

Journal 9 – Earthquake Scales (these are also in your book section 12.1)

The Richter Scale:

Level	Magnitude	Description of what may occur
Micro	Less than 2.0	Barely felt, but recorded by seismographs
Very minor	2.0–2.9	Recorded but not felt by most people
Minor	3.0–3.9	Little damage but felt by people
Light	4.0–4.9	No serious damage, objects shake
Moderate	5.0–5.9	Major damage to poorly-designed buildings
Strong	6.0–6.9	Serious damage over a 100-km area or less
Major	7.0–7.9	Serious damage over a larger area
Great	8.0–8.9	Serious damage over several hundred km
Rare great	9.0 or greater	Serious damage over several thousand km

Modified Mercalli Scale

Category (approximate)	Effects	Richter scale
I. Instrumental	Not felt	1-2
II. Just perceptible	Felt by only a few people, especially on upper floors of tall buildings	3
III. Slight	Felt by people lying down, seated on a hard surface, or in the upper stories of tall buildings	3.5
IV. Perceptible	Felt indoors by many, by few outside; dishes and windows rattle.	4
V. Rather strong	Generally felt by everyone; sleeping people may be awakened	4.5
VI. Strong	Trees sway, chandeliers swing, bells ring, some damage from falling objects	5
VII. Very strong	General alarm; walls and plaster crack	5.5
VIII. Destructive	Felt in moving vehicles; chimneys collapse; poorly constructed buildings seriously damaged	6
IX. Ruinous	Some houses collapse; pipes break	6.5
X. Disastrous	Obvious ground cracks; railroad tracks bent; some landslides on steep hillsides	7
XI. Very disastrous	Few buildings survive; bridges damaged or destroyed; all services interrupted (electrical, water, sewage, railroad); severe landslides	7.5
XII. Catastrophic	Total destruction; objects thrown into the air; river courses and topography altered	8