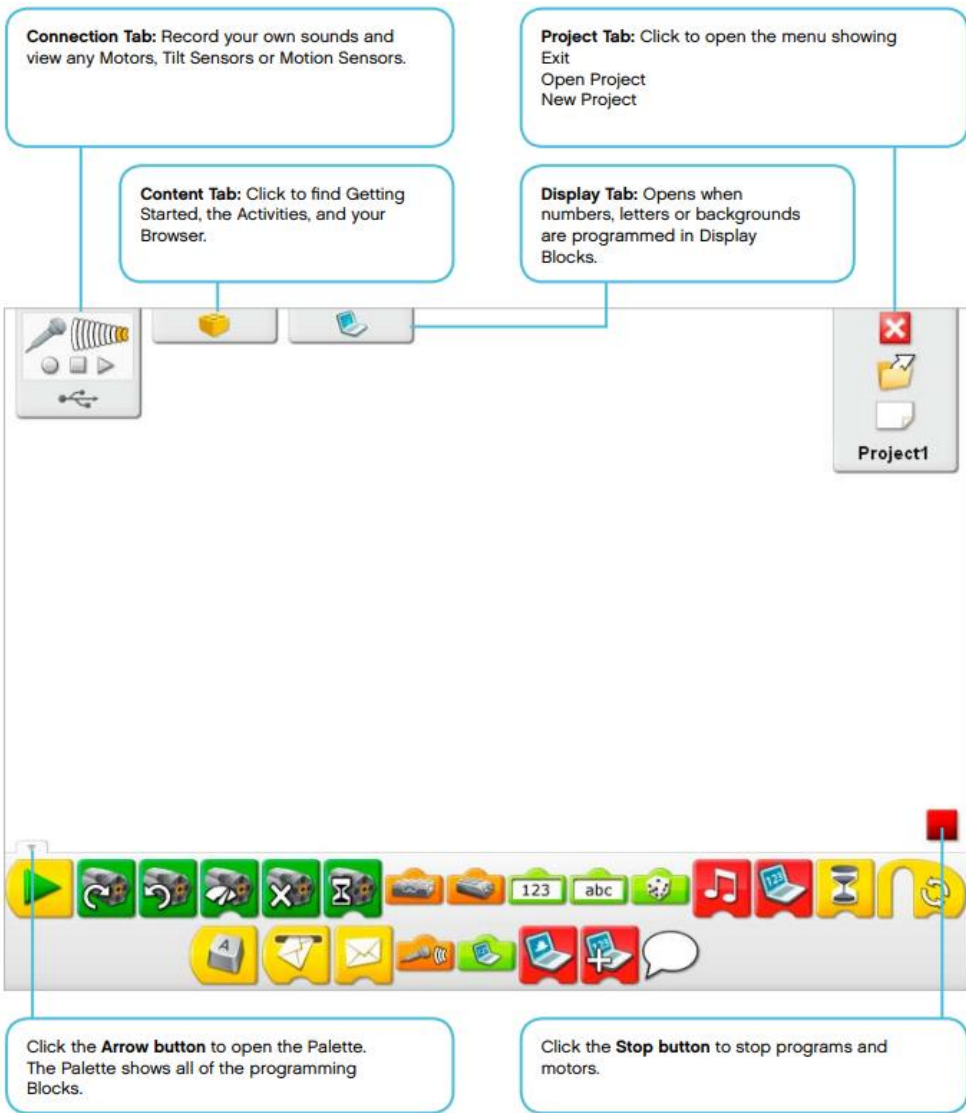
x1



x1



x1























### Vocabulary List

-  Connection Tab
-  Content Tab
-  Display Tab
-  Project Tab
-  Exit
-  Open
-  New
-  Stop



## Sound List

This list shows the type of sound that is made when you use the Play Sound Block with the Number Input shown. Click the Play Sound Block to hear the sound. See Getting Started 8. Crossed Belts for help recording your own sound.

 Hi	 Croak	 Kiss
 Magic	 Boing	 Bubbles
 Spin	 Splash	 Creak
 Thunder	 Cheer	 Whistle
 Zzz	 Roar	 Motor
 Clonk	 Crunch	 Flap
 Tweet	 Laser	

## Background List

This list shows the type of background picture that appears on the LEGO® Education WeDo™ Software Canvas when you use the Display Background Block with the Number Input shown.

 Sky	 Grass	 Sea
 Storm	 Forest	 Savanna
 Rock	 Reef	 Cave
 Mountain	 Space	 Polar
 Chalkboard	 Flowers	 Bubble
 Heart	 Boom	 Yell
 Happy	 Panic	

## Key Images

Vocabulary List	
	Start Block
	Start On Key Press Block
	Start On Message Block
	Motor This Way Block
	Motor That Way Block
	Motor Power Block
	Motor On For Block
	Motor Off Block
	Play Sound Block
	Display Block
	Add to Display Block
	Subtract from Display Block
	Multiply by Display Block
	Divide by Display Block
	Display Background Block
	Send Message Block
	Wait For Block
	Repeat Block
	Text Input
	Number Input
	Random Input
	Record Stop Play
	Motion Sensor Input
	Tilt Sensor Input
	Tilt Up
	Tilt Down
	Tilt This Way
	Tilt That Way
	Any Tilt
	Sound Sensor Input
	Display Input
	Bubble

## Key Questions

What a pulley?

A pulley is a type of wheel that has an inner groove, with a rope or cable running along the groove. The can be used in a similar way to gears, or as a way of lifting a heavy object.

Are there any benefits to using a pulley instead of gears?

Pulleys do not provide as reliable a transfer of force, as the belt can slip a small amount each time and lose some force. However, in real life, pulleys are often much cheaper to install into mechanical systems and can be much lighter in weight than gears.

What is a sensor and how does it work?

In our LEGO WeDo kit, motion sensors come with a small lens which sends out a small infra-red beam. If something moves in front of the beam and interrupts it, it detects this movement. Motion detecting sensors are used in things like automatic doors and burglar alarms in everyday life.