

LOVE AND ATTRACTION

Lovebirds mate for life, and mating pairs are often seen sitting close together for long periods of time.

Warm Up

Discuss these questions with a partner.

1. What are some things that animals do to attract a mate?
2. What is it that makes one person attractive to another?
3. In what ways do you think science might explain feelings of love?



Before You Read

A. Discussion. Check (✓) whether you agree or disagree with the following statements about love. Then explain your answers to a partner.

	Agree	Disagree
1. The idea of romantic love is a modern one.		
2. The feeling of love is caused by chemicals in the brain.		
3. Attitudes about love are basically the same in all cultures.		
4. The feeling of romantic love usually only lasts a short time.		
5. Arranged marriages are likely to last longer than ones started in romance.		

B. Scan. You are going to read about some specialists' beliefs about love. Quickly scan the reading on pages 27–29. Then match the people on the left with their professions on the right.

- | | |
|------------------------------|---------------------------------|
| 1. _____ Thomas Lewis | a. Swiss university professor |
| 2. _____ Claus Wedekind | b. Italian university professor |
| 3. _____ Donatella Marazziti | c. American anthropologist |
| 4. _____ Helen Fisher | d. American psychiatrist |

LOVE: A CHEMICAL REACTION?



^ Newlyweds dressed in Han-dynasty costumes face each other during a traditional group wedding ceremony in Xi'an, China.

1 **SOME ANTHROPOLOGISTS¹ ONCE THOUGHT** that **romance** was a Western idea, developed in the Middle Ages.² Non-Western societies, they thought, were too occupied with social and family relationships for romance. Today, scientists believe that romance has existed in human brains in all societies since prehistoric³ times. In one study, for example, men and women from Europe, Japan, and the Philippines were asked to fill out a survey to measure their experiences of passionate love. All three groups said that they felt passion with the same extreme intensity.

15 But though romantic love may be universal, its cultural expression is not. To the Fulbe people of northern Cameroon, men who spend too much time with their wives are insulted⁴ and looked down on. Those who fall deeply in love are thought to have fallen under a dangerous spell. For the Fulbe, to be controlled by love is seen as shameful.

25 In India, marriages have traditionally been arranged, usually by the bride's and groom's parents, but today love marriages appear to be on the rise, often in **defiance** of parents' wishes. The victory of romantic love is celebrated in Bollywood films. However, most Indians still believe arranged marriages are more likely to succeed than love marriages. In one survey of Indian college students, 76 percent said they would marry someone with all the right qualities even if they weren't in love with the person. Marriage is considered too important a step to leave to **chance**.

1 An **anthropologist** studies people, society, and culture.

2 The **Middle Ages** was the period in European history between about 500 A.D. and about 1500 A.D.

3 **Prehistoric** people and things existed at a time before information was written down.

4 If someone **insults** you, they say or do something that is rude or offensive.

Finding the Right Person

35 Some psychiatrists,⁵ such as Thomas Lewis from
the University of California, hypothesize that
romantic love is rooted in experiences of physical
closeness in childhood—for example, how we felt
in our mother’s arms. These feelings of comfort
40 and affection are written on our brain, and as
adults, our constant **inclination** is to find them
again. According to this theory, we love whom we
love not so much because of the future we hope
to build, but rather because of the past we hope
45 to live again. The person who “feels right” has a
certain look, smell, sound, or touch that activates
very deep memories.

Evolutionary psychologists explain, however, that
survival skills are **inherent** in our choice of a mate.
50 According to this hypothesis, we are attracted to
people who look healthy—for example, a woman
with a 70 percent waist-to-hip ratio is attractive
because she can likely bear children successfully.
A man with rugged features probably has a
55 strong immune system⁶ and therefore is more
likely to give his partner healthy children.

On the other hand, perhaps our choice of a
mate is a simple matter of following our noses.
Claus Wedekind, a professor at the University of
60 Lausanne in Switzerland conducted an interesting
experiment with sweaty⁷ T-shirts. He asked 49
women to smell T-shirts previously worn by a
variety of unidentified men. He then asked the
women to rate which T-shirts smelled the best
65 and which the worst.

He found that women preferred the smell of
a T-shirt worn by a man who was the most
genetically different from her. This genetic
difference means that it is likely that the man’s
70 immune system possesses something hers does
not. By choosing him as the father of her children,
she increases the chance that her children will
be healthy.

5 A **psychiatrist** is a doctor who treats people with a particular mental condition or illness.

6 The body’s **immune system** protects it from diseases of all kinds.

7 **Sweat** is the salty, colorless liquid that comes through your skin when you are hot, sick, or afraid.

Is It All Just Chemicals?

75 According to other researchers, love may be caused
by chemicals in the body. Donatella Marazziti,
a professor at the University of Pisa in Italy, has
studied the biochemistry⁸ of lovesickness.⁹ Having
been in love twice herself and felt its overwhelming
80 power, Marazziti became interested in exploring
the similarities between love and obsessive-
compulsive disorder (OCD).¹⁰

Marazziti examined the blood of 24 people
who had fallen deeply in love within the past six
85 months, and measured their levels of serotonin.
Serotonin is a powerful chemical in the brain
and body that is connected with our moods,
emotions, and **desires**. She found that their levels
of serotonin were 40 percent lower than normal
90 people—the same results she found from people
with OCD. Her conclusion was that love and
mental illness may be difficult to tell apart.

Another scientist, anthropologist Helen Fisher, from
Rutgers University, U.S.A., has been looking at love
with the aid of an MRI machine.¹¹ She **recruited**
95 subjects who were “madly in love,” and once they
were inside the MRI machine, she showed them
two photographs, one neutral, the other of their
loved one.

100 What Fisher saw fascinated her. When each subject
looked at his or her loved one, the parts of the
brain linked to reward and pleasure “lit up.” Love
“lights up” these areas using a chemical called
dopamine. Dopamine creates intense energy,
105 exhilaration, focused attention, and motivation to
win rewards. Dopamine levels do eventually drop,
though, and studies around the world confirm that
a decrease in passion is the norm.

Fisher has suggested that relationships frequently
110 break up after about four years because that’s

8 **Biochemistry** is the study of the chemical processes that occur in living things.

9 A **lovesick** person experiences overwhelming feelings of love.

10 **Obsessive-compulsive disorder (OCD)** is a mental illness that involves repeating actions or thinking about certain things too much.



✓ A couple poses for a portrait a few days before their wedding in Delhi, India.

115 about how long it takes to raise a child through infancy.¹² Passion, that wild feeling, turns out to be practical after all. A couple not only needs to bring a child into this world; they also need a bond that continues long enough to raise a helpless human infant.

Maintaining Love

120 Eventually, all couples find that their passion declines over time. For relationships that get beyond the initial stage of passion to have a real chance of lasting, a chemical called oxytocin may be the key. Oxytocin is a hormone our body produces that promotes

125 **mutual** feelings of connection and bonding. It is produced when we hug our long-term partners or our children. In long-term relationships that work, oxytocin is believed to be **abundant** in both partners. According to Helen Fisher, couples who want their relationship to last should make an effort to keep a close physical relationship. Through frequent physical contact, they can **trigger** the production of more oxytocin—and in this way feel closer to each other.

11 An **MRI machine** allows medical staff to get a picture of the soft parts inside a patient's body using a powerful magnetic field.

12 **Infancy** is the period of your life when you are a baby or very young child.

Reading Comprehension

Multiple Choice. Choose the best answer for each question.

Gist

1. Another title for this reading could be _____.
- Science Can Conquer Passion
 - The Right Way to Choose a Mate
 - Explaining Why We Fall in Love
 - The Case for Arranged Marriage

Detail

2. How do the Fulbe people of Cameroon feel about love?
- Everyone falls in love in the same way.
 - The men's wives don't want them around.
 - It is shameful to be controlled by love.
 - Men can fall in love, but women cannot.

Reference

3. Which choice best expresses the meaning of *this theory* in line 42?
- Marriage is too important to leave to chance.
 - Without the approval of family, romantic love rarely succeeds.
 - Romantic love is based on pleasant memories that we try to find again.
 - Memories of comfort and affection can satisfy our need for romantic love.

Detail

4. According to evolutionary psychology, why would a woman choose a man with rugged features?
- to improve her immune system
 - to have healthier children
 - to protect her from animals and other threats
 - because he is more likely to have a 70 percent waist-to-hip ratio

Inference

5. Why did Marazziti probably choose to study similarities between love and OCD?
- She wanted to better understand her own experiences.
 - She had naturally low serotonin levels.
 - Other researchers felt it was an important area to study.
 - She suffered from a mental illness.

Detail

6. According to researchers, which chemical is most closely related to successful long-term relationships?
- dopamine
 - oxytocin
 - serotonin
 - none of the above

Inference

7. What advice would Helen Fisher probably give to couples who want a long-term relationship?
- Hug each other often.
 - Avoid having children.
 - Keep your partner's photo in your wallet.
 - Spend time apart so you appreciate each other when you're together.

Critical Thinking

Discussion: Evolutionary psychologists suggest we are attracted to healthy people because they are more likely to have healthy children. Do you think this "survival skills" theory is still true today? What qualities do people look for in a mate these days?

Relating: The author writes that a particular chemical may be the key to lasting relationships. How do you feel about relationships relying on a chemical?

Distinguishing Facts from Theories

Scientific texts often contain a mix of facts and theories. Facts are ideas that are known to be true, or can be proven. Theories and hypotheses are ideas that have not been proven to be true or false. Words and phrases that may indicate a theory include *think, believe, hypothesize, may, might, possibly, likely, suggest, and according to this theory/hypothesis*.

A. Scanning. Look back at the reading on pages 27–29. Find and underline the following information.

1. _____ Romance has existed in human brains in all societies since prehistoric times. (lines 6–7)
2. _____ The cultural expression of love is not universal. (lines 13–14)
3. _____ Arranged marriages in India are more likely to succeed than love marriages. (lines 27–28)
4. _____ Romantic love is rooted in experiences of physical closeness in childhood. (lines 37–38)
5. _____ We love whom we love because of the past we hope to live again. (lines 42–45)
6. _____ We are attracted to people who look healthy. (lines 50–51)
7. _____ In one study, women preferred the smell of a T-shirt worn by a man who was the most genetically different from her. (lines 66–68)
8. _____ Love is caused by chemicals in the body. (lines 75–76)
9. _____ Serotonin is a powerful chemical in the brain and body that is related to our moods, emotions, and desires. (lines 86–88)
10. _____ Love and mental illness are difficult to tell apart. (lines 91–92)
11. _____ The reason relationships often break up after four years is that it takes that long to raise a child through infancy. (lines 109–112)
12. _____ All couples find that their passion declines over time. (lines 118–119)
13. _____ In long-term relationships that work, oxytocin is abundant in both partners. (lines 126–128)

B. Fact or Theory. Which of the statements above are facts and which are theories? Write **F** (Fact) or **T** (Theory) next to each statement. Then circle the words in the reading that indicate the theories.

Vocabulary Practice

A. Matching. Read the information below and match each word in **red** with its definition.

The Origins of Valentine's Day

Although Valentine's Day may seem like a modern event, its roots go back over 2,000 years.

Around 270 A.D., Roman Emperor Claudius II, seeking to **recruit** more soldiers for his army, prohibited young men from marrying. Valentine was a priest who performed marriages in secret despite the ban. As the story goes, Valentine was killed—on February 14—for his **defiance** of the emperor. When the emperor Constantine made Christianity the official religion of the Roman Empire in 313 A.D., February 14 was celebrated as a day to remember Saint Valentine.

Over time, it became widely recognized as a day of **romance** and a celebration of love. The first Valentine's Day card was sent in 1415 from France's Duke of Orléans to his wife to express the love and **desire** he felt for her while he was held prisoner in England. Today, lovers all around the world exchange cards, chocolates, and gifts as a sign of their love for each other.

1. _____: behavior showing you are not willing to obey
2. _____: the actions and feelings of people who are in love
3. _____: a very strong want or wish
4. _____: to select or persuade someone to join an organization

B. Completion. Complete the sentences using the correct form of words from the box.

abundant chance inclination inherent mutual trigger

1. Chocolate may be _____ romantic—it contains chemicals that cause you to feel like you're in love.
2. However, chocolate, which may cause feelings of love in some people, can _____ severe headaches for others.
3. By exchanging gifts, a person in love sometimes discovers that the love is _____, and that his or her feelings are returned.
4. According to a recent scientific study, women with large chins have a greater _____ to cheat in relationships.
5. A(n) _____ of certain chemicals in the brain causes the racing heart, blushing, and sweaty palms of someone in love.
6. In the natural world, there is an element of _____ in winning a mate.



^ St. Valentine is looked upon as the guardian saint of lovers.

Usage Use **chance** to mean events that happen when they are not planned or controlled.



FEATHERS OF LOVE

Before You Read

A. Quiz. Guess the answers to the questions below. Then use the captions, maps, and images on pages 33–37 to check your answers.

- | | | |
|---|------------|-----------|
| 1. Most birds of paradise live in Australia. | Yes | No |
| 2. The female birds of paradise are more colorful than the males. | Yes | No |
| 3. The male bird of paradise dances to attract females. | Yes | No |
| 4. Most birds of paradise live at very low altitudes. | Yes | No |

B. Predict. Look again at the title, headings, photos, and captions on pages 33–37. Check (✓) the information about birds of paradise you think you'll read about.

- | | |
|--|--|
| <input type="checkbox"/> what they eat | <input type="checkbox"/> their commercial uses |
| <input type="checkbox"/> why they have such beautiful feathers | <input type="checkbox"/> how they attract a mate |

^ A Wilson's bird of paradise displays his elaborate tail feathers. Like other birds of paradise, male Wilson birds are more colorful than their female counterparts.

1 **COVERED IN SOFT, BLACK FEATHERS**, the **noble**
performer bows deeply to his audience. From
the top of his head grow several long feathers
that tap the ground as he begins his dance. This
5 dancing bird is Carola's parotia, just one of the
fascinating and unique birds of paradise that live
on the island of New Guinea. What is the reason
for the dance show? This male bird is attempting
to impress a row of females that are watching
10 him from a branch above.

Keeping the females' attention isn't easy, so he
really gives it his all. He pauses for dramatic
effect, and then **commences** his dance again.
His neck sinks and his head moves up and
15 down, head feathers **bouncing**. He jumps
and shakes his feathers until his performance
attracts the attention of one of the females—
the one that will be his mate.

An Amazing Performance

20 In the dense and humid jungle of New Guinea
is nature's most **absurd** theater, the very special
mating game of the birds of paradise. To attract
females, males' feathers are costumes worthy of
the stage. The bright reds, yellows, and blues of
25 their feathers stand out sharply against the green
of the forest. It seems that the more extreme the
male's costume and colors, the better his chance
of attracting a mate.

30 Not only do most male birds of paradise have
extremely beautiful feathers, they know how
to use them. Each species has its own type
of display behavior. Some dance remarkably
complex dances on the ground, in areas that
they have cleared and prepared like their own
35 version of a dance floor.¹ Others perform their
display high in the trees.

The male red bird of paradise shows off his
delightful red and yellow feathers in a display
sometimes called a "butterfly dance." He
40 spreads and moves his wings intensely like some
giant butterfly. The male Carola's parotia has at
least six different dance moves. These include
one in which he spreads out his feathers like a
dress in a move called the "ballerina"² dance."
45 While some birds of paradise perform alone,
others, like Goldie's birds of paradise, often
perform together, creating an eye-catching
performance that female birds find impossible
to resist. Hanging from nearby branches, male
50 Goldie's birds **prominently** display the clouds
of soft red feathers that rise from their backs as
they flap³ their wings with great energy. Excited
females soon arrive to choose the one that
pleased them the most.

1 A **dance floor** is an area where people can dance.

2 A **ballerina** is a woman who dances ballet, a type of artistic dance.

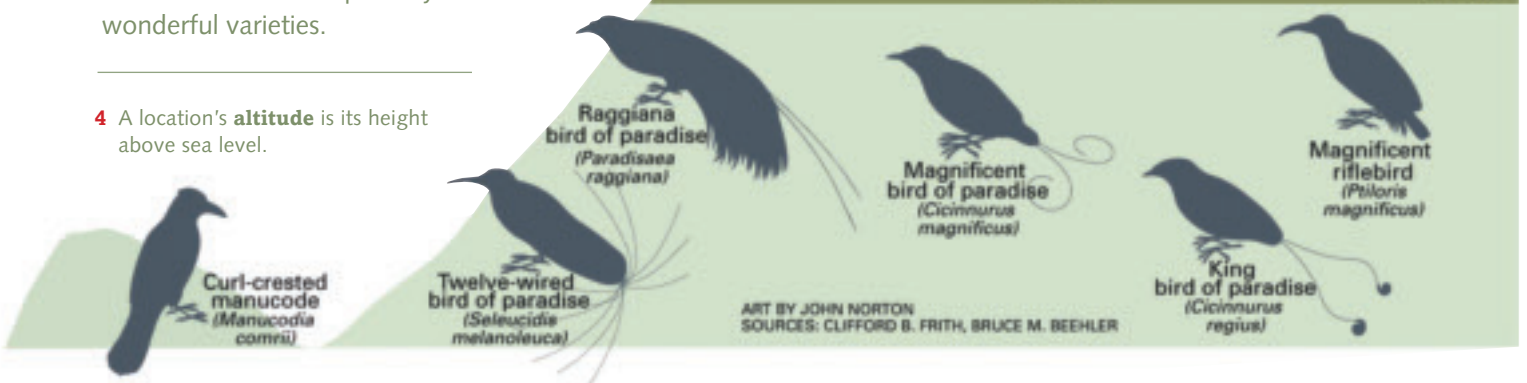
3 If a bird or an insect **flaps** its wings, the wings move quickly up and down.





< The island of New Guinea is home to 38 species of birds of paradise, more than anywhere else in the world. Most birds of paradise, including the Red bird of paradise (above), live within a single mountain range and altitude.⁴ This isolation reduces the flow of genes between populations, allowing the birds to evolve separately into their wonderful varieties.

⁴ A location's **altitude** is its height above sea level.



55 | The Evolution of Color

These brilliantly colored birds of paradise have evolved over millions of years from ancient birds whose feathers were dark and boring in comparison. Of today's 43 brightly colored birds of paradise species, most live only on the island of New Guinea. These birds of paradise invite us to solve a mystery of nature. It seems to be a contradiction⁵ that such extreme feathers and colors could have been favored by the process of evolution. After all, these same brightly colored feathers that attract mates also make them much more noticeable to predators⁶ and slow the birds down, making fleeing from those predators more difficult. The answer lies in the safe environment in which the birds live, and a process of evolution known as "sexual selection."

"Life here is pretty comfortable for birds of paradise. The island's unique environment has allowed them to go to extremes unheard of elsewhere," says biologist Ed Scholes. Under **harsher** conditions, he says, "evolution simply wouldn't have come up with these birds." Fruit and insects are abundant all year in the forests of New Guinea, and predators are few. The result is a perfect environment for birds.

Sexual selection has thus been the driving force in the evolution of birds of paradise. Freed of other pressures, birds of paradise began to specialize in attracting mates. Over millions of years, they have slowly **undergone** changes in their color, feathers, and other talents. Characteristics that made one bird more attractive than another were passed on and enhanced over time. "The usual rules of survival aren't as important here as the rules of successful mating," Scholes adds.

The diversity of New Guinea's birds also springs from its varied environments: from humid coastal plains to high-elevation cloud forests, from swamps⁷ to mountains rising as high as 5,000 meters (16,000 feet). The landscape has many physical barriers that isolate animal populations, allowing them to develop into separate and distinct species.

Two birds of >
paradise dancing as
part of a mating ritual



5 | Bird Performers, Human Dancers

100 The people of New Guinea have been watching the displays of the birds of paradise for centuries. "Locals will tell you they went into the forest and copied their **rituals** from the birds," says anthropologist Gillian Gillison of the University of Toronto, who lived among New Guinea tribes for more than a decade. At local dance performances, now more tourist entertainment than true ritual, the painted dancers still **evoke** the birds with their movements and beautiful costumes. "By wearing the feathers," Gillison says, ". . . you capture the animal's life force. It makes you a warrior."

In the past, demand for the birds' beautiful feathers resulted in a huge amount of hunting. At the peak

5 If an aspect of a situation is a **contradiction**, it is completely different from other aspects and makes the situation confusing.

6 A **predator** is an animal that kills and eats other animals.

7 A **swamp** is an area of very wet land with wild plants growing in it.



115 of the trade, in the early 1900s, 80,000 skins
a year were exported from New Guinea for
European ladies' hats. However, surprisingly
few birds die for these costumes nowadays.
Ceremonial feathers are passed down from
generation to generation. Local people are still
120 permitted to hunt birds of paradise for traditional
uses. However, hunters usually target older
male birds, leaving younger males to continue
breeding.

125 There are more serious threats to the birds'
welfare. An illegal market in feathers still exists.
Large farms use up thousands of hectares of
forest where birds of paradise once lived, as does
large-scale industrial logging.⁸ Oil prospecting
and mining⁹ also present dangers to New
130 Guinea's wildest forests. Meanwhile, human
populations continue to grow. Land is owned by
different local families whose leaders disagree
about which areas should be protected.

135 David Mitchell, a conservationist, is using local
villagers to record where the birds display and what
they eat. He hopes not only to gather data, but
also to encourage protection of the birds' habitat.
The strategy seems to be working. "I had come to
cut down some trees and plant yam vines,"¹⁰ says
Ambrose Joseph, one of Mitchell's farmers. "Then
140 I saw the birds land there, so I left the trees alone."
For millions of years, these impressive birds have
danced to find their mates. They'll keep dancing
for as long as the forest offers them a stage.

⁸ **Logging** is the business of cutting down trees for use as wood.

⁹ **Mining** is the business of digging deep into the earth to obtain valuable materials.

¹⁰ A **yam** is a root vegetable, like a potato, that grows in tropical areas. A **vine** is a plant that grows up or over things.

Reading Comprehension

Multiple Choice. Choose the best answer for each question.

- | | |
|------------------|--|
| Main Idea | 1. Why do birds of paradise dance and display their feathers?
a. to frighten away predators
b. to attract a mate
c. to exercise and clean their bodies
d. to show possession of an area |
| Vocabulary | 2. In line 12, the phrase <i>gives it his all</i> is closest in meaning to _____.
a. tries as hard as possible
b. gives everything away
c. stops paying attention
d. starts to lose hope |
| Detail | 3. Which type of bird dances in a group?
a. male Carola's parotia
b. female Carola's parotia
c. male Goldie's bird of paradise
d. female Goldie's bird of paradise |
| Detail | 4. Which factor is NOT mentioned as a reason for the birds' unusual characteristics?
a. widespread availability of fruit and insects
b. variety of environments
c. lack of predators
d. the island's geographical location |
| Cause and Effect | 5. Why did so many birds of paradise die in the early 1900s?
a. There was a high demand for feathers to use in European ladies' hats.
b. Local people hunted the birds for traditional uses.
c. Large scale deforestation to make way for industrial development.
d. Illegal logging drastically reduced the birds' habitat. |
| Inference | 6. Why do local people continue to hunt birds of paradise?
a. to eat them
b. to sell them to tourists
c. to make traditional costumes
d. to keep their numbers down |
| Cohesion | 7. The following sentence would best be placed at the beginning of which paragraph? <i>However, there may be some good news for the birds.</i>
a. 5 (starting line 37)
b. 9 (starting line 91)
c. 12 (starting line 124)
d. 13 (starting line 134) |

Critical Thinking

Inference: Why does the author include the quote from Ambrose Joseph in the last paragraph?

Discussion: Besides the feathers of birds of paradise, what other animal characteristics might sexual selection be responsible for?

Recognizing Figurative Language

Figurative language is a creative way to use language to describe someone or something. Writers use it to create an image in the reader's mind. Examples include similes, metaphors, and personification.

A **simile** compares two different things using *like* or *as*.

Her skin was as cold as ice.

A **metaphor** says one thing *is* another thing.

The road during rush hour is a parking lot.

Personification gives humanlike qualities to something nonhuman.

Lightning danced across the sky.

A. Analyzing. Look at these examples from the reading. Mark each one as an example of a simile (**S**), a metaphor (**M**), or personification (**P**). Some have more than one answer.

- _____ Covered in soft, black feathers, the noble performer bows deeply to his audience. (lines 1–2)
- _____ To attract females, males' feathers are costumes worthy of the stage. (lines 22–24)
- _____ He spreads and moves his wings intensely like some giant butterfly. (lines 39–41)
- _____ These include one in which he spreads out his feathers like a dress. (lines 42–44)
- _____ For millions of years, these impressive birds have danced to find their mates. (lines 142–143)

B. Analyzing. Work with a partner. Complete each of these figurative sentences.

- | | |
|---|---------------|
| 1. He eats like a _____. | a. bedroom |
| 2. Her _____ is like silk. | b. book |
| 3. She is a walking _____. | c. cake |
| 4. His _____ is a bottomless pit. | d. camera |
| 5. His _____ is a disaster zone. | e. door |
| 6. The _____ loves the model. | f. dictionary |
| 7. The _____ protested as I forced it open. | g. hair |
| 8. That _____ flew off the shelves. | h. horse |
| 9. The last piece of _____ was calling my name. | i. stomach |
| 10. The flowers were begging for _____. | j. water |

Vocabulary Practice

A. Completion. Complete the information using the correct form of words from the box. Five words are extra.

absurd bounce breed commence evoke
harsh noble prominent ritual undergo

Jennifer Holland is a writer who went to Papua New Guinea to do research for an article on birds of paradise. She later shared her experiences there.

Jennifer Holland's favorite species of bird of paradise is Carola's parotia. Its dance **1.** _____ includes motions such as bowing, flapping, and **2.** _____ to move the heavy and **3.** _____ wirelike feathers on its head, in hopes of winning one of the watching females. "Its mating dance is so **4.** _____ that I could hardly keep from laughing."

For a couple of nights, Holland stayed in a tiny village with a local family. It is the custom of the local people to build a fire pit in the center of the room. Because she was not accustomed to the smoke, it was very **5.** _____ on her eyes and lungs. "My eyes watered constantly, I coughed like a new smoker, and I had to step outside regularly to get fresh air—much to the delight of the local kids who sat on the steps waiting for us to emerge."

B. Definitions. Match the definitions to words from the box in **A**.

1. _____ : to mate and have babies (for animals)
2. _____ : to begin
3. _____ : to have something necessary or unpleasant happen to you
4. _____ : to cause a particular memory, idea, emotion, or response to occur
5. _____ : grand or magnificent
6. _____ : ridiculous or not making sense
7. _____ : easily visible; obvious
8. _____ : something done in a particular situation and in the same way each time



- ↗ A male Carola's parotia displays his courting ritual to a female.

Thesaurus

absurd Also look up: (adj.) *ridiculous, ludicrous, crazy, foolish*

VIEWING Singing Mice

Before You Watch

A. **Definitions.** Look at the picture and read the caption. Then match each word in **bold** with its definition.



◀ During **courtship**, living creatures do all sorts of things to impress the opposite sex. Some even **break into song**. Researchers have discovered that the **vocalizations** of mice sound like songs. In the lab, these **ultrasonic** mice **tunes** are recorded and played back in **frequencies** that can be detected by the human ear.

1. _____ : musical notes in a series
2. _____ : sound vibrations per unit of time
3. _____ : to suddenly start to sing
4. _____ : sounds made by voice
5. _____ : too high for the human ear to hear
6. _____ : behavior that leads to mating

B. **Discussion.** Discuss these questions with a partner.

1. Do you think that male mice sing to females, or females sing to males?
2. What other animals can sing?
3. Besides singing, what other ways do animals use to court the opposite sex?

While You Watch

A. **Fact or Theory.** Watch the video. Mark if these statements are fact or theory.

- | | Fact | Theory |
|---|--------------------------|--------------------------|
| 1. Older humpback whales teach popular tunes to younger whales. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Singing is most often a masculine pursuit in the natural world. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. A male mouse sings because it is courting a female mouse. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. When a male mouse sings, it enhances its mating success with a female. | <input type="checkbox"/> | <input type="checkbox"/> |

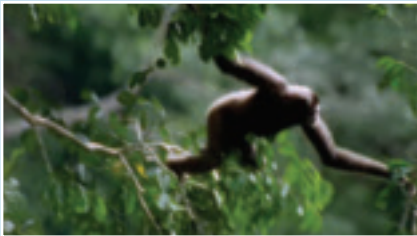
B. Completion. Complete each caption with the correct words from the box.

bolder	complex	future	genes
mammals	mate	opposite	researchers

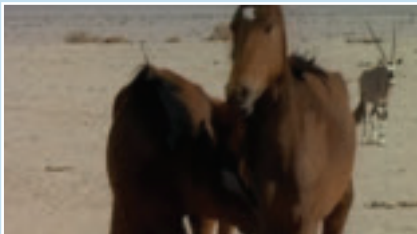


Many species of birds sing to attract a

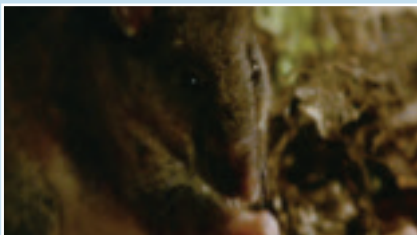
1. _____, but only a handful of
2. _____ have been known to sing.



Gibbons make loud, long, and **3.** _____ vocalizations during mating season. This is considered singing by **4.** _____.



It's usually the female that gets to choose a mate, and the male must demonstrate that his **5.** _____ are worth passing along to **6.** _____ offspring.



When it comes to pursuing the **7.** _____ sex, a timid creature may be **8.** _____ than we ever imagined.

After You Watch

A. Discussion. In addition to singing, some other human traits have been observed in the animal world. Read the information below. Which information surprises you? What are some other examples of humanlike behavior in other species?

Naming their young

Dolphins, monkeys, and parrots use unique calls to get the attention of their offspring. This shows that some animals have the equivalent of their own names.

Playing with dolls

Female chimps take sticks, bark, and vines and hold them as if they are dolls. They have been observed putting their “dolls” to bed and even building separate nests for them.

Using correct grammar

Some birds have grammar rules when it comes to songs. When a song is played back out of order, the birds get very annoyed. Is it the equivalent of a *there/their/they're* mistake?