# **TOEFL Reading Season 1**

Session

Procedures - 10/18 min

Summary

- l. Intro
- 2. Prep plan
- 3. Skimming
- 4. Prob solving I
- 5. Prob solving II
- 6. Summary
- 7. From beginning to end



# Skimming Reading Solve problems one by one Solving without reading gets you < 20

# A Warm-Blooded Turtle

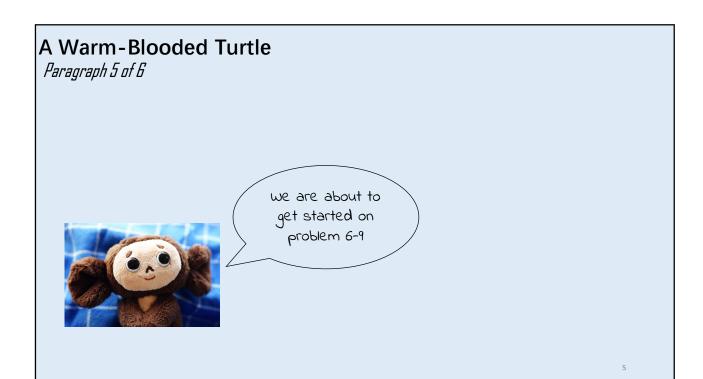
- 1/6 Leatherback can swim in cold water
- 2/6 Source of turtle heat
- 3/6 Keep warm by size
- 4/6 Keep warm by fat and system
- 5/6 Arrangement of the system
- 6/6 How do small turtles keep warm?

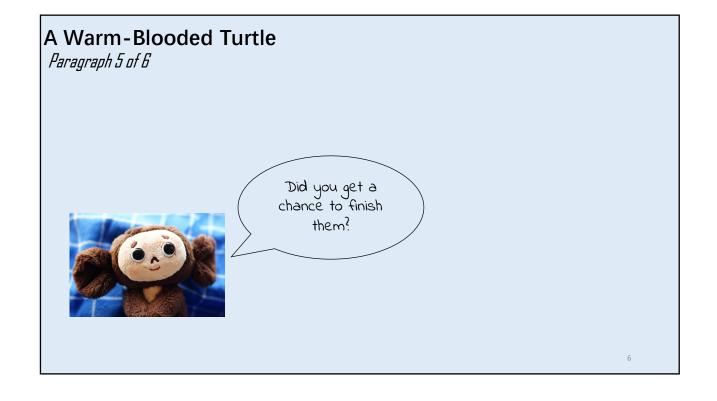


# **A Warm-Blooded Turtle**

- 1/6 Leatherback can swim in cold water
- 2/6 Source of turtle heat
- 3/6 Keep warm by size
- 4/6 Keep warm by fat and system
- 5/6 Arrangement of the system
- 6/6 How do small turtles keep warm?







# A Warm-Blooded Turtle Paragraph 5 of 6: Arrangement of the system

#### 6/10 Sentence Simplification

Which of the sentences below best expresses the essential information in the **highlighted sentence** in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself. This is the same arrangement found in an old-fashioned steam radiator, in which the coiled pipes pass heat back and forth as water courses through them. The leatherback is certainly not the only animal with such an arrangement; gulls have a countercurrent exchange in their legs. That is why a gull can stand on an ice floe without freezing.

# **Sentence Simplification**

- 1. Segmentation
- 2. Analysis
- 3. Simplification
- 4. Logic
- 5. Matching

Group9120

#### Step 1: Segmentation

#### 6/10 Sentence Simplification

Which of the sentences below best expresses the essential information in the **highlighted sentence** in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.

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# Step 1: Segmentation

#### 6/10 Sentence Simplification

Which of the sentences below best expresses the essential information in the **highlighted sentence** in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels;

thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.

#### Sentence core:

a minimum sentence

#### Modifier:

elements that provide additional info beyond sentence core In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels;

thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.

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# Step 2: Analysis

#### Segment 1:

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels;

In a countercurrent exchange system,

the blood vessels carrying cooled blood from the flippers

run close enough to

the blood vessels carrying warm blood from the body

to pick up some heat from the warmer blood vessels

#### Sentence core:

The blood vessels run close enough to the blood vessels.

In a countercurrent exchange system,

the blood vessels carrying cooled blood from the flippers

run close enough to

the blood vessels carrying warm blood from the body

to pick up some heat from the warmer blood vessels

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# Step 2: Analysis

#### **Modifier:**

Prepositional phrase

In a countercurrent exchange system,

the blood vessels carrying cooled blood from the flippers

run close enough to

the blood vessels carrying warm blood from the body

to pick up some heat from the warmer blood vessels

#### **Modifier:**

Prepositional phrase

E.g.

The plane <u>in the sky</u> is beautiful.

The plane is flying in the sky.

In a countercurrent exchange system,

the blood vessels carrying cooled blood from the flippers run close enough to

to pick up some heat from the warmer blood vessels

the blood vessels carrying warm blood from the body

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# Step 2: Analysis

#### **Modifier:**

In a countercurrent exchange system,

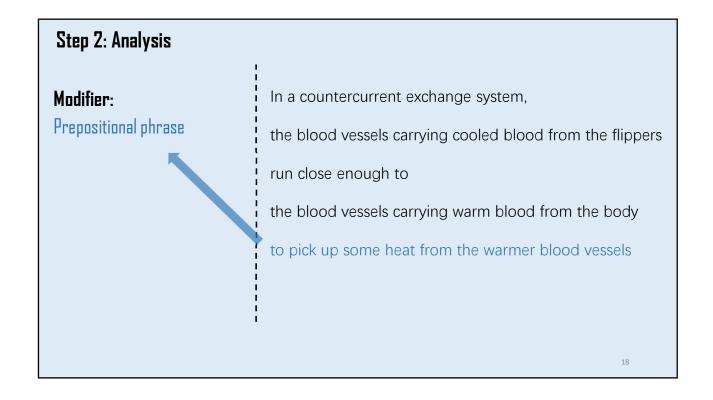
the blood vessels carrying cooled blood from the flippers)

run close enough to

the blood vessels carrying warm blood from the body

to pick up some heat from the warmer blood vessels

# Step 2: Analysis Modifier: Participle In a countercurrent exchange system, the blood vessels[carrying cooled blood from the flippers] run close enough to the blood vessels[carrying warm blood from the body] to pick up some heat from the warmer blood vessels to pick up some heat from the warmer blood vessels



# Step 3: Simplification

#### In proper human language:

In a countercurrent exchange system,

the blood vessels carrying cooled blood from the flippers

run close enough to

the blood vessels carrying warm blood from the body

to pick up some heat from the warmer blood vessels

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# Step 3: Simplification

#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat. In a countercurrent exchange system,

the blood vessels carrying cooled blood from the flippers

run close enough to

the blood vessels carrying warm blood from the body

to pick up some heat from the warmer blood vessels

#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat. In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels;

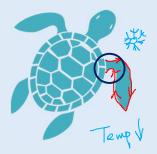
thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.

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# Step 3: Simplification

#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers. In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.



#### Step 4: Logic

#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers.

Logic: ?

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.



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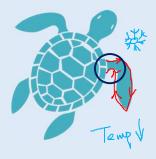
# Step 4: Logic

#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers.

Logic: Fact A enables Fact B.

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.



#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers.

**Logic:** Fact A enables Fact B.

- **A.** In a turtle's countercurrent exchange system, outgoing vessels lie near enough to ingoing ones that heat can be exchanged from the former to the latter before reaching the turtle's flippers.
- **B.** Within the turtle's flippers, there is a countercurrent exchange system that allows colder blood vessels to absorb heat from nearby warmer blood vessels and then return warmed blood to the turtle's body.
- **C.** In a countercurrent exchange system, a turtle can pick up body heat from being close enough to other turtles, thus raising its blood temperature as it passes them.
- **D.** When a turtle places its flippers close to its body, it is able to use its countercurrent exchange system to transfer heat from the warmer blood vessels in its body to the cooler blood vessels in its flippers.

2.5

#### Step 5: Matching

#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers.

**Logic:** Fact A enables Fact B.

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.

**C.** In a countercurrent exchange system, a turtle can pick up body heat from being close enough to other turtles, thus raising its blood temperature as it passes them.

**D.** When a turtle places its flippers close to its body, it is able to use its countercurrent exchange system to transfer heat from the warmer blood vessels in its body to the cooler blood vessels in its flippers.

#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers.

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In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.

**C.** In a countercurrent exchange system, a turtle can pick up body heat from being close enough to other turtles, thus raising its blood temperature as it passes them.

**D.** When a turtle places its flippers close to its body, it is able to use its countercurrent exchange system to transfer heat from the warmer blood vessels in its body to the cooler blood vessels in its flippers.

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# Step 5: Matching

#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers.

**Logic:** Fact A enables Fact B.

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the <a href="heat is transferred from the outgoing">heat is transferred from the outgoing</a> to the ingoing vessels before it reaches the flipper itself.

**C.** In a countercurrent exchange system, a turtle can pick up body heat from being close enough to other turtles, thus raising its blood temperature as it passes them.

**D.** When a turtle places its flippers close to its body, it is able to use its countercurrent exchange system to transfer heat from the warmer blood vessels in its body to the cooler blood vessels in its flippers.

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Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers.

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In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.

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Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers.

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In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.

**A.** In a turtle's countercurrent exchange system, outgoing vessels lie near enough to ingoing ones that heat can be exchanged from the former to the latter before reaching the turtle's flippers.

**B.** Within the turtle's flippers, there is a countercurrent exchange system that allows colder blood vessels to absorb heat from nearby warmer blood vessels and then return warmed blood to the turtle's body.

#### In proper human language:

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**B.** Within the turtle's flippers, there is a countercurrent exchange system that allows colder blood vessels to absorb heat from nearby warmer blood vessels and then return warmed blood to the turtle's body.

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# Step 5: Matching

#### In proper human language:

Vessels with cold flipper blood run close to vessels with warm body blood to pick up heat, so heat is transferred from outgoing to ingoing vessels before reaching flippers.

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In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.

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33

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# Sentence Simplification

- 1. Segmentation
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- 3. Simplification
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Group9120

#### A Warm-Blooded Turtle Paragraph 5 of 6: Arrangement of the system

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself. This is the same arrangement found in an old-fashioned steam radiator, in which the coiled pipes pass heat back and forth as water courses through them. The leatherback is certainly not the only animal with such an arrangement; gulls have a countercurrent exchange in their legs. That is why a gull can stand on an ice floe without freezing.

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#### A Warm-Blooded Turtle Paragraph 5 of 6: Arrangement of the system

This is the same arrangement found in an old-fashioned steam radiator, which the coiled pipes pass heat back and forth as water courses through them in.



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# A Warm-Blooded Turtle Paragraph 5 of 6: Arrangement of the system

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#### 7/10 Purpose

Why does the author mention "old-fashioned steam radiator" in the discussion of countercurrent exchange systems?

- A. To argue that a turtle's central heating system is not as highly evolved as that of other warm blooded animals
- B. To provide a useful comparison with which to illustrate how a countercurrent exchange system works
- C. To suggest that steam radiators were modeled after the sophisticated heating system of turtles
- D. To establish the importance of the movement of water in countercurrent exchange systems

#### Paragraph 5 of 6: Arrangement of the system

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## Approach 1: What is the function of an example?



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Paragraph 5 of 6: Arrangement of the system

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#### Paragraph 5 of 6: Arrangement of the system

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**Approach 1:**What is the function

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#### Paragraph 5 of 6: Arrangement of the system

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Approach 2: Summarize the context



#### Approach 1:

What is the function of an example? To illustrate the arrangement of the "system"

#### Approach 2:

Summarize the context How the "system" works

#### Paragraph 5 of 6: Arrangement of the system

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#### Paragraph 5 of 6: Arrangement of the system

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# A Warm-Blooded Turtle

- 1/6 Leatherback can swim in cold water
- 2/6 Source of turtle heat
- 3/6 Keep warm by size
- 4/6 Keep warm by fat and system
- 5/6 Arrangement of the system
- 6/6 How do small turtles keep warm?

Group9120

#### A Warm-Blooded Turtle Paragraph 6 of 6: How do small turtles keep warm?

All this applies, of course, only to an adult leatherback. Hatchlings are simply too small to conserve body heat, even with insulation and countercurrent exchange systems. We do not know how old, or how large, a leatherback has to be before it can switch from a cold-blooded to a warm-blooded mode of life. Leatherbacks reach their immense size in a much shorter time than it takes other sea turtles to grow. Perhaps their rush to adulthood is driven by a simple need to keep warm.

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#### A Warm-Blooded Turtle Paragraph 6 of 6: How do small turtles keep warm?

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#### A Warm-Blooded Turtle Paragraph 6 of 6: How do small turtles keep warm?

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According to paragraph 6, which of the following statements is most accurate about young leatherback turtles?

- A. They lack the countercurrent exchange systems that develop in adulthood.
- B. Their rate of growth is slower than that of other sea turtles.
- C. They lose heat easily even with insulation and countercurrent exchange systems.
- D. They switch between cold-blooded and warm-blooded modes throughout their hatchling stage.

#### Paragraph 6 of 6: How do small turtles keep warm?

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#### 8/10 Factual Info

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#### Paragraph 6 of 6: How do small turtles keep warm?

All this applies, of course, only to an adult leatherback. Hatchlings are simply too small to conserve body heat, even with insulation and countercurrent exchange systems. We do not know how old, or how large, a leatherback has to be before it can switch from a cold-blooded to a warm-blooded mode of life. Leatherbacks reach their immense size in a much shorter time than it takes other sea turtles to grow. Perhaps their rush to adulthood is driven by a simple need to keep warm.

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According to paragraph 6, which of the following statements is most accurate about young leatherback turtles?

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# A Warm-Blooded Turtle

Prob 9/10 Cohesion



#### 9/10 Cohesion

Look at the four squares that indicate where the following sentence could be added to the passage.

However, these animals have additional means of staying warm.

Leatherbacks keep their body heat in three different ways. The first, and simplest, is size. The bigger the animal is, the lower its surface-to-volume ratio; for every ounce of body mass, there is proportionately less surface through which heat can escape. An adult leatherback is twice the size of the biggest cheloniid sea turtles and will therefore take longer to cool off. Maintaining a high body temperature through sheer bulk is called gigantothermy. 

It works for elephants, for whales, and, perhaps, it worked for many of the larger dinosaurs. apparently works, in a smaller way, for some other sea turtles. 

Large loggerhead and green turtles can maintain their body temperature at a degree or two above that of the surrounding water, and gigantothermy is probably the way they do it. 
Muscular activity helps, too, and an actively swimming green turtle may be 7°C (12.6°F) warmer than the waters it swims through.

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#### Paragraph 3 of 6: Keep warm by size

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#### However:

used to contrast **OR** contradict with previous statement(s)

#### Means:

method or process; both singular and plural

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Works for other turtles ■
How other turtles use G ■
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# A Warm-Blooded Turtle

Prob 10/10 Summary



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# Session summary – problem solving 2

- 1. Segmentation, analysis, simplification, logic, and matching
- 2. Purpose conclude the context
- 3. Observe the flow of idea for cohesion
- 4. Grammar helps





# THANK YOU Any questions? © Leave a comment and I will get back to you.

