



# Lesson Plan for Implementing NETS•S—Template I *(More Directed Learning Activities)*



## **Template with guiding questions**

Teacher(s)

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Position

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Grade Level(s)

4th grade

Content Area

Language/Science

Timeline

5-50-minute sessions

**Standards** (What do you want students to know and be able to do? What knowledge, skills, and strategies do you expect students to gain? Are there connections to other curriculum areas and subject area benchmarks? )

- ELAGSE4W7: Conduct short research projects that build knowledge through investigation of different aspects of a topic.
- ELAGSE4W8: Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources
- S4E4. Students will analyze weather charts/maps and collect weather data to predict weather events and infer patterns and seasonal changes.
- S4CS7. Students will be familiar with the character of scientific knowledge and how it is achieved.

Content Standards

- 6-Creative Communicator: Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.
- 6d-Students publish or present content that customizes the message and medium for their intended audiences.

NETS\*S Standards:

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- Global Collaborator: 7c-Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.
  - Empowered Learner
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**Overview** (a short summary of the lesson or unit including assignment or expected or possible products)

The objective of this lesson is for fourth-grade students to assume the role of a meteorologist and create an informational visual for other fourth graders and younger students to understand different extreme weather events. Additionally, students will write an informational essay describing their extreme weather. To begin the unit students will be shown various weather event videos. After watching the videos, students will be grouped based on their interests in the following extreme weather events: thunderstorms, blizzards, hurricanes, tornadoes. Groups will use various online resources to complete research on their type of weather event. At the end of the unit, fourth graders will present their completed projects to other classmates and younger students in kindergarten, first and second grade. During this event, students will view all presentations and take notes to learn about other types of extreme weather events.

**Essential Questions** (What essential question or learning are you addressing? What would students care or want to know about the topic? What are some questions to get students thinking about the topic or generate interest about the topic? What questions can you ask students to help them focus on important aspects of the topic? What background or prior knowledge will you expect students to bring to this topic and build on?)

- What is weather?
- Why do we study weather?
- What is the difference between weather and climate?
- What are tornadoes? Hurricanes? Blizzards?  
Thunderstorms?
- How are tornadoes formed? Hurricanes? Blizzards?
- What type of scientists study weather?
- What type of information should be included in your essay?

**Assessment** (What will students do or produce to illustrate their learning? What can students do to generate new knowledge? How will you assess how students are progressing (formative assessment)? How will you assess what they produce or do? How will you differentiate products?)

Students will produce a visual presentation using Prezi, Google Slides, or a Piktochart. The presentation will illustrate their learning on how their extreme weather event forms and the damages it can cause. Each group will decide on the tool to use to produce their visual product. Additionally, students will also produce an informational essay to pair with their visual presentation. Two rubrics will be used to assess students' work throughout this unit. A rubric assessing the

presentation includes areas such as: content, technology, attractiveness, and grammar and mechanics. The second rubric will be used to assess the students' informational writing. A checklist will be used to assess students' collaboration and communication skills. The checklist follows the expectations chart that I use in my classroom daily. Throughout the research process, students will interact with various resources like text and videos. I will assess (formative assessment) the accuracy of their notes and graphic organizers pertaining to the main idea and key details charts, by observing and checking over students work.

**Resources** (How does technology support student learning? What digital tools, and resources—online student tools, research sites, student handouts, tools, tutorials, templates, assessment rubrics, etc—help elucidate or explain the content or allow students to interact with the content? What previous technology skills should students have to complete this project?)

Technology will support students' learning by allowing them to collaboratively complete graphic organizers, visual and written products. The creation of these visual productions will also allow students to easily share their work with me and other students within our school. Students will benefit from read-aloud resources on Discovery Education and Pebble Go, which allow all students to gain access to the information. Students will also have access to Get Epic! An online library where students can find kid-friendly books, videos, and audio. In addition, students will also get to use a webquest I've created to help them gain extra information. Lastly, students will also have access to Brain Pop videos that we have watched during previous lessons. To complete this product students will need to review lessons and new lessons on how to use the visual tools to create their presentations.

### **Instructional Plan**

**Preparation** (What student needs, interests, and prior learning provide a foundation for this lesson? How can you find out if students have this foundation? What difficulties might students have?)

Students have been particularly interested in learning about the weather. They have looked forward to our weather unit and their curiosity leans more toward extreme weather. Students do have some background knowledge on the topic. Before the start of this lesson, students got to meet a real meteorologist from our local news station located in Chattanooga, Tennessee. Students got to hear first-hand how a meteorologist gets to track and gather weather data for weather events such as a blizzard or a hurricane. Students have a misconception between the difference in climate and weather. This misconception will be cleared up with the help of this lesson.

**Management** Describe the classroom management strategies will you use to manage your students and the use of digital tools and resources. How and where will your students work? (small groups, whole group, individuals, classroom, lab, etc.) What strategies will you use to achieve equitable access to the Internet while completing this lesson? Describe what technical issues might arise during the Internet lesson and explain how you will resolve or troubleshoot them?

To ensure students work collaboratively in groups I will review group expectations. These group expectations include: get along, respect peers, work collaboratively, do your part, be respectful. These expectations go along with the PBIS school wide expectation. Each member will also assume a membership role within the group. Groups will be composed of three to four students. This will allow all students to participate while completing the tasks. The roles include: Recorder, Researcher, and designer. Students will communicate with other group members to choose these roles. Groups with four members will be challenged to work together to share one role. Throughout the unit, students will complete their task within our classroom environment and use the class set of Chromebooks that are readily available to us. I am excited about using the Chromebooks, because most work is saved automatically to Google drive. I think students may have some trouble maneuvering from the Google apps to the online resources needed to research their topic. I will teach a mini lesson on how to pull up two screens when working. I will also offer mini-lessons on being a good digital citizen. I think the designers will have trouble determining which technology to use. Although most may choose Google slides because it is most familiar, I will encourage students to use a new technology during this unit. However, it will be up to each group to decide which online tool to use for their presentation.

**Instructional Strategies and Learning Activities** – Describe the research-based instructional strategies you will use with this lesson. How will your learning environment support these activities? What is your role? What are the students' roles in the lesson? How can you ensure higher order thinking at the analysis, evaluation, or creativity levels of Bloom's Taxonomy? How can technology support your teaching? What authentic, relevant, and meaningful learning activities and tasks will your students complete? How will they build knowledge and skills? How will students use digital tools and resources to communicate and collaborate with each other and others? How will you facilitate collaboration?

Throughout this unit, students assume the authentic role of a meteorologist. I wanted this unit to be student centered so students were able drive the instruction through inquiry by asking questions about the weather events and looking for those answers through research. I also guided inquiry by asking students to also research the formation of the weather event of their choice. In this setting, I assumed the role as a facilitator. As a facilitator, I plan to help students construct their own knowledge by modeling how to find and record important information, explaining information, clarifying, redirecting focus, and providing more options if needed. My overall goal is for students to take ownership of their learning as they work together collaboratively and with the support of the my colleagues who come for multiple student services. Students will collaborate with each other to research information and produce a visual about the formation of their extreme weather event of choice. Throughout the process students must communicate with group members and through writing. I will closely facilitate collaboration by utilizing our rules when working in small groups. These are posted in our classroom. I will also remind students of our class expectations which are inspired by the expectations of the Ron Clark Academy. These reminders in the expectations in their behavior will ensure success in their groups.. Another way that I plan to facilitate collaboration is by using G-Suite. By using these tools, I can view students' progress and interaction on my own

computer. Students will be challenged to retrieve information by evaluating and analyzing texts and videos. Students will then take this knowledge and create a visual for other to learn about the formation, damages and other key information on the extreme weather events.

**Differentiation** (How will you differentiate content and process to accommodate various learning styles and abilities? How will you help students learn independently and with others? How will you provide extensions and opportunities for enrichment? What assistive technologies will you need to provide?)

I only teach science and language to my entire fourth grade level and because of this, students come to my class for a fraction of the day. Since many our students receive ESOL and SPED services, along with EIP, these support teachers will help provide assistance to the students they serve during my blocks. For our special ed students with the accommodation of read aloud questions, their paraprofessional will helping them through their small groups. The same accommodation will take place for my students that receive ESOL services while they are in my room. Having other teachers throughout the day will provide a strong support in differentiation. Allowing my students to choose the extreme weather event they would like to research will be another differentiation available for my students. Based on the choices made, students will be strategically grouped so that developing learners are placed with proficient or exemplary learners. My co-teachers and I carefully planned to check in with groups with developing students to ensure they understand and complete their fair share to the work. To differentiate the process students are given roles and I will check in with each group. Students who research the information can read the text independently, with a partner, or benefit from audio (assistive technology) reading of the text on Pebble Go or via Get Epic! Students who assume the role of recorder will either use a graphic organizer to organize notes or use bullet points on Google Docs. I will also provide my students with a skeleton template to help them understand the type of information their presentations need to include. The Chromebooks will allow students to type on the screen, use the keyboard or use the speak to text mode (special headphone are available for this). Students who assume the roles of designers will meet with me or my co teachers daily to ensure students have all their questions answered daily about the tool. Extension: Students can add additional details to their project, animations, and voice thread to make the project more creative.

At the end of the unit, students will organize their information to create a presentation using one of the online tools of their choice. I will be collecting observations throughout the completion of the project. After students complete their presentations, they will present them to each other. Students who are not presenting will be in charge of writing down notes of the different weather events presented. The groups will also present to the younger student body in Kindergarten, 1st and 2nd grade.

**Reflection** (Will there be a closing event? Will students be asked to reflect upon their work? Will students be asked to provide feedback on the assignment itself? What will be your process for answering the following questions?)

- Did students find the lesson meaningful and worth completing?
- In what ways was this lesson effective?
- What went well and why?
- What did not go well and why?
- How would you teach this lesson differently?)

The students found this lesson very meaningful and engaging. Since the start of our weather unit and with the visit of the local meteorologist, the students became more and more interested in learning about extreme weather events. This lesson was very effective because I got to observe true collaboration among all the groups. My special ed students, who need additional assistance in everything we complete stayed engaged and on task during the entire completion of all parts of the lesson. They gained a lot of understanding about their extreme weather events and felt a sense of accomplishment. Some of the weaknesses of the lessons was students being absent. Many of our fourth graders have a history of being absent from school a lot, and their group suffered their absence. I would definitely give more time to complete this lesson. The lesson had a lot of components and with milestones review and testing around the corner, I had to cut the time my students had to complete it. If I teach this lesson again, I will plan it with plenty of time so my students will not feel rushed. Also, if I had to teach this lesson again, I would take more time to teach mini-lessons over the online tools my students had to choose from. However, I think my students really enjoyed the lesson and had fun researching and completing the project. I felt they had a strong foundation after completing the unit, meeting a real meteorologist and completing their visual presentations.

**Closure:** Anything else you would like to reflect upon regarding lessons learned and/or your experience with implementing this lesson. What advice would you give others if they were to implement the lesson?

Overall, I think the lesson was a success with the students. The beginning of the lesson was a bit bumpy, but my students and I managed to get things back on track. When I was planning the lesson I thought the lesson was going to be very challenging to my ESOL and SPED students, but with the support from their peers and teachers, their assignments turned out presentable and with a sense of pride. I would advise anyone that plans to implement this lesson to make sure their students get to hear from a real meteorologist. This part of my weather unit, prior to the completion of this lesson really helped my students understand the job of a meteorologist. I also think this sparked interest in my quietest students, who happen to be girls to like science a little more.

**Rubrics:**

[Visual Presentation Rubric](#)

[Group Collaboration Checklist](#)

**Informational Writing Rubric (See image below)**

# Informative Writing Rubric

Standard	1	2	3	4
<b>W.4.2</b> » Write informative/explanatory texts to examine a topic and convey ideas and information clearly.				
<b>W.4.2A</b> » Introduce a topic clearly and group related information in paragraphs and sections, include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.				
<b>W.4.2B</b> » Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.				
<b>W.4.2C</b> » Link ideas within categories of information using words and phrases (e.g., <i>another</i> , <i>for example</i> , <i>also</i> , <i>because</i> ).				
<b>W.4.2D</b> » Use precise language and domain-specific vocabulary to inform about or explain the topic.				
<b>W.4.2E</b> » Provide a concluding statement or section related to the information or explanation presented.				
<b>W.4.7</b> » Conduct short research projects that build knowledge through investigation of different aspects of a topic.				
<b>W.4.8</b> » Recall relevant information from experiences or gather relevant information from print and digital sources, take notes and categorize information, and provide a list of sources.				