Adopt-A-Swan Lessons Matrix

	Title	Concepts and Skills	Targeted Grade Levels	Objectives	Description
1.	**Meet the Trumpeter Swan**	Observation and description, natural history, conservation, dichotomous keys, proportions	4-8	Students will learn how to identify Trumpeter Swans. They will learn about swan biology and life history traits, and conservation efforts in the Blackfoot and elsewhere.	Students watch a PowerPoint slide show to learn the basics about Trumpeter Swan natural history and conservation. They use a dichotomous key to distinguish between different species of large white waterfowl in Montana. They collaborate in making a life-sized drawing of a swan.
2.	**Ups and Downs: Swan Population Trends**	Populations, graphing, migration, conservation	5-8	Students will learn how to analyze population data collected by biologists. They will understand how swan populations have changed in the Rocky Mountains over time.	Students use graphing skills to evaluate the data collected during biannual swan surveys in Montana, Wyoming and Idaho. They identify population trends, compare populations among sites, and examine the proportions of swans in different age classes.
3.	**Assessing Blackfoot Wetlands**	Habitat use, writing skills, chart reading, data analysis	4-8	Students will learn which habitat characteristics are important to swans. They will learn how biologists analyze data to determine if	Students use data from the Blackfoot Valley Wetland Habitat Suitability Data to analyze individual wetlands. They summarize their findings

				a wetland is suitable for swan reintroduction and swan nesting. They will learn how some wetlands in the Blackfoot Valley meet these suitability criteria.	and give an assessment to the rest of their class on whether the wetland is suitable for nesting and whether they would recommend it as a release site.
4.	**The Blackfoot Swan Reintroduction Program**	Graphing, proportions, rates, animal mortality	5-8	Students will learn the history of the swans previously released in the Blackfoot, their fates, locations, return rates and mortality rate.	Students study and analyze the data from the Blackfoot Swan Project and summarize the results of the project thus far, just as biologists do.
5.	**Where in the World are We?**	Latitude and longitude, mapping, animal migration, wildlife ecology	4-8	Students learn what latitude and longitude are and how to use them to plot and find locations on maps.	Students play a grid-based game and devise clues to help classmates locate spots on the globe. In doing so, they come to recognize the value of using latitude and longitude for identifying locations.
6.	**The Travels of the Swan**	Latitude and longitude, mapping, animal migration, wildlife ecology species, habitat use	5-8	Students will learn how to track swan movements using Satellite Telemetry Data and Google Earth. They will learn how swans use the landscape during migration and overwintering.	Students use satellite telemetry data from the Blackfoot Valley Swan Project to track and plot swan locations. They determine distances moved and create habitat use records based on swan locations.