

# Continental Glaciation

## Description of Model 6: Continental Glaciation

This is a model of a region which has features resulting from continental glaciation. A large lake fills the basin which has been carved by one of the main lobes of the continental glacier. This may be seen at the north end of the model. All preglacial rock outcrops have been obscured by the thick till deposits. The glaciated region has undergone little erosion; therefore, the till plain is considered young.

Typical moraine features may be seen on the terminal moraine (105). These include kettles (113) kettle lakes (111) as well as numerous mounds and hummocks. The kettle depressions were created by the melting of isolated blocks of ice left by the retreating glacier; these blocks of ice were buried in the till and when they melted, the overlying till settled, leaving depressions. An esker (109) is a ridge-like deposit of sand and gravel left by a stream which ran in a tunnel in the ice of the glacier.

North of the terminal moraine is a recessional moraine (103). This is a till deposit left during the glacier's retreat. A group of drumlins (108) may be seen at the northeast end of the model. The steeper ends of the drumlins usually face toward the direction from which the glacier came.

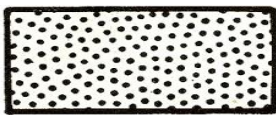
South of the terminal moraine all of the topography is unglaciated. Some glacial material has been deposited by stream action on the outwash plain (107).

There is a limestone area in the southwest corner of the model with extensive subterranean caverns. These caverns have been formed by water dissolving the calcium carbonate (limestone). Water running through underground fissures has dissolved caves in the limestone. Where the limestone overlying these caves has collapsed, depressions are formed. Originally, drainage in the limestone area was on the surface, however in a mature karst region such as this the drainage is subterranean.

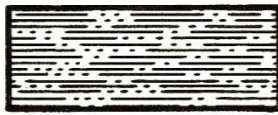
The large river meanders across the broad flood plain created between the glacial outwash and the limestone cliff (121). The river has cut a terrace (114) in the limestone. Several stages in the creation of oxbow lakes can be seen in the course of the river on this model.

*from Geology Models Study Guide by Robert B. Lewis*

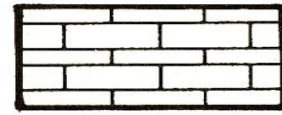
## LEGEND



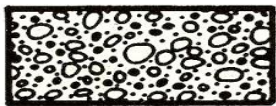
SANDSTONE



SHALE



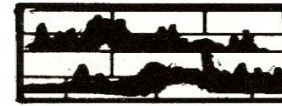
LIMESTONE



GLACIAL TILL



SWAMP



CAVERNS

**Continental Glaciation** Find each feature on the model and write the number of the feature in the table below. Answer the questions below.

Feature Number	Feature Name
	Caverns
	Cutoff
	Drumlins
	Esker
	Flood Plain
	Glacial Till
	Kame
	Kettle
	Kettle Lake
	Meander
	Hogback
	Oxbow Lake
	Sink Hole
	Swamp

1. How is a kettle formed?
2. What causes meanders?
3. How might glacial till be identified by geologists?
4. Describe the shape and orientation of a drumlin?
5. How does an oxbow lake form?
6. How does a sink hole form?
7. What is the usual shape of a kame?