Plan For The Week Students Template

Plan for the week of: _April 13 - April 17_____

At the end of the week you will know, understand, and/or be able to do the following:
I can use mathematics and statistics to analyze data. I can use tables and graphs to display and analyze data. I can communicate findings clearly and persuasively. I can defend my explanation.
Why does this learning matter?
You will be able to use cross cutting concepts that span all subject areas and engage in science and engineering practices.
The plan for the week :
• Monday: Read the Data Nugget Research Background "Tail-of-two-scorpions", find the meaning of any words you do not understand, and underline the hypothesis. • Tuesday: Answer the questions on Check for Understanding. • Wednesday: Answer the scientific data page 3 • Thursday: Select the level that is most appropriate for your current skills and complete the graphing portion. You only need to do one of these graphs. Start with Level C and see if you can complete the graph. If that is beyond your current skills then look at Level B or Level A. The graphs are not labeled as A, B, or C but you can tell the difference by the following. Level A: Make observations of a completed graph Level B: Complete a graph that has the x and y axes labeled and intervals already selected Level C: Complete the graph on a blank graph • Friday: Answer the Interpret the Data questions. I included Sentence Starters: Claim, Evidence, Reasoning to help shape your response.
Who To Ask For Help and How To Reach Them
Ms. Davis, 6th & 7th Grade Science Teacher Email: wdavis@fernridge.k12.or.us Phone: (541) 972-3156

SENTENCE STARTERS:
CLAIM, EVIDENCE, REASONING

CLAIM

- Directly answer the question/ prompt.

Sentence Starters

- I observed _____ when _____.
- I compared _____ and _____.
- I noticed _____, when _____.
- The effect of _____ on _____ is _____

EVIDENCE

- The scientific data that supports the claim.
    - Data are observations or measurements OR results from an experiment.
    - Specific Examples
    - Use numbers and data table information

Sentence Starters

- In the data …
- The evidence I use to support _____ is _____.
- I believe _____ (statement) because _____ (justification).
- I know that _____ is _____ because _____ .
- Based on _____ , I think _____ .
- Based upon _____ , my hypothesis is _____ .

REASONING

- Explains why the evidence supports the claim, providing a logical connection between the evidence and claim.
    - Why is claim valid?
    - include general scientific principle
    - background/ prior knowledge

Sentence Starters

- Based on the evidence, we must conclude… because…..
- The most logical conclusion we can draw from this evidence is that…. because….
- These facts work together to build a case that… because…
- All of this proves that….. because…
- The reason I believe _____ is _____ .

Name_____

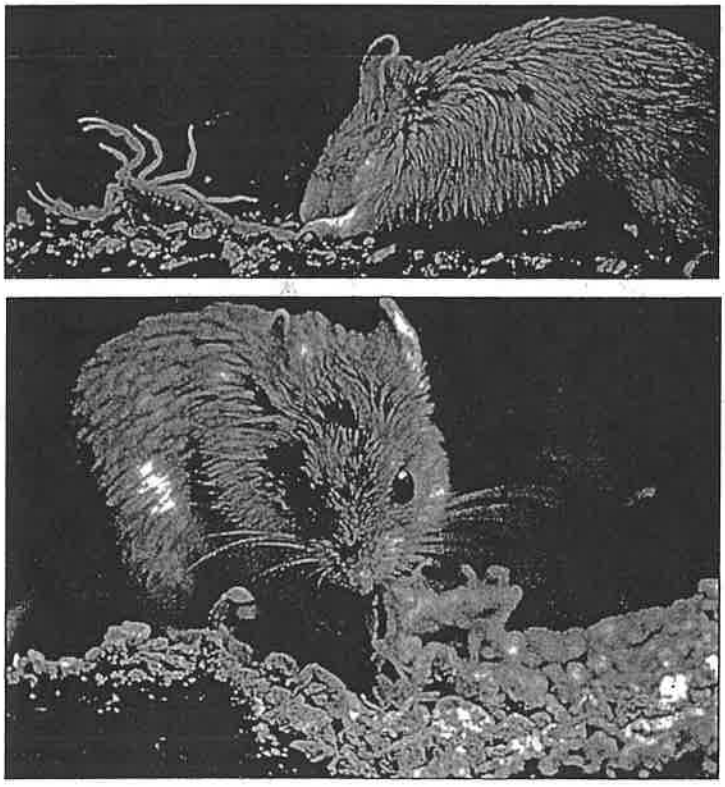
DATA Nugget

A tail of two scorpions

Featured scientists: Ashlee Rowe and Matt Rowe from University of Oklahoma

Animals have evolved many ways to defend themselves against predators. Many species use camouflage to avoid being seen. Others rely on speed to escape. Some species avoid capture by hiding in a safe place. Other animals use painful and venomous bites or stings to try to prevent attacks or to make being captured more difficult. Anyone who has been stung by a bee or wasp understands how stinging could be a great way to keep predators away! However, there is little research that documents if painful stings or bites deter predators.

The grasshopper mouse lives at the base of the Santa Rita Mountains in Arizona. Scientists Ashlee and Matt have been studying populations of this mouse for many years and wanted to know what the mouse ate. In the mountains, there are two scorpions that make a great food source for the mice. One of the scorpion species has a painful sting. The other species is slightly larger, but its sting is not painful. Ashlee and Matt thought that the use of a painful, venomous sting helped the smaller species avoid most predator attacks.



A southern grasshopper mouse (*Onychomys torridus*) capturing and eating the painful species of scorpion (*Centruroides sculpturatus*).

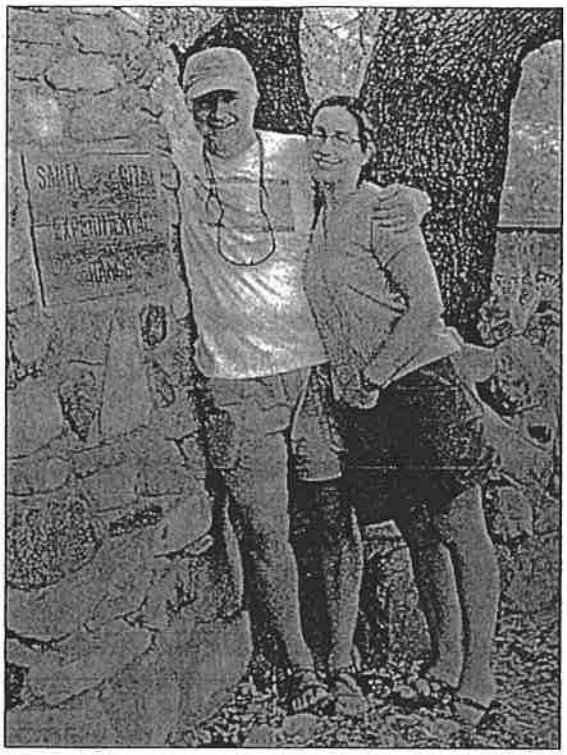
The scientists collected six grasshopper mice from the wild. Back in the lab, they trained the mice to expect a food reward when they tipped over a small cup containing live prey. Once trained, the mice were used in an experiment. The mice were presented with two cups to choose from. One contained the small scorpion species that has a painful sting. The other cup contained the larger scorpion species that has a painless

Name_____

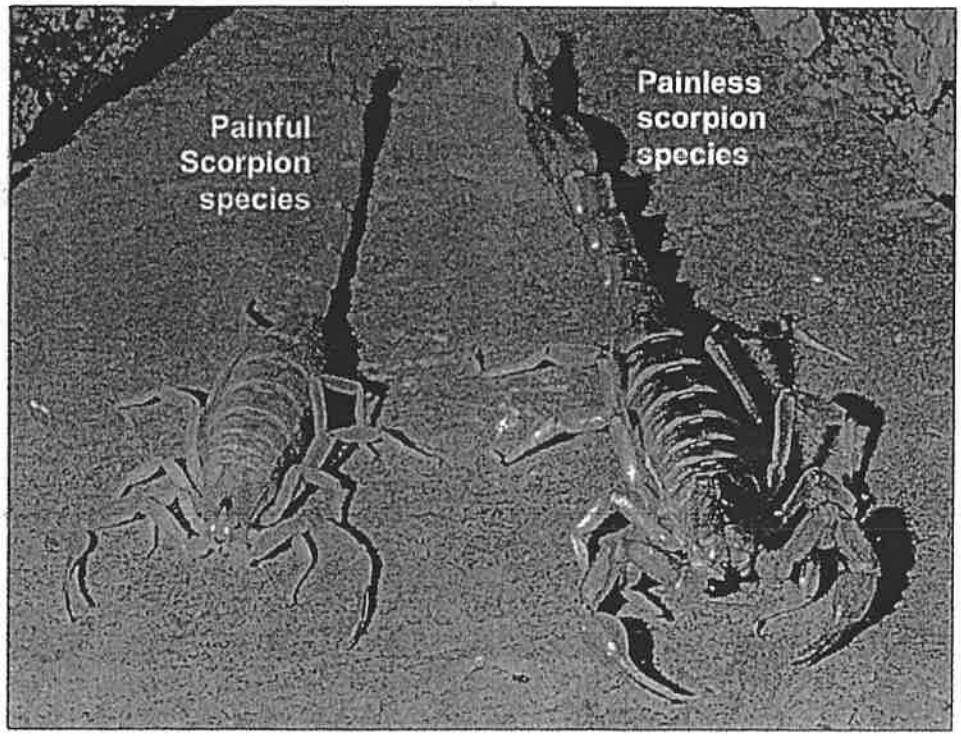
sting. Ashlee and Matt collected data on which cup the mice chose to approach, inspect, or pursue (by tipping over the cup). They also recorded if the mice attacked or consumed the painless or painful species of scorpion. Each trial ended when the mouse finished consuming one of the scorpions. If painful stings prevent a predator from attacking, they predicted the mice would choose to eat the scorpion species with the painless sting more often.

Scientific Question: Do painful scorpion stings affect the behavioral choices of the grasshopper mouse?

What is the hypothesis? Find the hypothesis in the Research Background and underline it. A hypothesis is a proposed explanation for an observation, which can then be tested with experimentation or other types of studies.



Matt and Ashlee Rowe in Arizona



The painful and painless species of scorpion used in the experiment. Note that the painless species tends to be slightly larger.

Level A

Name_____

Scientific Data:

Complete the tables and use the data below to answer the scientific question:

Number of times, out of 6 trials, each mouse chose to approach, inspect, pursue (by tipping the cup), attack, and consume the **PAINFUL** species of scorpion first.

Mouse	Approach	Inspect	Tip	Attack	Consume
1	5/6	5/6	2/6	0/6	0/6
2	5/6	5/6	1/6	0/6	0/6
3	2/6	2/6	0/6	0/6	0/6
4	4/6	4/6	1/6	0/6	0/6
5*	4/5	3/5	0/5	0/5	0/5
6	2/6	2/6	0/6	0/6	0/6
Sum					
Proportion					

Number of times, out of 6 trials, each mouse chose to approach, inspect, pursue (by tipping the cup), attack, and consume the **PAINLESS** species of scorpion first.

Mouse	Approach	Inspect	Tip	Attack	Consume
1		1/6	4/6	6/6	6/6
2		1/6	5/6	6/6	6/6
3		4/6	6/6	6/6	6/6
4		2/6	5/6	6/6	6/6
5*		2/5	5/5	5/5	5/5
6		4/6	6/6	6/6	6/6
Sum					
Proportion					

**One of the trials for mouse #5 was terminated early because it inadvertently tipped both cups simultaneously, while jumping, releasing the scorpions and thus preventing any meaningful "choice."*

What data will you graph to answer the question?

Independent variable(s): _____

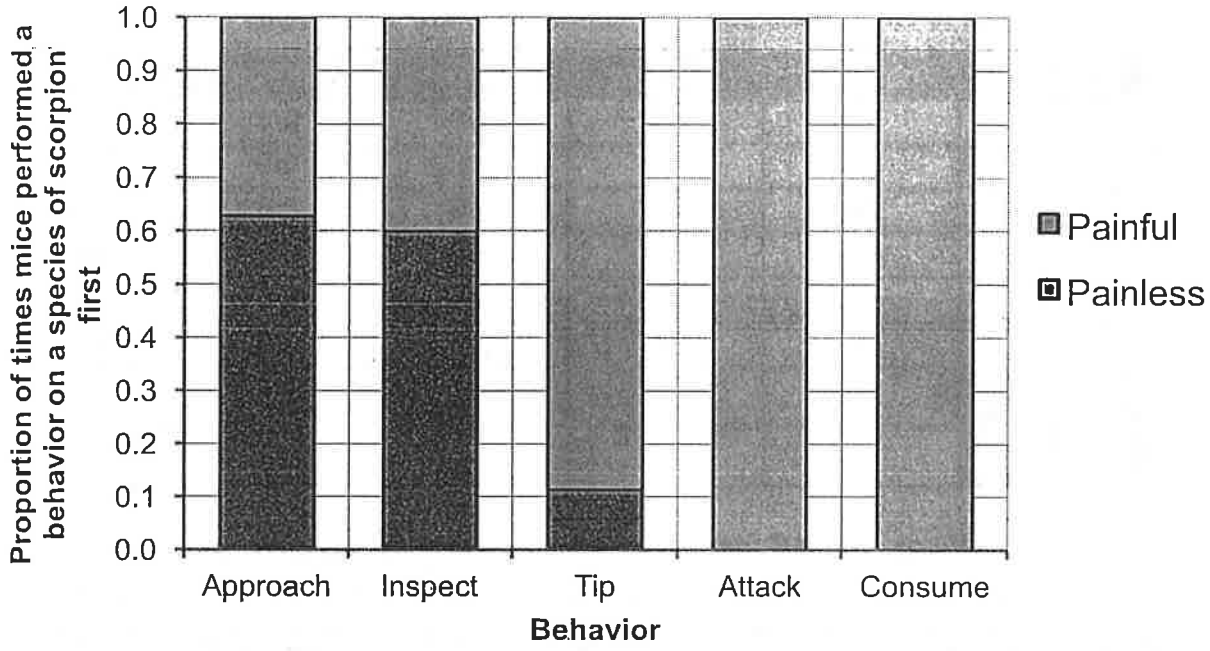
_____

Dependent variable(s): _____

_____

Name_____

Below is a graph of the data: Identify any changes, trends, or differences you see in the graph. Draw arrows pointing out what you see, and write one sentence describing what you see next to each arrow.



Interpret the data:

Make a claim that answers the scientific question.

What evidence was used to write your claim? Reference specific parts of the tables or graph.

Name_____

Explain your reasoning and why the evidence supports your claim. Connect the data back to what you learned about how prey use defenses to deter predators.

Did the data support Ashlee and Matt's hypothesis? Use evidence to explain why or why not. If you feel the data was inconclusive, explain why.

Your next steps as a scientist: Science is an ongoing process. What new question(s) should be investigated to build on Ashlee and Matt's research? What future data should be collected to answer your question(s)?

Level B

Name_____

Scientific Data:

Complete the tables and use the data below to answer the scientific question:

Number of times, out of 6 trials, each mouse chose to approach, inspect, pursue (by tipping the cup), attack, and consume the **PAINFUL** species of scorpion first.

Mouse	Approach	Inspect	Tip	Attack	Consume
1	5/6	5/6	2/6	0/6	0/6
2	5/6	5/6	1/6	0/6	0/6
3	2/6	2/6	0/6	0/6	0/6
4	4/6	4/6	1/6	0/6	0/6
5*	4/5	3/5	0/5	0/5	0/5
6	2/6	2/6	0/6	0/6	0/6
Sum					
Proportion					

Number of times, out of 6 trials, each mouse chose to approach, inspect, pursue (by tipping the cup), attack, and consume the **PAINLESS** species of scorpion first.

Mouse	Approach	Inspect	Tip	Attack	Consume
1		1/6	4/6	6/6	6/6
2		1/6	5/6	6/6	6/6
3		4/6	6/6	6/6	6/6
4		2/6	5/6	6/6	6/6
5*		2/5	5/5	5/5	5/5
6		4/6	6/6	6/6	6/6
Sum					
Proportion					

**One of the trials for mouse #5 was terminated early because it inadvertently tipped both cups simultaneously, while jumping, releasing the scorpions and thus preventing any meaningful "choice."*

What data will you graph to answer the question?

Independent variable(s): _____

_____

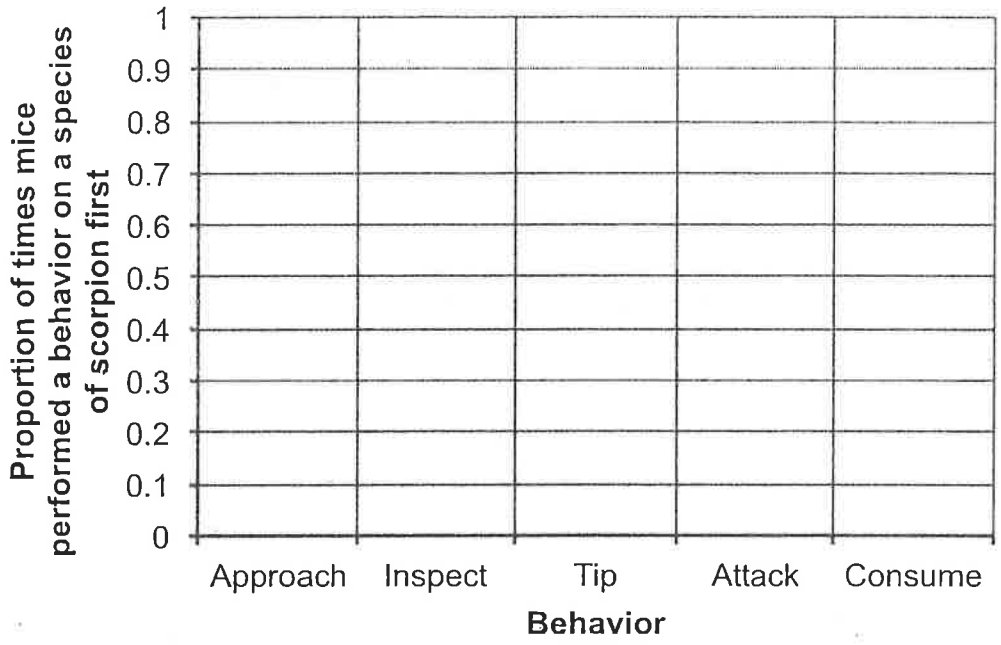
Dependent variable(s): _____

_____

Level B

Name_____

Draw your graph below: Identify any changes, trends, or differences you see in your graph. Draw arrows pointing out what you see, and write one sentence describing what you see next to each arrow.



Interpret the data:

Make a claim that answers the scientific question.

What evidence was used to write your claim? Reference specific parts of the tables or graph.

Level B

Name_____

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Your next steps as a scientist: Science is an ongoing process. What new question(s) should be investigated to build on Ashlee and Matt's research? What future data should be collected to answer your question(s)?

Level C

Name_____

Scientific Data:

Complete the tables and use the data below to answer the scientific question:

Number of times, out of 6 trials, each mouse chose to approach, inspect, pursue (by tipping the cup), attack, and consume the **PAINFUL** species of scorpion first.

Mouse	Approach	Inspect	Tip	Attack	Consume
1	5/6	5/6	2/6	0/6	0/6
2	5/6	5/6	1/6	0/6	0/6
3	2/6	2/6	0/6	0/6	0/6
4	4/6	4/6	1/6	0/6	0/6
5*	4/5	3/5	0/5	0/5	0/5
6	2/6	2/6	0/6	0/6	0/6
Sum					
Proportion					

Number of times, out of 6 trials, each mouse chose to approach, inspect, pursue (by tipping the cup), attack, and consume the **PAINLESS** species of scorpion first.

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1		1/6	4/6	6/6	6/6
2		1/6	5/6	6/6	6/6
3		4/6	6/6	6/6	6/6
4		2/6	5/6	6/6	6/6
5*		2/5	5/5	5/5	5/5
6		4/6	6/6	6/6	6/6
Sum					
Proportion					

**One of the trials for mouse #5 was terminated early because it inadvertently tipped both cups simultaneously, while jumping, releasing the scorpions and thus preventing any meaningful "choice."*

What data will you graph to answer the question?

Independent variable(s): _____

_____

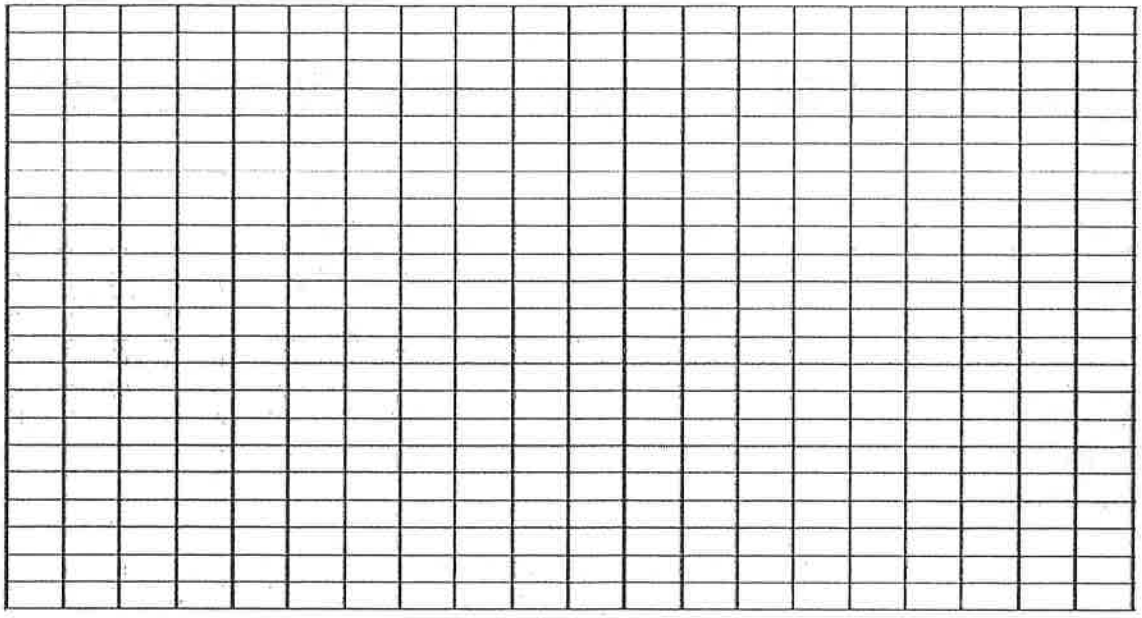
Dependent variable(s): _____

_____

Level C

Name_____

Draw your graph below: Identify any changes, trends, or differences you see in your graph. Draw arrows pointing out what you see, and write one sentence describing what you see next to each arrow.



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Level C

Name_____

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Plan For The Week Students Template

Plan for the week of: April 13th

At the end of the week you will know, understand, and/or be able to do the following:

Learn & interpret through oral history about specific experiences of their family members centered around an important historical event (i.e. 9/11, WWII, Pearl Harbor, the Kennedy Assassination, Y2K, the End of the Cold War, ect.).

Why does this learning matter?

You'll be learning about the personal experiences and thoughts of the someone in your family, while also learning history.

The plan for the week :

- **Monday**: Decide which family member to interview in person or via video or phone chat. Use the "**Ten Questions**" page to develop the ***first*** ten questions that you ask the interviewee.
- **Tuesday**: **Interview** the family member in person, or via video or the phone, asking the first ten questions you created on the "Ten Questions" page. Be sure to write down notes on the answers given for each question. You don't have to stop at ten questions... there is space on the page(s) for more information. You don't have to write using complete sentences... these are just notes.
- **Wednesday & Thursday**: Using the questions and answers from the interview, write up a full one page summary of the interview. You can hand write the page, or you can choose to type it out. You do have to use complete sentences for this. You do not have to stop at one page, you can make it two pages if you prefer.
- **Friday**: Using the historical information gained in the interview, draw a picture related to the historical event. You can use stick figures and very basic shapes if you want, or you can be as detailed as Michaeangelo. You will not be graded on your art for the pic, just how it addresses the content of your interview and write-up. Consider this a cover page for your report on the interview.

If you want to go ***above and beyond*** you can do some research on the topic you discuss in the interview, either while you are creating your questions, or after the interview, comparing what you find to the answers that were given.

If you struggle with writing the notes on what their answers are, simply write down keywords for what they answered... remember, the answers you write down do not need to be in complete sentences.

Who To Ask For Help and How To Reach Them

Mr. Wondra, 7th Grade Social Studies Teacher

Email: pwondra@fernridge.k12.or.us
Phone: 541-887-0154

Student name: _____ Date:_____

INTERVIEW – TEN QUESTIONS WORKSHEET

Instructions: Create ten questions you will ask the person you will interview about a specific, crucial event in world history (like 9/11, WWII, Pearl Harbor, the Kennedy Assassination, Y2K, the End of the Cold War, ect.). Answers do not need to be in complete sentences.

Sample Questions:
- How old where you when the event occurred?
- Where were you living when the event occurred?
- How did you find out about the event?
- What did you think about what was going on?
- How did the event affect you and your family?
- Ect.

NOTE: There is space provided at the end of this worksheet for further notes after the tenth question is asked. Use that space to write down any further information you gain after the last question... (a.k.a. the last question doesn't have to be the end of the conversation).

Question #1: _____

_____

Answer: _____

_____

_____

Question #2: _____

_____

Answer: _____

_____

Question #3: _____

Answer: _____

Question #4: _____

Answer: _____

Question #5: _____

Answer: _____

Question #6: _____

Answer: _____

Question #7: _____

Answer: _____

_____

_____

Question #8: _____

_____

Answer: _____

_____

_____

Question #9: _____

_____

Answer: _____

_____

_____

Question #10: _____

_____

Answer: _____

_____

_____

Further Discussion Notes (Anything else you discuss related to this topic, including, but not limited to, further questions and answers)

_____

_____