Warm Up – Scientific Investigation

What is a smart grid?

What do you already know about smart grids? What do you want to know about smart grids?

Complete the first and second column.

What do you know already?	What do you want to know?

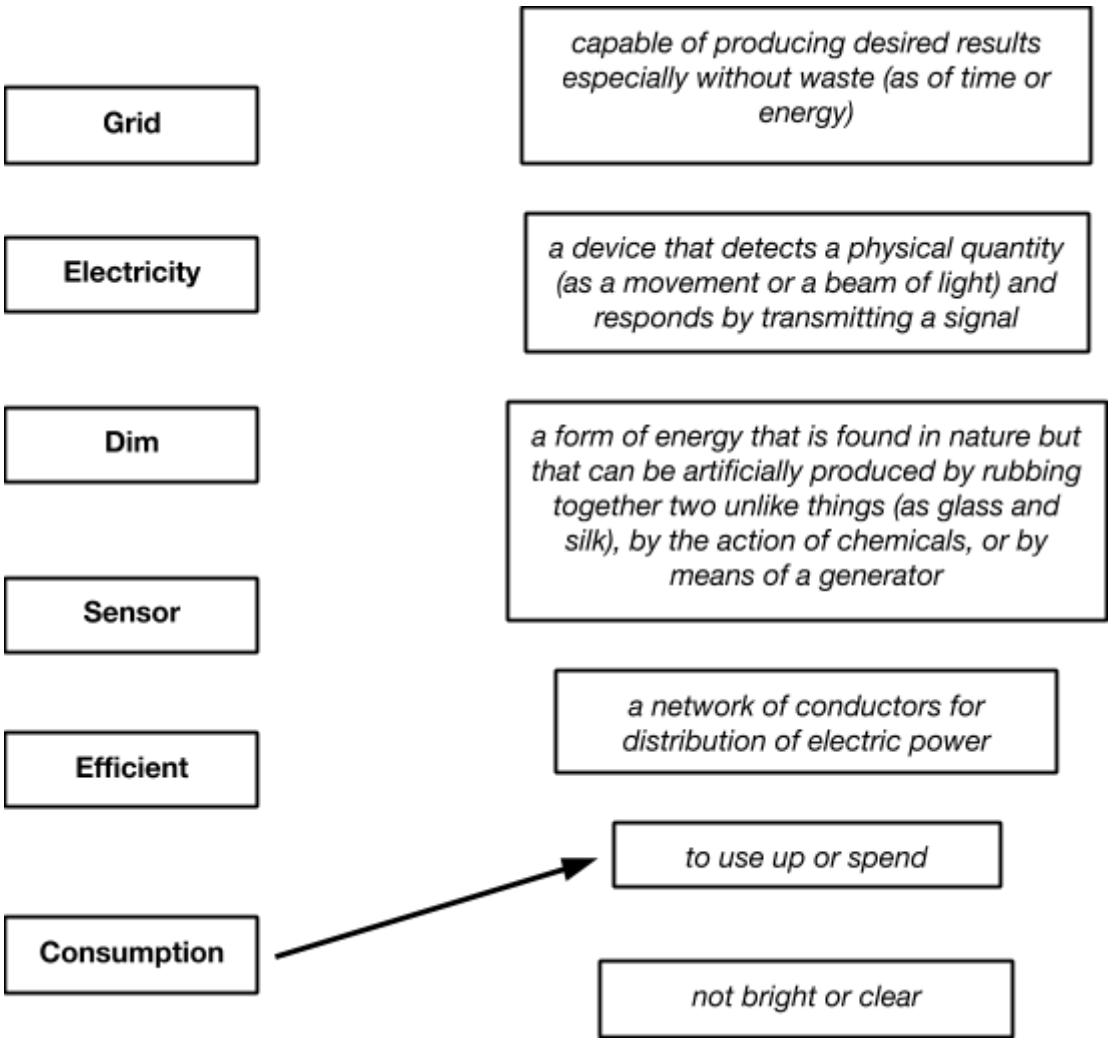
Mini-lesson

What is smart lighting? What makes it 'smart'?

Choose one of these lighting systems. What makes it 'smart'? Write in complete sentences.

Keyword Review

Match the keyword with its definition. 'Consumption' has been completed for you.



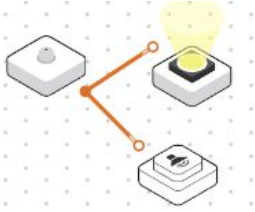
Let's Discuss: *In your workbook or with a partner, record, discuss, or share one example of how smart lighting reduces energy consumption.*

Challenge 2

Design a smart lighting system that responds to the amount of light in the environment, has a mock occupancy sensor and a alert.

Read the steps that describe Challenge 2. What happens First? Second? Third? Match the number of the step to each picture.

Step 1 has been completed for you.

Steps	Instructions	Workspace
Step 1.	Drag the Light Sensor block, RGB LED block and Sleeping Buzzer onto the Workspace.	
	Find the Filter function and add it to the between the Light Sensor, RGB LED and Buzzer. Set the filter values to 0-30.	
	Now, try it! *(Replace the Buzzer with Sound Player to see if they work interchangeably.)*	
	Find the On/Off block and add it between the Filter and Buzzer.	
	Connect the RGB LED and the Buzzer to the Light Sensor.	

Why do you think the order of steps important?

We can use transitional phrases to talk about the order events or actions that take place. Practice by using transitional phrases in order to present your system.

Time & Sequence	Compare (+)	Contrast (-)	Cause and Effect
first/second/third	also	but	because
next	equally	however	so
after	likewise	otherwise	therefore
then	in addition	on one hand… ...on the other hand	as a result
finally/overall/to sum up	similarly	opposite	due to

