



# Main Idea Generation

DECEMBER 2020 COACHES' WEBINAR

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Review the steps of teaching students how to generate a main idea.

Practice generating and evaluating main ideas.

Discuss how to support sites' implementation of the main idea strategy.

## Objectives

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## Reminders

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Main idea = sentence



Referring to it as the gist



In service of comprehension

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## Poll 1: How difficult is it for middle school students to generate a main idea?

PART OF CCSS IN GRADE 3

1	2	3	4	5
Not at all difficult	Somewhat difficult	Neither easy nor difficult	Somewhat easy	Very easy

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## Why Main Idea Is Difficult

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## Explaining the Purpose to Students

Understand	Make sure you understand what you are reading
Think about	Think about the information
Remember	Help yourself remember important information

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## Generating Main Ideas

1. Name the who or the what.
  2. Tell the most important thing about the who or what.
  3. Say it in about 10 words.

(Boardman et al., 2015)



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**Natural selection has helped the Bajau people hold their breath while diving**

(By Nicola Davis, The Guardian, adapted by Newsela staff on 04.25.18  
Read Count 877  
Level 1692)



The Bajau people in Southeast Asia are known for their amazing ability to hold their breath for long periods of time while diving to hunt fish. Scientists have finally figured out how they do it. The secret is evolution.

The Bajau people are able to dive up to 200 feet underwater with no conventional diving aids. Instead, they rely on weights, handmade wooden goggles and a single breath of air.

While the Bajau people's talents have long been known, the reason for their amazing skill was unclear. The skill could be the result of practice. It could also be the result of adaptations which have been passed on through the DNA. DNA is found in the cells of all living organisms.

Sequences of DNA called genes tell our bodies how to grow and change. DNA contains the instructions for how each part of the body works. DNA is passed from parent to child; it can tell scientists how a species changes over time.

Read or Re-read the Text

Read or Re-  
read the Text

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# Model Generating a Main Idea: Step 1

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## Model Generating a Main Idea: Step 1

### Practice Passage: *Natural Selection*

1. Name the who or the what.

### Clues:

- What is an important fact (person, place, thing)?
  - What fact is mentioned frequently?
  - What fact links ideas?
  - What fact is emphasized in the text features (e.g., bolding, captions, subheadings)?

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**Natural selection has helped the Bajau people hold their breath while diving**

By Nissa Davis, The Guardian, adapted by Newsela staff on 04.25.19  
Word Count 877  
Level Y4/5A



Image 1: A Bajau diver hunting fish on the reef. Photo by Melinda Edwards.

The Bajau people in Southeast Asia are known for their amazing ability to hold their breath for long periods of time while diving to hunt fish. Scientists have finally figured out how they do it. The Bajau people's talent has been passed down through generations. The Bajau people's talents have been passed down through generations. While the Bajau people's talents have been passed down through generations, the reason for their amazing skill was not fully understood until recently. The Bajau people's talents have been passed down through generations which have their roots in the Bajau people's DNA. DNA is found in the cells of our bodies. Sequences of DNA, called genes, tell our bodies how to grow and operate. DNA contains the instruction for how each part of the body works. Because DNA is passed from parent to child, it can tell scientists how a species or group within a species changes over time.

Clues:

- What is an important fact (person, place, thing)?
- What fact is mentioned frequently?
- What fact links ideas?
- What fact is emphasized in the text features (e.g., bolding, captions, subheadings)?

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## Model Generating a Main Idea: Step 2

**Practice Passage: Natural Selection**

1. Name the who or the what.
2. Tell the most important thing about the who or what.

Clues:

- What is something the who/what has, is, or does?
- What ideas are repeated in different ways or linked?
- What ideas are emphasized in the text features (e.g., bolding, captions, subheadings)?

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**Natural selection has helped the Bajau people hold their breath while diving**

By Nissa Davis, The Guardian, adapted by Newsela staff on 04.25.19  
Word Count 877  
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Clues:

- What is something the who/what has, is, or does?
- What ideas are repeated in different ways or linked?
- What ideas are emphasized in the text features (e.g., bolding, captions, subheadings)?

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## Model Generating a Main Idea: Step 3

### Practice Passage: Natural Selection

1. Name the who or the what.
2. Tell the most important thing about the who or what.
3. Say it in about 10 words.

Clues:

- What is in your own words?
- What can be said more clearly and concisely?
- What will make it a complete sentence?

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Clues:

- What is in your own words?
- What can be said more clearly and concisely?
- What will make it a complete sentence?

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### Check the Main Idea

Main Idea Rubric

	0	1
1. Statement names a who or what.	No	Yes
2. The who/what identified is the key who/what of the passage.	No	Yes
3. Statement includes only the most important information about the who/what.	No	Yes
4. Statement is written in the students' own words.	No	Yes
5. Statement is a complete sentence of about 10 words.	No	Yes

Sum of scores \_\_\_\_\_ / Total possible points x 100 = \_\_\_\_\_ %

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## Poll 2: Which Is a Good Gist?

(Section 2 of the passage)



1. Scientists measure spleen size to understand how bodies survive without oxygen.
2. Scientists study the spleens of the Bajau and seals that dive for longer times.

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## Poll 3: Which Is a Good Gist?

(Section 3 of the passage)



1. Certain versions of genes are more commonly found in Bajau people..

2. Larger spleens put more red blood cells in the circulatory system..

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1

Genes help humans with the diving reflex, tolerating lactose, and living at high altitudes.

2

Changes in some human genes show natural selection happening.

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## Poll 4: Which Is a Good Gist?

(Section 4 of the passage)

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Breakout  
Rooms

Generate a main idea statement for each section of the passage.

Make notes of what is challenging

- How will you help teachers anticipate and plan for the challenges?
- What supports need to be provided for students to overcome the challenges?

Be prepared to share.

- When you return to the main room, your group will be assigned a section for which you will share the main idea.
- Each group will be asked to share one identified challenge and how it will be used to plan for helping teachers/students.

20

# Evaluating Main Ideas

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## Share Out: Challenges Identified in Your Breakout

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PARAPHRASING



RECORDING TEXTUAL  
EVIDENCE IN A-R GUIDES

## Integrating Main Ideas

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## Questions?

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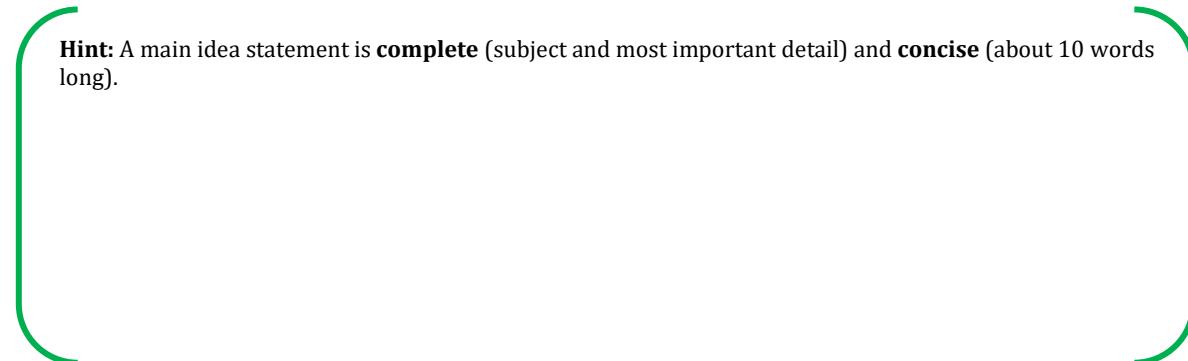
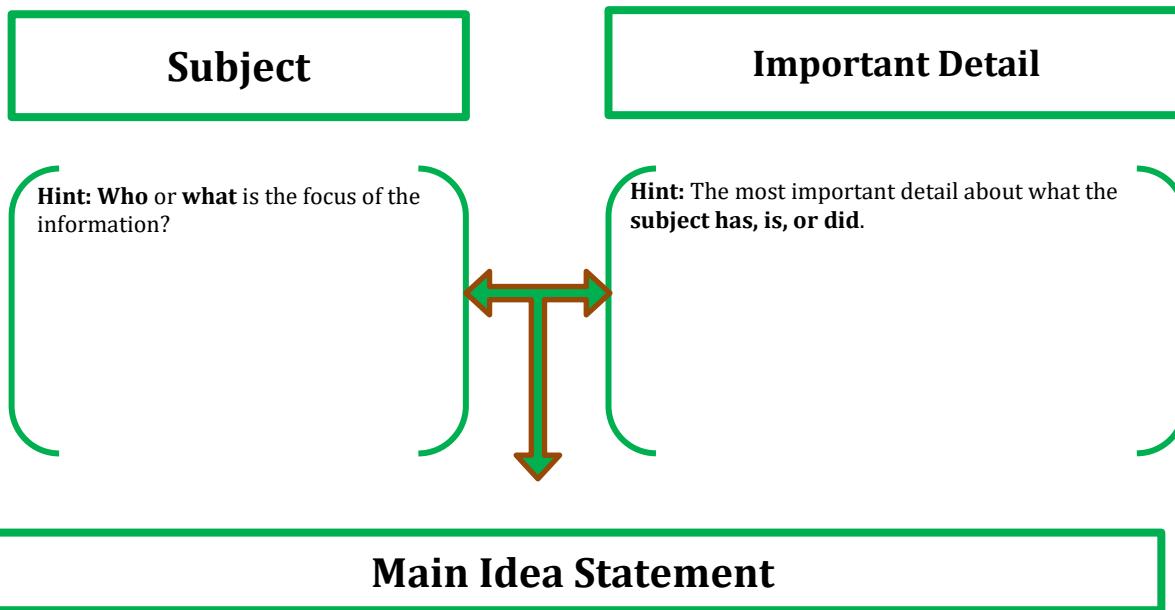
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24



## Main Idea Graphic Organizer

Passage title: \_\_\_\_\_



**Main Idea Rubric**

	<b>0</b>	<b>1</b>
1. Statement names a who or what.	No	Yes
2. The who/what identified is the key who/what of the passage.	No	Yes
3. Statement includes only the most important information about the who/what.	No	Yes
4. Statement is written in the students' own words.	No	Yes
5. Statement is a complete sentence of about 10 words.	No	Yes

Sum of scores \_\_\_\_\_ / 5 Total possible points x 100 = \_\_\_\_\_ %

# Natural selection has helped the Bajau people hold their breath while diving

By Nicola Davis, The Guardian, adapted by Newsela staff on 04.25.18

Word Count 877

Level 1060L



Image 1. A Bajau diver hunting fish on the reef. Photo by: Melissa Ilardo

The Bajau people in Southeast Asia are known for their amazing ability to hold their breath for long periods of time while diving to hunt fish. Scientists have finally figured out how they do it. The secret is evolution.

The Bajau people are able to dive up to 200 feet underwater with no conventional diving aids. Instead they rely on weights, handmade wooden goggles and a single breath of air.

While the Bajau people's talents have long been known, the reason for their amazing skill was unclear. The skill could be the result of practice. It could also be the result of adaptations which have their roots in the Bajau people's DNA. DNA is found in the cells of our bodies.

Sequences of DNA, called genes, tell our bodies how to grow and operate. DNA contains the instructions for how each part of the body works. Because DNA is passed from parent to child, it can tell scientists how a species or group within a species changes over time.

The Bajau people have undergone natural selection, the process by which organisms that are better suited to their environment survive, while others do not. Natural selection has resulted in certain versions of genes becoming widespread among the Bajau people.

### **Measuring Spleens Of Bajau People**

Many of the adaptations are linked to biological changes, including having a larger spleen. These changes help the Bajau to hold their breath underwater for many minutes at a time.

Dr. Melissa Ilardo is an author of the study about the Bajau people. She worked at the University of Copenhagen at the time of the research. She said that the Bajau people have a lot to teach us about how the human body reacts to a lack of oxygen, which is an important medical issue.



Doctors could use the research to figure out new ways to help patients. Some people are more at risk than others when they experience a lack of oxygen. This can happen, for instance, during surgery. Understanding how the Bajau people can survive for longer periods of time without oxygen is very useful information for doctors.

Writing in the journal Cell, the scientists reveal how they solved the mystery following a clue from previous research. Certain species of seals can dive for longer amounts of time. It turns out that these seals have larger-than-expected spleens. The spleen is an organ which, among its purposes, can store oxygen-carrying red blood cells.

Ultrasound devices use sound waves to create images of the inside of the body. The team of scientists used an ultrasound device to measure the spleen in 43 Bajau people. They also measured 33 people from a neighboring group of farming people, the Saluan.

### **Large Spleen Helps With Underwater Diving**

Professor Eske Willerslev is a co-author of the study from the University of Cambridge. The Bajau people's spleens were about 50 percent larger than the Saluan people's spleens, which is a very extreme difference, he said.

The team notes the trend held regardless of whether the Bajau individual was themselves a diver. It even held when factors such as age, sex and height were taken into account.

DNA tests revealed that certain versions of genes are more commonly found in Bajau people than would be expected. Many of these genes seem linked to biological changes that could help individuals handle low-oxygen conditions.

Among them is a form of a gene linked to an increased spleen size. This is important for diving. People, like other mammals, experience something called the "diving reflex" when our heads are underwater. The diving reflex causes the spleen to get shorter and tighter. A large spleen means even more oxygen-carrying red blood cells can be pumped into the circulatory system during this process, allowing individuals to stay underwater for longer.

### **Genes Did Not Develop By Accident**

Another gene commonly found in Bajau people is linked to a different feature of the diving reflex. It sends less blood to the hands and feet, leaving more for organs such as the brain, heart and lungs.

Further analysis by the team also discovered that these helpful genetic traits are not the result of chance. They are evolutionary adaptations arising from natural selection.

Stephen Stearns is a scientist at Yale University who was not involved in the research. He said the study adds to evidence for recent natural selection on certain genes in human populations.

Previous examples include genes for lactose tolerance that cropped up with the beginning of domestication of dairy animals. Another example would be genes for adaptation to high altitude among people who live in Tibet and Native Americans in the Andes mountains in South America.

"What we lack at this point, and badly need, are samples large enough to allow us to infer when the selection [in the Bajau] started to happen," he said. "We know that the Bajau have been leading this lifestyle for at least a thousand years, but we do not know when they started it – perhaps much earlier."

# App helps Inuit adapt to changing climate

By Public Radio International, adapted by Newsela staff on 11.12.20

Word Count 899

Level 1030L



Image 1. A hunter checks the Arctic ice with a harpoon near a stretch of open water surrounded by ice. These traditional tools are still needed for ice safety in addition to the tools and services provided by apps like SIKU. Photo: SIKU

Mick Appaqaq lives on one of the thousands of small islands that make up Canada's northernmost territory of Nunavut. Nunavut's land stretches deep into the Arctic. Appaqaq been going out onto the rough Arctic land since he was little.

"My father would always take me geese hunting in the spring and berry picking in the summer, ever since I was a young kid," he said. "So, yeah, it's in my blood."

For much of the year, sea ice covers the water surrounding Nunavut's coastline and islands. Sea ice is the thick layer of ice that floats on top of the ocean's surface. People must traverse the ice to get to fishing and hunting grounds. Rule number one is not falling through the ice, Appaqaq says.

To make sure it can hold the weight of a snowmobile, hunters often try to punch through the ice with a harpoon, which is a long spear used for fishing. This traditional method has been used for thousands of years by Appaqaq's people, the Inuit — the Indigenous People of the Arctic region. But now there's another step.

If the ice is too thin, Appaqaq will grab his phone and open an app called SIKU. By uploading a photo of the thin ice, he can alert other hunters of dangerous ice conditions.

### The Arctic Is Warming Fast

Thin ice has become much more common in the far North due to climate change, which is significant change in the climate of Earth over a long period of time. It can happen naturally or in response to human activities.



The Arctic region is warming faster than most other places in the world, threatening the safety of those communities — and their livelihoods. Apps like SIKU can provide new tools to keep track of current conditions and collect data, or information, over long periods of time. They give communities the ability to notice trends and plan for the future.

SIKU means "sea ice" in Inuktitut, the Inuit language. The app launched in 2019 and now has more than 6,000 users. Appaqaq works as a technician for the app, and he said it was partly inspired by an elder community member who recently passed away. The elder wanted to combine old ways with new tech.

"He said that it's time for the harpoon and the computer to work together," said Appaqaq.

Young people have been using SIKU with their grandparents to record ice conditions. They can also record any unusual behavior of wildlife, said Appaqaq. One elder who frequently uses SIKU is Jimmy Iqaluq, who is 73 years old and is an expert at "reading" sea ice.



In a SIKU video post from February 2020, Iqaluq points to the sea ice around him. He explains that this past year, the sea ice was different. Unusually warm weather prevented it from getting thick enough.

Iqaluq's observation connects to a wider trend. In summer 2020, due to intense summer heat, sea ice in the Arctic melted to one of the lowest levels on record.

### Tracking Long-Term Changes

Climate change also affects animals that are important to the Inuit diet. These include Arctic char, which is a type of salmon, and caribou, also known as reindeer.

In the SIKU app, people can post where they hunted snow geese, picked ripe berries, saw moose tracks or caught fish. It's useful to track what the environment is currently doing, but its founders hope it can also provide benefits in the long run.

For example, caribou populations are shrinking in Nunavut. Keeping track of caribou movements can help communities decide where to hunt and where to have protected areas.

Before SIKU existed, many users of the app would post their wildlife observations on Facebook. Once it's on Facebook, the data no longer belongs to them.

"With SIKU, you can download your own data, and you own all [of it]," said Joel Heath, who helped found SIKU.

### **Expanding The App**

Heath says that the SIKU creators designed the app to respect the knowledge of Indigenous people. Usually, Heath said, gathering data involves scientists coming from outside the community. They make observations, and then they leave. SIKU could completely change that pattern.

Heath pointed out that Inuit communities already deeply understand the animal communities around them. They also understand the way the land changes. SIKU simply gives them "tools that help document the data that's always been behind Inuit knowledge," he said.

Now, they're working to get the app translated into different dialects of Inuktitut to make it more accessible, since almost every Inuit community has its own dialect.

Candice Pedersen helps communities around Nunavut learn to use the app. As an Inuk woman, she also wants SIKU to expand beyond hunting and fishing.

"We're trying to work on stuff so that you can have sewing posts or recipe posts to get more people involved in the app," she said.

Pedersen hopes the app will become the new Facebook for a lot of people. It provides a network that keeps people in touch — not just with each other — but with the changing Arctic region.