

# BEARCAT DAY 13

GRADE 8  
ANDERSON COUNTY SCHOOLS



ANDERSON COUNTY MIDDLE SCHOOL

## 8TH GRADE BEARCAT DAY 13

LANGUAGE ARTS	<b>Lincoln 1st Inaugural Speech Part II</b> Read the notes from yesterday about Lincoln's 1st inaugural speech. Answer the <a href="#">multiple choice questions</a> and the <a href="#">short answer question</a> .
MATH	<b>IDENTIFYING FUNCTIONS</b> Students will need to use the notes and examples on the note sheet to help them complete the <a href="#">practice problems on the homework sheet</a> . The homework sheet will need to be returned to the school and turned in for a grade.
SCIENCE	<b>Bearcat Day 13: Radioactive Dating/Radiometric Dating</b> Read the <a href="#">passage</a> "Radioactive Dating," use the information from the passage to complete the assignment in their science class' google classroom. If students are not able to access google classroom this worksheet is included in the packet picked up at school.
SOCIAL STUDIES	<b>DRED SCOTT DECISION</b> Read the notes about the <a href="#">Dred Scott Decision</a> . Answer the question on the last slide. Submit in Google Classroom or take a picture and email it to your teacher.
PE/HEALTH	<b>ILLEGAL DRUGS</b> Look over the <a href="#">printable notes</a> and answer the <a href="#">10 questions</a> based on the notes
CAREERS	<b>WHAT GOES ON A RESUME?: REFERENCES</b> Read the <a href="#">notes</a> about creating a resume and answer the <a href="#">questions</a> .

Day 13. 4/1/20 Day 13 MC Lincoln Part II

\* Required

1. Email address \*

Use the Lincoln notes from yesterday to answer the questions.

2. Please write your first and last name (capitalizing where appropriate). \*

3. 1. In the third paragraph of part II, which text structure is used to describe the progress of the Union? \*

Mark only one oval.

- Whole to part
- Part to whole
- Spatial
- Sequence

4. 2. There is implication that a government formed should be united and perpetual. PERPETUAL- what does the capitalized word mean? \*

Mark only one oval.

- Short-lived
- Energetic
- Everlasting
- Future generations

5. 3. In the final sentences of part II the word "forego" is used. What is the meaning of this term in the paragraph? \*

Mark only one oval.

- Put off
- Energetic
- Everlasting
- Bring about

6. 4. "...having lost the vital element of perpetuity"... what is Lincoln referring to in this quote? \*

Mark only one oval.

- Constitution
- Preamble
- Articles of Confederation
- Uncle Sam

# Day 13 4/1/20 Short Answer Extra Credit Optional Lincoln Part II

\* Required

1. Email address \*  
\_\_\_\_\_
2. Please write your first and last name. \*  
\_\_\_\_\_

3. PARAPHRASE PRACTICE Extra Credit Optional (This is NOT a RACE format question.) Remembering that paraphrase means to restate in your own words, paraphrase the first paragraph of Part II. \*  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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## Grade 8 Bearcat Day 13 Math

Unit: Functions  
Student Handout 1

Name \_\_\_\_\_ Answer Key

Date \_\_\_\_\_ Pd \_\_\_\_\_

p 1 of 2

### IDENTIFYING FUNCTIONS

#### FUNCTIONS

- A function is a rule that assigns each input exactly one output.
- Functions occur when every x-value is associated with exactly one y-value.

#### TABLES AND ORDERED PAIRS

- To test whether or not a table or set of ordered pairs represents a function, look to see if each input or x-value has exactly one output or y-value.

#### GRAPHS

- If a graph represents a function, it should be able to pass a vertical line test. This means that any vertical line drawn on the graph should intersect the graph at exactly one point.

Determine whether or not the following representations are functions. Explain your thinking.

1.

x	-2	-1	0	1	2
y	7	1	-1	1	7

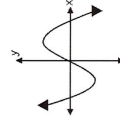
Yes; each input has exactly one output.

2.

$\{(-2, 1), (3, 1), (-4, -3), (-2, 8), (0, 5)\}$

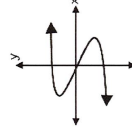
No; the input of -2 has two different outputs.

3.



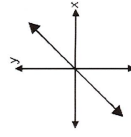
Yes;  
Passes vertical line test

4.



No;  
Does not pass vertical line test

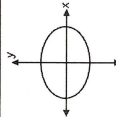
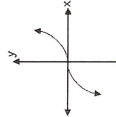
5.



Yes;  
Passes vertical line test

**IDENTIFYING FUNCTIONS**

Use your knowledge of functions to complete the table below. Identify whether or not each representation is a function, and be sure to justify your answer.

RELATIONSHIP	FUNCTION?	JUSTIFICATION										
<table border="1"> <tr><td>x</td><td>-3</td><td>-1</td><td>1</td><td>3</td></tr> <tr><td>y</td><td>10</td><td>2</td><td>2</td><td>10</td></tr> </table>	x	-3	-1	1	3	y	10	2	2	10		
x	-3	-1	1	3								
y	10	2	2	10								
$y = -3x^2 + 10$												
												
$\{(-3, 0), (13, 4), (6, 3), (13, -4), (22, 5)\}$												
$x^2 + y^2 = 100$												
												
<table border="1"> <tr><td>x</td><td>25</td><td>25</td><td>36</td><td>36</td></tr> <tr><td>y</td><td>5</td><td>-5</td><td>6</td><td>-6</td></tr> </table>	x	25	25	36	36	y	5	-5	6	-6		
x	25	25	36	36								
y	5	-5	6	-6								

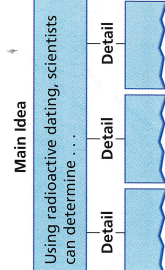
**Reading Preview**

- Key Concepts**
- What happens during radioactive decay?
  - What can be learned from radioactive dating?

- Key Terms**
- atom
  - element
  - radioactive decay
  - half-life

**Target Reading Skill**

**Identifying Main Ideas** As you read the Determining Absolute Ages section, write the main idea in a graphic organizer like the one below. Then write three supporting details that give examples of the main idea.



**Lab zone Discover Activity**

**How Long Till It's Gone?**

- Make a small cube—about 5 cm × 5 cm × 5 cm—from modeling clay.
- Carefully use a knife to cut the clay in half. Put one half of the clay aside.
- Cut the clay in half two more times. Each time you cut the clay, put one half of it aside.

**Think It Over**  
**Predicting** How big will the remaining piece of clay be if you repeat the process several more times?



In Australia, scientists have found sedimentary rocks that contain some of the world's oldest fossils. These are fossils of stromatolites (stroh MAT uh lyts). Stromatolites are the remains of reefs built by organisms similar to present-day bacteria. Sediment eventually covered these reefs. As the sediment changed to rock, so did the reefs. Using absolute dating, scientists have determined that some stromatolites are more than 3 billion years old. To understand absolute dating, you need to learn more about the chemistry of rocks.



**FIGURE 9**  
**Stromatolites**  
Scientists think that ancient stromatolites were formed by organisms similar to blue-green bacteria (above). Modern stromatolites (right) still form reefs along the western coast of Australia.

p2 of 5

### Radioactive Decay

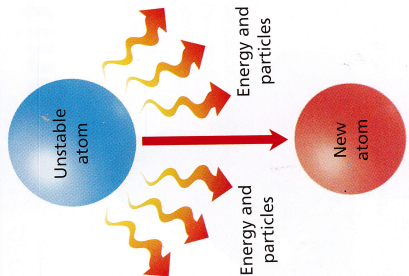
Rocks are a form of matter. All the matter you see, including rocks, is made of tiny particles called **atoms**. When all the atoms in a particular type of matter are the same, the matter is an **element**. Carbon, oxygen, iron, lead, and potassium are just some of the more than 110 currently known elements.

Most elements are stable. They do not change under normal conditions. But some elements exist in forms that are unstable. Over time, these elements **break down**, or **decay**, by releasing particles and energy in a process called **radioactive decay**. These unstable elements are said to be radioactive. **During radioactive decay, the atoms of one element break down to form atoms of another element.**

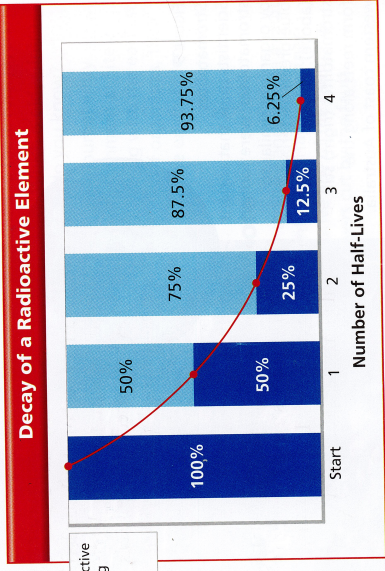
Radioactive elements occur naturally in igneous rocks. Scientists use the rate at which these elements decay to calculate the rock's age. You calculate your age based on a specific day—your birthday. What's the "birthday" of a rock? For an igneous rock, that "birthday" is when it first hardens to become rock. As a radioactive element within the igneous rock decays, it changes into another element. So the composition of the rock changes slowly over time. The amount of the radioactive element goes down. But the amount of the new element goes up.

The rate of decay of each radioactive element is constant—it never changes. This rate of decay is the element's half-life. The **half-life** of a radioactive element is the time it takes for half of the radioactive atoms to decay. You can see in Figure 11 how a radioactive element decays over time.

What is the meaning of the term "half-life"?



**FIGURE 10**  
**Radioactive Decay**  
In the process of radioactive decay, an atom releases energy and particles as it changes to a new kind of atom.



**FIGURE 11**  
The half-life of a radioactive element is the amount of time it takes for half of the radioactive atoms to decay.  
**Calculating** After three half-lives, how much of the radioactive element remains?

p3 of 5

### Elements Used in Radioactive Dating

Radioactive Element	Half-life (years)	Dating Range (years)
Carbon-14	5,730	500–50,000
Potassium-40	1.3 billion	50,000–4.6 billion
Rubidium-87	48.8 billion	10 million–4.6 billion
Thorium-232	14 billion	10 million–4.6 billion
Uranium-235	713 million	10 million–4.6 billion
Uranium-238	4.5 billion	10 million–4.6 billion

**FIGURE 12**  
The half-lives of different radioactive elements vary greatly.

### Determining Absolute Ages

**Geologists use radioactive dating to determine the absolute ages of rocks.** In radioactive dating, scientists first determine the amount of a radioactive element in a rock. Then they compare that amount with the amount of the stable element into which the radioactive element decays. Figure 12 lists several common radioactive elements and their half-lives.

**Potassium–Argon Dating** Scientists often date rocks using potassium-40. This form of potassium decays to stable argon-40 and has a half-life of 1.3 billion years. Potassium-40 is useful in dating the most ancient rocks because of its long half-life.

**Carbon-14 Dating** A radioactive form of carbon is carbon-14. All plants and animals contain carbon, including some carbon-14. As plants and animals grow, carbon atoms are added to their tissues. After an organism dies, no more carbon is added. But the carbon-14 in the organism's body decays. It changes to stable nitrogen-14. To determine the age of a sample, scientists measure the amount of carbon-14 that is left in the organism's remains. From this amount, they can determine its absolute age. Carbon-14 has been used to date fossils such as frozen mammoths, as well as pieces of wood and bone. Carbon-14 even has been used to date the skeletons of prehistoric humans.

Carbon-14 is very useful in dating materials from plants and animals that lived up to about 50,000 years ago. Carbon-14 has a half-life of only 5,730 years. For this reason, it can't be used to date very ancient fossils or rocks. The amount of carbon-14 left would be too small to measure accurately.

**Math Skills**

**Percentage** What percentage of a radioactive element will be left after 3 half-lives? First, multiply  $\frac{1}{2}$  three times to determine what fraction of the element will remain.

$$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{8}$$

You can convert this fraction to a percentage by setting up a proportion:

$$\frac{1}{8} = \frac{d\%}{100\%}$$

To find the value of  $d$ , begin by cross multiplying, as for any proportion:

$$1 \times 100 = 8 \times d$$

$$d = \frac{100}{8}$$

$$d = 12.5\%$$

**Practice Problems** What percentage of a radioactive element will remain after 5 half-lives?

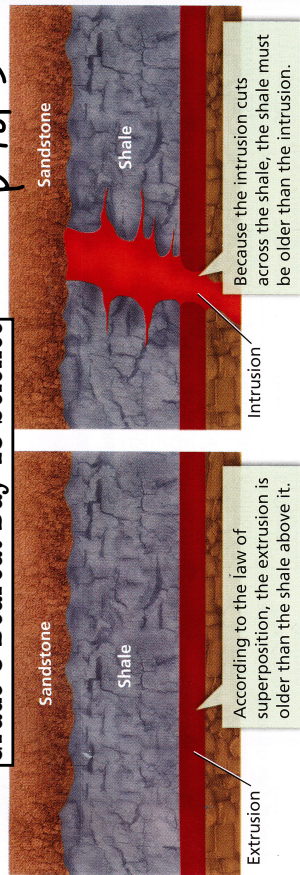


FIGURE 13

**Inferring the Age of Rocks**

A layer of shale forms above an extrusion (left). Later (right), an intrusion crosses the shale.

**Inferring** What can you infer about the age of the shale?

**Radioactive Dating of Rock Layers** Radioactive dating works well for igneous rocks, but not for sedimentary rocks. The rock particles in sedimentary rocks are from other rocks, all of different ages. Radioactive dating would provide the age of the particles. It would not provide the age of the sedimentary rock.

How, then, do scientists date sedimentary rock layers? They date the igneous intrusions and extrusions near the sedimentary rock layers. Look at Figure 13. As you can see, sedimentary rock (sandstone) above an igneous intrusion must be younger than that intrusion.



What are two types of radioactive dating?



For more on radioactive dating  
Visit: PHSchool.com  
Web Code: cfd-2043

Bearcat Day 13: Radioactive Dating/Radiometric Dating  
LESSON REVIEW:

1. Elements that are unstable will decay over time, what does that mean?

- A. Atoms release particles & energy to become a different element
- B. Atoms release particles only
- C. Atoms release energy only
- D. Atoms decay by decomposers breaking them down

2. The time it takes for half of a radioactive element's atoms to decay is a(n)

- A. Relative age
- B. Half-life
- C. Absolute age
- D. Decay process

3. When is a rock's birthday?

- A. When the rock breaks apart to form more rocks
- B. When a rock attains a certain size
- C. When a dog first pees on it
- D. When the rock first hardens


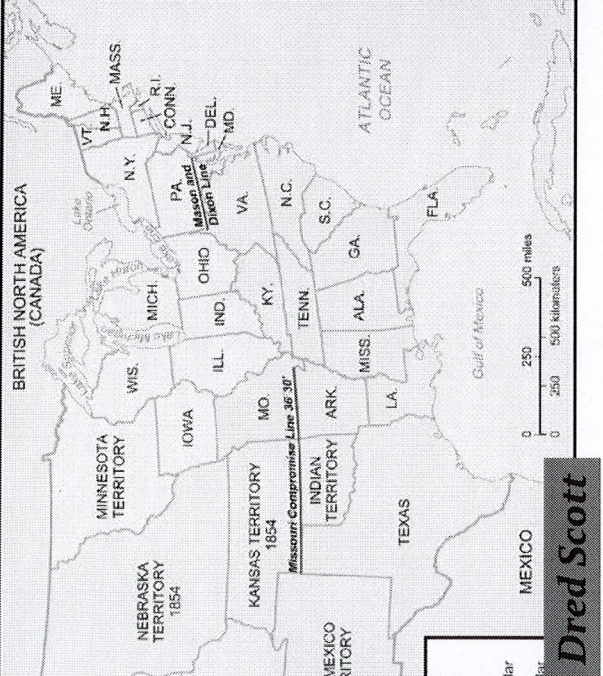
4. What is Carbon-14 used to find the age of?

- A. Animals only
- B. Plants & Animals
- C. Ancient rocks
- D. Young rocks

5. After two half-lives how much of the radioactive element remains? (Use Fig. 1.1)

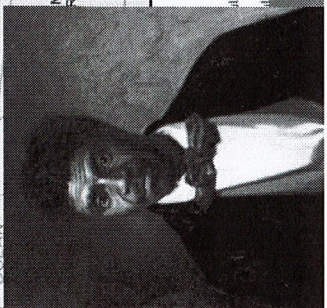
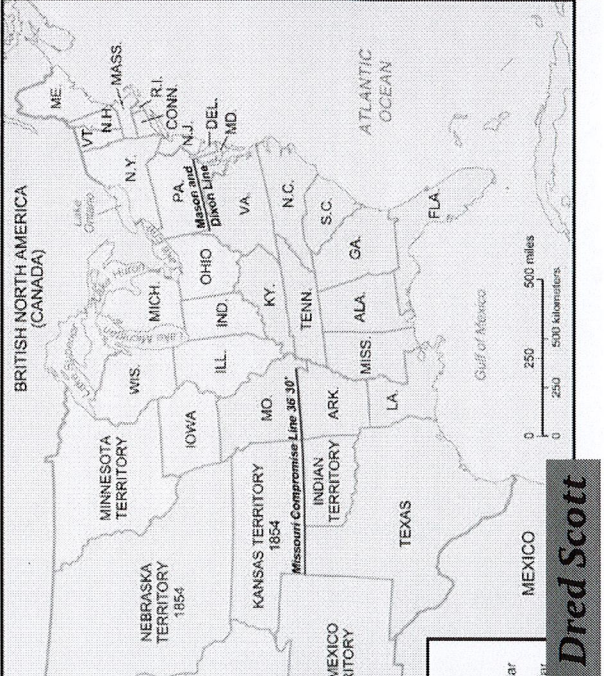
- A. 100%
- B. 50% or 1/2
- C. 25% or 1/4
- D. 12.5% or 1/8

**Dred Scott Decision - FACTS:**  
Dred Scott was a slave from Missouri. (MO)

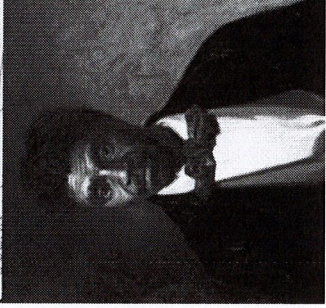
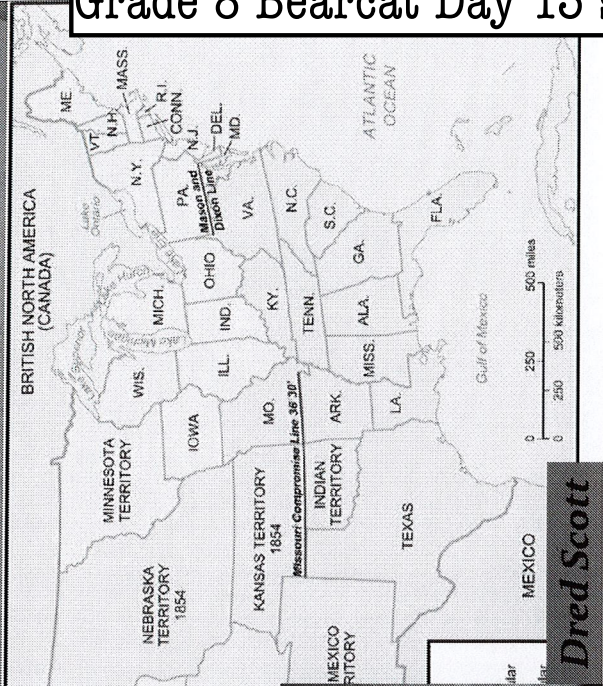
**Dred Scott**

**Dred Scott Decision - FACTS:**  
Scott's owner died after returning to Missouri.

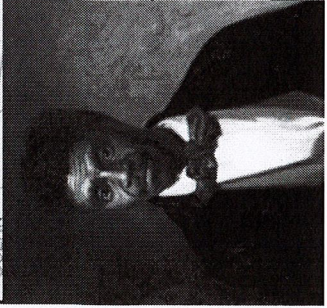
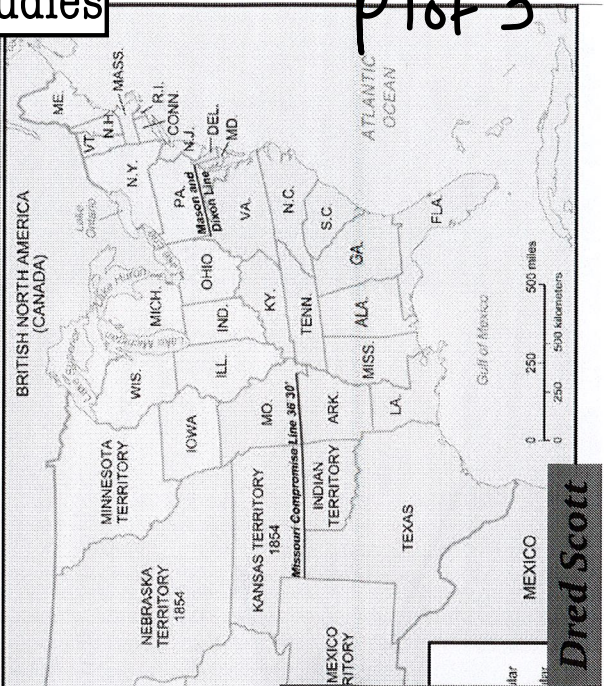
**Dred Scott**

**Dred Scott Decision - FACTS:**  
Scott and his owner moved to Wisconsin for four years.

**Dred Scott**

**Dred Scott Decision - FACTS:**  
Scott sued for his freedom. He claimed that he should be a free man since he lived in a free territory (WI) for four years.

**Dred Scott**

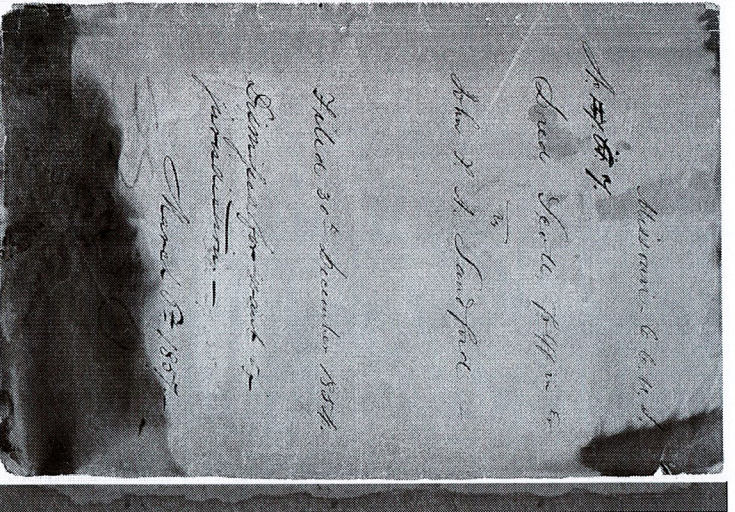
**SUPREME COURT**

**DECISIONS:**

**Q:** Was Scott a U.S. citizen with the right to sue?  
**A:**

**NO**  
**Q:** Did living in a free territory make Scott a free man?  
**A:**

**NO**  
**Q:** Did Congress have the right to outlaw slavery in any territory?  
**A:** NO



According to the Supreme Court...

It would give to persons of the negro race, ...the right to enter every other State whenever they pleased, ...to sojourn there as long as they pleased, to go where they pleased ...the full liberty of speech in public and in private upon all subjects upon which its own citizens might speak; to hold public meetings upon political affairs, and to keep and carry arms wherever they went.

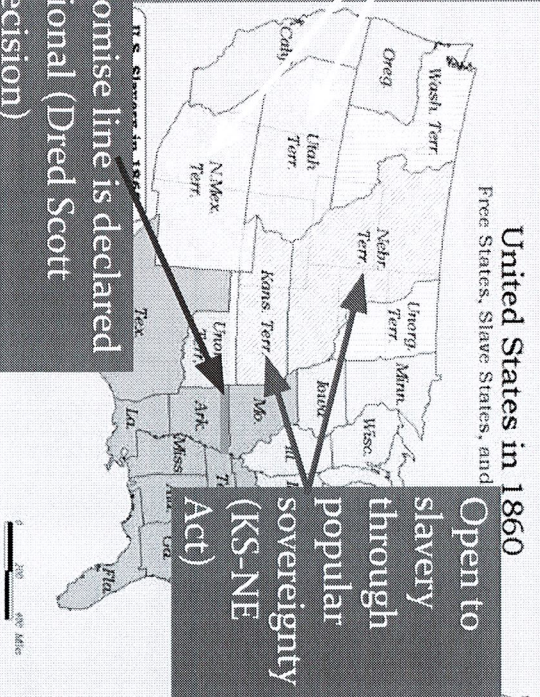
It is difficult at this day to realize the state of public opinion in regard to that unfortunate race which prevailed in the civilized and enlightened portions of the world at the time of the Declaration of Independence, and when the Constitution of the United States was framed and adopted; but the public history of every European nation displays it in a manner too plain to be mistaken. They had for more than a century before been regarded as beings of an inferior order, and altogether unfit to associate with the white race, either in social or political relations, and so far unfit that they had no rights which the white man was bound to respect; and that the negro might justly and lawfully be reduced to slavery for his benefit. He was bought and sold, and treated as an ordinary article of merchandise and traffic, whenever a profit could be made by it. This opinion was at that time fixed and universal in the civilized portion of the white race.

**RESULTS:**

Dred Scott was not given his freedom.  
 • The Missouri Compromise was found to be unconstitutional.

Open to slavery through popular sovereignty (Compromise of 1850)

Missouri Compromise line is declared unconstitutional (Dred Scott Decision)



**Slavery Legitimized**

- Missouri was a slave state
- Texas was a slave state
- Utah and New Mexico could potentially have slavery (Compromise of 1850)
- Kansas and Nebraska could potentially have slavery (Kansas-Nebraska Act)
- After the Dred Scott decision, slavery could now extend north of 36° 30' N
- Most importantly, it appeared that the Supreme Court and the federal government supported slavery!



## Bearcat Day 13 Answer in Complete Sentences

1. Explain the why Dred Scott thought he could become free.
2. Why did the Supreme Court decide that Congress could not make slavery illegal in any state?
3. What were the outcomes of the Dred Scott case?

Illegal Drugs

**Vocabulary:**

- Controlled Drug- possession, manufacture and sale is regulated by law
- Illegal Drug- possession, manufacture and sale is against the law
- Euphoria- a feeling of intense happiness and well-being
- Designer Drug- a drug that is a changed form of a controlled drug
- Roid Rage- an outburst of anger caused by using anabolic steroids

**Marijuana**

- A drug that affects mood and impairs short-term memory
- Illegal in some states, controlled in others
- Affects coordination
- Slows reaction time and affects visual perception
- High doses can cause hallucinations, paranoia, and panic attacks
- Long-term use can lead to bronchitis and lung cancer
- Can delay puberty in males and decrease sperm production

**Cocaine and Crack**

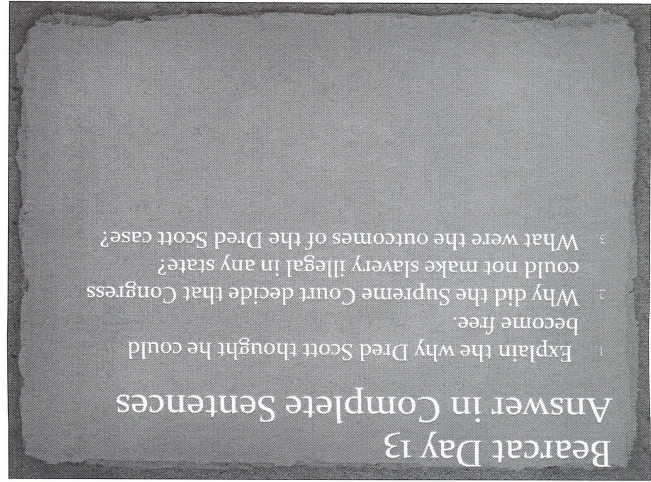
- Cocaine- stimulant made from leaves of the coca bush
- Crack- illegal drug that is a smokable form of cocaine
- Increases heart rate, blood pressure and respiration- stimulant
- User can slide into a depression or "crash"- at risk for suicide
- Long-term use can damage the liver
- Personality changes, confused, anxious, short-tempered, hallucinations, runny nose, sore throat
- Even a small amount of cocaine can cause sudden death

**Methamphetamine**

- Stimulant that can produce short-lived euphoria , followed by depression
- Street names: speed, ice, crystal meth, and crank
- Extreme alertness, chest pain, irregular heartbeat, stroke, bleeding in the brain, coma, death
- Personality changes, impulsive, nervous, irritable, restless and paranoid
- Permanent brain damage

**LSD**

- Illegal hallucinogen that can produce a trip and flashbacks



## Grade 8 Bearcat Day 13 Health

P 2 of 3

- Sensitive to light and sounds
- Short-term memory loss and mood swings
- Bad trip- anxious, fearful, depressed and paranoid
- Users cannot rely on senses to warn them of danger
- At risk for suicide

### Heroin

- Illegal narcotic made from morphine
- Reaches the brain rapidly- slows breathing and heart rate
- Chills, nausea, sweating, runny nose and coma
- Forgetful and fall in and out of sleep
- At risk of dying from overdose

### Inhalants

- A drug that is breathed in and produces immediate effects
- Can harm the heart, kidneys, blood and bone marrow
- Can cause leukemia and lead poisoning
- Headaches, hallucinations, shaky, double vision, dizzy and vomiting
- Huffing, sniffing and bagging

## Grade 8 Bearcat Day 13 Health

P 3 of 3

1. What is the difference between a controlled drug and an illegal drug? Please give two examples of each.
2. What are three negative effects of using marijuana?
3. Why might it be dangerous for a middle school boy to use marijuana?
4. Describe the difference between crack and cocaine.
5. What might even the smallest amount of cocaine do to a user?
6. List 3 street names for methamphetamine.
7. What do you think would be the most dangerous part of using a hallucinogen?
8. What type of drug user might turn to heroin? Why?
9. What are three parts of the body affected by inhalants?
10. Why might inhalants be popular among younger people?

# What goes on a resume?

## References

## Who can be a reference for you?

- You should use an ADULT.
  - Your bestie can not be used as a reference. Why? References should be professional in nature.
  - Make sure to get permission BEFORE you use someone on your resume.
    - They may not feel they know you well enough to answer questions about you.
- (\*The possible employer will be contacting them if you are considered for an interview and you want GOOD things said about you.)

## What goes at the bottom?

- All resumes end with your references.
- A reference is someone that can say something positive about you.
  - This SHOULD NOT be a family member (parent, grandparent, sibling, aunt/uncle, etc.) UNLESS you have worked for them. (Doing chores and babysitting your siblings isn't considered working for them.)
  - If your family has a business and you work there, it is ok to use them as a reference.

## Types of references

- References fall into two categories: work, or personal.
- Work reference is someone that knows your work ethic. (Do you do your work in a timely manner? Do you show up and give your best?)
  - Who would be a good reference for this?
    - Answer:** teachers, coaches, youth minister, someone you work for, etc.
- Personal reference is someone that knows you personally. (Are you a cooperative person, outgoing, patient, great attitude?)
  - Who would be a good reference for this? (remember, not your bestie)
    - Answer:** youth minister, coach, teacher, club sponsor, friends' parents, neighbor, etc.

### Writing your references on your resume

- You should include 3 people along with their name and contact info. Make sure to get their complete information. If you just put "neighbor" the hiring person won't know who to ask for if they call them.
- You will include the following information:
  - Name - complete name. (Ex. Jessica Bealsey)
  - Relationship - how you know them (Ex. teacher)
  - Address - complete address (Ex. 1 Mustang Trail, Lawrenceburg, KY 40342)
  - Contact info - phone and/or email address ( Ex. 502-839-9261 [jessica.beasley@anderson.kyschools.us](mailto:jessica.beasley@anderson.kyschools.us))

### Careers 13 Quiz

\* Required

1. First Name \*

---

2. Last Name \*

---

3. Class period \*

Mark only one oval.

- 1
- 2
- 4
- 5
- 6

4. 1. What goes last on your resume? \*

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### Quiz Time

Click the link below to take the quiz. Once finished, mark done in Google Classroom

[https://docs.google.com/forms/d/1umL7i3Q9TTLZPIX01Ob\\_NZUEoeL\\_UoPz4d68qdAqjKl](https://docs.google.com/forms/d/1umL7i3Q9TTLZPIX01Ob_NZUEoeL_UoPz4d68qdAqjKl)

**Grade 8 Bearcat Day 13 Careers**

P5 of 6  
1 point

5. 2. How many references should you have? \*

Mark only one oval.

- 2
- 3
- 1
- 4

6. 3. What is a work reference? Give an example of someone that you could use. \*

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7. 4. What is a personal reference? Give an example of someone that you could use. \*

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**Grade 8 Bearcat Day 13 Careers**

P6 of 6  
1 point

8. 5. What is the rule for using family as references? \*

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9. Bonus: What would be one tip you could tell someone about references? \*

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10. Use this space to write down the information for your references. \* 3 points

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