

Move 1: Introduce Key finding Move 2: Significance/ implication Move 3: General background Move 4: Rationale

Move 5: Source

GROUP 1 ANALYSIS

Students' names:
Richelle
Xinyuan
Saidah
Shi Qian
Amos

Table 1

Note: You can highlight any interesting parts of the sections to make your answer clearer.

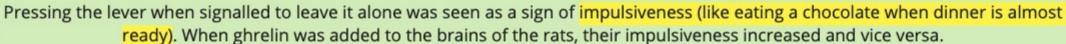
Previous research has shown that your stomach starts to produce ghrelin- informally known as the "hunger hormone" - when you get hungry, and that has an impact on regulating your appetite. Now, for the first time, a team in Sweden has managed to link it to a lack of rational thinking and a loss of impulse control.

Why does the news author begin with Move 4, omitting Move 3?

The context is quite related to our everyday life. No need for background introduction. Hunger is a universal feeling/experience that everyone has encountered so there is no need for explanations. He assumes that everyone has felt sensitive/impulsive upon feeling hungry.

2) Refer to Sections 3 - 4:

In the study, academics from the University of Gothenburg set up an impulsivity test for rats, where they were rewarded with sugar when they correctly followed a signal to either press a lever or leave it alone. Through a repeated series of tests, the rats gradually learned which action corresponded to a reward.



What is the news author trying to achieve in these sections?	He is trying to establish a causal link between hunger and impulsiveness while summarising the experiment done in the research. He compares the actions of the rats to those of humans to depict how the research relates to us. He is writing about the materials and methods in the experiment, so as to provide the reader enough details so they can understand how the research is carried out; explains how the problem was studied; identifies the procedures followed
How are they different from the news article? (What is included and omitted?)	There are fewer details and layman terms are utilised in the news article. He still included the gist of the experiment but omitted the exact steps and methods to interpret the results

Move 6: Methods & Findings

Move 7: Explain the results

Move 8: Evaluate the results

Required Reading

Nield, D. (2016, May 13). Your Hunger Hormones Can Affect the Way You Make Decisions. ScienceAlert. http://www.sciencealert.com/your-hungry-hormones-can-affect-the-way-you-make-decisions

Background Reading

Anderberg, R. H., Hansson, C., Fenander, M., Richard, J. E., Dickson, S.L., Nissbrandt, H., Bergquist, F.& Skibicka, K.P. (2015). The Stomach-Derived Hormone Ghrelin Increases Impulsive Behavior. Neuropsychopharmacology, 41(5), 1199-1209. http://www.nature.com/npp/journal/v41/n5/full/npp2015297a.html



Move 1: Introduce Key finding Move 2: Significance/ implication Move 3: General background Move 4: Rationale Move 5: Source

GROUP 2 ANALYSIS

Note: You can highlight any interesting parts of the sections to make your answer clearer.

Students' names:
Bo cong
Benedict
Ryan
Min Jet
Fang Yu

2) Refer to Sections 3 - 4:

In the study, academics from the University of Gothenburg set up an impulsivity test for rats, where they were rewarded with sugar when they correctly followed a signal to either press a lever or leave it alone. Through a repeated series of tests, the rats gradually learned which action corresponded to a reward.

Pressing the lever when signalled to leave it alone was seen as a sign of impulsiveness (like eating a chocolate when dinner is almost ready). When ghrelin was added to the brains of the rats, their impulsiveness increased and vice versa.

What is the news author trying to achieve in these sections?	spark interest and awe The author shed light on the methods in carrying out this experiment as well as the findings of the experiment. Move 6: Methods & Findings
How are they different from the news article? (What is included and omitted?)	Included: Gave a very general outline of the methods used and the results that were drawn from the tests used Omitted: Specific tests used to draw results, how to interpret the intermediate results to draw the findings -> only included the part of the methodology that was relevant to understanding the key finding

3) Refer to Section 5:

"Our results showed that restricting ghrelin effects to the ventral tegmental area, the part of the brain that is a crucial component of the reward system, was sufficient to make the rats more impulsive," said one of the researchers, Karolina Skibicka. "Importantly, when we blocked ghrelin, the impulsive behavior was greatly reduced."

What is the author trying to achieve in this section?	explaining the results, drawing conclusions from the result to let the readers know what the key points to takeaway.	
Which section in the research article does this correspond to?	First paragraph of discussion	

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Move 1: Introduce Key finding Move 2: Significance/ implication Move 3: General background Move 4: Rationale

Move 5: Source

GROUP 3 ANALYSIS

Note: You can highlight any interesting parts of the sections to make your answer clearer.

3) Refer to Section 5:

"Our results showed that restricting ghrelin effects to the ventral tegmental area, the part of the brain that is a crucial component of the reward system, was sufficient to make the rats more impulsive," said one of the researchers, Karolina Skibicka. "Importantly, when we blocked ghrelin, the impulsive behavior was greatly reduced."

section?

What is the author trying to achieve in this To inform the readers about the new findings. And to educate the public the function of ghrelin so that they know the ghrelin is what causes the impulsive behavior.

Move 7: Explain the findings

Which section in the research article does this correspond to?

Introduction section 2:

"The impact of ghrelin on neurotransmitters critical for regulation of impulsive behavior, taken together with the regulatory role for ghrelin on food reward behavior (a behavior that correlates with impulsivity), led us to hypothesize that ghrelin's neurobiological role could extend to the regulation of impulsivity."

Results:

Central Ghrelin Increases Impulsive Behavior in the Go/No-Go Test

Dicussion Section 5:

"In the final impulsivity test, ghrelin increased impulsive choice by increasing the rat's selection for smaller but immediate rewards instead of the four times larger but delayed food rewards. In contrast to the DRL or the go/no-go test, both of which evaluate the motor impulsivity, the delay discounting test challenges the decision-making capacity of the rat. Ghrelin-treated rats displayed steeper discounting rates compared with their vehicle injection day."

4) Refer to Section 8:

So we're probably telling you something you already know, but seriously, don't try to make decisions on an empty stomach, because it's probably not good for you. It's just one of many biological processes happening when we start to get stomach pains, and research has also pointed to a tendency to get more short-tempered and less likely to behave within socially acceptable norms (aka 'hangry').

the readers?

What does the news author assume about the author assumes that the belief that one should not make any major decisions when hungry is very commonly held by the readers. The author also assumes that the reader knows what the term 'hangry' means

What is the news author trying to achieve? To inform readers the drawbacks of having an empty stomach. The author also tries to persuade the reader not to make any big decisions when hungry considering the drawbacks of doing so.

Required Reading

Nield, D. (2016, May 13). Your Hunger Hormones Can Affect the Way You Make Decisions. ScienceAlert. http://www.sciencealert.com/your-hungry-hormones-can-affectthe-way-you-make-decisions

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Students' names:



Move 1: Introduce Key finding Move 2: Significance/ implication Move 3: General background Move 4: Rationale Move 5: Source

GROUP 4 ANALYSIS

Note: You can highlight any interesting parts of the

sections to make your answer clearer.

Students' names: Adinda Meng Han Kai Lin Francis Lara

4) Refer to Section 8:

So we're probably telling you something you already know, but seriously, don't try to make decisions on an empty stomach, because it's probably not good for you. It's just one of many biological processes happening when we start to get stomach pains, and research has also pointed to a tendency to get more short-tempered and less likely to behave within socially acceptable norms (aka 'hangry').

the readers?

What does the news author assume about Author assumes that everyone knows what being "hangry" feels like - and the frustration that comes with it (by saying, "So we're probably telling you something you already know") He also assumes that everyone also knows the feeling of making irrational decisions when hungry.

> why does the author feel the need to introduce research?: Perhaps to make his claims more reliable

What is the news author trying to achieve? He tries to relates to the majority of the readers and assures them that being "hangry" is a common sensation that many of us experience, not them being crazy.

> Move 8: Evaluate the findings -> with logical explanation and evidence

5) Refer to Sections 9 - 11:

This new study in some ways contradicts findings from a 2014 paper that suggested decision-making was actually improved on an empty stomach, based on experimental exercises carried out with fasting and non-fasting volunteers. In that case, scientists concluded that hunger increases our reliance on our 'gut feeling,' which in certain cases can benefit "complex decisions with uncertain outcomes".

Now, before we get too carried away with either side of the debate, it's important to note that this latest study was conducted on rats, not humans. And while these results could transfer, we won't know until we test the experiment out on humans.

Getting the food we need is so crucial to the survival of the species, it's no surprise that when it's lacking, our internal wiring can shift in certain ways, even if we don't fully understand yet how that shift actually works. In the meantime, perhaps the best course of action is to simply always get a second opinion on any important decisions if you're dealing with a mild case of hanger.

Why is another study introduced? (*Hint: what is the role of Section 10?) The author wants to give a balanced viewpoint so that he seems less biased by prese to the argument.

The role of section 10: point out limitations of research which is the potential lack of tresearch which is the potenti of results (since animal models were used instead of human subjects)

Move 8: Evaluate the findings

-> acknowledging limitations while emphasising the validty of the research -> opening up future directions for research

How does the author try to resolve the contradicting findings?

- · Hedging; we can never be certain about how different people react when they're hungry because there are many other factors
- pointed out shortcomings/limitations of the study so readers can be adequately informed
- · Neatly ties up the article after introducing a contradictory point in section 11. This is a call to action to scientists to do more research on humans instead of sticking to animal models so that we can have more relevant and useful information.

How was Move 8 achieved in the Crispr article?

It not only worked on plants and animals, it worked beautifully. Professors Doudna and Charpentier had found the holy grail of genetic engineering - a method of cutting and stitching DNA accurately and simply anywhere in a complex genome. Until now, this was carried out by modified viruses, which inserted their DNA at random, or by elaborately cumbersome techniques known as "zinc fingers" or "Talens".

Professor Doudna agreed the possibility is there, but she has concerns. "I think in principle it could be done, but I think personally I'd be uncomfortable with that," she said. "Certainly, at this stage, I don't think we understand it well enough. Would you be correcting one problem but introducing others?"

"I'm tremendously excited about the possibility of this discovery having a real impact on people's lives. Maybe it will offer the opportunity to do therapeutics that we've not been able to do in the past," Professor Doudna

said.

How was Move 8 achieved in the Cicada article?

Mathemetician-Glenn Webb of Vanderbilt University says the explanation is reasonable but that there are other alternatives. 'Our hypothesis is that cicada emergences minimize overlap with the periodic cycles of their producers. His birds and small animals, which are 2 to 5 years," he said. "By choosing prime number, through evolution, cicadas avoid meshing with these shorter cycles." murriburn per coinciclental, and not sign

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http://www.nature.com/npp/journal/v41/n5/full/npp2015297a.html

6) Refer to Section 4:

Pressing the lever when signalled to leave it alone was seen as a sign of impulsiveness (like eating a chocolate when dinner is almost ready). When ghrelin was added to the brains of the rats, their impulsiveness increased and vice versa.

What strategy is used to explain 'impulsiveness'? Why is it effective? exemplification

effective because its simple and <u>relatable</u>, many people are likely to have experienced this before

-> very specific (not a metaphor/analogy)

7) Refer to Section 7:

They also found signs that the ghrelin injections in rats also caused changes in dopamine-related genes and enzymes (controlling the reward and pleasure centres of the brain) that are already associated with ADHD (attention deficit hyperactivity disorder) and OCD (obsessive compulsive disorder).

What technique is used to explain 'dopamine-related genes and enzymes'? Why is it effective? functional recontextualisation, explains the function of the genes and enzymes

effective because it is simple and understandable, words like "reward" and "pleasure" relate to the experiment's methodology + they make it easy for us to comprehend how these genes are related to getting something in return



Explanatory Strategies

Exemplification
 Functional recontextualisation



GROUP 1 ANALYSIS: cohesive devices conjunction phrases

Table 1

Section 5

8) Instructions: Find a conjunction word or phrase that ensures ideas are presented coherently and logically.

Highlight in blue.

"Our results showed that restricting ghrelin effects to the ventral tegmental area, the part of the brain that is a crucial component of the reward system, was sufficient to make the rats more impulsive," said one of the researchers, Karolina Skibicka. "Importantly, when we blocked ghrelin, the impulsive behavior was greatly reduced."

What is the purpose of this conjunction word/phrase?

The words are to emphasise the key finding of the experiment that "proves" that there is a chemical/scientific reasoning behind our impulse when hungry and there is a way to decrease this impulsiveness

the use of "when" instead of "if" highlights how we CAN control our impulsiveness and it has been scientifically proven -> cause and effect



Be aware of the difference between academic vs. non-academic sentence connectors.

E.g. 'similarly' vs 'in the same way' E.g. 'concurrently' vs 'in the meantime'

6) Refer to Section 4:

Pressing the lever when signalled to leave it alone was seen as a sign of impulsiveness (like eating a chocolate when dinner is almost ready). When ghrelin was added to the brains of the rats, their impulsiveness increased and vice versa.

What strategy is used to explain 'impulsiveness'? Why is it effective? Exemplification. Relatable to us.



7) Refer to Section 7:

They also found signs that the ghrelin injections in rats also caused changes in dopamine-related genes and enzymes (controlling the reward and pleasure centres of the brain) that are already associated with ADHD (attention deficit hyperactivity disorder) and OCD (obsessive compulsive disorder).

What technique is used to explain 'dopamine-related genes and enzymes'? Why is it effective? Functional recontextualization.

Provides readers the significance of the 'dopamine-related genes and enzymes' and their role in rats --> Allows reader to understand how the rats would be affected should they be injected with ghrelin.



GROUP 2 ANALYSIS: cohesive devices conjunction phrases

Table 1

Section 6

8) Instructions: Find a conjunction word or phrase that ensures ideas are presented coherently and logically.

Highlight in blue.

In the same way, the scientists suggest, the presence of ghrelin when we're hungry could be affecting the quality of our own decision-making.

What is the purpose of this conjunction word/phrase?
Is it academic or non-academic (formal or informal)? Why?

Purpose is to form a cohesive link to an earlier part of the article and demonstrate similarities between the 2 sections.

It sounds non-academic / informal.

Formal examples: Similarly, Correspondingly, Likewise, Equivalently, Identically, In accordance with,



6) Refer to Section 4:

Pressing the lever when signalled to leave it alone was seen as a sign of impulsiveness (like eating a chocolate when dinner is almost ready). When ghrelin was added to the brains of the rats, their impulsiveness increased and vice versa.

What strategy is used to explain 'impulsiveness'? Why is it effective? Exemplification. It gives a good example about impulsiveness. It is effective because chocolate is embedded in our everyday lives and hence the readers are more able to relate to it.



7) Refer to Section 7:

They also found signs that the ghrelin injections in rats also caused changes in dopamine-related genes and enzymes (controlling the reward and pleasure centres of the brain) that are already associated with ADHD (attention deficit hyperactivity disorder) and OCD (obsessive compulsive disorder).



What technique is used to explain 'dopamine-related genes and enzymes'?
Why is it effective?

functional recontextualization: giving an explanation of the functions of chemicals in the brain and link it back to the research paper

GROUP 3 ANALYSIS: cohesive devices conjunction phrases

Table 1

Section 11

8) Instructions: Find a conjunction word or phrase that ensures ideas are presented coherently and logically.

Highlight in blue.

Now, before we get too carried away with either side of the debate, it's important to note that this latest study was conducted on rats, not humans. And while these results could transfer, we won't know until we test the experiment out on humans.

What is the purpose of this conjunction word/phrase?

'while': acts as a preamble into the research limitations (the research was conducted on rats not humans) -> contrast

- 37

'these': refers to the experimental results conducted on rats

6) Refer to Section 4:

Pressing the lever when signalled to leave it alone was seen as a sign of impulsiveness (like eating a chocolate when dinner is almost ready). When ghrelin was added to the brains of the rats, their impulsiveness increased and vice versa.

What strategy is used to explain 'impulsiveness'? Why is it effective? exemplification

because it shows the nature of impulsivity in a very relatable way (a lot of people will understand wanting to eat chocolate even though dinner is almost ready)



7) Refer to Section 7:

They also found signs that the ghrelin injections in rats also caused changes in dopamine-related genes and enzymes (controlling the reward and pleasure centres of the brain) that are already associated with ADHD (attention deficit hyperactivity disorder) and OCD (obsessive compulsive disorder).

What technique is used to explain 'dopamine-related genes and enzymes'? Why is it effective? functional recontextualisation

it is effective because we understand the words "control", "reward" and "pleasure" more than "genes" and "enzymes". (Compared to defining and describing what enzymes are, explaining the functions is better because it puts the genes and enzymes into context. The audience has no use for knowing that enzymes are biological catalysts but they just need to know how the enzymes work)



GROUP 4 ANALYSIS: cohesive devices conjunction phrases

Table 1

Section 12

8) Instructions: Find a conjunction word or phrase that ensures ideas are presented coherently and logically.

Highlight in blue.

Getting the food we need is so crucial to the survival of the species, it's no surprise that when it's lacking, our internal wiring can shift in certain ways, even if we don't fully understand yet how that shift actually works. In the meantime, perhaps the best course of action is to simply always get a second opinion on any important decisions if you're dealing with a mild case of hanger.

What is the purpose of this conjunction word/phrase?

"In the meantime" (informal)
Formal:
Currently, At present, Presently



9) How did the author highlight the significance of the study?

Evaluative language

section 1 "...new evidence..."

section 2 "Now, for the <u>first</u> time, a team in Sweden has managed to link it to a lack of rational thinking and a loss of impulse control" -> significance +

importance

section 8 "further study into the effect of ghrelin <u>COULD</u> potentially lead to better treatments for these disorders" (ADHD and OCD) -> **possibility** section 10 "these results <u>COULD</u> transfer, <u>we won't know until</u>..." -> **possibility**

11) Look at the picture at the top of the article.

How effective is it?



depicts impulsiveness due to the sheer amount of food as compared to the size of the child

BUT kids are generally impulsive (sorry for the stereotype) so they make bad decisions like eating wayyyyy too many pancakes on a daily basis

also, the kid is really happy which does not relate to the feelings of annoyance when you are hungry

Can you find a more effective picture?

Remember to <u>credit</u> the source and include a <u>caption</u> that links to the story.

(Refer to p. 49 of your Student's Book about finding and citing images).







Brawl breaks out between men who have starved for 24 hours: Maybe it's time for them to eat the food in front of them...





Emptiness breeds sadness





9) How did the author highlight the significance of the study?

Teleological appeal

Further study into the effects of ghrelin could potentially lead to better treatments for these disorders, the researchers suggest.

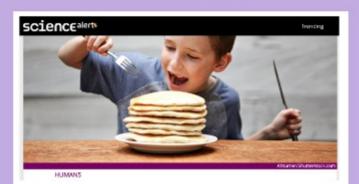
"Now, before we get too carried away with either side of the debate, it's important to note that this latest study was conducted on rats, not humans. And while these results could transfer, we won't know until we test the experiment out on humans. "

"Getting the food we need is so crucial to the survival of the species, it's no surprise that when it's lacking, our internal wiring can shift in certain ways, even if we don't fully understand yet how that shift actually works. In the meantime, perhaps the best course of action is to simply always get a second opinion on any important decisions if you're dealing with a mild case of hanger" - Main takeway for the reader, can be used in their daily lives

'presence of ghrelin when we're hungry could be affecting the quality of our own decisionmaking.'

11) Look at the picture at the top of the article.

How effective is it?



Your Hunger Hormones Can Affect The Way You Make Decision

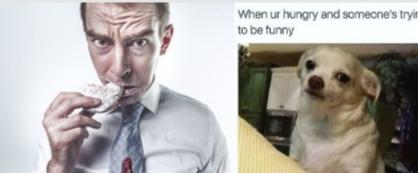
The picture shows a person holding onto utensils, and is about to eat something --> links to "hunger"

But there isn't much of a link to "the way you make decisions"

Futhermore, the boy in the photo looks happy, which goes against what the news article wants to say

Can you find a more effective picture? Remember to credit the source and include a caption that links to the story.

(Refer to p. 49 of your Student's Book about finding and citing images).





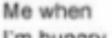
Making decisions? Don't do it when you are hungry.





When your mom calls you for dinner







Me after







10) How did the author try to engage the readers?

(Hint: How does he show he is aware of the readers' presence?)

Find and quote specific examples throughout the article.

"If you've ever felt peckish, you'll know it can start to have an impact on the way you think,...." (using you **pronouns** and try to include the reader)

· tried to relate to things that readers usually experience

Previous research has shown that your stomach starts to produce ghrelin - informally known as the "hunger hormone" - when you get hungry,

"Now, before we get too carried away with either side of the debate" --> we pronouns to include the reader as well as **conversational language**

11) Look at the picture at the top of the article.

How effective is it?



Is it not very effective because the picture does not correctly describe how someone would feel when they are hungry

the child's expression does not correspond to the context. (because the child looks happy)



Can you find a more effective picture?

Remember to <u>credit</u> the source and include a <u>caption</u> that links to the story.

(Refer to p. 49 of your Student's Book about finding and citing images).

https://nutritionlondon.uk/blog-nutrition/tag/hangry

https://www.mashed.com/919979/a-new-study-shows-being-hangry-isnt-just-in-

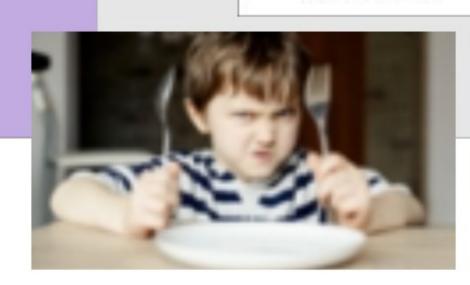
your-head/



a state of anger caused by lack of food; hunger causing a negative change in emotional state.







10) How did the author try to engage the readers?

(Hint: How does he show he is aware of the readers' presence?)

Find and quote specific examples throughout the article.

"So we're probably telling you something you already know"

use of personal pronouns:

We, you (makes the reader feel included/connected)

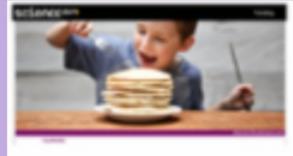
Use of **relatable terms/situations** (provides greater understanding for the readers) - see yellow highlights



11) Look at the picture at the top of the article.

How effective is it?

Not very effective because it doesn't show decision making



it also show someone looking happy, which is contradicting to the unhappy nature that they are supposed to be because they are "hangry"

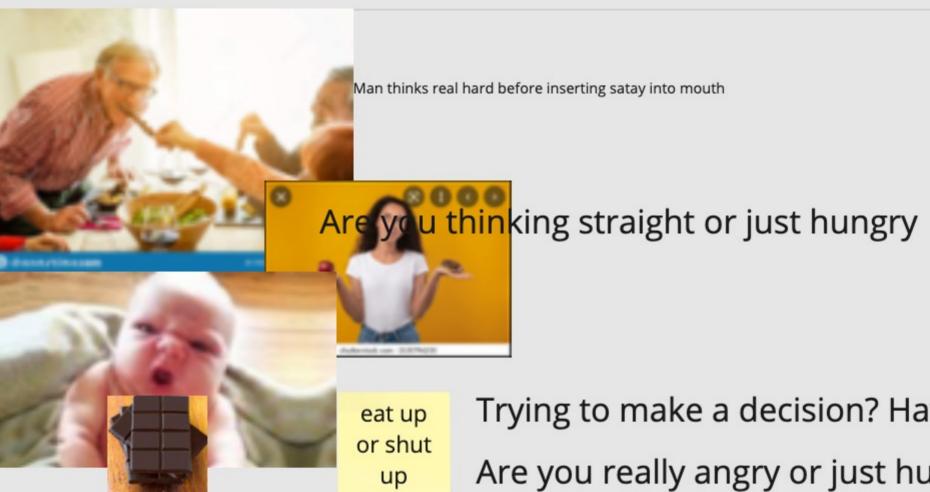
not everyone likes pancakes so it doesn't appeal/appear relatable to the majority.

perhaps using children is not the ideal example as children tend to be very impulsive no matter what, unlike adults who usually show more self control.

That Range Harmonie Can Affect The Way To: Male Sections

Can you find a more effective picture? Remember to credit the source and include a caption that links to the story.

(Refer to p. 49 of your Student's Book about finding and citing images).



Trying to make a decision? Have a bite Are you really angry or just hungry? Here