

Sense Organs and the Domino Game

Level: S2

Topic: How we see, how we hear, and sense of taste (Sections 11.2, 11.5 & 11.8 of Unit 11)

Introduction:

This set of ELA materials is designed to consolidate what students have learned about the functions of the main parts of the eye and the ear and four primary types of taste. It consists of two ELAs. They are:

ELA1 The eye, the ear, the tongue and tastes

ELA2 The domino game

In ELA1, students acquire the English vocabulary and key points about the subject content. Then in ELA2, students have to practice using the language when they play a domino game.

Each ELA lasts for one period.

ELA1 Lesson Plan-- The Eye, the Ear, the Tongue and Tastes

Description: The three worksheets in this ELA are designed to consolidate, with the use of English in particular, the main points students have learned about (1) the main parts of the eye and their functions, (2) the main parts of the ear and their functions, and (3) the four primary tastes. The content of these areas is specified in Sections 11.2, 11.5 and 11.8 of the CDC syllabus.

The English terms in the vocabulary list of each worksheet are introduced together with the Chinese terms when the subject content is taught in Chinese. The worksheets will be given to students to let them work out the answers after they have learned the subject content in Chinese. Teacher then provides feedback to the answers and explains the difficult words.

Content After completing the activity, students should be able to:

- Objectives:
- identify the main parts of the eye and relate them to our sense of vision;
 - identify the main parts of the ear and relate them to our sense of hearing;
 - identify the four primary tastes and the different parts of the tongue which are more sensitive to the different tastes.

Language After completing the activity, students should be able to:

- Objectives:
- understand and use the English terms related to this topic (e.g., *cornea, iris, pupil, lens, retina, protective coat, optic nerve, focus, enter, protect, messages, the size of the pupil, light-sensitive, primary tastes, sensitive, sweet, sour, salty, bitter, bitten melon juice, salted fish, lemon juice, dessert, main parts, functions, ear flap, ear drum, ear bones, cochlea, auditory nerve, sound waves, vibrate, vibrations, magnify, detect*);
 - name the main parts of the eye and describe their functions, e.g.,
 - *The cornea helps focus light onto the retina.*
 - *The iris controls the size of the pupil.*
 - *The pupil allows light to enter the eye.*
 - *The lens helps focus light onto the retina.*
 - *The retina contains light-sensitive cells.*
 - *The optic nerve sends messages from the retina to the brain.*
 - *The protective coat protects the eyeball.*
 - name the main parts of the ear and describe their functions, e.g.,
 - *The ear flap collects sound waves in the air.*

- *The eardrum vibrates when sound waves hit it.*
 - *The ear bones magnify the vibrations from the eardrum.*
 - *The cochlea detects vibrations and changes them into messages.*
 - *The auditory nerve sends messages from the cochlea to the brain.*
- name the four primary tastes and state the part of the tongue that is more sensitive to a particular type of tastes, e.g.,
 - *Part A of the tongue is more sensitive to dessert.*
 - *Part B is more sensitive to salted fish.*
 - *Part C is more sensitive to lemon juice.*
 - *Part D is more sensitive to bitter melon juice.*

- Activities:
1. 複習 – 全班活動 (10 min)
 2. Completing worksheets – pair work (20 min)
 3. Speaking practice – pair work (10 min)

Materials: Worksheets 1-3

Steps:

複習 – 全班活動 (10 min)

1. 老師利用提問方式跟學生重溫眼、耳各主要部分的功用及不同部份的舌頭對不同味道的敏感度。由於英文關鍵詞已在之前教學的時候已引入，在複習的時候，老師再跟學生重溫一次這些關鍵詞的串法及讀音。

Completing worksheets – pair work (20 min)

2. The teacher distributes Worksheets 1-3 to the class and asks them to work in pairs to complete the worksheets.
3. The teacher checks the answers and explains any difficult words in the sentences.

Speaking practice – pair work (10 min)

4. The teacher tells the class that they are going to play a domino game in the next lesson and they have to describe orally the functions of the main parts of the eye and ear and state the different parts of the tongue that are sensitive to different types of tastes. Thus, they have to do some speaking practice before playing the game.
5. The teacher asks each student in the pair to take turns to read aloud to each other the

sentences in the fill-in-blanks exercises of the worksheets.

6. The teacher monitors the class while students work in pairs and provide guidance where necessary.
7. If there are a considerable number of students who have difficulty in pronouncing the key terms correctly, the teacher may assign some student helpers who have mastered the pronunciation of the key terms to help the weaker students to read aloud the worksheets.

WS 1 – Main Parts of the Eye and Their Functions 眼睛的主要部份及功能

Vocabulary:

角膜 cornea

虹膜 iris

瞳孔 pupil

晶狀體 lens

視網膜 retina

視神經 optic nerve

鞏膜 protective coat

聚焦 focus (v.)

進入 enter (v.)

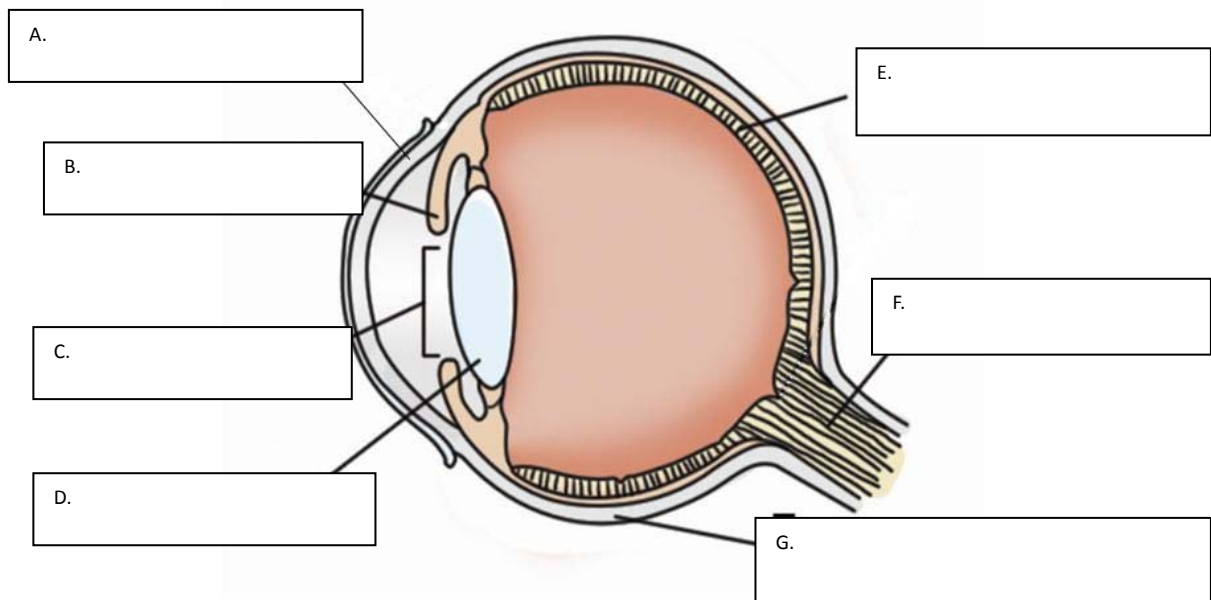
保護 protect (v.)

訊息 messages (n.)

瞳孔的大小 the size of the pupil

感光 (光線敏感) light-sensitive (adj.)

Label the diagram:



Fill in blanks (make sure that correct tenses are used in the answers):

1. The cornea helps _____ light onto the retina.
2. The iris controls _____.
3. The pupil allows light to _____ the eye.
4. The lens helps _____ light onto the retina.
5. The retina contains _____ cells.
6. The optic nerve sends _____ from the retina to the brain.
7. The protective coat _____ the eyeball.

WS 2 – Main Parts of the Ear and Their Functions 耳朵的主要部份及功能

Vocabulary:

耳廓 ear flap

耳膜 eardrum

耳骨 ear bones

耳蝸 cochlea

聽神經 auditory nerve

訊息 messages (n.)

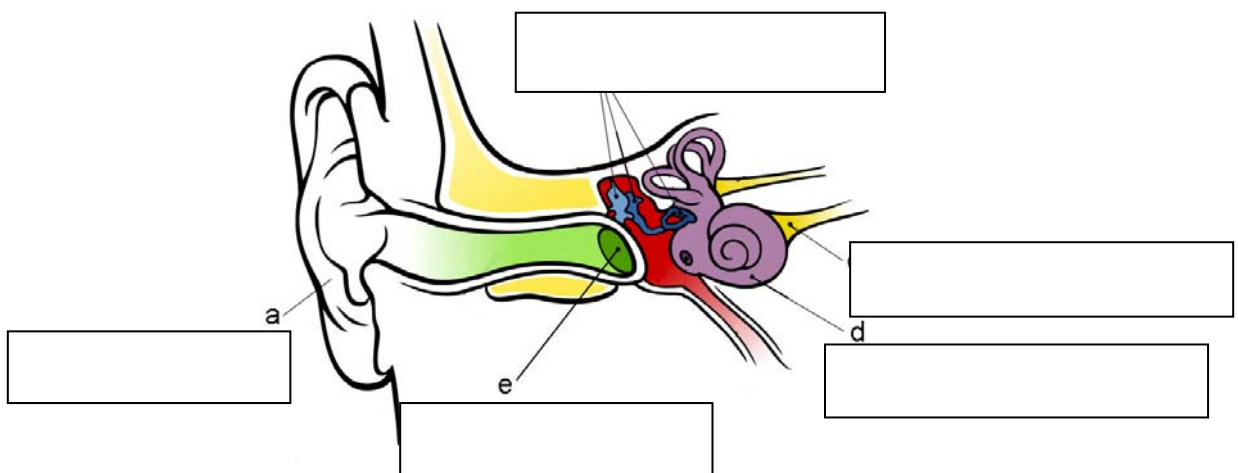
聲波 sound waves (n.)

振動 vibrate (v.) / vibrations (n.)

放大 magnify (v.)

探測 detect (v.)

Label the diagram:



(Photo credit: Chittka L, Brockmann; available at

http://commons.wikimedia.org/wiki/File:Anatomy_of_the_Human_Ear.

Fill in blanks (make sure that correct tenses are used in the answers):

1. The ear flap collects _____ in the air.
2. The eardrum _____ when sound waves hit it.
3. The ear bones _____ the vibrations from the eardrum.
4. The cochlea _____ vibrations and changes them into messages.
5. The auditory nerve sends _____ from the cochlea to the brain.

WS 3 – Four Primary Tastes 四種基本的味道

Vocabulary:

敏感 sensitive

甜 sweet

酸 sour

鹹 salty

苦 bitter

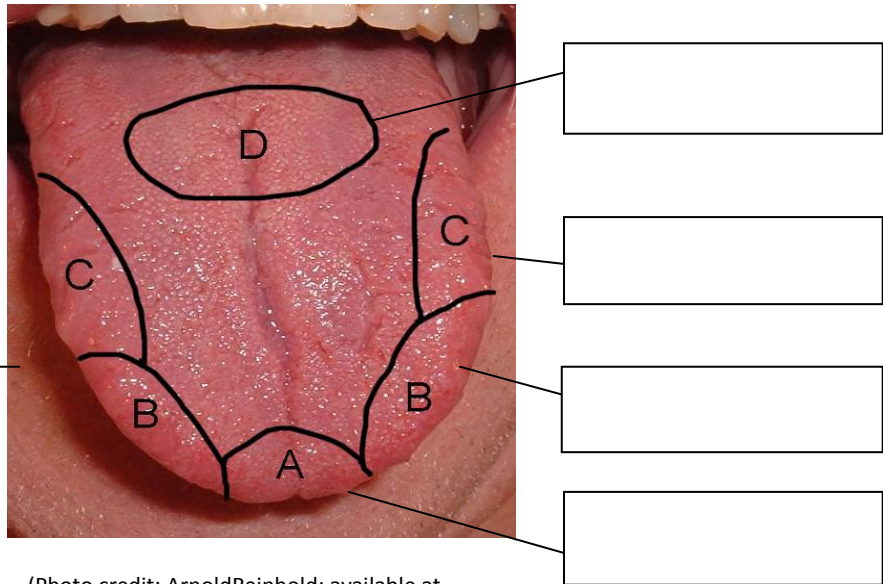
苦瓜汁 bitter melon juice

鹹魚 salted fish

檸檬汁 lemon juice

甜點 dessert

Certain parts of the tongue are more sensitive to certain tastes:



(Photo credit: ArnoldReinhold; available at

<http://commons.wikimedia.org/wiki/File:Tongue.agr.jpg>)

Fill in the blanks with the following food items:

bitter melon juice salted fish lemon juice dessert

1. Part A of the tongue is more sensitive to _____.
2. Part B is more sensitive to _____.
3. Part C is more sensitive to _____.
4. Part D is more sensitive to _____.

WS 1 – Main Parts of the Eye and Their Functions 眼睛的主要部份及功能

Vocabulary:

角膜 cornea

虹膜 iris

瞳孔 pupil

晶狀體 lens

視網膜 retina

視神經 optic nerve

鞏膜 protective coat

聚焦 focus (v.)

進入 enter (v.)

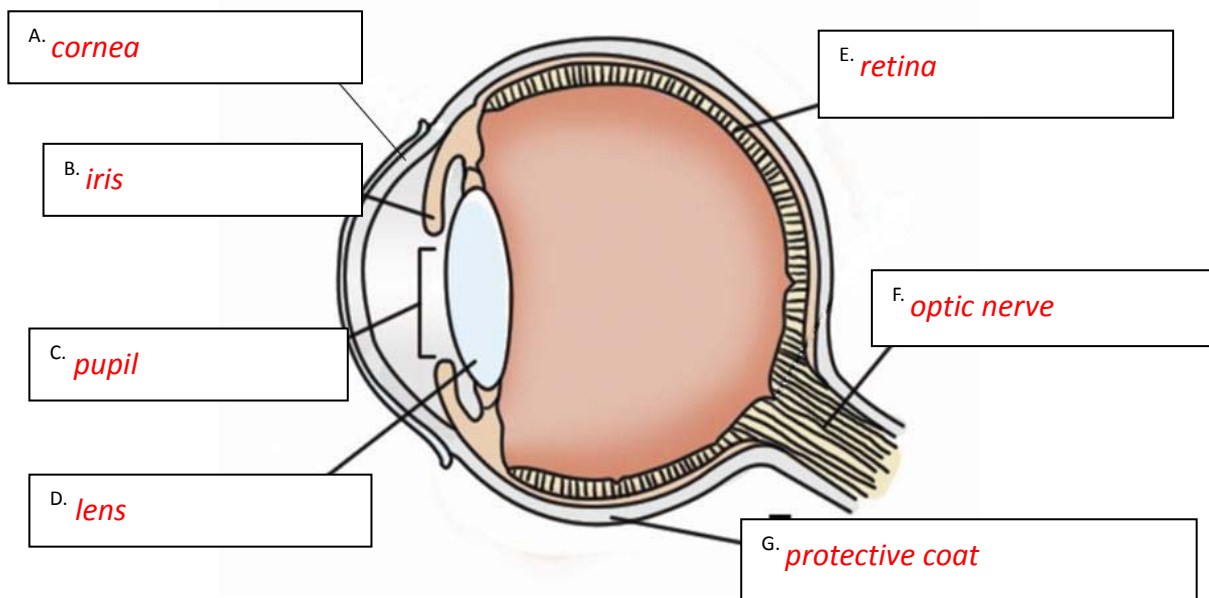
保護 protect (v.)

訊息 messages (n.)

瞳孔的大小 the size of the pupil

感光 (光線敏感) light-sensitive (adj.)

Label the diagram:



Fill in blanks (make sure that correct tenses are used in the answers):

- The cornea helps focus light onto the retina.
- The iris controls the size of the pupil.
- The pupil allows light to enter the eye.
- The lens helps focus light onto the retina.
- The retina contains light-sensitive cells.
- The optic nerve sends messages from the retina to the brain.
- The protective coat protects the eyeball.

WS 2 – Main Parts of the Ear and Their Functions 耳朵的主要部份及功能

Vocabulary:

耳廓 ear flap

耳膜 eardrum

耳骨 ear bones

耳蝸 cochlea

聽神經 auditory nerve

訊息 messages (n.)

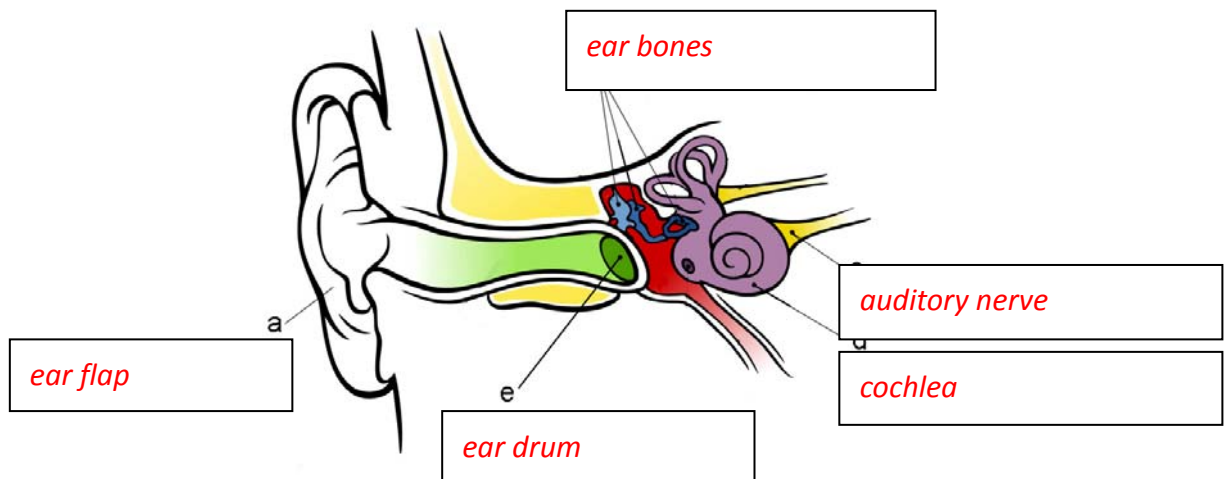
聲波 sound waves (n.)

振動 vibrate (v.) / vibrations (n.)

放大 magnify (v.)

探測 detect (v.)

Label the diagram:



(Photo credit: Chittka L, Brockmann; available at

http://commons.wikimedia.org/wiki/File:Anatomy_of_the_Human_Ear.

Fill in blanks (make sure that correct tenses are used in the answers):

1. The ear flap collects sound waves in the air.
2. The eardrum vibrates when sound waves hit it.
3. The ear bones magnify the vibrations from the eardrum.
4. The cochlea detects vibrations and changes them into messages.
5. The auditory nerve sends messages from the cochlea to the brain.

WS 3 – Four Primary Tastes 四種基本的味道

Vocabulary:

敏感 sensitive

甜 sweet

酸 sour

鹹 salty

苦 bitter

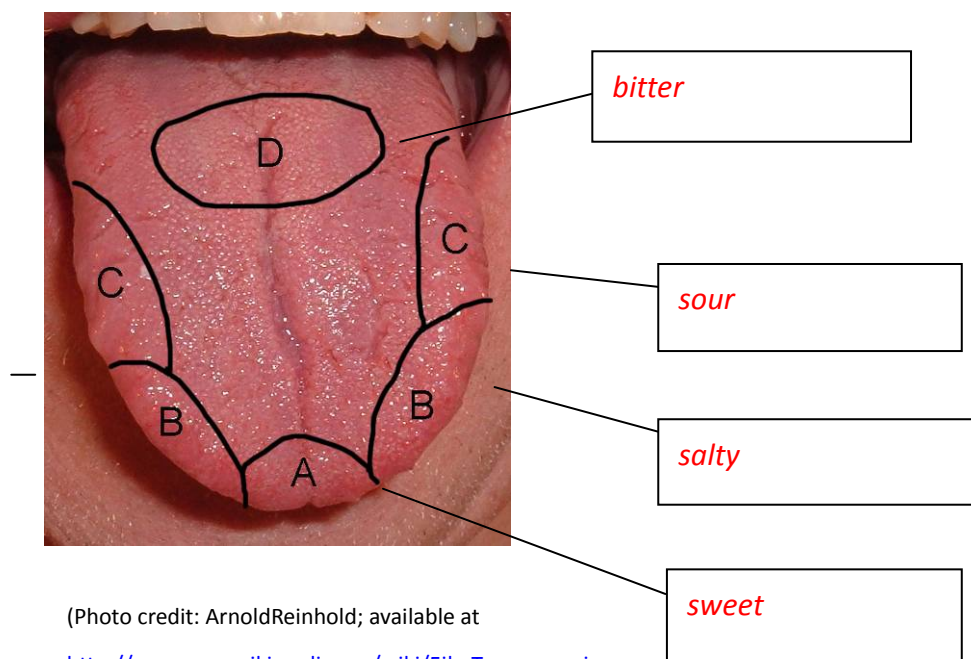
苦瓜汁 bitter melon juice

鹹魚 salted fish

檸檬汁 lemon juice

甜點 dessert

Certain parts of the tongue are more sensitive to certain tastes:



Fill in the blanks with the following food items:

bitter melon juice

salted fish

lemon juice

dessert

1. Part A of the tongue is more sensitive to *dessert*.
2. Part B is more sensitive to *salted fish*.
3. Part C is more sensitive to *lemon juice*.
4. Part D is more sensitive to *bitter melon juice*.

ELA2 Lesson Plan – The Domino Game

Description: This game is a revision activity for part of the content specified in Sections 11.2, 11.5 & 11.8 of the CDC syllabus. In previous lessons, students have learned the English terms and English key points in these areas. In this lesson, they have to apply the language and the concepts they learned before in order to play the game.

Content After completing the activity, students should be able to:

- Objectives:**
- identify the main parts of the eye and relate them to our sense of vision;
 - identify the main parts of the ear and relate them to our sense of hearing;
 - identify the four primary tastes and the different parts of the tongue which are more sensitive to the different tastes.

Language After completing the activity, students should be able to:

- Objectives:**
- understand and use the English terms related to this topic (e.g., *cornea, iris, pupil, lens, retina, protective coat, optic nerve, focus, enter, protect, messages, the size of the pupil, light-sensitive, primary taste, sensitive, sweet, sour, salty, bitter, bitten melon juice, salted fish, lemon juice, dessert, main parts, functions, ear flap, ear drum, ear bones, cochlea, auditory nerve, sound waves, vibrate, vibrations, magnify, detect*);
 - name the main parts of the eye and describe their functions, e.g.,
 - *The cornea helps focus light onto the retina.*
 - *The iris controls the size of the pupil.*
 - *The pupil allows light to enter the eye.*
 - *The lens helps focus light onto the retina.*
 - *The retina contains light-sensitive cells.*
 - *The optic nerve sends messages from the retina to the brain.*
 - *The protective coat protects the eyeball.*
 - name the main parts of the ear and describe their functions, e.g.,
 - *The ear flap collects sound waves in the air.*
 - *The eardrum vibrates when sound waves hit it.*
 - *The ear bones magnify the vibrations from the eardrum.*
 - *The cochlea detects vibrations and changes them into messages.*
 - *The auditory nerve sends messages from the cochlea to the*

brain.

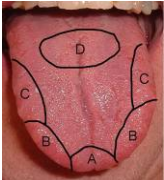
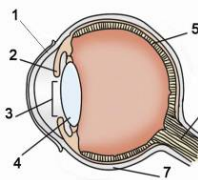
- name the four primary tastes and state the part of the tongue that is more sensitive to a particular type of tastes, e.g.,
 - *Part A of the tongue is more sensitive to dessert.*
 - *Part B is more sensitive to salted fish.*
 - *Part C is more sensitive to lemon juice.*
 - *Part D is more sensitive to bitter melon juice.*

Activity: Game – group activity

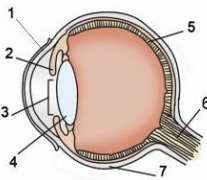
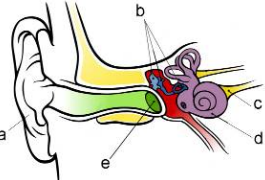
Materials: Domino cards – 31 cards for each set distributed; visualizer for demonstration

Steps:

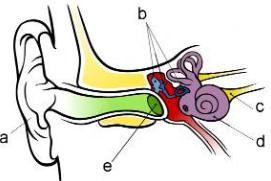
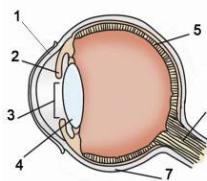
1. Review with students the worksheets, *Main Parts of the Eye and Their Functions*, *Main Parts of the Ear and Their Functions*, and *Four Primary Tastes*.
2. Explain to the class that they are going to play dominoes in groups of three or four (if the group has more than four people, some of them can play in duos). Together with three students, use a visualizer to demonstrate how to play the game. The instructions below may be explained to the students in Cantonese.
 - a. Have one student in the group deal the Domino cards. Each student should be given five cards and the remaining cards should be face-down in the stack. Tell students not to show their cards to each other.
 - b. To start the game, one student picks a card from the stack and then puts it face-up on a desk/bench.
 - c. Students then take turns to place one card next to the ones on the desk/bench, on either end of the array and face-up. When placing a new card, each student should put the name or a written description of a particular part of the eye, the ear or the tongue next to the related pictures or vice versa. At the same time, the student should produce a sentence that combines the two pieces of information. For example, in the following combinations of domino cards, the student needs to say:

Lens		More sensitive to bitterness	
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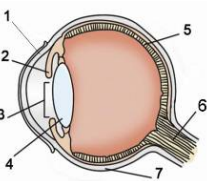
- Part D is more sensitive to bitterness.

More sensitive to bitterness		Protects the eyeball	
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- Part 7 protects the eyeball.

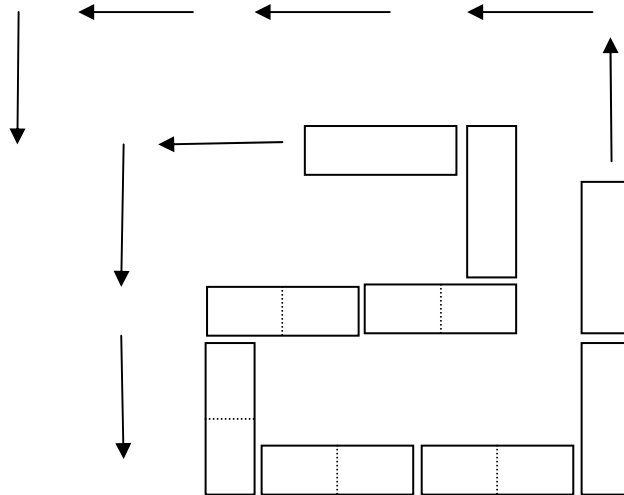
Protects the eyeball		Detects vibrations and changes them into messages	
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- Part *d* detects vibrations and changes them into messages.

Detects vibrations and changes them into messages		Iris	More sensitive to bitter melon juice
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- Part 2 is the iris.

- d. Other students listen and decide if the sentence is correct. If not, the student has to take back the card.
 - e. If a student has no suitable card to place next to either end of the array on the desk/bench, he/she must pick up a card from the stack.
 - f. The first player to put down all their cards is the winner. Players can go on to find the second and third winners.
3. A large flat surface is needed to lay out the cards. Teacher may suggest that students lay out the cards in a spiral shape as in the following:


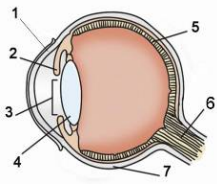
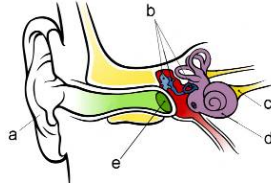
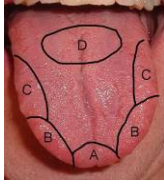
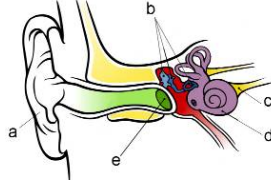
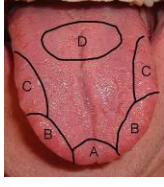
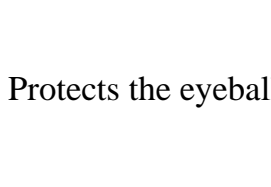
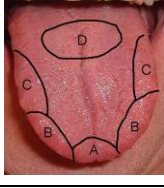
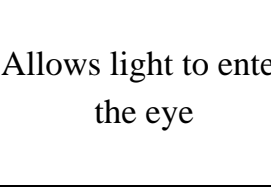
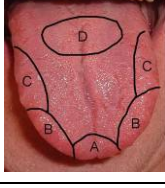
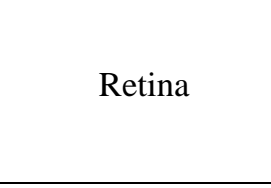
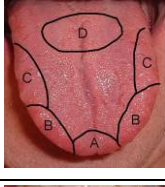
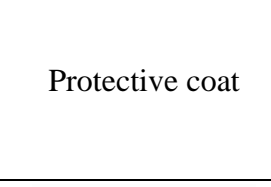
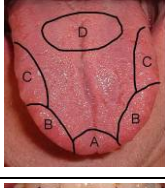
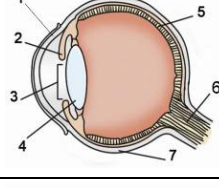
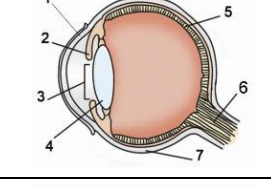
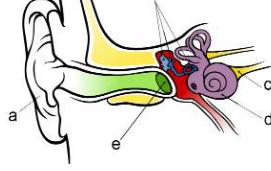
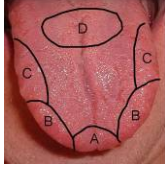
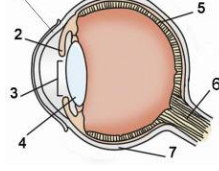


Or, teacher may tell the class to lay the cards along the edge of a student's bench or desk.

4. Divide the class into groups and give a set of Domino cards to each group. Monitor students as they are playing and correct their mistakes. While monitoring, encourage students to listen carefully to each other and to decide whether or not their classmates are producing correct sentences.
5. When the game is over, teacher may give the class a brief oral quiz to check how well they have retained the information from the game.

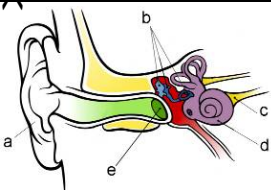
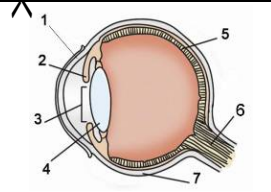
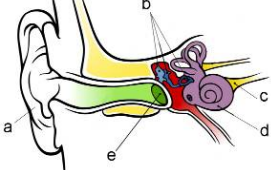
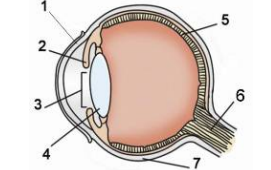
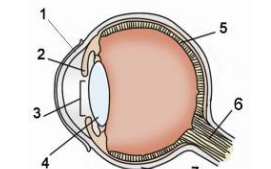
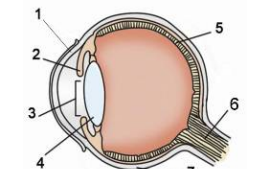
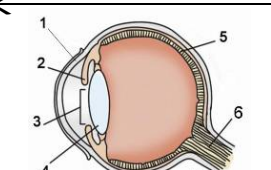
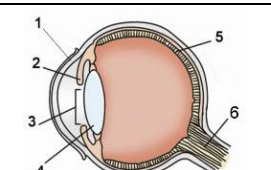
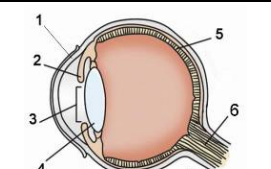
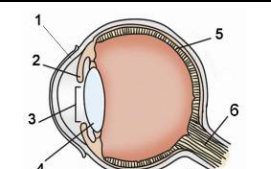
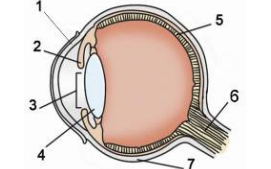
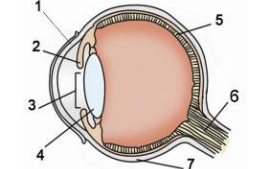
Domino cards

Note: You can add colour backing paper to the cards before laminating them.

			Contains light-sensitive cells
	Cochlea		Optic nerve
	Auditory nerve		Protects the eyeball
	Helps focus light onto the retina		Allows light to enter the eye
Lens			Retina
Pupil			Protective coat
Cornea			
			Eardrum

Domino cards

Note: You can add colour backing paper to the cards before laminating them

	<p>More sensitive to lemon juice</p>		<p>Ear flap</p>
	<p>Controls the size of the pupil</p>		<p>Sends messages from the cochlea to the brain</p>
	<p>More sensitive to sweetness</p>	<p>Collects sound waves in the air</p>	
	<p>More sensitive to dessert</p>	<p>Detects vibrations and changes them into messages</p>	
<p>Magnify the vibrations from the eardrum</p>		<p>More sensitive to bitterness</p>	
<p>More sensitive to salted fish</p>		<p>More sensitive to saltiness</p>	
<p>Ear bones</p>	<p>Sends messages from the retina to the brain</p>	<p>Vibrates when sound waves hit it</p>	<p>More sensitive to sourness</p>
<p>Iris</p>	<p>More sensitive to bitter melon juice</p>		