**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.

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| Basic concept of disaster and disaster risk | The learners demonstrate understanding of the... | The learners relate the concept of disaster with daily life. | The learners... | DRR11/12-Ia-b-1
<p>| | 1. Concept of disaster | 1. Explain the meaning of disaster; | | DRR11/12-Ia-b-2 |
| | 2. Concept of disaster risk | 2. Differentiate the risk factors underlying disasters; | | DRR11/12-Ia-b-3 |
| | 3. Nature of disasters | 3. Describe the effects of disasters on one’s life; | | DRR11/12-Ia-b-4 |
| | 4. Effects of disasters | 4. Explain how and when an event becomes a disaster; | | DRR11/12-Ia-b-5 |
| | | 5. Identify areas/locations exposed to hazards that may lead to disasters; and | | DRR11/12-Ia-b-6 |
| | | 6. Analyze disaster from the different perspectives (physical, psychological, socio-cultural, economic, political, and biological). | | |</p>
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| Exposure and Vulnerability | *The learners demonstrate understanding of...* | The learners conduct hazard hunts of exposed elements and propose corresponding corrective actions for one’s preparedness. | *The learners...*  
1. Enumerate elements exposed to hazards;  
2. Explain the meaning of vulnerability;  
3. Explain why certain sectors of society are more vulnerable to disaster than others;  
4. Analyze why certain structures are more vulnerable to specific hazards than others;  
5. Determine the elements that are exposed to a particular hazard;  
6. Recognize vulnerabilities of different elements exposed to specific hazards; and  
7. Differentiate among hazards, exposure, and vulnerabilities and give examples from actual situations. | DRR11/12-Ic-7  
DRR11/12-Ic-8  
DRR11/12-Ic-9  
DRR11/12-Ic-10 |
| Various elements that may be exposed to hazards:  
1. *Physical*  
2. *Social*  
3. *Economic*  
4. *Environmental* | Vulnerability of each exposed element. | | |
| Basic concept of hazard | *The learners demonstrate understanding of the...*  
1. Concept of hazard  
2. Types of hazards  
3. The impact of various hazards | The learners relate various types of hazard with a specific area for one’s preparedness. | *The learners...*  
1. Define hazards;  
2. Give examples of the types of hazards; and  
3. Explain the impact of various hazards on different exposed elements. | DRR11/12-Ie-14  
DRR11/12-Ie-15  
DRR11/12-Ie-16 |
### Earthquake Hazards

**The learners demonstrate understanding of...**

- Potential earthquake hazards:
  1. Ground shaking
  2. Ground rupture
  3. Liquefaction
  4. Earthquake-induced ground subsidence
  5. Tsunami
  6. Earthquake-induced landslide

**The learners develop a family emergency preparedness plan to guide them on what to do before, during, and after an earthquake.**

**The learners...**

1. Identify various potential earthquake hazards;
2. Recognize the natural signs of an impending tsunami;
3. Analyze the effects of the different earthquake hazards;
4. Interpret different earthquake hazard maps; and
5. Apply precautionary and safety measures before, during, and after an earthquake.

**Code:**
- DRR11/12-If-g-17
- DRR11/12-If-g-18
- DRR11/12-If-g-19
- DRR11/12-If-g-20
- DRR11/12-If-g-21

### Volcano Hazards

**The learners demonstrate understanding of...**

- Signs of impending volcanic eruptions

- Potential volcano-related hazards:
  1. Lahar
  2. Ash fall
  3. Pyroclastic flow
  4. Ballistic projectile
  5. Volcanic gasses
  6. Lava flow

**The learners develop a family emergency preparedness plan to guide them on what to do before, during, and after a volcanic eruption.**

**The learners...**

1. Explain various volcano-related hazards;
2. Differentiate among different volcano hazards;
3. Recognize signs of an impending volcanic eruption;
4. Interpret different volcano hazard maps; and
5. Apply appropriate measures/interventions before, during, and after a volcanic eruption.

**Code:**
- DRR11/12-Ih-i-22
- DRR11/12-Ih-i-23
- DRR11/12-Ih-i-24
- DRR11/12-Ih-i-25
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<td>Other related geological hazards</td>
<td>The learners demonstrate understanding of... Related geological hazards 1. Rainfall-induced landslide 2. Sinkhole</td>
<td>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.</td>
<td>The learners... 1. Discuss the different geological hazards; 2. Analyze the causes of geological hazards; 3. Recognize signs of impending geological hazards; 4. Interpret geological maps; and 5. Apply mitigation strategies to prevent loss of lives and properties.</td>
<td>DRR11/12-IIa-b-27 DRR11/12-IIa-b-28 DRR11/12-IIa-b-29</td>
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<td>Hydrometeorological hazards</td>
<td>The learners demonstrate understanding of... Potential hydrometeorological hazards: 1. Typhoon 2. Thunderstorm 3. Flashflood 4. Flood 5. Stormsurge 6. El niño 7. La niña</td>
<td>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. The learners develop proficiency in executing emergency response plans through safety drills.</td>
<td>The learners... 1. Distinguish and differentiate among and between different hydrometeorological hazards; 2. Recognize signs of impending hydrometeorological hazards; 3. Apply appropriate measures/interventions before, during, and after hydrometeorological hazards; 4. Interpret different hydrometeorological hazard maps; and 5. Use available tools for monitoring hydrometeorological hazards.</td>
<td>DRR11/12-IIc-d-32 DRR11/12-IIc-d-33 DRR11/12-IIc-d-34 DRR11/12-IIc-d-35 DRR11/12-IIc-d-36</td>
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| Fire hazard | The learners demonstrate understanding of... | The learners develop a family emergency preparedness plan to guide them on what to do before, during, and after a fire incident. | The learners...  
1. Recognize elements of the fire triangle in different situations;  
2. Analyze the different causes of fires;  
3. Observe precautionary measures and proper procedures in addressing a fire incident;  
4. Apply basic response procedures during a fire incident; and  
5. Follow fire emergency and evacuation plans; | DRR11/12-IIe-f-37  
DRR11/12-IIe-f-38  
DRR11/12-IIe-f-39 |
| Concept of Disaster Risk Reduction (DRR) and Disaster Risk Reduction and Management (DRRM) | The learners demonstrate understanding of... | 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 | The learners...  
1. Discuss the key concepts, principles, and elements of DRR;  
2. Recognize the importance of DRR on one’s life; | DRR11/12-IIg-h-42  
DRR11/12-IIg-h-43 |
## Content

### Community-based disaster risk reduction and management for preparedness

1. Emergency plan
2. Monitoring and Evaluation
3. Early Warning Systems
4. Survival kits and materials

### What to expect between the State and the citizens

1. Policies of DRRM - The Philippine DRRM Law RA 10121 and its Implementing Rules and Regulations
2. Information and resources from the Government (Projects and Programs)

### Performance Standard

- Limit adverse impacts of hazards.
- The learners practice and develop proficiency in executing emergency response protocols/procedures through safety drills.

### Learning Competencies

1. Discuss different community-based practices for managing disaster risk to specific hazards;
2. Develop a community preparedness plan;
3. Prepare survival kits and materials for one’s family and for public information and advocacy.

### Code

- DRR11/12-IIg-h-44
- DRR11/12-IIg-h-45
- DRR11/12-IIg-h-46
- DRR11/12-IIi-j-47
- DRR11/12-IIi-j-48
- DRR11/12-IIi-j-49
### Code Book Legend

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

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References:

