





Short Form 1.5 (Assuming instructor uses videos)

Materials	Room/ Space
<ul style="list-style-type: none"> - 3 Signs (Yes, No, Unsure) - Cardboard Computer - Computer Efficiency Model Sheet - Paper and Pencil 	<ul style="list-style-type: none"> - Place 3 signs (Yes, No, Unsure) in 3 corners of the room - Put up Computer Efficiency Model Sheet for display

Lesson Theme: The crew realizes an essential part of the computer they need to learn more about: all machines need a power source and software to make them run.

Space Bucks Payout Focus- Independence, Helping Others, Teamwork, On Task

	
<p>Key Resource: 3 Signs (Yes, No, Unsure)</p> <p>Debrief Video:</p> <ul style="list-style-type: none"> ● Students will gather in the center of the room <p>Activity:</p> <ul style="list-style-type: none"> ● Students will be running/walking to one of the 3 corners where you've placed the "Yes", "No" and "Unsure" signs ● Students will be asked a question by you and will go to a sign based on the questions you will pose (See Model) ● Start with an easy question so students can gain confidence (you can use the questions on the model below to get you started). <p>Instructor Cues:</p> <ul style="list-style-type: none"> ● Circulate to give Space Bucks 	<p>Key Resources: Computer Efficiency Model Sheet, Cardboard Computer, Paper and Pencil</p> <p>Debrief Video:</p> <ul style="list-style-type: none"> ● Start the lesson by asking students why explore was all about power/energy. ● Have a discussion on how computers get power and explain to students the sequence of a computer's power. ● Ask students if all devices/computers use the same amount of power. ● Explain that the unit of power we measure in is called "watts". The amount of energy used by a computer can be figured out by seeing how many watts an hour a computer uses. ● Tell students we need a computer that has power but is also energy efficient. <p>Exit Slip:</p> <ul style="list-style-type: none"> ● Have students write or draw the definition of a "power source" and "watt".
	
<p>Key Resource: Computer Efficiency Model Sheet, paper, and pencil</p> <p>Debrief Video:</p> <ul style="list-style-type: none"> ● Break students into teams of 3 <p>Activity:</p> <ul style="list-style-type: none"> ● Students will need to figure out which computer is the most efficient by using the computer efficiency model sheet ● Have students solve the problems on the poster and decide which machine will be most efficient ● Review the correct answers ● Instructor Cues: ● Circulate to give space bucks 	<p>Key Resource: N/A</p> <p>Debrief Video:</p> <ul style="list-style-type: none"> ● Have students come together and discuss what they learned from today's lesson and which computer they all agreed will use the least amount of power ● Make sure to emphasize which computer was most efficient and why. ● Tell students that they will soon get a chance to draw what the computer looks like and to get ready to build a real computer in class. ● If time allows, record Space Bucks earned and purchase prize.

Models 1.5



Teacher Questions

1. All living things need energy/ power.
(students will run/walk to the corner with the answer that they think is correct).
2. iPhones need sand for energy.
3. Cookies give us energy.
4. A bike needs power.
5. All food gives you at least some energy.
6. Plants make their own energy.

Yes/No/Unsure Signs

YES

NO

UNSURE



Computer Efficiency Model Sheet

COMPUTER EFFICIENCY



RASBERRY PI
5 WATTS AN HOUR



DESKTOP
200 WATTS AN HOUR



IPAD
10 WATTS AN HOUR.

**EACH DEVICE WILL RUN
FOR 5 HOURS.**

CODE IN CLASS



Computer Efficiency Model Sheet

COMPUTER EFFICIENCY



RASBERRY PI
5 WATTS AN HOUR



DESKTOP
200 WATTS AN HOUR



IPAD
10 WATTS AN HOUR.

**EACH DEVICE WILL RUN
FOR 5 HOURS.**

CODE IN CLASS



NA