WEEK 7 Lesson 2

Science and Engineering

Observing the Sky: What happens during a storm?

S & E **Big Idea**	Weather affects people.
S & E **Guiding Question**	How does the weather affect people?
Content Objective	I can describe how a picture (or frame of a video) connects to what I am learning in science and engineering. (SE.ESS.1, Practice 8)
Language Objective	I can use unit vocabulary to describe what happens during a storm. (SL.3.1.a, L.6.1)
Vocabulary	**time-lapse**: a way of filming something using many photographs taken over a long period of time, shown quickly **storm**: a weather condition with heavy rain or snow and strong winds and sometimes thunder or lightning
Materials and Preparation	• demonstration thermometer, set to below 32 degrees • Winter Storm Nemo (Blizzard of 2013) in Boston video (1:52) (https://www.youtube.com/watch?v=1gnhcupdp1s&feature=youtu.be) OR replace with a video that takes place in Maine • projector and screen
Opening 5 minutes	*A few weeks ago we defined the word **meteorologist** as a person who studies the weather. This week we'll talk more about how the weather can impact our lives.* *Think of a time when a plan you had was canceled because of weather. Have you stayed home from school on a "snow day?" Have you had a soccer game or a birthday party canceled because of rain? The weather can make us change our whole day!* *Today we'll watch a video of a winter storm. Meteorologists give big weather events, like blizzards and hurricanes, names. This storm*

	was called Winter Storm Nemo, and it occurred in 2013 (____ years ago). *After we watch the video, we'll play a weather game!*
Text 10 minutes	*This is a **time-lapse** video. That means that many pictures were taken over a long period of time, and then the pictures were put together to watch quickly. This makes it seem like the storm happened in just a couple of minutes, but this video really shows what happened over a few days. Let's watch it.* Show the video through without stopping. *Now we'll watch it again, stopping in a few places to talk about what we find.* With each stop, facilitate a brief VTS conversation, asking the questions, *What's going on here?* *What makes you say that?* *What more can we find?* Suggested stopping points: 0:11 snow starts accumulating 0:20 snow covers the road 0:31 snow covers the road/low visibility 0:49 cars are completely covered 1:05 people shoveling out cars (connect to benefit of community) 1:12 nighttime, some cars have been shoveled out 1:37 sunny, storm is over
Game 10 minutes	Invite children to sit around the perimeter of the meeting space. Make sure that children have plenty of space to move around without too much bumping. *We've been acting out stories in the Drama Studio and all together. Let's act out needing to go outside in different weather conditions.* *What are some reasons we might need to go outside, no matter what the weather conditions may be?* Allow children to revisit the reasons people go out, as shown in the video and to add other ideas. Set the scene of a blizzard. *Before we go out, let's take a look out the window to see what's happening. It's snowing, with a very strong wind. It's difficult to see out there.* *Let's check the thermometer. It's very cold, only 26 degrees. We're going to need to bundle up!*

	Allow the children a moment to pretend dressing in cold weather gear, zipping up coats and pulling on boots, hats, mittens, and scarves, etc. *Ready to go outside?* Mime opening the door (or ask a couple of children to act as the doorway) and invite children to go through it. *How can we move through this weather, with so much wind and snow flying around? Are we moving quickly or slowly? Is it easy or hard to walk?* *What are you doing out in this storm? Act it out!* Give a signal to bring the children back "inside." Suggest or have a child suggest another weather condition to act out, such as thunderstorms, rain showers, a tornado, warm and sunny. For each scenario, adjust the model thermometer to offer evidence for the the particular weather condition. Intentionally use weather-specific vocabulary children have been exploring.
Closing	*We'll play this game again and watch another video during the next Science lesson.*
Standards and **Practices**	**SE.ESS.1** Make observations at different times of the year to relate the amount of daylight to the time of year. (Further explanation: Emphasis is on relative comparisons of the amount of daylight in the winter or summer to the amount in the spring or fall. Planning and Carrying out Investigations, Earth and the Solar System, Patterns) Clarification Statement: • Examples of seasonal changes to the environment can include foliage changes, bird migration, and differences in amount of insect activity. **Practice 8.** Obtaining, evaluating and communicating information. **SL.3.1.a** Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.**L.6.1** Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., because).
Ongoing assessment	The focus of this lesson is allowing students to communicate and make sense of the language they have been using during this unit. Assess students ability to use vocabulary and recognize the relative temperature.
Extension activity	https://www.weather.gov/media/owlie/Owlie11.pdf