Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. For each of the following foods, identify it as a fruit (F) or a vegetable (V):

**\_\_\_\_\_\_\_\_ Carrot \_\_\_\_\_\_\_\_ Lettuce \_\_\_\_\_\_\_\_ Tomato**

**\_\_\_\_\_\_\_\_ Bell pepper \_\_\_\_\_\_\_\_ Peach \_\_\_\_\_\_\_\_ Peas**

2. For the following fruits, **describe** the most likely mode of seed dispersal.

|  |  |
| --- | --- |
| **Fruit** | **Mode of dispersal** |
| **Apples** |  |
| **Dandelion** |  |
| **Coconut** |  |
| **Sand spur** |  |
| **Acorns** |  |

3. Explain why it is an advantage for seeds to be dispersed far from the parent plant.

4. This plant lives in a desert and has sweet fleshy fruits that turn orange when ripe. Each fruit is about the size of a baseball and has only a few heavy seeds. This desert has many reptiles, birds, and mammals.

 How do you hypothesize this fruit is dispersed from the parent plant?

 What might you look for to provide evidence for your claim?

5. This plant lives in dense, humid jungles. It is small, dry, and has many spines that tend to stick to things. The jungle has many birds and mammals.

 How do you hypothesize this fruit is dispersed from the parent plant?

 What might you look for to provide evidence for your claim?

Answer key

1. For each of the following foods, identify it as a fruit (F) or a vegetable (V):

**\_\_\_\_\_V\_\_ Carrot \_\_\_\_\_\_V\_\_ Lettuce \_\_\_\_F\_\_\_\_ Tomato**

**\_\_\_F\_\_\_\_\_ Bell pepper \_\_\_\_F\_\_\_\_ Peach \_\_\_\_F\_\_\_\_ Peas**

2. For the following fruits, **describe** the most likely mode of seed dispersal.

|  |  |
| --- | --- |
| **Fruit** | **Mode of dispersal** |
| **Apples** | An animal eats the ripe apple and the seeds are eliminated in its feces, far from the parent tree. |
| **Dandelion** | The wind blows the dandelion seed away from the parent plant. |
| **Coconut** | Coconuts are lightweight and less dense that ocean water, and they float to new places. |
| **Sand spur** | Sand spurs stick to the fur of animals, and the animals carry them away. The sand spurs fall off elsewhere, far from the parent plant.  |
| **Acorns** | Acorns get buried by squirrels far away from the parent plant. |

3. Explain why it is an advantage for seeds to be dispersed far from the parent plant.

Seeds that get dispersed far from the parent generally end up in a place where there is less competition for the water, soil nutrients, and sunlight the seedling will need. Seeds that drop at the base of the parent plant have difficulties, because the parent plant shades the seedling and is better at absorbing water and nutrients from the soil.

Also, if the environment the parent plant lives in changes (e.g., humans clear the land, a hurricane sweeps in salt water, sea level rise waterlogs the soil), then seeds that are dispersed farther away have a chance of landing in a better environment where they can survive.

4. This plant lives in a desert and has sweet fleshy fruits that turn orange when ripe. Each fruit is about the size of a baseball and has only a few heavy seeds. This desert has many reptiles, birds, and mammals.

 How do you hypothesize this fruit is dispersed from the parent plant? An animal that eats the ripe fruit will disperse the seeds in its feces.

 What might you look for to provide evidence for your claim? I would look for animal scat and pick it apart to see if the seeds are in there.

5. This plant lives in dense, humid jungles. It is small, dry, and has many spines that tend to stick to things. The jungle has many birds and mammals.

 How do you hypothesize this fruit is dispersed from the parent plant? This seed probably sticks to the fur of mammals or feathers of birds and gets transported when the animal moves.

 What might you look for to provide evidence for your claim? I would look for these seeds in animal fur and birds’ nests.