

□□ 3. □□□ □□ □□

- [□□](#)
- [□□](#)
- [□□](#)
- [□□□\\_3D □□](#)
- [□□□\\_3D □□](#)
- [□□□\\_3D □□](#)

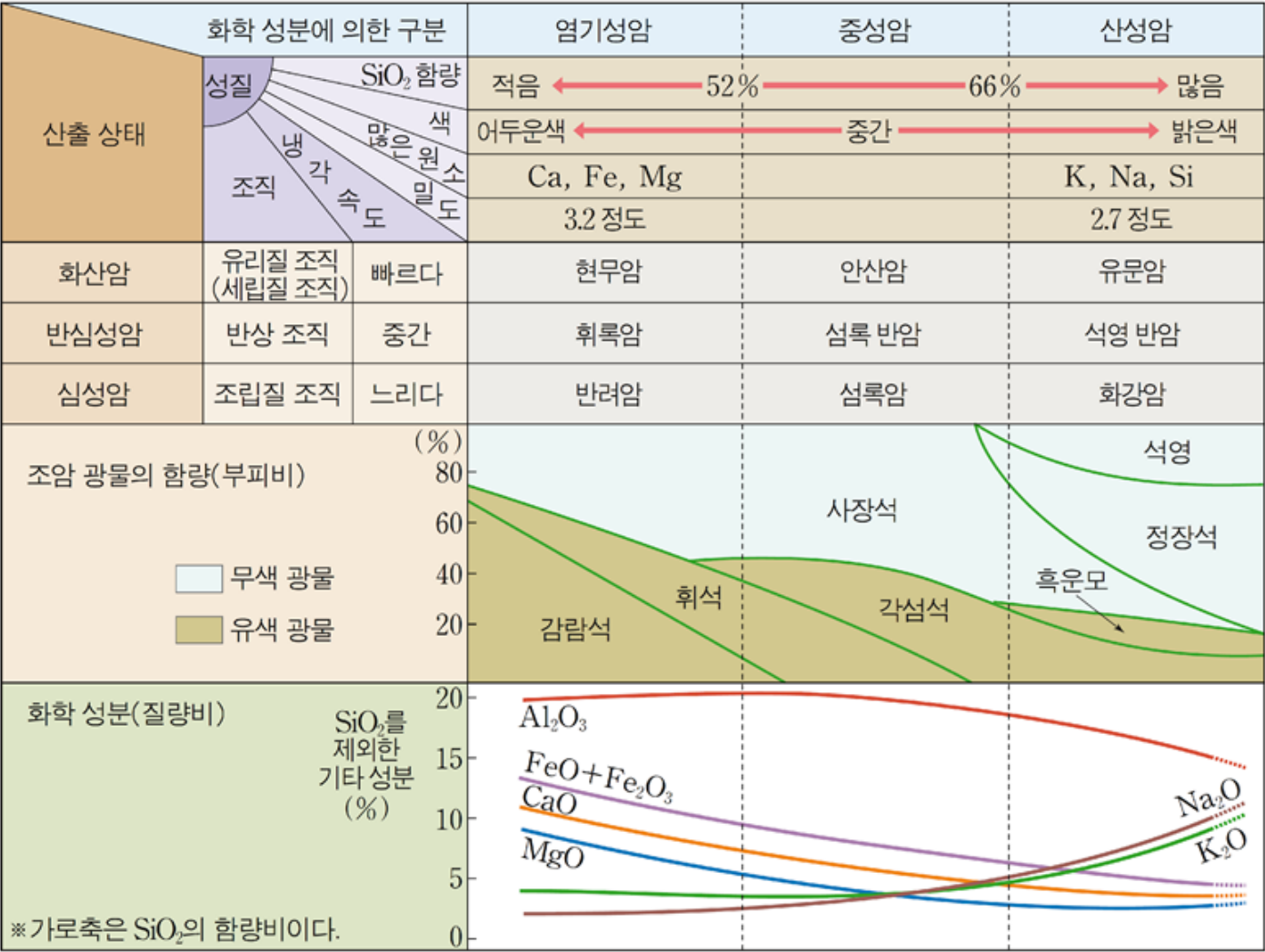


□□ □□□ □ □□□ □ □□ □□, □□, □□ □ □ □□□ □□□. □□ □ □□ □□ □ □ □□ □ □□ □□ □□, □□, □□□

< 1 >    □ □    □ □    □ □

<ul style="list-style-type: none"> <li>○</li> <li>○</li> <li>○</li> </ul>		<ul style="list-style-type: none"> <li>● 〇〇〇 〇〇 〇〇〇 〇〇〇 〇〇</li> <li>● 〇〇 〇〇〇〇 〇〇〇 〇〇〇 〇〇〇〇 〇〇. (〇〇, 〇〇, 〇〇〇, 〇〇, 〇〇)</li> <li>● 〇〇 〇〇〇〇 〇〇〇 〇〇</li> <li>● 〇〇 〇〇 〇〇 〇〇 〇〇〇 〇〇〇 〇〇.</li> </ul>
〇〇〇	〇〇〇	<ul style="list-style-type: none"> <li>● 〇〇〇 〇〇 〇〇〇 〇〇 〇〇 〇〇〇 〇〇〇 〇〇〇〇 〇〇〇〇 〇〇.</li> <li>● 〇〇 〇〇〇 〇〇 〇〇〇 〇〇〇 〇〇.</li> </ul>
	〇〇〇〇	<ul style="list-style-type: none"> <li>● 〇〇〇〇〇 〇〇 〇〇 〇〇 〇〇〇 〇〇〇 〇〇.</li> <li>● 〇〇 〇〇〇 〇〇〇〇〇 〇〇〇〇 〇〇. (〇〇〇, 〇〇, 〇〇)</li> <li>● 〇〇 〇〇 〇〇〇 〇〇〇 〇〇.</li> </ul>
<ul style="list-style-type: none"> <li>○</li> <li>○</li> <li>○</li> </ul>		<ul style="list-style-type: none"> <li>● 〇〇〇 〇〇 〇〇〇 〇〇〇 〇〇.</li> <li>● 〇〇〇, 〇〇〇, 〇〇〇, 〇〇〇 〇〇 〇〇〇 〇〇. 〇〇〇 〇〇〇〇 〇〇〇 〇</li> <li>● 〇〇〇, 〇〇〇, 〇〇〇, 〇〇〇〇 〇〇 〇〇 〇〇〇〇 〇〇〇〇 〇〇.</li> <li>● 〇〇〇 〇〇 〇〇 〇〇〇 〇〇〇 〇〇.</li> </ul>

<2>    □□□□   □□



<3> 실험 방법

실험 목적	암석의 광물 조성 분석	실험 방법	시료
시료 준비	시료(4×64mm), 시료(2×4mm)를 잘라낸다.	시료의 무게를 측정한다.	시료
	시료를 분쇄한다 (1/16×2mm)	시료를 잘라낸다.	시료
	시료를 분쇄한다	시료를 잘라낸다. 시료를 잘라낸다.	시료
	시료(1/256mm)를 분쇄한다	시료를 잘라낸다. 시료를 잘라낸다.	시료
시료 분석	CaCO <sub>3</sub>	시료, 시료, HCl 시료	시료
	Ca, Mg(CO <sub>3</sub> ) <sub>2</sub>	시료, 시료 HCl 시료	시료
	SiO <sub>2</sub>	시료를 잘라낸다. 시료, HCl 시료	시료

<4> 실험 결과

시료의 무게	시료의 무게	시료의 무게	시료
--------	--------	--------	----





- 1.1. 1.1. 1.1. 1.1. 1.1.
- 1.2. 1.2. 1.2. 1.2. 1.2.
- 1.3. 1.3. 1.3. 1.3. 1.3.
- 1.4. 1.4. 1.4. 1.4. 1.4.



(1) 

--	--	--	--

--	--	--

--	--

(2)  $\square\square\square\square\square\square\square\square$

(3) □□□□ □□ □

(3) ☐ ☐ ☐ ☐

※ □□□□ □□ 3D □, □□ □□ □□ □□ □□ □□ □□□□.

 $\times \square 6\square\square\square\square\square.$ 

3D URL	3D Model Name	3D Model ID
https://sketchfab.com/3d-models/sandstone-c7c36cc003c348f3ba68ff47e4b907fa	Sandstone	c7c36cc003c348f3ba68ff47e4b907fa
https://sketchfab.com/3d-models/basalt-var-scoria-8f2e33fcb5fa48e490f207986bb6ee7a	Basalt var scoria	8f2e33fcb5fa48e490f207986bb6ee7a

□□□ □	□□	□□	
□□	□□□ □	□□□ □	
□□□□ □	□□	□□	
□□□□ □	□□	□□	
□□□ □□□	□□, □□□, □□□	□□	

# 3D

(; igneous rock)

화학 성분에 의한 분류			염기성암	중성암	산성암
조직에 의한 분류	성분	SiO <sub>2</sub> 함량	적음 ← 52% → 66% → 많음		
	조직	냉각 속도	어두운 색 ← 중간 → 밝은 색		
화산암	유리질 조직 (반상 조직)		현무암	안산암	유문암
반심성암	반상 조직		휘록암	반암 (섬록반암)	석영반암
심성암	원정질 조직 (입상 조직)		반력암	섬록암	화강암

(; volcanic rock)

(; basalt)

<https://sketchfab.com/models/2aaf28c806c24830a0fb512cbeb10a88/embed>

[Scoriaceous basalt, Spain](#) by [Sara Carena](#) on [Sketchfab](#)

(; andesite)

<https://sketchfab.com/models/f66ba9533797441aa10c4f9f745ce81c/embed>

[Mt. Saint Helens andesite](#) by [Nichole Moerhuis \(UBC Geology\)](#) on [Sketchfab](#)

(; rhyolite)

<https://sketchfab.com/models/24f8c9d0584048c78316e4fe2b262174/embed>

[Rhyolite, Vulcano, Italy](#) by [callanbentley](#) on [Sketchfab](#)

(; hypabyssal rock)

□□□(□□□; diabase)

<https://sketchfab.com/models/0377da653e2448389ef4cc862e028b73/embed>

**Diabase** by **EDUROCK - EDUCATIONAL VIRTUAL ROCK COLLECTION** on **Sketchfab**

□□ □□(□□□□; diorite porphyry)

<https://sketchfab.com/models/1c669ce3a97549af8a81dbb92fd03211/embed>

**RD-2 (Reko Diq Porphyry)** by **Nichole Moerhuis (UBC Geology)** on **Sketchfab**

□□ □□(□□□□; quartz porphyry)

<https://sketchfab.com/models/7c693859a47e4cdba1ec1ce0393cdf44/embed>

**Quartz porphyry** by **Sara Carena** on **Sketchfab**

□□□(□□□; plutonic rock)

□□□(□□□; gabbro)

<https://sketchfab.com/models/5ab826e71dad411e86d6979cd6f28b0a/embed>

**Gabbro** by **Vanessacs** on **Sketchfab**

□□□(□□□; diorite)

<https://sketchfab.com/models/301bbc33e581435cbb71e09e33df5938/embed>

**Diorite** by **Sara Carena** on **Sketchfab**

□□□(□□□; granite)

<https://sketchfab.com/models/121808e411c94fff8022c9a186298c3a/embed>

**Granite** by **Rutgers University Geology Museum** on **Sketchfab**

# 3D

## (; sedimentary rock)

퇴적암	생성 원인	주요 구성 물질		화성
쇄설성 퇴적암	쇄설물이 퇴적되어 생성	실트, 점토(크기: 1/16 mm 이하)		실트암, 이암, 셰일
		모래(크기: 2~1/16 mm)		사암
		자갈(크기: 2mm 이상)		역암, 각력암
		화산 쇄설물	화산탄, 화산암괴	집괴암
화학적 퇴적암	물에 녹은 광물질이 침전되어 생성	침전물	화산재	응회암
			$\text{CaCO}_3$	석회암
			$\text{CaMg}(\text{CO}_3)_2$	돌로스톤
		증발 잔류물	$\text{SiO}_2$	처트
			$\text{NaCl}$	암염
유기적 퇴적암	생물체의 유해 등의 유기물이 집적	$\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$		석고
		석회질 생물체(산호, 유공충)		석회암
		규질 생물체(방산충 등)		처트
		식물체		석탄

## 

## (; breccia)

<https://sketchfab.com/models/4886bc86443f46dda3fe4cd7b564d459/embed>

[Tectonic breccia](#) by [Sara Carena](#) on [Sketchfab](#)

## (; conglomerate)

<https://sketchfab.com/models/9c2b5e3b70a0410394e2c61e31851164/embed>

[Conglomerate](#) by [Sara Carena](#) on [Sketchfab](#)

## (; sandstone)

<https://sketchfab.com/models/c7c36cc003c348f3ba68ff47e4b907fa/embed>

[Sandstone](#) by [EDUROCK - EDUCATIONAL VIRTUAL ROCK COLLECTION](#) on [Sketchfab](#)

## (shale)

<https://sketchfab.com/models/b0792d0212f44f81a03516b6662dc4f5/embed>

**Shale** by **PalomarESES** on **Sketchfab**



**Shale** (shale; limestone)

<https://sketchfab.com/models/248abbc982294c85b884ba2864a26dc6/embed>

**Limestone** by **UQ School of Earth and Environmental Sciences** on **Sketchfab**

**Limestone** (limestone; dolostone)

<https://sketchfab.com/models/74731d8dd78d49769fa4183802c42e79/embed>

**Dolostone, Spain** by **Sara Carena** on **Sketchfab**

**Dolostone** (chert)

<https://sketchfab.com/models/9f0642975e0a4d609bc71ae02a83a335/embed>

**Franciscan Chert** by **Ron Schott** on **Sketchfab**

**Franciscan Chert** (coquina, coquina)

<https://sketchfab.com/models/5f02b5f4f3e24012a3ff7f1735dca67f/embed>

**Coquina (PRI)** by **Digital Atlas of Ancient Life** on **Sketchfab**

# 3D

(; metamorphic rock)

## 변성암의 종류



(; quartzite)

<https://sketchfab.com/models/712165c36f36431cbc453aec567c49e6/embed>

Quartzite, Spain by Sara Carena on Sketchfab

(; marble)

<https://sketchfab.com/models/3e6a621e4b084e44b78e71e9eabfad99/embed>

Marble by EDUROCK - EDUCATIONAL VIRTUAL ROCK COLLECTION on Sketchfab

(; gneiss)

<https://sketchfab.com/models/1d539c5094fd4b24987c0b34f4f86ea4/embed>

Gneiss by Earth Sciences, University of Newcastle on Sketchfab

[[[[]]]( [[]]; slate)

<https://sketchfab.com/models/b8d8e2147dbf43e292a937fad475b990/embed>

[Slate, Taiwan](#) by [Sara Carena](#) on [Sketchfab](#)

[[[[]]]( [[]]; schist)

<https://sketchfab.com/models/752ed38ca6434f85acb2684af5d34730/embed>

[Schist](#) by [GSGEQueens](#) on [Sketchfab](#)

[[[[]]](hornfels)

<https://sketchfab.com/models/4b344dadd5ea44d1856d0f5e075658a3/embed>

[Viridin-Hornfels](#) by [Uni Freiburg](#) on [Sketchfab](#)