



## NJSLA Research Simulation Task

### Grade 8 Reading

#### Lesson 3: Identifying the Main Idea

#### Rationale

- Paramount for students' success on the reading portion of the NJSLA assessments is their ability to identify and understand an author's main idea.

#### Goals

- To prepare students for the reading assessment by teaching them strategies to identify and understand an author's main idea.

#### Task Foci

- **CCSS RI.8.2:** Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
- **CCSS RI.8.5:** Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.

#### Objectives

- Students will learn strategies for reading to determine a main idea.
- Students will be able to identify the main idea of an informational text.

#### Materials

- Informational text
- Main Idea worksheet

#### Procedures

- Tell students that today they will explore the concept “main idea” and learn strategies for determining the main idea of a text.
- Start by defining “main idea.” You can define it in a couple ways: It is what the text is mostly about. It is the central point the writer makes.
- Explain to students, **“There are certain things you can do before, during, and after reading that will help you determine the main idea. Let’s go through some of them as we look at this text.”**
- Distribute the sample text and worksheet. In the following steps, pause to allow students time to fill out their worksheets as indicated.

- Start with the pre-reading strategy of examining text features: title, headings, pictures, charts, diagrams. Tell students, **“The first thing we want to do is figure out what the subject of the text is. The title can usually help us with this.”**
- Read the title aloud. Discuss how the title can tell us what the subject is. For example, a straightforward title like, “What is Earth?” tells us that this text will be about our home planet. (A title in the form of a question often indicates that the main idea will be the answer to that question.)
- Go through any other text features present. Ask students what they are and what they show about the subject.
- Allow students time to fill out the BEFORE READING section of their worksheets.
- Next, tell students that there are things you can do while you’re reading. One strategy is to be on the lookout for repeated terms and ideas, as these will often relate to the main idea.
- Read the text aloud or have students read independently. Allow students to annotate the text and fill out the DURING READING section.
- After students finish reading, ask them to share their answers to the “before reading” and “during reading” sections. Everyone’s answers should be similar, though some students may have noticed something that others missed.
- Next, direct students to look at the AFTER READING section. Explain that every writer has an opinion about the subject they’re writing about. But often, writers don’t present that opinion as one direct statement, but develop it throughout the text through tone, wording, reasoning, and examples.
- Have students answer the AFTER READING section of the worksheet.
- Reiterate that the “main idea” is “what the text is mostly about.” In other words, it is the biggest point the author makes about the subject.
- Ask your students to review their answers to each section of their worksheet.
- Then ask them, **“Using the information you’ve found, what do you think is the main idea of this text? Write your answer in the space provided on the worksheet.”**
- Ask students to share their answers. Discuss.
- Collect student worksheets.
- Keep students’ work for Lesson 4: Supporting Details

### **Check for Understanding**

- Check that students correctly identify the main idea and were able to articulate it in their own words on the worksheet.
- Check for evidence that the student’s answers on the worksheet provide evidence of his or her reasoning for determining the main idea.

# What's the Main Idea?

## BEFORE READING

---

What is the title?

List any other text features and give a brief description of each:

What is the subject?

## DURING READING

---

What terms and ideas are repeated in the text? Explain each you found.

## AFTER READING

---

What do you think is the author's opinion on the subject? How can you tell?

I think the main idea is...

---

---

---

## Fish aglow: Hidden colors in the sea

Courtesy: National Science Foundation

1. With the help of blue light and special long-pass filters, scientists have uncovered more of the undersea world's secrets. A study published in 2014 describes more than 180 species of marine fishes that glow in different colors and patterns, via a process known as biofluorescence.
2. Scientists already knew that some marine organisms fluoresce, including corals and jellyfish, but this is the first reported evidence of widespread biofluorescence among fishes.
3. "There's a whole light show going on down there, and people never see it," said one of the study's principal authors, John Sparks, a curator in the American Museum of Natural History's (AMNH) Department of Ichthyology.
4. The findings will surely lead to new investigations of the function of biofluorescence as well as research related to the evolution and diversification of marine fishes. They could also lead to the discovery of new fluorescent proteins useful in cancer, brain and other biomedical research.
5. Biofluorescence is a natural process in which organisms absorb light at one intensity, or wavelength, and emit it at a different, usually lower, level--seen as a different color. In the ocean, the researchers found, fishes absorb the higher energy blue light around them and emit it in glowing greens, reds and oranges.
6. Scientists made the discovery while taking and processing images of biofluorescent coral for an traveling museum exhibit. Sparks and AMNH research associate David Gruber were amazed to see, in the background of one image, an eel glowing bright green.
7. To further explore the phenomenon, they enlisted the help of other researchers and embarked on a series of dive expeditions. Deep underwater near the Bahamas and later the Solomon Islands, the divers shone blue lights on the ocean floor to stimulate intense biofluorescence in fishes. To see through the **obliterating** veil of blue light, they wore green visors over their masks and equipped their underwater camera lenses with special long-pass filters. (The researchers note that many fishes have long-pass filters in their eyes, which would allow them to see fluorescent displays.)
8. With the resulting images, analyses of some 12,000 specimens the team collected over four expeditions, as well as studies after hours at public aquariums, the research team discovered that biofluorescence is common throughout the tree of life for fishes. The researchers identified biofluorescence in 16 orders, 50 families, 105 genera and more than 180 species of fishes. These include the two main fish groups: cartilaginous (sharks and rays) and bony fishes (eels, lizardfishes, gobies, flatfishes).
9. Fish fluoresce in a wide range of patterns--from simple red/orange coloration to green eye rings to more complex, species-specific patterns of interspersed fluorescent elements on the head, jaws, fins, flank and ventrum. In some cases, the fish's entire body fluoresced, including internally. The patterns were most common and variable in fishes that had cryptic coloration, or camouflage, such as eels, gobies and lizardfishes.
10. The research opens the door to new studies that could yield new proteins for use in biomedical research.
11. "The discovery of green fluorescent protein in a hydrozoan jellyfish in the 1960s has provided a revolutionary tool for modern biologists, transforming our study of everything from the AIDS virus to the workings of the brain," said Gruber. "This study suggests that fish biofluorescence might be another rich reservoir of new fluorescent proteins."
12. Fluorescent proteins can be injected and used to track cellular functions, neural activity and more.