**JAG03 Unit 3 Water**

**Task 1 Identify the idioms or proverbs in the sentences below and explain their meaning in your own words.**

1. I can't seem to get my head above water. Work just keeps piling up.

2. Bill got in deep water in algebra class. The class is too difficult for him, and he's almost failing.

3. Things were going along quite smoothly until you came along and muddied the water.

4. George and I were friends once, but that's all water under the bridge now.

5. You can't close the airport because one airline has problems - that's just throwing out the baby with the bath water.

6. Our manager thinks the best way to introduce new staff to the job is to throw them in at the deep end and see how they go.

**Task 2 Questions**

**Ask about the missing part of the sentence:**

1. Hydrogeology deals with ……

…………………………………………………………………………….. ?

1. Hydrogeology is the study of groundwater – we refer to it ……

…………………………………………………………………………….. ?

1. Hydrogeologists apply their knowledge …..

…………………………………………………………………………….. ?

1. Hydrogeologists attempt to ……

…………………………………………………………………………….. ?

1. Hydrogeologists work closely with ……….

……………………………………………………………………………… ?

**Now match the questions from above with their answers:**

1. to many practical uses.
2. as geohydrology or groundwater hydrology.
3. a wide range of people from farmers to scientists to policy makers.
4. solve some of the big questions facing the world today.
5. how water gets into the ground (recharge), how it flows in the subsurface (through aquifers) and how groundwater interacts with the surrounding soil and rock.

**Task 3 Hydrogeologist´s job**

**Complete the gaps with one of the words below.**

***clean construct dewatering harness investigate sustain***

Hydrogeologists might:

* design and (1) ………….. water wells for drinking water supply, irrigation schemes and other purposes;
* try to discover how much water is available to (2) …………. water supplies so that these do not adversely affect the environment;
* (3) …………….. the quality of the water to ensure that it is fit for its intended use;
* where the groundwater is polluted, they design schemes to try and (4) …………. up this pollution;
* design (5) …………… schemes and deal with groundwater problems associated with mining;
* help to (6) …………… geothermal energy through groundwater-based heat pumps.

(adapted from https://iah.org/education/general-public/what-is-hydrogeology)

**Task 4 Speaking**

**Imagine you are going to attend a lecture given by a famous hydrogeologist. What current issues do you think she is going to cover? What questions would you ask her?**

**Task 5 Video – 4 ways we can avoid a catastrophic drought**

(<https://www.ted.com/talks/david_sedlak_4_ways_we_can_avoid_a_catastrophic_drought?referrer=playlist-talks_on_water>)

1. **Study the vocabulary below. What solutions to drought do you think the speaker will present?**

drought reservoir dam rural faucet water-starved sewer

resource rainwater harvesting water demand water treatment wetland aquifer

1. **Watch the speech. Then answer the questions:**

* **What strategies were used in the past to deal with water shortage?**
* **What are the four suggested ways to deal with the problem?**
* **How does the speaker conclude his talk?**
* **What is your opinion on the speaker´s suggestions?**

1. **Listening for detail**

**Watch and complete the gaps with the missing words.**

<https://www.ted.com/talks/david_sedlak_4_ways_we_can_avoid_a_catastrophic_drought?referrer=playlist-talks_on_water> (5:39-7:05)

1. Los Angeles …………. about a third of its water supply from a massive aquifer that underlies the San Fernando Valley.
2. You don't want to drink stormwater it until it ………………. a little bit.
3. The goal in urban water harvesting is to ……………. the water, clean the water and get it underground.
4. In Burbank they're hooking storm sewers, and …………….. that water into an abandoned gravel quarry.
5. The water that's captured in the quarry is slowly ………….. a man-made wetland, and then it goes into that ball field and …………. into the ground, …………… the drinking water aquifer.
6. In this process, the water …………….. microbes and that ………….. the water.
7. If the water's still not clean enough to drink after it …………. through this natural treatment process, the city can treat it again when they ……………… it back out of the groundwater aquifers before they deliver it to people.

**D) Listening for detail II**

**Watch and write down all the verbs the speaker uses to describe the process of recycling wastewater.**

<https://www.ted.com/talks/david_sedlak_4_ways_we_can_avoid_a_catastrophic_drought?referrer=playlist-talks_on_water> (7:52-8:45)