Today you will need your notebook and pencil.
Test on Thursday. HW due Friday.

- **Review from Yesterday:**
  Describe or draw a series of pictures for how an oxbow lake forms.

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**Groundwater + Floods**

February 3, 2015

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**Aquifer**

- **Aquifer:** Huge underground storehouse of groundwater used for drinking

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**Groundwater Animation**

- http://www.as.uky.edu/sites/default/files/elearning/module01.swf
Changes to Groundwater

- **Groundwater Recharge:** Infiltration of water into the saturated zone. Replenishes supply of groundwater.
  
  **Example:** Precipitation, runoff

- **Groundwater Discharge:** Movement of groundwater out to surface waters. Lowers supply of groundwater.
  
  **Example:** Occurs during dry periods

Flood Protection Techniques

- We’ll divide into 6 groups
- Each group will read about one flood protection technique
- Each group member will present one of the following questions to the class:
  1. Define/explain your flood protection technique
  2. What is one benefit of your technique?
  3. What is one disadvantage of your technique?
  4. Interesting fact about your technique.

Flood Prevention Methods

- **Levees**
  - Embankments built next to the river channel

- **Flood Barriers**
  - Expensive. Protect important urban areas and some can be opened and closed.

- **Flood Control Channels**
  - Empty concrete channels that run above or below the surface

- **Dams**
  - Regulate the river’s flow so that the river never exceeds bankfull discharge
Flood Prevention Methods

• Reforestation
  • Planting trees to try and increase the lag time (period of time between peak rainfall and peak discharge) of a river

Flood Prevention Methods

• Controlled Flooding
  • Redirecting excess water to designated flood regions

Flash Floods

What conditions contribute to creating a flash flood?
https://www.youtube.com/watch?v=_luLaH7zuHA

HOW FLASH FLOODS OCCUR

1. Heavy rain falls onto waterlogged ground
2. Rainfall cannot seep in, so runs down into river
3. River rises dramatically and buries its banks, flooding valley floor

Flooding in Bangladesh

• How has urbanization and a growing population contribute to the flooding in Bangladesh?
https://www.youtube.com/watch?v=gRwAMjeTgYQ

The Drowning Country

• https://www.youtube.com/watch?v=MAkz1AVZY_Y