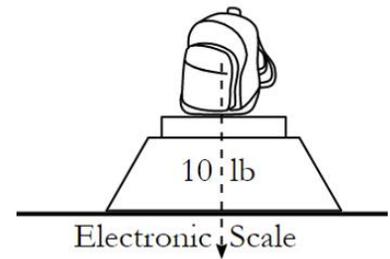
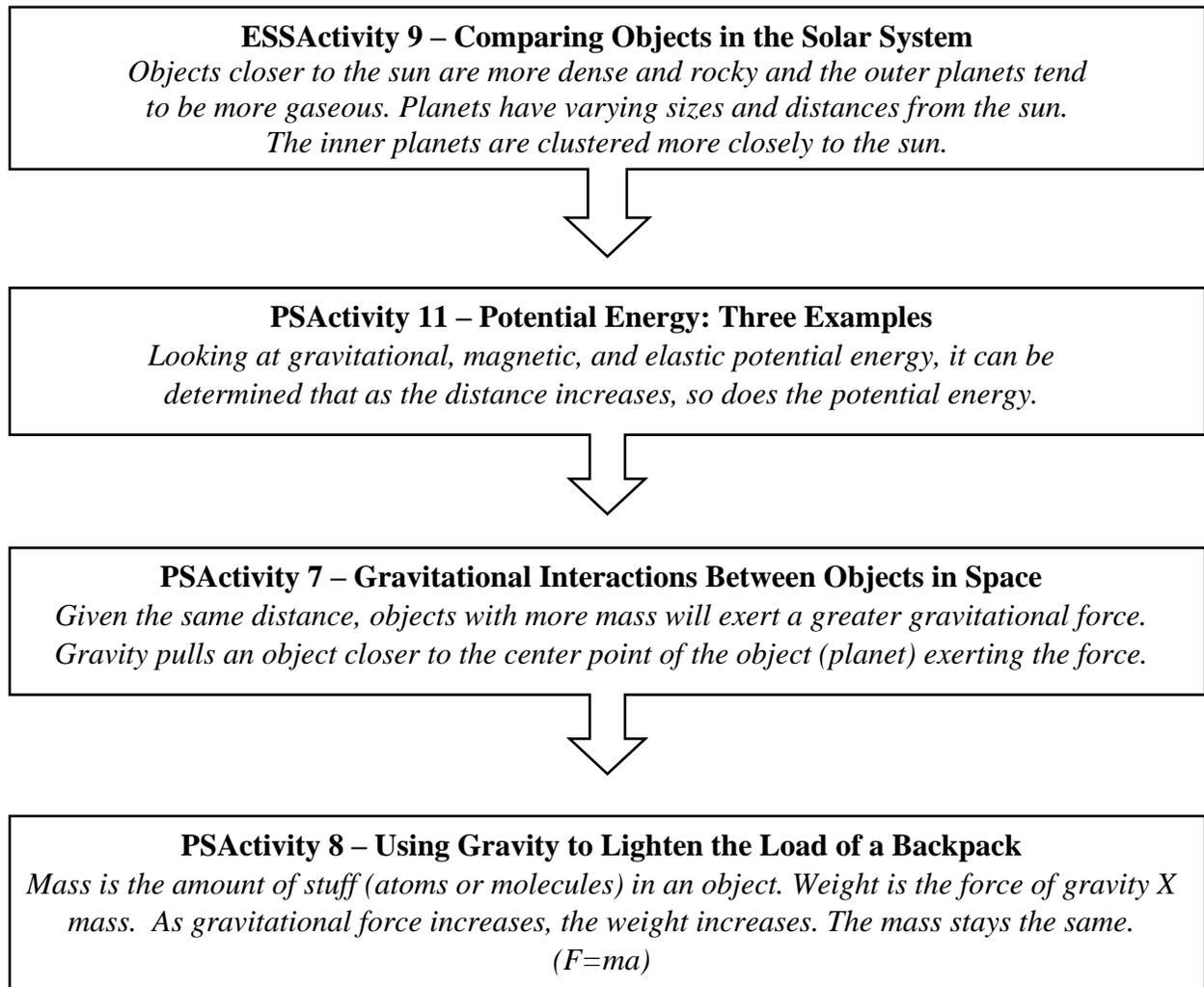


**Anchoring phenomenon:
Carrying a backpack from Earth to
Mercury – What happens to its weight?
Why?**



POGIL[®] Activities that support the anchoring phenomenon:



POGIL® Activity	NGSS Performance Expectation	Learning Outcomes
ESSActivity 9	<p>MS-ESS1-3 Analyze and interpret data to determine scale properties of objects in the solar system.</p>	<p>Comparing Objects in the Solar System</p> <ol style="list-style-type: none"> 1. I can describe the relative distances between the planets and the relative sizes of the planets and their moons, based on appropriate scale diagrams. 2. I can compare and contrast the interior structures of solar system objects, based on a scale diagram of these solar system objects. 3. I can assess various models of solar system objects to determine which model is most useful for answering a specific question about those objects.
PSActivity 11	<p>MS-PS3-2 Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system</p>	<p>Potential Energy: Three Examples</p> <ol style="list-style-type: none"> 1. I can describe how three types of potential energy change in systems of objects. 2. I can create a model to illustrate how the potential energy of a system changes as the distances between interacting objects in the system change.
PSActivity 7	<p>MS-PS2-4 Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.</p>	<p>Gravitational Interactions Between Objects in Space</p> <ol style="list-style-type: none"> 1. I can draw a diagram to show the direction of gravitational forces for any planet in space. 2. I can describe how the total mass of a system of two planets affects the gravitational force between those planets.
PSActivity 8	<p>MS-PS2-4</p>	<p>Using Gravity to Lighten the Load of a Backpack</p>

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	<p>Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.</p>	<ol style="list-style-type: none">1. I can describe the difference between weight and mass.2. I can use a table of gravitational forces to predict the weight of an object on another planet if I know the object's weight on Earth.
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