



## Next Generation Science Standards Curriculum Connections for Planet Protector Academy: KEEP COOL

The Planet Protector Academy provides highly engaging learning activities that empower students to make a difference in the world and introduce students to topics and concepts that correspond to the national Next Generation Science Standards. The quiz games activate student thinking while the group activities and at-home missions engage them in environmental problem-solving.

### Relating to Disciplinary Core Ideas

While many of the modules and containing videos/activities introduce vocabulary and concepts related to one or more performance expectations of the Next Generation Science Standards, some module components directly address the disciplinary core idea embedded in the performance expectations they support (marked by **orange text**). Teachers are encouraged to develop their own materials and lessons to extend and deepen learning in order to thoroughly address all three dimensions of the performance expectations that each module component is correlated with.

### Depth of curriculum connections – introducing & engaging

The resource is designed to introduce and engage students with a wide variety of topics within the 6x1hr pre-planned lessons. Module components without an asterisk *directly* support the learning standard listed while module components marked \* either *introduce* students to topics related to this performance expectation or *prepare* students for subsequent module component(s) that address the performance standard in greater depth.

### Feedback

If you have any feedback or suggestions, please don't hesitate to get in touch with us at [support@planetprotectoracademy.com](mailto:support@planetprotectoracademy.com).

We hope you enjoy bringing the Planet Protector Academy to your classroom!

## GRADE 3

Content: V = video content

G = game show

A = Activity

M = At-Home Mission

Curriculum Expectations	Levels					
	1	2	3	4	5	6
<b>GRADE 3   EARTH AND SPACE SCIENCE: EARTH'S SYSTEMS</b>						
3-ESS2-1 Represent data in tables and graphical displays to describe <b>typical weather conditions expected during a particular season.</b>	GA					
3-ESS2-2 Obtain and combine information to <b>describe climate</b> in different regions of the world.	VG					
<b>GRADE 3   ENGINEERING, TECHNOLOGY AND APPLICATION OF SCIENCE</b>						
3-5-ETS1-1 <b>Define a simple design problem</b> reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.		M	VG AM	G	VG	
3-5-ETS1-2 Generate and compare <b>multiple possible solutions to a problem</b> based on how well each is likely to meet the criteria and constraints of the problem.	A			A	GA	

# GRADE 4

Content: V = video content

G = game show

A = Activity

M = At-Home Mission

Curriculum Expectations	Levels					
	1	2	3	4	5	6
<b>GRADE 4   EARTH AND SPACE SCIENCE: EARTH AND HUMAN ACTIVITY</b>						
4-ESS3-1 Obtain and combined information to describe that <b>energy and fuels are derived from natural resources and their uses affect the environment.</b>	V G A	G	G	G		
<b>GRADE 4   EARTH AND SPACE SCIENCE: EARTH'S SYSTEMS</b>						
4-ESS2-2 Generate and compare multiple solutions to <b>reduce the impacts of natural Earth processes on humans.</b>	V A					
<b>GRADE 4   PHYSICAL SCIENCE: ENERGY</b>						
4-PS3-1 Use evidence to construct an explanation <b>relating the speed of an object to the energy of that object.</b>				A		
4-PS3-2 Make observations to provide evidence that <b>energy can be transferred from place to place by sound, light, heat, and electric currents.</b>		G A	G			
<b>GRADE 4   ENGINEERING, TECHNOLOGY AND APPLICATION OF SCIENCE</b>						
3-5-ETS1-1 <b>Define a simple design problem reflecting a need or a want</b> that includes specified criteria for success and constraints on materials, time, or cost.		M	V G A M	G	V G	
3-5-ETS1-2 <b>Generate</b> and compare <b>multiple possible solutions</b> to a problem based on how well each is likely to meet the criteria and constraints of the problem.	A			G A	G A	

# GRADE 5

Content: V = video content

G = game show

A = Activity

M = At-Home Mission

Curriculum Expectations	Levels					
	1	2	3	4	5	6
<b>GRADE 5   EARTH AND SPACE SCIENCE: EARTH'S PLACE IN THE UNIVERSE</b>						
5-ESS1-2 Represent data in graphical displays to reveal patterns of <b>daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.</b>	A					
<b>GRADE 5   EARTH AND SPACE SCIENCE: EARTH'S SYSTEMS</b>						
5-ESS2-1 Develop a model using an example to describe <b>ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</b>	VA					
5-ESS3-1 Obtain and combine information about ways <b>individual communities use science ideas to protect the Earth's resources and environment.</b>	VG A	GM	A	GM	M	V
<b>GRADE 5   ENGINEERING, TECHNOLOGY AND APPLICATION OF SCIENCE</b>						
3-5ETS1-1 <b>Define a simple design problem reflecting a need or a want</b> that includes specified criteria for success and constraints on materials, time, or cost.		M	GA M	G	VG	
3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on <b>how well each is likely to meet the criteria and constraints of the problem.</b>	A			GA	GA	