

## Pre / Post Quiz for the Invasive Species Integrated Curriculum Unit Solutions

1. Which of these picture below shows the common reed, *Phragmites australis*?



2. A scale bar indicates that 1 inch on a map represents 20 miles in the real world, and you measure the distance between 2 towns on that map as being 2 inches, how far apart are those towns in the real world?

$$2 * 20 = 40 \text{ miles}$$

3. Invasion Rate of a plant = distance the population has expanded divided by \_\_\_time\_\_\_\_\_
4. A student wants to know the number of a certain kind of plant within a marsh but the marsh is too big to allow her to count them all. She decides to take a sample using a quadrat. She takes her quadrat and throws it randomly into the marsh and counts all the plants in her quadrat. Her quadrat is 1/1000 the size of the marsh, so she multiplies by 1000 to estimate the number of plants in the whole marsh? What's wrong with this plan?
- b. Not enough replicates

5. Which of these are different species?

d. Common reed and cattail reed

6. A strain is

b. A group of related individuals within a species that look or act differently

7. Invasive species are

a. Species which are alien to an ecosystem that cause harm if introduced into it

8. Which of these is **false** regarding the data shown in the graphs below?

e. Fruit type is a continuous variable (Graph D)

9. Which of the graphs above uses the wrong (incorrect) format for the data shown in it?

D

10. What is one way you could distinguish between native and invasive strains of the common reed *Phragmites australis*?

| Native                                               | Invasive                                                |
|------------------------------------------------------|---------------------------------------------------------|
| Lighter green leaves                                 | Darker green leaves                                     |
| More bugs                                            | Bug free                                                |
| Fewer leaves                                         | Denser growth                                           |
| Less bushy flowers                                   | More busy flowers                                       |
| Thinner leaves                                       | Thicker, sturdier leaves                                |
| No center ridge due to thin vein down middle of leaf | Strong midrib (vein) makes clear white line down middle |
| Purple leaf collar                                   | White leaf collar                                       |
| Red stem in spring                                   | Beige / Green stem in spring                            |
| Darker brown stem in winter                          | Light brown stem in winter                              |
| Shorter stems                                        | Taller stems                                            |

11. True (T) or false (F)?

a. Marshes have different plants and animals in them depending on the level of salt in them  
TRUE

b. Marshes have grasses not trees                      TRUE

c. Phragmites can only grow in both fresh water marshes                      FALSE

d. The loss of diversity associated with invasive *Phragmites* affects BOTH plants and animals                      TRUE

e. If you can buy a plant at a local nursery or plant store it can't be a plant that may become invasive.                      FALSE

f. When invasive *Phragmites* enters a marsh the result is often that the water levels drop and the marsh dries out                      TRUE

12. X → squirrel → hawk

The producer that could best be placed in position X would be a

C. acorn

13. Fruit → mouse → Z

Which consumer could best be placed in position Z?

C. owl

14. A food web is more realistic than a food chain for showing the feeding relationships in ecosystems because

D. Producers are usually eaten by many different consumers and most consumers are eaten by more than one predator

15. What is transpiration?

b. The process by which water is lost by evaporation from plant tissues

16. Which of these factors is not a reason that transpiration rates are higher in invasive *Phragmites* than in native plants?

a. More water is present in marshes in which invasive *Phragmites* grows

17. Name THREE things you or your friends and family can do to avoid adding more invasive species to the environment

- Contact your local native plant society or state Department of Natural Resources to find out which plants are invasive in your area.
- Learn to identify locally important invasive plants.
- Remove invasive plants on your property or prevent their spread.
- Only use non-invasive plants when landscaping your property.
- If your property borders a natural area, consider using only native plants in your landscape.
- Find non-invasive or native alternatives for invasive landscape plants.
- Use systemic herbicides carefully as a last resort to remove invasive plants.
- Make others in your neighborhood aware of invasive plants.
- Volunteer on an invasive species removal

- Don't move firewood or other materials from place to place (insects inside them can move with the wood)
- Throw away fishing bait in garbage, not in the lake or ocean
- Wash boat inside and out and allow to dry before moving it from lake to lake.
- Rinse bottom of shoes / boots between different hiking trails
- Don't release unwanted pets into the environment
- ANY OTHER ANSWER THAT MAKES SENSE IS FINE HERE

18. When writing for a newspaper, a reporter tries to cover the "5 W's and the H" of the story. Fill in the blanks for what those stand for

Who, What, Where, When,

Why and How?

19. An event that took place 4000 years ago, took place at approximately what date?

c. 2000 BC

20. Why is the Rosetta Stone important?

b. It allowed scholars to translate Egyptian hieroglyphics and demotic texts

21. The Ancient Egyptians made pens out of

D. Reeds

22. Anasazi true (T) or false (F)

- a. Lived in New Jersey FALSE
- b. Domesticated turkeys TRUE
- c. Wove reed mats TRUE
- d. A nomadic people, they hunted and gathered food as they traveled from camp to camp  
FALSE
- e. Famous for their rock drawings or petroglyphs TRUE
- f. A serious people, they frowned on music, jewelry and other "frivolities"  
FALSE

23. Put the following in order starting with the poorest / least powerful member of medieval society

C. Serf      A. Farmer      E. Knight      D. Noble      B. Monarch

24. Which of these is TRUE of invasive species?

b. Often first observed near ports or airports