## Water in the landscape – a sandbox model

## Part II – Visualization of hydrological processes

	The water cycle	<u>0:19</u>	
1.	Precipitation, infiltration & flow direction of groundwater	<u>0:50</u>	Coloring of precipitation  Precipitation, infiltration & flow direction of GW
2.	Pressure conditions in the groundwater	<u>1:52</u>	
2.1	Different pressure heads in lower and upper aquifer	<u>1:57</u>	> different water levels  Pressure differences in lower and upper aquifer
2.2	Artesian Well	3:26	Upper aquifer: Sand & gravel  Impermeable layer: Loam  Separating loam layer enables higher pressure in lower aquifer compared to upper aquifer
2.3	Local aquitard – A loam lense	4:50	Both gauges filtered in same aquifer  Influence of loam lense on groundwater level below and above loam lense
2.4	Overview of water levels	6:19	Confined GW in lower aquifer  Overview of water levels
3.	Visualization of flow directions with tracer (ink)	<u>7:17</u>	
3.1	Movement of water in the subsurface	<u>7:23</u>	GW-flow along an impermeable layer

3.2	Interaction of stream and groundwater	<u>9:31</u>	Coloring of stream water Connection of stream with groundwater
3.3	Local inversion of regional groundwater flow direction	10:27	Regional flow direction of groundwater of groundwater pressure above loam lense higher than below due to infiltrating stream water
4.	Simulation of sea level rise	11:39	Adjust water level at overspill
5.	Water flow through lake as part of water cycle	<u>12:45</u>	
5.1	Dependency of lake water level from groundwater level	12:51	Formation of lake due to rising groundwater
5.2	Suspended loam particles unveil flow through the lake	<u>13:32</u>	Lateral flow through the lake