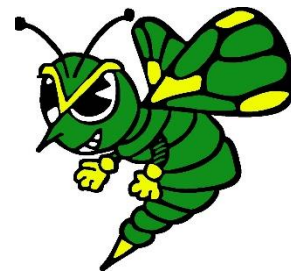




# HORNET TARGETS

## “CAN I?”



### 8<sup>TH</sup> GRADE SCIENCE

*Discover · Explore · Practice · Create*

<b>Target #</b>	<b>Target</b>	<b>Can I?'s</b>
<b>ESS.1</b>	I CAN explain the Earth's motions and the phenomena associated with this motion.	<ul style="list-style-type: none"><li>• demonstrate how Earth moves in space (rotation, revolution, orbit, and axis)</li><li>• explain what causes the seasons on Earth</li><li>• explain what causes the phases of the moon</li><li>• differentiate between solar and lunar eclipses</li></ul>
<b>ESS.2</b>	I CAN develop a model of the solar system that illustrates the role of gravity.	<ul style="list-style-type: none"><li>• describe the factors that keep the Earth and the moon in orbit</li><li>• identify what determines the strength of the force of gravity between two objects (mass, distance, and inertia)</li></ul>
<b>ESS.3</b>	I CAN create a scale model of an object(s) in the solar system.	<ul style="list-style-type: none"><li>• describe the objects that make up the solar system</li><li>• compare and contrast objects in our solar system</li><li>• analyze data from scientific instruments to determine similarities and differences of objects in the solar system</li></ul>
<b>ESS.4</b>	I CAN analyze rock and fossil data to construct a geologic time scale of Earth's history.	<ul style="list-style-type: none"><li>• analyze rock formations and fossil evidence to establish relative ages and major events in Earth's history</li></ul>
<b>ESS.6</b>	I CAN construct a scientific explanation about changes on Earth's surface over time.	<ul style="list-style-type: none"><li>• explain the ways in which heat is transferred</li><li>• identify what causes convection currents</li><li>• describe convection currents at Earth's mantle</li><li>• describe how rocks change through the rock cycle</li></ul>
<b>ESS.5</b>	I CAN analyze rock and fossil data to provide evidence for the theory of plate tectonics.	<ul style="list-style-type: none"><li>• provide evidence that continents move</li><li>• describe the process of subduction</li><li>• provide evidence for seafloor spreading</li><li>• describe plate boundaries</li><li>• explain the theory of plate tectonics</li></ul>
<b>PS.3</b>	I CAN develop a model to describe the atomic composition of simple molecules and extended structures.	<ul style="list-style-type: none"><li>• determine the charge of subatomic particles</li><li>• determine the location of the subatomic particles</li><li>• determine the number of elements in a compound</li><li>• differentiate between elements, compounds, and mixtures</li></ul>
<b>PS.4</b>	I CAN interpret data to determine if a chemical reaction has occurred in a substance.	<ul style="list-style-type: none"><li>• explain how thermal energy is lost or gained as matter changes states</li><li>• identify the chemical and physical properties of pure substances</li><li>• determine if a chemical change has occurred</li></ul>

<b>PS.1</b>	I CAN develop a model that predicts and describes changes in a pure substance when thermal energy is added or removed.	<ul style="list-style-type: none"> <li>differentiate between solids, liquids, and gases</li> <li>differentiate between chemical and physical properties</li> <li>provide evidence that a chemical reaction has taken place (smoke, color change, light, or a new substance has formed)</li> </ul>
<b>PS.5</b>	I CAN develop a model to explain the law of conservation of mass.	<ul style="list-style-type: none"> <li>determine the number of atoms in a compound</li> <li>determine the reactants and products of a chemical reaction</li> <li>determine the number of atoms in a chemical reaction before and after a reaction has taken place</li> </ul>
<b>PS.2</b>	I CAN construct a device that either releases or absorbs thermal energy by chemical processes.	<ul style="list-style-type: none"> <li>differentiate between endothermic and exothermic reactions</li> <li>develop a plan to create a device that releases or absorbs thermal energy by chemical properties</li> </ul>

## 8<sup>th</sup> GRADE SCIENCE SKILLS

8SS1	I CAN apply the steps of the scientific method.	<ul style="list-style-type: none"> <li><i>write a procedure that can be followed by another person</i></li> <li><i>write a hypothesis.</i></li> <li><i>identify variables.</i></li> <li><i>isolate and control variables in an experiment.</i></li> <li><i>display data in a graph</i></li> <li><i>write a conclusion that summarizes the results of an experiment</i></li> </ul>
8SS2		<ul style="list-style-type: none"> <li><i>identify the safety rules of the lab</i></li> <li><i>identify and use the tools of science lab appropriately</i></li> </ul>
8SS3	I CAN be safe in the science lab.	<ul style="list-style-type: none"> <li><i>be a careful observer using all senses.</i></li> <li><i>differentiate between qualitative and quantitative observations.</i></li> <li><i>distinguish between observations, inferences, and predictions.</i></li> <li><i>measure using accuracy and precision.</i></li> <li><i>based on logical observations and inferences, make logical predictions.</i></li> </ul>