

**K to 12 BASIC EDUCATION CURRICULUM  
SENIOR HIGH SCHOOL – CORE SUBJECT**

**Grade:** 11/12

**Subject Title:** Disaster Readiness and Risk Reduction

**No. of Hours/Semester:** 80 hours/semester

**Prerequisite:** Grades 3-10 Science

**Subject Description:** This course focuses on the application of scientific knowledge and the solution of practical problems in a physical environment. It is designed to bridge the gap between theoretical science and daily living.

| CONTENT                                     | CONTENT STANDARD  | PERFORMANCE STANDARD   | LEARNING COMPETENCIES  | CODE  |
|---|---|--|--|---|
| Basic concept of disaster and disaster risk | <p><i>The learners demonstrate understanding of the...</i></p> <ol style="list-style-type: none"> <li>1. Concept of disaster</li> <li>2. Concept of disaster risk</li> <li>3. Nature of disasters</li> <li>4. Effects of disasters</li> </ol> | The learners relate the concept of disaster with daily life. | <p><i>The learners...</i></p> <ol style="list-style-type: none"> <li>1. Explain the meaning of disaster;</li> <li>2. Differentiate the risk factors underlying disasters;</li> <li>3. Describe the effects of disasters on one’s life;</li> <li>4. Explain how and when an event becomes a disaster;</li> <li>5. Identify areas/locations exposed to hazards that may lead to disasters; and</li> <li>6. Analyze disaster from the different perspectives (physical, psychological, socio-cultural, economic, political, and biological).</li> </ol> | <p><b>DRR11/12-Ia-b-1</b><br/> <b>DRR11/12-Ia-b-2</b><br/> <b>DRR11/12-Ia-b-3</b><br/> <b>DRR11/12-Ia-b-4</b><br/> <b>DRR11/12-Ia-b-5</b><br/> <b>DRR11/12-Ia-b-6</b></p> |

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|----------------------------|---|--|--|--|
| Exposure and Vulnerability | <i>The learners demonstrate understanding of...</i>   | The learners conduct hazard hunts of exposed elements and propose corresponding corrective actions for one's preparedness. | <i>The learners...</i> <ol style="list-style-type: none"> <li>1. Enumerate elements exposed to hazards;</li> <li>2. Explain the meaning of vulnerability;</li> <li>3. Explain why certain sectors of society are more vulnerable to disaster than others;</li> <li>4. Analyze why certain structures are more vulnerable to specific hazards than others;</li> </ol> | <p align="center"><b>DRR11/12-Ic-7</b><br/><b>DRR11/12-Ic-8</b></p> <p align="center"><b>DRR11/12-Ic-9</b></p> <p align="center"><b>DRR11/12-Ic-10</b></p> |
|                            | Various elements that may be exposed to hazards: <ol style="list-style-type: none"> <li>1. <i>Physical</i></li> <li>2. <i>Social</i></li> <li>3. <i>Economic</i></li> <li>4. <i>Environmental</i></li> </ol> Vulnerability of each exposed element. |  | <ol style="list-style-type: none"> <li>5. Determine the elements that are exposed to a particular hazard;</li> <li>6. Recognize vulnerabilities of different elements exposed to specific hazards; and</li> <li>7. Differentiate among hazards, exposure, and vulnerabilities and give examples from actual situations.</li> </ol>                                   | <p align="center"><b>DRR11/12-Id-11</b></p> <p align="center"><b>DRR11/12-Id-12</b></p> <p align="center"><b>DRR11/12-Id-13</b></p>                        |
| Basic concept of hazard    | <i>The learners demonstrate understanding of the...</i> <ol style="list-style-type: none"> <li>1. Concept of hazard</li> <li>2. Types of hazards</li> <li>3. The impact of various hazards</li> </ol>   | The learners relate various types of hazard with a specific area for one's preparedness.                                   | <i>The learners...</i> <ol style="list-style-type: none"> <li>1. Define hazards;</li> <li>2. Give examples of the types of hazards; and</li> <li>3. Explain the impact of various hazards on different exposed elements.</li> </ol>  | <p align="center"><b>DRR11/12-Ie-14</b><br/><b>DRR11/12-Ie-15</b><br/><b>DRR11/12-Ie-16</b></p>  |

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|--------------------|---|--|---|--|
| Earthquake Hazards | <p><i>The learners demonstrate understanding of...</i></p> <p>Potential earthquake hazards:</p> <ol style="list-style-type: none"> <li>1. <i>Ground shaking</i></li> <li>2. <i>Ground rupture</i></li> <li>3. <i>Liquefaction</i></li> <li>4. <i>Earthquake-induced ground subsidence</i></li> <li>5. <i>Tsunami</i></li> <li>6. <i>Earthquake-induced landslide</i></li> </ol>             | The learners develop a family emergency preparedness plan to guide them on what to do before, during, and after an earthquake.       | <p><i>The learners...</i></p> <ol style="list-style-type: none"> <li>1. Identify various potential earthquake hazards;</li> <li>2. Recognize the natural signs of an impending tsunami;</li> <li>3. Analyze the effects of the different earthquake hazards;</li> </ol> | <p><b>DRR11/12-If-g-17</b></p> <p><b>DRR11/12-If-g-18</b></p> <p><b>DRR11/12-If-g-19</b></p> |
|                    |   |  | <ol style="list-style-type: none"> <li>4. Interpret different earthquake hazard maps; and</li> <li>5. Apply precautionary and safety measures before, during, and after an earthquake.</li> </ol>   | <p><b>DRR11/12-If-g-20</b></p> <p><b>DRR11/12-If-g-21</b></p>                                |
| Volcano Hazards    | <p><i>The learners demonstrate understanding of...</i></p> <p>Signs of impending volcanic eruptions</p> <p>Potential volcano-related hazards:</p> <ol style="list-style-type: none"> <li>1. <i>Lahar</i></li> <li>2. <i>Ash fall</i></li> <li>3. <i>Pyroclastic flow</i></li> <li>4. <i>Ballistic projectile</i></li> <li>5. <i>Volcanic gasses</i></li> <li>6. <i>Lava flow</i></li> </ol> | The learners develop a family emergency preparedness plan to guide them on what to do before, during, and after a volcanic eruption. | <p><i>The learners...</i></p> <ol style="list-style-type: none"> <li>1. Explain various volcano-related hazards;</li> <li>2. Differentiate among different volcano hazards;</li> <li>3. Recognize signs of an impending volcanic eruption;</li> </ol>                   | <p><b>DRR11/12-Ih-i-22</b></p> <p><b>DRR11/12-Ih-i-23</b></p> <p><b>DRR11/12-Ih-i-24</b></p> |
|                    |   |  | <ol style="list-style-type: none"> <li>4. Interpret different volcano hazard maps; and</li> <li>5. Apply appropriate measures/interventions before, during, and after a volcanic eruption.</li> </ol>   | <p><b>DRR11/12-Ih-i-25</b></p> <p><b>DRR11/12-Ih-i-26</b></p>                                |

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|----------------------------------|---|--|--|--|
| Other related geological hazards | <i>The learners demonstrate understanding of...</i><br><br>Related geological hazards<br>1. <i>Rainfall-induced landslide</i><br>2. <i>Sinkhole</i>   | The learners develop a family emergency preparedness plan to guide them on what to do before, during, and after the occurrence of events that cause geological hazards.          | <i>The learners...</i><br><br>1. Discuss the different geological hazards;<br>2. Analyze the causes of geological hazards;<br>3. Recognize signs of impending geological hazards;  | <b>DRR11/12-IIa-b-27</b><br><b>DRR11/12-IIa-b-28</b><br><b>DRR11/12-IIa-b-29</b>     |
|                                  |   |  | 4. Interpret geological maps; and<br>5. Apply mitigation strategies to prevent loss of lives and properties.   | <b>DRR11/12-IIa-b-30</b><br><b>DRR11/12-IIa-b-31</b>                                 |
| Hydrometeorological hazards      | <i>The learners demonstrate understanding of...</i><br><br>Potential hydrometeorological hazards:<br>1. <i>Typhoon</i><br>2. <i>Thunderstorm</i><br>3. <i>Flashflood</i><br>4. <i>Flood</i><br>5. <i>Stormsurge</i><br>6. <i>El niño</i><br>7. <i>La niña</i> | The learners develop a family emergency preparedness plan to guide them on what to do before, during, and after the occurrence of events that cause hydrometeorological hazards. | <i>The learners...</i><br><br>1. Distinguish and differentiate among and between different hydrometeorological hazards;<br>2. Recognize signs of impending hydrometeorological hazards;  | <b>DRR11/12-IIc-d-32</b><br><br><b>DRR11/12-IIc-d-33</b>                             |
|                                  |   | The learners develop proficiency in executing emergency response plans through safety drills.  | 3. Apply appropriate measures/interventions before, during, and after hydrometeorological hazards;<br>4. Interpret different hydrometeorological hazard maps; and<br>5. Use available tools for monitoring hydro-meteorological hazards. | <b>DRR11/12-IIc-d-34</b><br><br><b>DRR11/12-IIc-d-35</b><br><b>DRR11/12-IIc-d-36</b> |

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|--|---|---|--|--|
| Fire hazard  | <i>The learners demonstrate understanding of...</i><br><br>Fire hazards and related concepts:<br>1. <i>Fire triangle</i><br>2. <i>Causes of fires</i><br>3. <i>Phases of a fire emergency</i> | The learners develop a family emergency preparedness plan to guide them on what to do before, during, and after a fire incident.  | <i>The learners...</i><br><br>1. Recognize elements of the fire triangle in different situations;<br>2. Analyze the different causes of fires;<br>3. Observe precautionary measures and proper procedures in addressing a fire incident; | <b>DRR11/12-IIe-f-37</b><br><b>DRR11/12-IIe-f-38</b><br><b>DRR11/12-IIe-f-39</b> |
|  |   |   | 4. Apply basic response procedures during a fire incident; and<br>5. Follow fire emergency and evacuation plans;   | <b>DRR11/12-IIe-f-40</b><br><b>DRR11/12-IIe-f-41</b>                             |
| Concept of Disaster Risk Reduction (DRR) and Disaster Risk Reduction and Management (DRRM) | <i>The learners demonstrate understanding of...</i><br><br>Disaster risk reduction:<br>1. Concept of DRR<br>2. Importance of DRR<br>3. Key principles   | The learners are able to develop a community emergency preparedness plan and community disaster preparedness plan to minimize vulnerability and disaster risk in the community and avoid or | <i>The learners...</i><br><br>1. Discuss the key concepts, principles, and elements of DRR;<br>2. Recognize the importance of DRR on one's life;   | <b>DRR11/12-IIg-h-42</b><br><b>DRR11/12-IIg-h-43</b>                             |

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|---|--|---|---|--|
|   | Community-based disaster risk reduction and management for preparedness <ol style="list-style-type: none"> <li>1. <i>Emergency plan</i></li> <li>2. <i>Monitoring and Evaluation</i></li> <li>3. <i>Early Warning Systems</i></li> <li>4. <i>Survival kits and materials</i></li> </ol>  | limit adverse impacts of hazards.<br><br>The learners practice and develop proficiency in executing emergency response protocols/procedures through safety drills.                  | <ol style="list-style-type: none"> <li>3. Discuss different community-based practices for managing disaster risk to specific hazards;</li> <li>4. Develop a community preparedness plan; and</li> <li>5. Prepare survival kits and materials for one’s family and for public information and advocacy.</li> </ol> | <p align="center"><b>DRR11/12-IIg-h-44</b><br/><b>DRR11/12-IIg-h-45</b><br/><b>DRR11/12-IIg-h-46</b></p> |
| What to expect between the State and the citizens | <i>The learners demonstrate understanding of...</i> <ol style="list-style-type: none"> <li>1. Policies of DRRM -The Philippine DRRM Law RA 10121 and its Implementing Rules and Regulations</li> <li>2. Information and resources from the Government (Projects and Programs)</li> </ol> | The learners are able to develop a community disaster preparedness plan to minimize vulnerability and disaster risk in the community and avoid or limit adverse impacts of hazards. | <i>The learners...</i> <ol style="list-style-type: none"> <li>1. Explain DRR-related laws and policies;</li> <li>2. Avail of existing DRR-related services programs and projects; and</li> <li>3. Abide by public policies on DRRM.</li> </ol>  | <p align="center"><b>DRR11/12-IIi-j-47</b><br/><b>DRR11/12-IIi-j-48</b><br/><b>DRR11/12-IIi-j-49</b></p> |

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**Code Book Legend**

**Sample: DRR11/12-Id-11**

| LEGEND   |   | SAMPLE  |                 |
|--|---|---|-----------------|
| <b>First Entry</b>   | Learning Area and Strand/ Subject or Specialization | Disaster Readiness and Risk Reduction                           | <b>DRR11/12</b> |
|  | Grade Level   | Grade 11/12   |                 |
|  |   |   | -               |
| <b>Roman Numeral</b><br><i>*Zero if no specific quarter</i>  | Quarter   | First Quarter   | <b>1</b>        |
| <b>Lowercase Letter/s</b><br><i>*Put a hyphen (-) in between letters to indicate more than a specific week</i> | Week  | Weeks four  | <b>D</b>        |
|  |   |   | -               |
| <b>Arabic Number</b>   | Competency  | Determine the elements that are exposed to a particular hazard; | <b>11</b>       |

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**References:**

UNISDR. *2009 Terminology on Disaster Risk Reduction*. Geneva, Switzerland: United Nations International Strategy for Disaster Reduction, 2009.

UNISDR. *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*. Geneva, Switzerland: United Nations International Strategy for Disaster Reduction, 2007.

United Nations. *Sendai Framework for Disaster Risk Reduction 2015 – 2030*. Geneva Geneva, Switzerland: United Nations International Strategy for Disaster Reduction, 2015.