

Unit 1 How We Smell

(pp. 6-7)

Q1 What are the people doing?

A1 They are smelling various things.

Q2 What do you like to smell?

A2 (Answers may vary.) I like to smell bread and flowers.

Key Words (pp. 6-7)

1. ⓑ
2. ⓑ
3. ⓐ
4. ⓑ
5. ⓐ
6. ⓐ
7. ⓑ
8. ⓑ

(p. 8)

Q How do your nose and brain work together to smell something?

A Odor particles get into our nose, and our brain interprets and recognizes the smell.

Comprehension Check (p. 10)

1. ⓑ
2. ⓐ
3. True
4. False
5. brain
6. ready

7. ⓐ

8. closely

Points to Remember (p. 11)

A.

STEP 1 particles, breathe

STEP 2 receptors, signals

STEP 3 interprets

B.

process, nose, amazing, distinguish, ready, taste

Unit 2 How Some Animals Smell

(p. 12)

Q1 What are these animals doing?

A1 They are smelling flowers.

Q2 What body part do they use to smell?

A2 They use their noses to smell.

(p. 13)

Q How do you think these animals smell?

A (Answers may vary.) I think they use other body parts instead of their noses to smell.

Key Words (pp. 12-13)

1. ⓑ
2. ⓐ
3. ⓑ
4. ⓑ
5. ⓐ

6. Ⓐ

7. Ⓐ

8. Ⓑ

(p. 14)

Q Why is the sense of smell important for animals?

A It is a way for animals to understand their environments, find food, and avoid predators.

Comprehension Check (p. 16)

1. Ⓒ

2. Ⓐ

3. False

4. True

5. identifies

6. avoid

7. Ⓐ

8. covered

Points to Remember (p. 17)

A.

Marine Crabs: antennas, eyes, wave

Snakes: tongues, mouths, stick

B.

body parts, antennas, hairs, tongues, organ, environments

Making Connections (p. 18)

Unit 1: b-f-d

Unit 2: a-c-e

Unit 3 Town Squares for Everyone

(p. 20)

Q Where are the people getting together?

A They are getting together in a town square.

(p. 21)

Q What do you think the people are doing?

A Some people are listening to a man's speech. Some people are walking together. Some people are talking to each other.

Key Words (pp. 20-21)

1. Ⓑ

2. Ⓐ

3. Ⓐ

4. Ⓑ

5. Ⓐ

6. Ⓑ

7. Ⓐ

8. Ⓑ

(p. 22)

Q What did people do in the Greek agora or the Roman forum?

A They discussed politics, held elections, and traded goods. Also, they worshipped their gods and goddesses there.

Comprehension Check (p. 24)

1. Ⓑ

2. ©
3. True
4. False
5. town square
6. agora
7. Ⓐ
8. discussed

Points to Remember (p. 25)

A.

Ancient Times (Top→Down)

agora, forum, elections, worship

Today (Top→Down)

meetups, rallies

B.

gather, ancient, politics, spread, functions, events

Unit 4 Famous Town Squares

(p. 26)

Q What is happening in the town square?

A People are dancing. People are marching. People are enjoying their festival.

(p. 27)

Q What are the people doing in the town square?

A They are buying and selling things there.

Key Words (pp. 26-27)

1. Ⓐ

2. Ⓐ
3. Ⓑ
4. Ⓑ
5. Ⓐ
6. Ⓐ
7. Ⓑ
8. Ⓑ

(p. 28)

Q Why do tourists visit Times Square?

A It is a major tourist attraction and entertainment center.

Comprehension Check (p. 30)

1. Ⓐ
2. Ⓑ
3. False
4. True
5. financial
6. tourist
7. Ⓑ
8. named after

Points to Remember (p. 31)

A.

Plaza de Mayo: Argentina, hub, Revolution

Times Square: USA, entertainment, celebrate

B.

economic, famous, independence, business, attraction, tourists

Making Connections (p. 32)

Unit 3: c-a-e

Unit 4: f-b-d

Unit 5 Projection Mapping

(p. 34)

Q What are the people doing?

A They are watching a movie. Have you seen this kind of art before?

(p. 35)

Q Have you seen this kind of art before?

A (Answers may vary.) Yes, I've seen this kind of thing in Sydney before.

Key Words (pp. 34-35)

1. Ⓐ

2. Ⓐ

3. Ⓑ

4. Ⓑ

5. Ⓐ

6. Ⓑ

7. Ⓑ

8. Ⓑ

(p. 36)

Q What is projection mapping?

A It is a technique that turns any 3D object into 3D digital art.

Comprehension Check (p. 38)

1. Ⓐ

2. Ⓑ

3. True

4. False

5. digital

6. possible

7. Ⓒ

8. display

Points to Remember (p. 39)

A.

Tools: projectors

STEP 1: object

STEP 2: images

STEP 3: software, fit, turns

B.

digital art, flat, 3D object, project, software, fit

Unit 6 VR Painting

(p. 40)

Q1 What do people use to draw pictures?

A1 They use things like paintbrushes, palettes, canvases, pencils, sketchbooks, and tablet PCs.

Q2 What do you use to draw?

A2 (Answers may vary.) I use a tablet PC to draw.

(p. 41)

Q1 What is the boy wearing on his head?

A1 He's wearing a VR headset.

Q2 What do you think he is seeing?

A2 (Answers may vary.) I think he's seeing something spiral in the air.

Key Words (pp. 40-41)

1. ⑥
2. ①
3. ①
4. ⑥
5. ①
6. ⑥
7. ⑥
8. ⑥

(p. 42)

Q What can you do with a digital palette?

A We can change our paint colors, choose brushes, and add decorations to our artwork.

Comprehension Check (p. 44)

1. ⑥
2. ⑥
3. True
4. False
5. controller
6. walk

7. ①

8. simulated

Points to Remember (p. 45)

A. (from left to right)

headset, palette, paintbrush, colors, decorations

B.

virtual, exist, art, paint, share, sculpting

Making Connections (p. 46)

Unit 5: d-b-e

Unit 6: c-a-f

Unit 7 Unmanned Aerial Vehicles

(p. 48)

Q What is the girl doing?

A She is flying a drone.

(p. 49)

Q What do you think these drones do?

A (The answer may vary.) I think they deliver packages, take photos, rescue people, or help farmers.

Key Words (pp. 48-49)

1. ⑥
2. ⑥
3. ①
4. ①
5. ①

6. Ⓑ

7. Ⓐ

8. Ⓑ

(p. 50)

Q What are UAVs and how are they controlled?

A UAVs are unmanned aerial vehicles controlled by on-board computers or remote controls.

Comprehension Check (p. 52)

1. Ⓒ

2. Ⓑ

3. True

4. False

5. emergency

6. remote

7. Ⓒ

8. unmanned

Points to Remember (p. 53)

A.

climate, situations, aerial, deliver, tools

B.

vehicles, controlled, military, efficient, possible, rescuers

Unit 8 How Drones Save Lives

(p. 54)

Q Who uses these vehicles and equipment?

A Firefighters or rescuers use them.

(p. 55)

Q What do you think the firefighter will do with the drone?

A (The answer may vary.) I think he will rescue some people with the drone.

Key Words (pp. 54-55)

1. Ⓑ

2. Ⓐ

3. Ⓑ

4. Ⓑ

5. Ⓐ

6. Ⓑ

7. Ⓐ

8. Ⓐ

(p. 56)

Q How did the drones help find people trapped in the fires?

A The drones' thermal cameras helped find people trapped in the fires.

Comprehension Check (p. 58)

1. Ⓑ

2. Ⓒ

3. True

4. True

5. collect

6. lives

7. Ⓒ

8. real-time

Points to Remember (p. 59)

A. (Top→Down)

California Wildfires: forest, data, Thermal

A Lost Hiker in Utah: stuck, lights

B.

wildfires, predict, trapped, rescue, rescuers, save

Making Connections (p. 60)

Unit 7: a-b-d

Unit 8: c-f-e

Unit 9 Folk Wrestling

(pp. 62-63)

Q1 What are the people doing in the pictures?

A1 They are wrestling.

Q2 Does your country have this kind of sport?

A2 (Answers may vary.) Yes, we do. It is called ssireum.

Key Words (pp. 62-63)

1. ⑥

2. ①

3. ①

4. ⑥

5. ⑥

6. ①

7. ①

8. ⑥

(p. 64)

Q How are sumo and ssireum alike?

A Firstly, they are very old. Secondly, matches of both sports take place in large rings. Thirdly, wrestlers wear special belts in each sport.

Comprehension Check (p. 66)

1. ①

2. ③

3. False

4. True

5. knots

6. touch

7. ⑥

8. alike

Points to Remember (p. 67)

A. (from left to right)

wrestling, folk, ring, knots, satba

B.

styles, differences, matches, tie, push, ground

Unit 10 Thumb Wrestling

(pp. 68-69)

Q What types of wrestling are the kids playing?

A The boys are playing leg wrestling, and the girls are playing arm wrestling.

Key Words (pp. 68-69)

1. Ⓐ
2. Ⓑ
3. Ⓑ
4. Ⓐ
5. Ⓐ
6. Ⓑ
7. Ⓑ
8. Ⓐ

(p. 70)

Q How do players win a match at the championships?

A They pin down their opponents' thumbs long enough to say "one-two-three-four, I win thumb-o-war!"

Comprehension Check (p. 72)

1. Ⓒ
2. Ⓑ
3. False
4. True
5. thumbs
6. Championships
7. Ⓐ
8. to face

Points to Remember (p. 73)

A.

STEP 1: opponent

STEP 2: Lock

STEP 3: rhyme, declare

STEP 4: Pin down

B.

thumb, friend, world, rules, enough, decided

Making Connections (p. 74)

Unit 9: b-d-f

Unit 10: c-a-e

Unit 11 Why We Get Sick

(pp. 76-77)

Q1 What is the common problem with these people?

A1 They are sick.

Q2 How do you feel when you have a cold?

A2 (Answers may vary.) I feel bad. I have a headache and a sore throat. And I cough.

Key Words (pp. 76-77)

1. Ⓑ
2. Ⓐ
3. Ⓑ
4. Ⓐ
5. Ⓐ
6. Ⓑ
7. Ⓑ
8. Ⓐ

(p. 78)

Q What causes infectious diseases?

A Germs such as viruses and bacteria cause infectious diseases.

Comprehension Check (p. 80)

1. a
2. c
3. True
4. False
5. bacteria
6. lifestyle
7. b
8. spread

Points to Remember (p. 81)

A. (Top→Down)

Infectious Diseases: germs, flu, wash

Noninfectious Diseases: factors, choices, healthy

B.

viruses, infectious, diseases, defend, genetic, sleep

Unit 12 The Immune System

(p. 82)

Q What can we do to keep our body healthy?

A We can protect our body from germs by sleeping well, working out regularly, and eating healthfully.

(p. 83)

Q What do you think is happening?

A (The answer may vary.) I think some special cells are attacking the germ.

Key Words (pp. 82-83)

1. b
2. a
3. b
4. a
5. b
6. b
7. b
8. a

(p. 84)

Q What does the immune system do?

A The immune system defends the body from all kinds of diseases.

Comprehension Check (p. 86)

1. b
2. a
3. False
4. True
5. germs
6. cells
7. c
8. defends

Points to Remember (p. 87)

A. (clockwise)

bone, blood, recognize, antibodies, destroy

B.

diseases, organs, immune, patrol, white blood cells, vaccinated

Making Connections (p. 88)

Unit 11: e-a-f

Unit 12: c-b-d

Unit 13 Hexagons in Nature

(pp. 90-91)

Q What do these shapes have in common?

A I can see six-sided shapes.

Key Words (pp. 90-91)

1. Ⓑ

2. Ⓐ

3. Ⓑ

4. Ⓑ

5. Ⓐ

6. Ⓐ

7. Ⓑ

8. Ⓐ

(p. 92)

Q What do bee hives, dragonflies, and turtles have in common?

A They all have hexagons.

Comprehension Check (p. 94)

1. Ⓑ

2. Ⓒ

3. False

4. True

5. spaces

6. shell

7. Ⓑ

8. empty

Points to Remember (p. 95)

A.

Bee Hives: homes, hexagons

Dragonfly Eyes: eyes, lenses

Turtle Shells: curved

B.

six-sided, hives, compound, hexagons, cover, efficient

Unit 14 The Shape of a Soccer Ball

(pp. 96-97)

Q1 What main shape do you see in these pictures?

A1 I see five-sided shapes/pentagons.

Q2 How many sides does the shape have?

A2 It has five sides.

Key Words (pp. 96-97)

1. ⓑ
2. ⓐ
3. ⓑ
4. ⓐ
5. ⓐ
6. ⓑ
7. ⓑ
8. ⓑ

(p. 98)

Q What shapes are on a black-and-white soccer ball?

A There are pentagons and hexagons on the ball.

Comprehension Check (p. 100)

1. ⓐ
2. ⓐ
3. True
4. False
5. irregular
6. pentagons, hexagons
7. ⓑ
8. closer

Points to Remember (p. 101)

A.

sphere, polygons, pentagons, hexagons, surrounded

B.

soccer, rubber, bladders, introduced, colorful, remains

Making Connections (p. 102)

Unit 13: c-d-f

Unit 14: a-b-e

Unit 15 The Danger of Video Games

(p. 104)

Q What are the kids doing?

A They are playing video games.

(p. 105)

Q Do you get tired from playing video games?

A (Answers may vary.) Yes, I do.

Key Words (pp. 104-105)

1. ⓐ
2. ⓐ
3. ⓑ
4. ⓐ
5. ⓑ
6. ⓑ
7. ⓑ
8. ⓐ

(p. 106)

Q What is an addiction?

A When people cannot stop themselves from

doing something, they have an addiction.

Comprehension Check (p. 108)

1. a
2. b
3. True
4. False
5. spend
6. awake
7. a
8. ages

Points to Remember (p. 95)

A. (clockwise)
ten, homework, poor, instant, spend

B.
popular, addiction, mental, decreases, reward, set

Unit 16 Computer Vision Syndrome

(pp. 110-111)

Q1 What electronic devices do you usually use?

A1 (Answers may vary.) I use my smartphone, tablet, and laptop.

Q2 When do you use them?

A2 (Answers may vary.) I use my laptop to do my homework.

Key Words (pp. 110-111)

1. b
2. b
3. b
4. a
5. a
6. a
7. b
8. b

(p. 112)

Q What should you do to prevent computer vision syndrome?

A We should follow the simple 20-20-20 rule, reduce our screen time, and get regular eye exams.

Comprehension Check (p. 114)

1. a
2. b
3. False
4. True
5. worse
6. minutes, feet
7. c
8. fade

Points to Remember (p. 115)

A.

Symptoms: vision, dry, shoulder

Preventions: break, feet, screen, regular

B.

symptoms, worse, return, preventable, second, exams

Making Connections (p. 116)

Unit 15: a-c-b

Unit 16: d-f-e