

BAT CURRICULUM NGSS CORRELATIONS

Lesson	Activity	NGSS Standards for 6th, 7th, and 8th grades
Lesson 1- Fact or Fiction	Survey for Formative Assessment	None
Lesson 2 - Anatomy of a bat and Structure and function of body parts	Complete a diagram and card sort	<p>NGSS: NGSS Connections, MS-LS1-1. MS-LS1-2, MS-LS1-3</p> <p>As the parts of the bat's anatomy are discussed, a teacher can review how living things are made of cells, what the functions of cells are, and how multicellular organisms have systems made up of multiple interacting subsystems.</p>
Lesson 3 - Studying Bats	Using models of wings to fill out a data table with support of information cards	NGSS: MS-LS1-4 (Animals)
Lesson 4- Experimenting with flight	Experimenting with glider	NGSS: MS-PS2-2, MS-PS2-5, MS-PS3-3
Lesson 5- Engineering a Bat Wing	Engineering lesson	NGSS: MS-PS2-2, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4
Lesson 6- Echolocation	Game simulation of echolocation	<p>NGSS: MS-LS1-4 (Animals), MS-LS1-8, NGSS Connections, MS-PS4-2</p> <p>As echolocation is discussed, the characteristics of waves as well as the parts of a wave can be reviewed.</p>

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Lesson 7- Biomimicry: Can We Find Inspiration in Bats?	Engineering lesson- creating their own invention that is inspired by bats	NGSS: MS-LS1-8, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4, NGSS Connections, MS-PS4-2 As echolocation is discussed, the characteristics of waves as well as the parts of a wave can be reviewed. MS-PS4-3
Lesson 8 - Hibernation	Learn about hibernation and complete data table by analyzing information	NGSS: MS-LS1-4 (Animals), NGSS Connection: MS-LS2-1 As the reasons bats hibernate are discussed, a teacher can be review with students how the availability of resources affect organisms.
Lesson 9 - Migration	Learn about migration and analyze data from a map	NGSS: MS-LS1-4 (Animals), NGSS Connection: MS-LS2-1 As the reasons bats migrate are discussed, a teacher can be review with students how interactions in the environment and the availability of resources affect organisms.
Lesson 10 - Migration Game	Game with cards using information learned in lessons 9 and 10.	NGSS: MS-LS1-4 (Animals), NGSS Connections, MS-LS2-1 After the game is played, a teacher can be review with students how interactions in the environment and the availability of resources affect organisms.
Lesson 11 - Classifying Bats	Dichotomous key using bat information cards	NGSS: MS-LS1-4 (Animals), MS-LS4-4 Variations in Bats
Lesson 12 - Energy Pyramid	Modeling of 10% Rule and completing an energy pyramid	NGSS: MS-LS2-1, MS-LS2-3, MS-LS1-7, NGSS Connections, MS-LS2-2 The types of interactions that include competitive, predatory, and mutually beneficial can be reviewed as well.

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Lesson 13 - Bats: Pollinators, Seed Dispersers, and Pest Controllers Lesson	Creating a model of a pollinator	NGSS: MS-LS1-4 (Plants), MS-LS1-6, MS-LS2-3, NGSS Connections. MS-LS1-5 In addition to the focus of environmental factors, the genetic factors can be reviewed with this lesson.
Lesson 14 - Threats to Bats and Human Impact	Create a solution to a situation that causes harm to bats	NGSS: MS-LS2-4, MS-LS2-5, MS-ESS3-3
Lesson 15 - Engineering a Bat Garden	Engineering lesson	NGSS: MS-LS2-5, MS-ESS3-3, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4
Lesson 16 - Conservation	Conservation project in your community	NGSS: MS-LS2-5, MS-ESS3-3
Lesson 17- Engineering Zoo Habitat	Engineering lesson	NGSS: MS-LS2-1, MS-LS2-3, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4