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| 1. **OBJECTIVES** |  |
| 1. **Content Standards** | The learners demonstrate understanding of the factors that affect climate, and the effects of changing climate and how to adapt accordingly. |
| 1. **Performance Standards** | The learners should be able to participate in activities that reduce risks and lessen effects of climate change. |
| 1. **Learning Competencies** | Explain how different factors affect the climate of an area (**S9ES-IIIe-30**)  **Learning Objectives:**  At the end of this lesson, the students should be able to:   1. Explain how distance from the ocean affects the climate 2. Compare the effect of heat on water and land |
| 1. **GAD Integration/ Values Integration/Comprehensive Sexuality Education Integration** | * Cooperation * Analysis * Creativity * Inclusive |
| 1. **CONTENT** | Distance from the ocean affects Climate |
| 1. **LEARNING RESOURCES** 2. **References** |  |
| **1. Teachers Guide pages** | Science 9 – Unit 3, Module 2: Climate, pp.147 |
| **2. Learner’s Material pages** | Science 9 – Unit 3, Module 2: Climate, pp.190 |
| 1. **Materials** | * **For Teacher:** * PowerPoint Presentation/chalk board, Manila Paper, Marker, Adhesive Tape, Laptop, television, speaker * **For Learners:** * Pen/pencil, paper |
| 1. **Other Resources** | PowerPoint Presentation, Video Presentation, Pictures, Checklist, Internet Resources, Print-outs, Manila Papers, Permanent Markers |

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| 1. **PROCEDURES** |  | **Teacher's Activity** | **Student's Activity** |
| **Preliminaries** |  | **A. Greeting**  “Good morning, 9- (Santan)!” “How are you today?”  “Class, today is Tuesday, or let's just say Happy Tuesday, because today is another amazing day to learn something new.”  **B. Opening Prayer**  “Before we start our lesson this morning, may I ask the student of the day (name of the learner) to lead us in prayer.”  “Before you take your seat, kindly check your chairs if there are some trashes and also kindly arrange your chairs.”  **C. Checking of Attendance**  “Again, good morning, class!”  “May I ask who are not around today? Row 1…2…3…4…5…6?”  **D. Classroom Rules**  “Before we proceed to our lesson, let us recall our five classroom rules.  Who can give me the first rule?  How about the second rule?  What is our third rule?  And, our fourth rule?  Lastly, our fifth rule?  Very good, class. Can I expect you to follow all these classroom rules? Sure?” | “Good morning, Ma’am Jo!”  “Good, Sir”  “Happy Tuesday”  (Learner will lead the prayer)  (Learners will arrange their chairs and pick up some trashes)  “Good morning, Sir”  “None,  Sit properly.  Listen attentively.  Speak politely.  Participate actively.  Respect everybody.  “Yes, Sir!” “Sure, sure!” |
| 1. **Reviewing previous lesson or presenting the new lesson** | **ELICIT** | “Last meeting, we've tackled about the latitude and altitude that affects the climate.  Now, let's move to another fun and interesting topic.  The teacher will ask, “What do you feel when you're closer to the beach?”  “How about when you are not close to the beach and you are in most land areas?  “Excellent class; thanks for sharing your ideas, and again, are you ready to learn? | “"Sir, I'm glad we can go swimming with ease and that the cool air from the beach keeps it from feeling too hot.  “We're far from the ocean, so it's not as enjoyable for me, ma'am, and it's hot since there isn't as much cold air”.  “Yes, ma’am” |
| 1. **Establishing a purpose for the lesson** | **ENGAGE** | The teacher will show two pictures, one of a beach and another of a desert, and ask students to note the differences they observe in terms of climate indicators.    “Aside from the fact that you are able to identify which is warmer and which is not, what do you observe from these pictures?  “It's an excellent observation. Indeed, there are locations that depict both areas without water and areas close to water. Let us now address its relevance to our lesson.” | “Sir, the pictures show different places with dry land and water areas. |
| 1. **Presenting examples/ instances of the new lesson** |
| 1. **Discussing new concepts and practicing new skills #1** | **EXPLORE** | The teacher will ask the question, “Do you think the distance from the ocean affects the climate in different regions?”.  “That is an interesting idea, okay let’s find out! Thank you for all you shared! Let's understand how it impacts the climate now. Look at this image. With the two images, what can you see?”    “I appreciate you sharing; that observation class is excellent!”  (The teacher will show the Map of British Isles and Moscow, Russia. To further explain the topic)  The climate of a place is influenced by the surrounding bodies of water. Soil absorbs heat faster than water. At the same time, soil releases heat faster compared to water. These slow absorption and release of heat by the body of water greatly affect the climate. For example:  This shows **the British Isles and the part of Russia near Moscow**. Being in the temperate region, both places have four seasons. Even though both places are on the same latitude, the northern tip of the British Isles has a more moderate climate due to the neighboring bodies of water.  The British Isles experiences average maximum temperature of 17 degree Celsius and an average minimum temperature of 0-degree Celsius. Moscow on the other hand, has an average maximum temperature of 21 degree Celsius and very cold winter with an average of -8 degree Celsius.  Additionally, **land heats and cools faster than the sea and also Coastal areas have lower temperature than Island areas**. Take a look at this:    Take a walk along a dry beach on a hot early afternoon. No sooner than putting your barefoot in the sand, you start hopping and jumping and immediately run towards the sea to soak your scorching feet in the water. Yes, the sun heats both of them up. However, land and water do not heat up or cool down at the same pace. This differential heating and cooling of land and sea give rise to what are known as breezes, in the coastal areas.  The teacher will ask,” Is there a difference in the climate of regions close to oceans and regions far away from the oceans?”  “Very good class!”  Take note: Places that are far from the bodies of water have extreme climates | “Sir, I think it is possible that some areas will experience some cold wind or hot wind from the ocean.  “Sir, we can see that the first picture shows an area near the ocean.”  “Also, Sir, as we can see, the second image displays an area without of any nearby ocean.”  “Yes, ma’am because the regions far away from the oceans, contain extremely less amount of water vapor. As a result, the air remains dry. Dry air leads to a sharp difference in the day and night temperature and therefore the regions far away from the oceans have an extreme climate. Coastal areas are cooler and wetter than inland areas.” |
| 1. **Discussing new concepts and practicing new skills #2** | **EXPLORE** | The teacher will provide students with pictures or diagrams of various bodies of water/ coastal areas in Pangasinan for example. In small groups or pairs, ask students to discuss and answer the following questions:      Dagupan Ponds in Binmaley  How might the proximity (distance) of a body of water affect the climate in a surrounding area?  What changes in weather patterns or conditions might occur due to the presence of a nearby body of water?  The teacher will allow students time to share their ideas with the class and encourage discussion.  Lastly, the teacher will ask “why does the land warm up faster than the oceans?”  “That is an excellent class. I'm glad you understand the effect of water distance on climate”. | “Sir, this is because land has a smaller “heat capacity” than water, which means it needs less heat to raise its temperature. |
| 1. **Developing mastery** | **EXPLAIN** | The teacher will explain that bodies of water have a moderating effect on temperature, keeping temperatures near the coast cooler in summer and warmer in winter compared to inland areas.  Question and Answer  The teacher will ask some students to answer the following questions:  *“What I Have Learned?”*  Learners will be asked a question prior to their understanding of the lesson.  How does the distance of water affect the climate of an area? | “Distance from the sea – Oceans heat up and cool down much more slowly than land. This means that coastal locations tend to be cooler in summer and warmer in winter than places inland at the same latitude.” |
| 1. **Finding practical application of**   **concepts and skills in daily living** | **ELABORATE** | If you're given the choice of where to live, what will you choose? near bodies of water or not? Explain | (The student will response based on their learnings) |
| 1. **Making generalization and abstractions about the lesson** | **ELABORATE** | The teacher will distribute index cards to each student.   1. Instruct students to choose a specific body of water (ocean, lake, river, etc.) and write a short paragraph explaining how its distance from land affects the climate of the surrounding area. 2. Encourage students to include specific examples and use their knowledge from the previous discussion. 3. Allow students to share their paragraphs with a partner or in small groups. | (The student will response based on their learnings) |
| 1. **Evaluating learning** | **EVALUATE** | “Now that you’ve learned about the distance of water that affects climate, it’s time to assess your learning. Kindly bring out ½ sheet of paper for your short test.  Write a comparative analysis essay comprises 100 words discussing how the distance of bodies of water influences climate in two different regions.  “Okay, so can you all compare how the two regions—inland and coastal areas—are impacted by the distance between bodies of water?  “Very good Class!” | (The student will response based on their own learnings)  “Yes, sir” |
| 1. **Additional activities for application or remediation** | **EXTEND** | **Assignment**  The students will be tasked to answer the following question on their notebook and to be submitted the following day.  Guide Questions:   * Describe the Philippines in terms of its location in the world map. * Do you like the climate that we experience? Why and why not? * How does our climate help the livelihood of the citizens in our country?   Write your answers/ findings in a 1 whole sheet of paper.” “The submission of your assignment will be on Monday”  “Any questions or clarifications? If there’s nothing more, let’s call it a day. Thank you for listening and I do hope you learned something. Before you leave, kindly arrange the chairs and check if there are some trashes. Again, thank you 9- (Santan) and never forget to always shine bright like a Scimazing. Class dismissed!” | “Thank you and good bye, Ma’am Jo.” |
| 1. **REMARKS** |  |  |  |
| 1. **REFLECTION** |  |  |  |
| 1. No. of learners who earned 80% in the evaluation |  |  |  |
| 1. No. of learners who require additional activities for remediation who scored below 80% |  |  |  |
| 1. Did the remedial lessons work? No. of learners who have caught up with the lesson |  |  |  |
| 1. No. of learners who continue to require remediation |  |  |  |
| 1. Which of my teaching strategies worked well? Why did these work |  |  |  |
| 1. What difficulties did I encounter which my principal or supervisor can help me solve? |  |  |  |

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