English: Semester 6 – L3 Sciences de la vie – TD4

A. Reported speech

It is used to relay what someone has said without quoting them directly. In English, this often involves changes in verb tenses, pronouns, and time expressions.

a) Verb Tense Shift (Backshifting)

Present → Past

(*"I work here." → He said he worked there.*)

Past → Past Perfect (*"I went to London." → He said he had gone to London.*)

Will → Would, **Can → Could**, **Have → Had**, **Shall → Should**, **May → Might**, **Must → Had to**

b) Time & Place Changes

today → that day, *tomorrow → the next day*, *yesterday → the day before*, *now → then*, *here → there*.

"I will come tomorrow." → She said she would come the next day.

c) Pronoun Changes

Adapt based on context: *"I like my car." → He said he liked his car.*

d) Questions in Reported Speech

Wh-questions: *"Where do you live?" → She asked where I lived.*

Yes/No questions: *"Do you like coffee?" → He asked if I liked coffee.*

e) Imperatives in Reported Speech

"Close the door." → She told me to close the door.

"Don't be late." → He told me not to be late.

1. Convert the followind direct speech sentences into reported speech:

#	**Direct speech.** Mike says:	**Reported speech**
1	"I am tired."	Mike said (that) he _____ tired.
2	"My parents are fine."	Mike said (that) _____ parents _____ fine.
3	"I am going to learn Chinese."	He said (that) he _____ going to learn Chinese.
4	"I went to the movies last night."	He said (that)...
5	"I moved here two years ago."	
6	"I don't know what to do now."	
7	"Listen to me!"	
8	"Don't get angry!"	
9	"L.A. is bigger than Paris"	
10	"I must go."	
11	"I may get fired."	
12	"I will finish tomorrow."	

2. Rewrite the following direct questions as reported speech.

a) The student asked: “How do mitochondria produce energy?”

b) The researcher asked: “What is the function of an enzyme?”

c) The professor asked: “Have you finished your lab report?”

d) The scientist asked: “Did you analyze the DNA samples?”

e) The doctor asked: “Can bacteria survive in extreme environments?”

3. Recap on place and time.

Direct speech	Reported speech	Direct speech	Reported speech
This morning		Last year	
Today		Now	
Tomorrow		Here	

4. Rewrite the following commands and requests as reported speech.

a) The lab instructor said: “Wear protective gloves.”

b) The professor told the students: “Do not mix these chemicals.”

B. Listening comprehension

Answer the following questions using reported speech.

a) Where does the speaker say photosynthesis happens?

_____

_____

b) How does the speaker describe how plants get carbon dioxide and water?

_____

_____

c) What does the speaker say about the equation for photosynthesis?

_____

_____

d) What does the speaker say about why plants store starch instead of glucose?

_____

_____

C. Reading comprehension

Many birds-of-paradise species emit light through their plumage, study finds

Researchers found that most birds-of-paradise are biofluorescent – meaning they absorb light through their bodies

Birds-of-paradise are known for their bright and colourful plumage, but it turns out they are even more dazzling than previously thought.

Researchers have found 37 of the 45 species show biofluorescence – in other words, patches of their plumage or other body parts absorb UV or blue light, and emit light at lower frequencies.

"At a minimum, it would make these biofluorescent areas brighter – a yellow feather may be more green-yellow, a white feather may be brighter and slightly more green-yellow," said Dr Rene Martin from the American Museum of Natural History in New York, who was first author of the study.

Published in the journal Royal Society Open Science, Martin and colleagues reported how they studied preserved specimens of each bird-of-paradise species, held in the ornithology collection at the American Museum of Natural History.

The team placed males and females of each species under blue light in a dark room and recorded the wavelengths and intensity of light emitted. In some cases they also shone UV light on the skins.

The results revealed that males of 21 species showed biofluorescence on parts of their plumage such as their head, neck, belly and tail feathers, or on fleshy lobes known as face wattles. In addition, these species plus an additional 16 species showed – or were deemed likely to show – biofluorescence in their inner mouth and throat.

Females of 36 of these species, and most likely all 37, also showed biofluorescence. Several showed this on their chest and belly, or on feathers that form an eye stripe on the side of their head.

The team said the emitted light ranged from light or teal blue wavelengths to green and green-yellow.

"It may not have the effect of making something look different, but becoming brighter and more eye-catching," said Martin.

The team added that biofluorescence did not occur in species in the genera of Lycocorax, Manucodia and Phonygammus. That, they said, fits with the idea that biofluorescence was present in the common ancestor of all birds-of-paradise, but was lost in the ancestor of these three groups.

The researchers said the elaborate courtship displays shown by males of many of the biofluorescent species would be enhanced by the phenomenon – for example, male Lophorina gape their mouths open towards females while performing.

"Male birds-of-paradise often have these patches next to stark black [or] dark plumage, so the added effect of biofluorescence may aid in making these signal areas even brighter while being used during displays," added Martin.

In females, however, the phenomenon might have a different function. "The location and patterns of their biofluorescent plumage of many species are much more in line with its possible use as camouflage," she said.

Martin added that the research sheds fresh light on the well studied birds. "Even a charismatic group like the birds-of-paradise, that have been studied extensively, can still offer new insights into avian vision, behaviour and morphology," she said.

(source: The Guardian, 12/02/2025, Nicola Davis)

Questions:

a) How does biofluorescence potentially enhance male birds' courtship displays?

_____

_____

_____

b) Why might biofluorescence in female birds-of-paradise serve a different function than in males?

_____

_____

_____

c) How does biofluorescence affect the perceived colour of a bird's feathers?

_____

_____

_____

d) Birds-of-paradise also emit UV light with their bioluminescence.

_____

_____

_____

Find the translation for these words in the text:

1. Plumage : _____
2. Biofluorescence : _____
3. Émettre : _____
4. Absorber : _____
5. Plume : _____
6. Longueur d'onde : _____
7. Parade nuptiale : _____
8. Camouflage : _____
9. Ancêtre : _____
10. Spécimen : _____

D. Silent letters

1. Identify the Silent Letter: In each word below, underline the silent letter.

a) know
b) write
c) honest
d) doubt
e) whistle
f) tsunami
g) sword
h) vehicle

2. Read the words out loud. Identify which letter is not pronounced.

Thumb
Castle
Listen
Autumn
Half
Knock
Debt
Muscle
Yacht
Gnome
Pneumonia
Cupboard
Raspberry
Tomb
Psychology

3. Tongue Twister: Try to say this sentence filled with silents letters quickly.

The honest knight wrote a wrong rhyme about the castle's haunted ghost.