Introduction to Environmental Science 120
Class Activity: Food Chains and Web

Name - _____

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Read through the text provided on the KESAB Patawalonga and Torrens Waterwatch handout.

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1. Complete the chart provided. There should be at least twenty different organisms in the chart when you are done. **Organisms may appear in more than one column.** (10)

2. On the sheet of white paper provided, construct a food web consisting of **30 food chains** using the given organisms. Cut out the organisms then organize them on your paper – it is best to start with the producers on the bottom and build up. When you are satisfied with the placement of the organisms, glue them in place and add arrows to show the flow of energy through the food web. Make sure all arrows can be easily followed and point towards the predator. (15)

3. Below the chart provided, provide food chains that meet the following requirements…
   *****you must use arrows to indicate the energy flow!**

(i) three food chains that consist of **two organisms** (3)
(ii) a food chain with the **black swan as a second order consumer**
*** **you must include trophic level labels!** (2)
(iii) a food chain with the **lizard as a second order carnivore**
*** you must include trophic level labels! (2)

Using this page as a cover page, staple all of your work together and place it in the folder up front **BEFORE THE END OF CLASS!!!**

KESAB Patawalonga and Torrens Waterwatch

1. Complete the chart. (10)

Producers	First Order Consumer	Second Order Consumer and Higher

3. Write your food chains below. (7)

(i)

(ii)

(iii)

KESAB Patawalonga and Torrens Waterwatch

Activity 6 – FOOD WEB WORKSHEET

Read through the text. Design a food web and answer some questions from the following information:

The Torrens River starts in the Adelaide hills as several small creeks which join to form one larger creek. As it winds its way down the hills to the city, more and more water is added. It generally only flows in winter, when the rainfall is sufficient, and dries up into small waterholes during the summer. A weir is used to hold water permanently in the city. It is surprising how many organisms rely on the river for their existence.

Algae can be observed growing in the water, as well as water ribbons *(Triglochin procerum)*. On the water's edge, fluffy topped reeds such as the common reed *(Phragmites australis)* and the bulrush *(Typhus sp)* grow. Water boatmen are observed swimming in the water. They are eating the algae and reeds. Mosquito larvae also eat the algae while the freshwater snail eats both the algae and water ribbons. A long necked tortoise pokes its nostrils above the water. The tortoise eats the algae too, as well as feeding on snails, boatman and yabbies. The water boatman provides food for many species including fish, frogs, diving beetles and dragonfly larvae. The yabbies are scavengers, feeding on rotting plant and animal matter, while bacteria also help break down this dead material by digesting it and recycling nutrients in the food web. The mosquito larvae are considered a delicacy for several varieties of fish (such as the big-headed gudgeon or the congolli).

Birds are in abundance along the waterway. Pacific black ducks are feeding on fish, dragonfly larvae and diving beetles, while the occasional visiting pelican feeds on fish, frogs and dragonfly larvae. Black swans make a beautiful sight, bending their elegant necks to forage under the water grazing on the water ribbons, snails and an occasional fish. The white-faced heron makes a meal of the fish and frogs. The purple swamp hen runs quickly from the bulrushes where it feeds on the tender growth of the bulrushes and also makes its nest. On the bank a blue-tongue lizard is sunning itself in a warm rock. It snaps at the dragonflies and diving beetle and beware the unwary frog, the lizard will sometimes eat them too.

Wetland
Food Web Images


water ribbons


algae


mosquito larvae


mosquito


bulrushes


frog


heron


swamp hen


reeds


dragonfly


fish


freshwater snail


lizard


water boatman


diving beetle


dragonfly larvae


tortoise


black swan


pelican


yabby


duck

2) Food Web: Cut and layout organisms FIRST…then tape/glue.