Name: _____ Date: _____

Flowers Built for Their Visitors

Circle group

Flowers are not just for show. A flower is how a plant makes seeds. For many plants, seeds start only after pollen moves from one flower to another. This is called pollination. Plants cannot walk to meet a partner. So many plants use animals to carry their pollen.

A flower pays its visitors with food. This is usually nectar, a sweet liquid. Sometimes it is extra pollen. As an animal feeds, pollen sticks to its body. Then it rubs off on the next flower. The shape, color, and smell of a flower fit the visitor it wants.

Look at two kinds. A flower for bees is often blue, purple, or yellow. It has a place for the bee to land, and it smells sweet. Bees can see ultraviolet light, but people cannot. Some flowers have patterns that show in that light and point to the nectar. A flower for hummingbirds is often red or orange and shaped like a tube. The nectar is deep inside. These flowers have little smell. The long tube fits the bird's long bill and tongue.

Some flowers have very special partners. Many bats visit pale flowers that open at night. Moths visit flowers with a strong scent that fills the evening air. Each visitor needs the flowers, and each flower needs the visitor. If a pollinator is lost, the plants that depend on it can be hurt. This is one reason people work to protect bees and other insects.

Not all plants use animals. Grasses and many trees let go of light pollen, and the wind carries it. Their flowers are small and plain. Each plan works for the plant that uses it.

Questions

1. What is pollination?

_____

_____

2. What do flowers give their visitors?

_____

_____

3. How do patterns that show in ultraviolet light help bees?

_____

_____

4. Why is the long tube of a hummingbird flower a good fit for the bird?

_____

_____

5. Why are the flowers of grasses small and plain?

_____

_____

6. How does pollen get to the next flower when an animal visits?

_____

_____

Words to know

pollen: a fine powder that flowers make to produce seeds
pollination: the moving of pollen from one flower to another
nectar: the sweet liquid in flowers that animals drink
ultraviolet: a kind of light that people cannot see

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Flowers Built for Their Visitors

Triangle group

Flowers are not decorations. They are a plant's way of making seeds, and for many plants, seeds begin only after pollen moves from one flower to another. This movement is called pollination. Plants cannot walk to find a partner, so many of them rely on animals to carry pollen for them.

A flower pays its visitors with food, usually nectar, a sweet liquid, and sometimes extra pollen. While an animal feeds, pollen sticks to its body and rubs off on the next flower it visits. The shape, color, and scent of a flower are tuned to the kind of visitor it wants.

Compare two examples. A flower pollinated by bees is often blue, purple, or yellow, has a place for the bee to land, and gives off a sweet smell. Bees can see ultraviolet light, which people cannot, and some flowers have patterns that show up in that light and point toward the nectar. A flower pollinated by hummingbirds is often red or orange and shaped like a tube, with the nectar deep inside. These flowers usually have little scent, and the long tube suits the bird's long bill and tongue.

Some flowers have even more specialized partners. Many bats visit pale flowers that open at night, and moths pollinate flowers whose strong scent fills the evening air. Because each visitor needs the flowers, and each flower needs the visitor, the loss of a pollinator can affect the plants that depend on it, which is one reason people work to protect bees and other insects.

Not all plants use animals. Grasses and many trees release large amounts of light pollen that the wind carries, so their flowers are small and plain. Each strategy works for the plant that uses it.

Questions

1. What is pollination?

_____

_____

2. What do flowers give to their visitors?

_____

_____

3. How do patterns that show up in ultraviolet light help bees?

_____

_____

4. Why is the long tube of a hummingbird flower a good match for the bird?

_____

_____

5. Why are the flowers of grasses small and plain?

_____

_____

6. How does pollen get from one flower to the next when an animal visits?

_____

_____

Words to know

pollen: a fine powder that flowers make to produce seeds
pollination: the moving of pollen from one flower to another
nectar: the sweet liquid in flowers that animals drink
ultraviolet: a kind of light that people cannot see
strategy: a plan for reaching a goal

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Flowers Built for Their Visitors

Square group

Flowers are not mere decorations. They are a plant's means of producing seeds, and for many plants, seeds begin to form only after pollen travels from one flower to another. This movement is called pollination. Because plants cannot walk in search of a partner, many of them depend on animals to carry their pollen from place to place.

A flower rewards its visitors with food, most often nectar, a sweet liquid, and occasionally extra pollen. While an animal feeds, pollen clings to its body and rubs off on the next flower it visits. The shape, color, and scent of each flower are tuned to the particular kind of visitor it hopes to attract.

Consider two contrasting examples. A flower pollinated by bees is often blue, purple, or yellow, offers a convenient place for the bee to land, and gives off a sweet fragrance. Bees can see ultraviolet light, which people cannot, and some flowers display patterns that show up in that light and guide the bees toward the nectar. A flower pollinated by hummingbirds, by contrast, is often red or orange and shaped like a tube, with the nectar hidden deep inside. These flowers usually have little scent, and the long tube is well suited to the bird's long bill and tongue.

Some flowers have even more specialized partners. Many bats visit pale flowers that open at night, and moths pollinate flowers whose strong scent fills the evening air. Because each visitor needs the flowers, and each flower needs the visitor, the loss of a pollinator can affect the plants that depend on it, which is one reason people work to protect bees and other insects.

Not every plant enlists animals. Grasses and many trees release enormous amounts of light pollen that the wind carries away, so their flowers are small and plain. Each strategy succeeds for the plant that uses it.

Questions

1. What is pollination?

_____

_____

2. How do flowers reward their visitors?

_____

_____

3. How do patterns that show up in ultraviolet light help bees?

_____

_____

4. Why is the long tube of a hummingbird flower well suited to the bird?

_____

_____

5. Why are the flowers of grasses small and plain?

_____

_____

6. How does pollen travel to the next flower when an animal visits?

_____

_____

Words to know

pollen: a fine powder that flowers make to produce seeds
pollination: the moving of pollen from one flower to another
nectar: the sweet liquid in flowers that animals drink
ultraviolet: a kind of light that people cannot see
strategy: a plan for reaching a goal

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Flowers Built for Their Visitors

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Flowers Built for Their Visitors

Easier · 278 words · Flesch-Kincaid grade 4

1. Pollen moving from one flower to another.
2. Food, usually nectar and sometimes extra pollen.
3. They point the bees to the nectar.
4. The bird has a long bill and tongue that can reach the nectar deep inside.
5. The wind carries their pollen, so they do not need to draw in animals.
6. It sticks to the animal's body and rubs off on the next flower.

Triangle: Flowers Built for Their Visitors

This passage · 290 words · Flesch-Kincaid grade 7.9

1. The movement of pollen from one flower to another.
2. Food, usually nectar and sometimes extra pollen.
3. They point the bees toward the nectar.
4. The bird has a long bill and tongue that can reach the nectar deep inside.
5. The wind carries their pollen, so they do not need to attract animals.
6. It sticks to the animal's body and rubs off on the next flower.

Square: Flowers Built for Their Visitors

Harder · 312 words · Flesch-Kincaid grade 9

1. The travel of pollen from one flower to another.
2. With food, most often nectar and occasionally extra pollen.
3. They guide the bees toward the nectar.
4. The bird has a long bill and tongue that can reach the nectar hidden deep inside.
5. The wind carries their pollen, so they have no need to attract animals.
6. It clings to the animal's body and rubs off on the next flower.