**Grade 7 Science Test #2 Review ANSWER KEY Friday Nov 14**

**3 Symbiotic Relationships**

1. What 3 things does a relationship have to have to be SYMBIOTIC?

\*live in the same area

\*encounter eachother for a significant amount of time

\*at least 1 organism benefits from the relationship

1. In the chart below, use the 4 examples of symbiotic relationships on your “Welcome Partners and Unwanted Guests” worksheet. (whale & barnacle, dog and flea, nectar-eating bat and flowering cactus, bird and water buffalo)

Please find that sheet in your binder and look at it. Look also at the example below.

First column - write USING CORRECT SPELLING the TYPE of symbiotic relationship that the organisms have

Second column – list one of the organism; indicate whether it BENEFITS, is HARMED, or NEITHER (not helped or harmed)

Third column– list the other organism and repeat what you did in the second column for this next organism

|  |  |  |  |
| --- | --- | --- | --- |
| **Symbiotic Relationship** | **Organisms involved** | **Organism #1**  | **Organism #2** |
| **parasitism** | **Human, tapeworm** | **human-harmed (host)** | **tapeworm – benefits (parasite)** |
| **commensalism** | whale & barnacle  | **Whale - unaffected** | **Barnacle – benefits (free ride)** |
| **parasitism** | dog and flea | **Dog - harmed** | **Flea – benefits (free meal)** |
| **mutualism** | nectar-eating bat and flowering cactus,  | **Bat- benefits (gets a meal of nectar)** | **Cactus – gets pollinated so that its=c an grow more cacti** |
| **mutualism** | bird and water buffalo | **Bird – benefits (gets a free meal from the water buffalo’s teeth)** | **Water buffalo – benefits (gets its teeth cleaned)** |

1. If a woodtick feeds on the blood of a dog the parasite is the woodtick and the host is the dog

**Photosynthesis & Respiration (7-08)**

Here are the proper spellings for the words you need to write in the blanks for this topic.

glucose carbon dioxide sunlight

water chlorophyll oxygen

1. We studied two processes of the carbon cycle. The carbon cycle is the movement of They are photosynthesis and cellular respiration

The **process** that organisms use to make energy for their life processes is cellular respiration

The **process** that some organisms use to make energy form the Sun’s light is called photosynthesis

1. Fill in the following blanks to make proper descriptions for photosynthesis and respiration.

sunlight + carbon dioxide 🡪 oxygen + glucose

oxygen + glucose 🡪 energy + carbon dioxide

1. Using your cutouts, and your text, fill in the proper vocabulary:

**Photosynthesis**

Producers (green plants is true but use the new vocabulary, please! Plants is not a good word to use because plants that are not green – mushrooms for example- do not photosynthesize) do the process of photosynthesis.

Two “ingredients” that are required for photosynthesis are carbon dioxide and sunlight

Other needed items are water and chloropyll (the pigment that makes plants green).

Two products that are made during photosynthesis are oxygen and glucose.

**Respiration**

Consumers (humans, bears, insects) do the process of respiration.

Two “ingredients” that are required for respiration are oxygen and glucose.

Other needed items are water and cells to do the respiration inside of your body.

Two products that are made during respiration are carbon dioxide and water.

**Limiting Factors**

For #1-4, predict the effect of each of the following on the grasshopper population. Write I if the grasshopper population would increase and D if the population would decrease.

1. D There is a drought in the area.
2. D The number of birds in the area triples.
3. I The grass is very thick due to favorable abiotic conditions like sunny days with weekly rain.
4. D There is a flood in the area.
5. What is the relationship between a hawk and a mouse called? Predator-prey relationship

Which is the predator? Hawk Which is the prey? mouse

1. What is a limiting factor? A factor that limits a population to a certain maximum

On the first blank, name the limiting factor described in each phrase. On the second blank, name the population(s) that would be limited.

1. Climate change is the limiting factor, polar bear population is limited

 The carbon dioxide level is very high and it is making a blanket-type of effect around the

 Earth. The earth is heating up and polar bears do not have enough sea ice to float on to

 go seal hunting. This limits the polar bear population.

1. parasitism is the limiting factor, lynx population is limited

 Many lynx in an area are suffering from an intestine parasite, making it difficult for them

 to catch the snowshoe hare.

1. fire is the limiting factor, rabbit population is limited

 Rabbits are having to travel much longer distances to get fresh grass after the forest was

 burned.

1. competition is the limiting factor, the falcons & hawk populations (sometimes called birds of prey) are

limited

11) True or False: Agriculture is a limiting factor. Why/why not? True. Sometimes land is cleared for agriculture and that destroys the habitats of many organisms.

False. Agriculture always certain populations (wheat for example) to increase greatly in population.

**Succession**

For #1-4, write P if the description shows primary succession and S if the descriptions shows secondary succession.

1. P In the Atlantic Ocean, there are weak spots in the Earth’s crust where lava spews out to make

 new land in the middle of the ocean. Hawaii was made this way!

1. S Ms Maxwell’s mom cleared some forest land to make a garden in their back yard.
2. S There is a flood in the Red River Valley and when the water retreats, thistle populations are

 high.

1. S A forest fire allows a previously forested area to be used as a camping area.

#5 What is a pioneer species? A pioneer species is the first species to inhabit (colonize) an area

Why are lichen such a good pioneer species? Lichens are a good pioneer species because they secrete chemicals (called enzymes) into rock to break it down into soil.

#6 Look at the diagrams in your Ecology booklet.

 What is the climax community for a forest? Spruce, pine, fir (coniferous forest)

 What is the climax community for the marsh? forest

**Previous Test**

1. Write the letter from column B in the blank beside its description in column A. Do NOT use words more than once. You will have one letter not used. (7-09)

 Column A Column B

1. A organisms that can make their own food a) producers
2. C organisms that eat the food made by other b) omnivores

 organisms c) consumers

1. E organisms that eat only plants d) carnivores
2. D organisms that eat only meat e) herbivores
3. B organisms that eat both plants and animals f) vegetarian
4. Ecologists say that the Sun’s energy is “LOST” as we move up the food pyramid from producers to consumers. The Earth could support more humans if we all ate plants instead of animals. EXPLAIN.

(7-10)

Each time a consumer eats an organism from lower on the food pyramid, part of the energy from that organism goes toward the consumer increasing in size (gaining mass). Some energy is used just to keep the organism doing its life processes (walking, moving, getting more food, breathing, etc). This energy is `lost` since it is no longer available to the organisms at the next level of the food pyramid.

Therefore, the higher the level of a food pyramid, the more energy has been `lost``at each level and the less energy is available at the following level.