8th Grade, Lewis County Middle School NTI Day 14

Contents:

- **Language Arts**
- **Math**
- **Science**
- **Social Studies**

School Phone: 606-796-6228

Teams:

William.maynard@lewis.kyschools.us
Julee.howard@lewis.kyschools.us
Karen.jones@lewis.kyschools.us
John.liles@lewis.kyschools.us

Rick.robinette@lewis.kyschools.us
Alexis.enix@lewis.kyschools.us
Bj.thornsberry@lewis.kyschools.us
Chris.bryan@lewis.kyschools.us

Argumentative Writing 4 - Day 14 - 100 points

What happens when I cannot draw enough reasons from the prompt? Let's practice idea generation.

Writing situation
Your school is very concerned about students' attendance. A committee made up of teachers and students have been looking at ways to encourage students to come to school every day.

Writing directions
Consider your thoughts on this issue. Write a letter to the Attendance Committee, arguing for strategies you think would encourage students to come to school every day. As you write, be sure to support your argument with strong reasons.

Brainstorm 10 or more possible strategies to help increase attendance at school. Refer to your idea generator to help you come up with ideas that are easy to do, inexpensive, worth the time/effort, and/or can generate positive recognition for students or the school.

Strategies	Why would this work?
1. Have a drawing every week for students who have perfect attendance for a t-shirt.	It is an easy way to recognize students for attendance. It is only once a week and only requires the school make an announcement and give away a t-shirt that they might already have as an extra from a fundraiser.
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Day 14

Multiplying and Dividing with Scientific Notation

➤ **Find each product or quotient. Write your answer in scientific notation.**

1 $(3.6 \times 10^1) \div 6$

$(3.6 \times 10^1) \div 6$

$(3.6 \times 10^1) \div (6 \times 10^0)$ change 6 to scientific notation

0.6×10^1 divide mantissa and subtract exponents

6×10^0 convert mantissa to number between 1 and 10 and change exponent accordingly

2 $(2 \times 10^2) \times (3 \times 10^1)$

$(2 \times 10^2) \times (3 \times 10^1)$

6×10^3 multiply mantissa and add exponents

Since number is between 1 and 10 no need to change

3 $7 \times (2 \times 10^1)$

$7 \times (2 \times 10^1)$

$(7 \times 10^0) \times (2 \times 10^1)$ convert 7 to scientific notation

14×10^1 multiply mantissa and add exponents

1.4×10^2 convert mantissa to number between 1 and 10 and change exponent accordingly

4 $(2.5 \times 10^0) \times (1.5 \times 10^1)$

5 $(4 \times 10^2) \div (4 \times 10^1)$

6 $45 \div (5 \times 10^0)$

Day 14

Multiplying and Dividing with Scientific Notation *continued*

7 $(2.5 \times 10^2) \times 5$

8 $900 \div (4.5 \times 10^0)$

9 $(4 \times 10^5) \times 0.0375$

10 $(6 \times 10^{-10}) \div (2.5 \times 10^{-12})$

11 $(2.8 \times 10^{-7}) \times (7 \times 10^{12})$

12 $0.000068 \div (2 \times 10^8)$

13 How do you divide two numbers in scientific notation?

RESEARCH CONNECTION

Amazing Cells!

Did you know your body is made of trillions of cells? There are millions of different types. Where did all of these different types come from? Part of the answer is a special type of cell called *stem cells*.

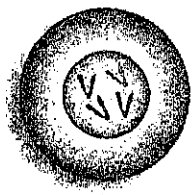
Many living things need stem cells including animals and plants. An organism that is not fully developed is called an *embryo*. In animal embryos, stem cells can develop into different types of cells. Your body has over 200,000 different types of cells. It has blood cells, muscle cells, skin cells, and stomach cells just to name a few. Each type of cell has its own structure and function.

The process of differentiation

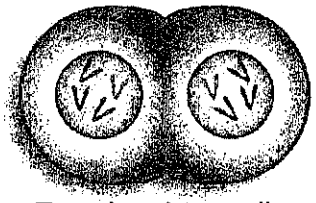
All stem cells have some certain properties:

- Stem cells divide to make more stem cells.
- Stem cells also have the ability to develop into different types of cells.

A stem cell divides into two daughter cells. Each daughter cell is identical to the original parent cell. When mature, these cells also divide. This is how embryos get a supply of stem cells. A growing embryo needs a lot of stem cells to develop tissues and organs. In the laboratory, starting with a few stem cells, scientists have grown millions in a few months.



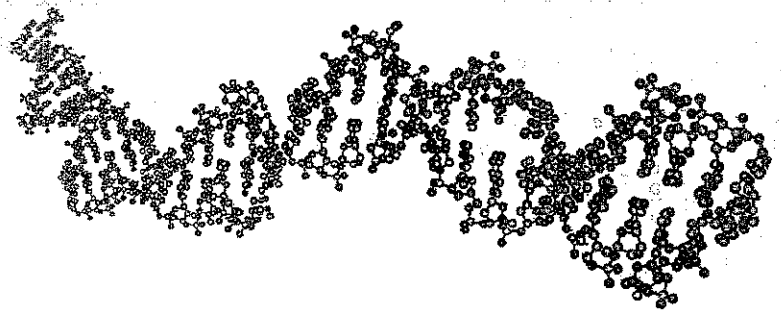
Parent cell



Two daughter cells

So how do stem cells change into other types of cells? Scientists are studying this problem.

Something called a signal tells stem cells to become different types of cells. Genes are pieces of DNA that carry information from the parent cell to the offspring cells. The genes inside stem cells provide internal signals. The environment outside of the cell provides external signals. The cell's environment includes chemicals from other cells.



Different types of specialized animal cells

There are two main types of animal stem cells. More than twenty years ago, scientists extracted stem cells from the embryos of mice. These stem cells are described as embryonic. The other main type of stem cells is described as adult. Embryonic stem cells and adult stem cells are very different.

Embryonic stem cells can divide to make more stem cells. They wait for a signal. Then they start producing specialized cells. These specialized cells form the tissues, which in turn form the organs.

Embryonic stems cells are like new players on a soccer team. Until the players are trained, they are reserves. They have the potential to do a lot of different things. Once they are trained, they become specialized in a position. The players might be defenders or forwards. They might play goalie or mid field. Similarly, embryonic stem cells are generic cells at first. They get "training" from a signal. Then they develop tissue for the kidneys, liver, or other organs.

While the main job of embryonic stem cells is growth, the main job of adult stem cells is repair. They do not have as much potential as embryonic stem cells. They seem to already carry genetic information that determines which type of cells they can become. They exist alongside the types of cells they can produce. Adult stem cells in the skin, for example, develop into skin cells to help new skin grow after an injury.

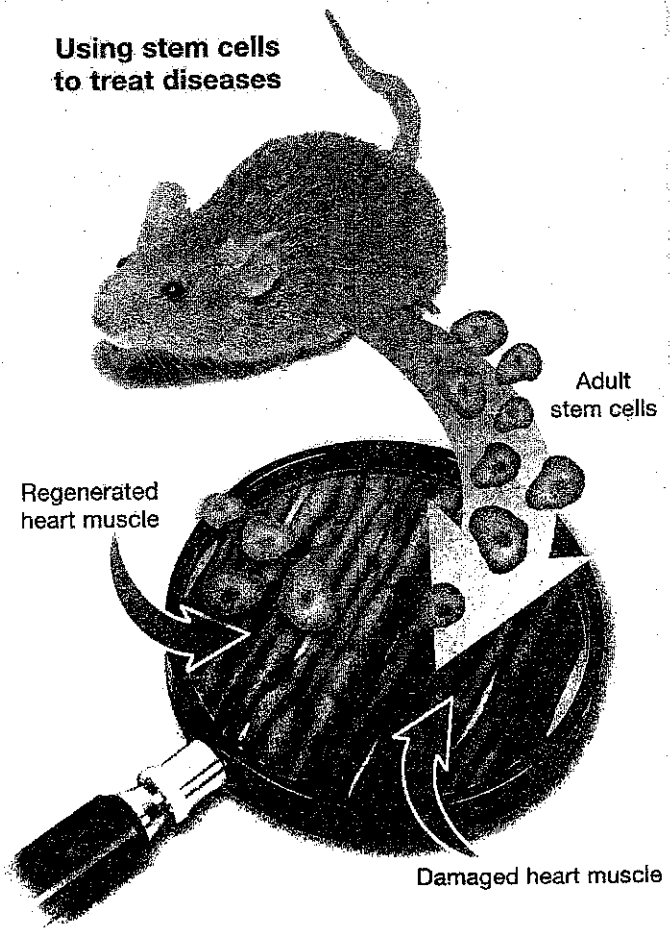
The potential for treating diseases

Scientists think stem cells may help treat diseases. Can you think how this might work? Embryonic stem cells can develop into many other types of cells. If the right signals can be discovered, these cells might be able to replace or repair diseased tissue. Scientist's hope that diseases such as diabetes and heart disease may be treated this way someday.

Adult stem cells are already used in medicine. For 30 years, adult stem cells have been used in bone marrow transplants. The potential of adult stem cells is more limited, but scientists hope to use them to fight diseases. For example, research in mice indicates that putting adult stem cells into a damaged heart may help repair heart tissue.

Scientists are trying to better understand what triggers the differentiation of stem cells. As knowledge and understanding of stem cells increase, so does the potential for many new disease therapies.

Using stem cells to treat diseases



Jones 8th grade Science

NTI Day 14-Cell structure and function-Amazing cells?

Materials

- CPO life science Ebook that is uploaded into google classroom
- 5 question quiz

Task

- Students read pages 168-169 in chapter 8.
- Students complete a 5 question quiz.

Quiz-Section 8.2

1. Where did all the different types of cells that are found in an animals body come from?

a) Muscle cells
b) Plant cells
c) Skin cells
d) Stem cells
e) Stomach cells

2. An organism that is not fully developed is called an_____.

a) Organism
b) Embryo
c) Cell membrane
d) Eukaryote
e) Organelle

3. A stem cell divides into ____ daughter cells.

a) 2
b) 4
c) 6
d) 8
e) 10

4. The two main types of animal stem cells are _____and _____.

a) Nucleus and organelle
b) Wild and domestic
c) Cell wall and Cell membrane
d) Prokaryotic and Eukaryotic
e) Embryonic and adult

5. The main job of embryonic cells is _____ whereas adult stem cells main job is _____?

a) Repair; growth.
b) Living; nonliving.
c) Prokaryotic; eukaryotic.
d) Growth; repair
e) Plant; animal.

The Fugitive Slave Acts

By History.com, adapted by Newsela staff on 02.16.17
Word Count **841**
Level **1060L**

"Effects of the Fugitive-Slave-Law," an impassioned condemnation of the Fugitive Slave Act passed by Congress in September 1850, which increased federal and free-state responsibility for the recovery of fugitive slaves. The law allowed the appointment of federal commissioners empowered to issue warrants for the arrest of alleged fugitive slaves. Universal History Archive/UIG via Getty images

The Fugitive Slave Acts were a pair of federal laws that allowed for the capture and return of runaway slaves in the United States. The first Fugitive Slave Act was passed by Congress in 1793. It authorized local governments to seize and return escaped slaves to their owners. It also imposed punishments on anyone who helped slaves in their flight. Widespread resistance to the 1793 law later led to the passage of the Fugitive Slave Act of 1850. This law went further by creating even harsher punishments for interfering in the capture of runaways. The Fugitive Slave Acts were among the most controversial laws of the early 19th century. Many Northern states passed special legislation in an attempt to find a way around them. Both laws were formally repealed by Congress in 1864.

Laws regarding refugee slaves existed in America as early as 1643. Slave laws were later enacted in several of the 13 original colonies. Among others, New York passed a 1705 law designed to prevent runaways from fleeing to Canada. Virginia and Maryland drafted laws offering rewards for the capture and return of escaped slaves.

By the time of the United States Constitutional Convention in 1787, many Northern states had abolished slavery. Southern lawmakers were concerned that these new free states would become shelters for runaway slaves. They made sure that the Constitution included a "Fugitive Slave Clause." It stated that "no person held to service or labor" would be released from slavery in the event that they escaped to a free state.

Northerners are against slavery

Despite the inclusion of the Fugitive Slave Clause in the Constitution, anti-slavery sentiment remained high in the North. Many asked Congress to ban the practice. However, Congress ultimately gave in to further pressure from Southern lawmakers and passed the Fugitive Slave Act of 1793.

This law was similar to the Fugitive Slave Clause in many ways. However, it included a more detailed description of how the law was to be put into practice. Most importantly, it said that slave owners had the right to search for escaped slaves in free states. The law also imposed a $500 fine on any person who helped hide escaped slaves.

The Fugitive Slave Act of 1793 was immediately met with heavy criticism. Northerners bristled at the idea of turning their states into a stalking ground for bounty hunters. Many argued that the law amounted to legalized kidnapping. Some abolitionists organized secret resistance groups and built networks of safe houses to help slaves in their escape to the North.

Most Northern states intentionally neglected to enforce the law. Several even passed so-called "Personal Liberty Laws" that gave accused runaways the right to a jury trial. The laws also protected free blacks, many of whom had been captured and sold into slavery.

Edward Prigg wins Supreme Court case

The legality of Personal Liberty Laws was eventually challenged in a Supreme Court case in 1842. The case concerned Edward Prigg, a Maryland man who was convicted of kidnapping after he captured a suspected slave in Pennsylvania. The Supreme Court ruled in favor of Prigg. It said that federal law overruled any state measures that tried to interfere with the Fugitive Slave Act.

Despite the Supreme Court's decision, the Fugitive Slave Act of 1793 remained largely unenforced. By the mid-1800s, thousands of slaves had poured into free states through networks like the Underground Railroad. Following increased pressure from Southern lawmakers, Congress passed a revised Fugitive Slave Act in 1850. The new law forced citizens to assist in the capture of runaway slaves. It also denied slaves the right to a jury trial. In order to ensure that it was enforced, the 1850 law also placed control of individual cases in the hands of federal officials. These agents were paid more for returning a suspected slave than for freeing them. This led many to argue the law was biased in favor of Southern slaveholders.

Much criticism for Fugitive Slave Act of 1850

The Fugitive Slave Act of 1850 was met with even more criticism and resistance than the earlier measure. States like Vermont and Wisconsin passed new measures intended to bypass the law. Abolitionists made even more efforts to assist runaway slaves. The Underground Railroad reached its peak in the 1850s, with many slaves fleeing to Canada to escape U.S. authorities. Resistance also occasionally boiled over into riots and revolts. In 1851 a group of anti-slavery activists rushed

a Boston courthouse and freed an escaped slave who had been captured. Similar rescues were later made in New York, Pennsylvania and Wisconsin.

The Fugitive Slave Act of 1850 was so unpopular in the North that it was almost impossible to enforce. By 1860 only around 330 slaves had been successfully returned to their Southern masters. Congressmen regularly introduced bills and resolutions related to repealing the Fugitive Slave Act. However, the law persisted until after the beginning of the Civil War. It was not until June 28, 1864, that both of the Fugitive Slave Acts were officially repealed by Congress.

Quiz

1 Which section of the article highlights the idea that laws about runaway slaves existed before the Fugitive Slave Acts were passed?

(A) Introduction [paragraphs 1-3]

(B) "Northerners are against slavery"

(C) "Edward Prigg wins Supreme Court case"

(D) "Much criticism for Fugitive Slave Act of 1850"

2 Select the paragraph from the section "Northerners are against slavery" that explains what the consequences were for someone who aided fugitive slaves.

3 Why does the author include the information about Edward Prigg?

(A) to describe a case that overruled the Fugitive Slave Act

(B) to describe a case that overruled Personal Liberty Laws

(C) to show how the Supreme Court supported Northern states

(D) to show how the Supreme Court supported refugee slaves

4 Which statement BEST explains how the section "Much criticism for Fugitive Slave Act of 1850" contributes to the development of the MAIN idea?

(A) It describes ways in which the second Fugitive Slave Act was resisted.

(B) It provides additional details about how the Underground Railroad operated.

(C) It compares features of the second Fugitive Slave Act to the first Fugitive Slave Act.

(D) It explains why the Fugitive Slave Acts were popular in the Southern states.