



Watershed Teacher Pacing Guide

This unit was developed with southern and rural Nevada and the Next Generation Science Standards in mind.

This unit was designed for fifth grade and focuses on the NGSS standards **5-ESS2-1**: Develop a model using an example to describe way the geosphere, biosphere, hydrosphere, and/or atmosphere interact, **5-ESS3-1**: Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment. However, it can be used for other grade levels and areas as well.

These activities are listed in their recommended order. This order will help to deepen student understanding by building on concepts from activity to activity. However, they were also designed to provide students with enough information that they will make sense on their own.

Lesson Titles	Standard(s)	Timing	Format	Activity Description	Notes
Building a Watershed Model	5-ESS2-1 : Develop a model using an example to describe way the geosphere, biosphere, hydrosphere, and/or atmosphere interact	20 min.	Fillable PDF	This hands-on model building activity provides students an opportunity to construct the definition of a watershed, while observing how water travels within one.	
Choose one of the following two activities					
Exploring your Watershed Map- Humboldt River Watershed	5-ESS2-1 : Develop a model using an example to describe way the geosphere, biosphere, hydrosphere, and/or atmosphere interact	30 min.	Fillable PDF	Students use a map of the Humboldt River Watershed to better understand its features and develop an understanding of what a watershed is.	Rural NV focused
Exploring your Watershed Map- Las Vegas Valley Watershed	5-ESS2-1 : Develop a model using an example to describe way the geosphere, biosphere, hydrosphere, and/or atmosphere interact	30 min.	Fillable PDF	Students use a map of the Las Vegas Valley Watershed to better understand its features and develop an understanding of what a watershed is.	Southern NV focused
Reflection	5-ESS2-1 : Develop a model using an example to describe way the geosphere, biosphere, hydrosphere, and/or atmosphere interact	15-20 min.	Fillable PDF	Students will draw their own watershed using the knowledge they have gained throughout this unit.	
Extensions					
Dividing up Water on the Colorado River	5-ESS2-2 : Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	15-30 min.	Fillable PDF	Students learn about Prior Appropriation on the Colorado River and about the unit acre-feet. They are given examples to practice recognizing senior vs junior water rights. They then practice dividing up the water from the Colorado River during a wet year, a normal year and a dry year.	Southern NV focused

<p>Updating Hoover Dam</p>	<p>5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.</p>	<p>15-20 min.</p>	<p>Fillable PDF</p>	<p>Students compare the difference between a natural river and a reservoir looking at the plant life around the Colorado River and comparing it to the lack of plant life around Lake Mead. They then learn about the impacts on the environment that a dam can have as well as the positive impacts on humans. They then develop a solution for dams to reduce human impact on the environment.</p>	<p>Southern NV focused</p>
<p>Wetlands</p>	<p>5-PS3-1: Use models to describe that energy in animals’ food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun</p>	<p>15-20 min.</p>	<p>Fillable PDF</p>	<p>Students learn about the different parts of a food chain through the lens of the Clark County Wetland Park. Students are given information on animals and are asked to determine how they get their energy. Then they build a food chain using those animals.</p>	<p>Southern NV focused</p>