Scope Phenomenon

Name: _____ Date: _____

Fish Fossil

1. What does the fossil in the video reveal about the environment that it came from?

_____

_____

2. Imagine that the fossil in the video had been found at the top of a mountain. Explain how that could have happened.

_____

_____

3. Why do you think that it is important for scientists to study fossils?

_____

_____

Explore

Name: _____ Date: _____

Nature of Science

Draw a picture of a fossil imprint preserved in **sand**.

Draw a picture of a fossil imprint preserved in **gravel**.

Answer the following questions:

Which type of soil best preserved the detail of the fossil?

_____

_____

Why do you think that type of soil worked best?

_____

_____

_____

What does this tell you about the challenges paleontologists face when searching for fossils?

_____

_____

_____

Explore

Name: _____ Date: _____

Fossil Dig

The Problem
You are part of an archaeological team that has excavated fossils that were buried 100 meters underneath the surface of the earth. Your team also collected and recorded the fossils they found at shallower levels as they were digging. Your team began to notice that the fossils from different depths looked different from each other. Your team is trying to figure out why the fossils found at 70 meters were completely different from the ones they found at 100 meters.

The Challenge
Look at the pictures of the fossils found at each depth. Use the key to determine the organism from which the fossil formed and the type of environment it lived in. Use this knowledge to create a poster that explains the changes in the environment in which the fossils were found.

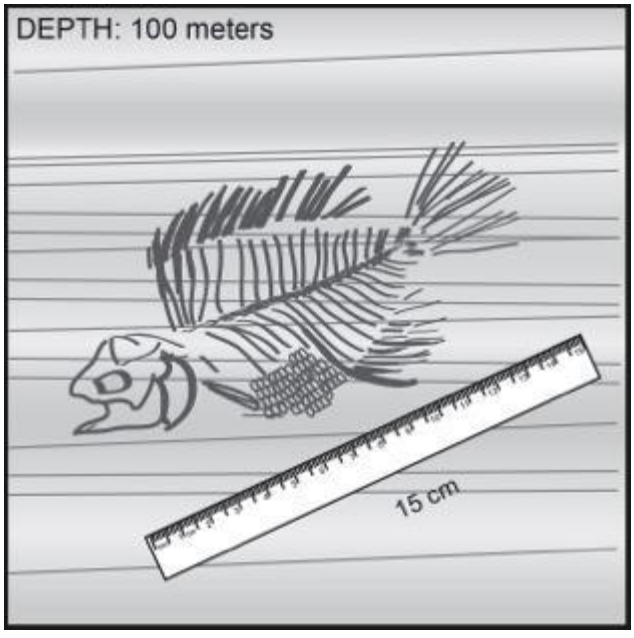
Criteria and Constraints
- All members of the group must participate in the creation and presentation of the poster.
- Poster should show how the fossils would be layered underground.
- Include 2-3 sentences describing the environment and the fossils for each layer.
- Include pictures of what the living organisms would have looked like. (Optional)

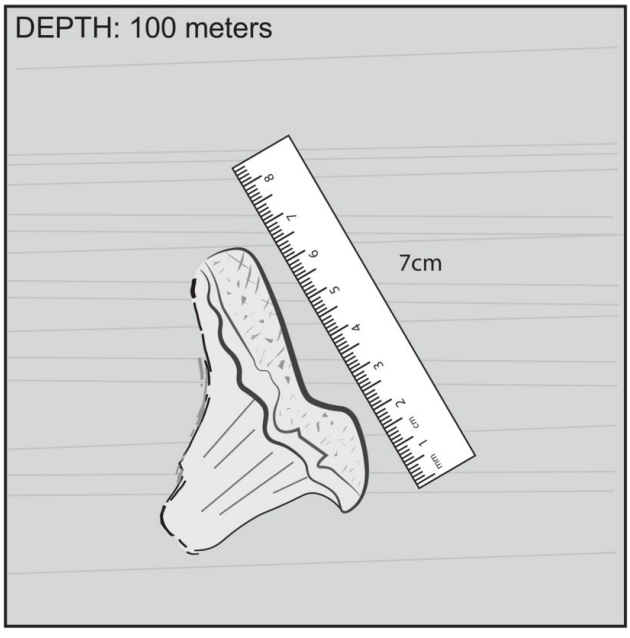
Use the box below to brainstorm your ideas before making your poster.

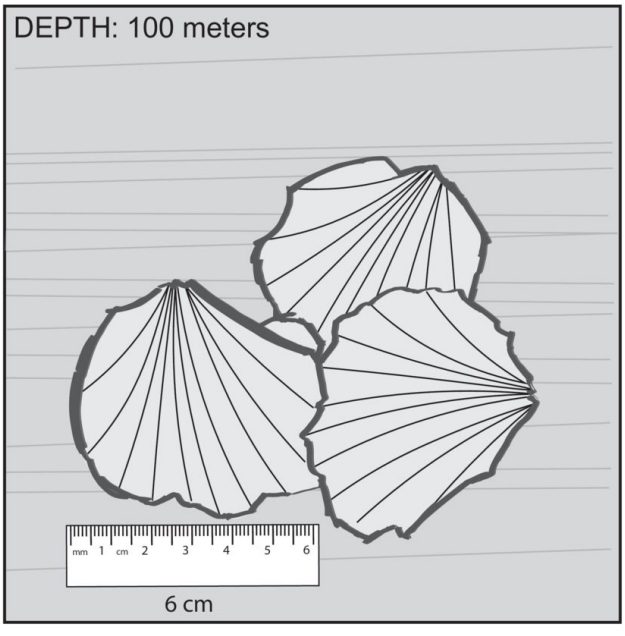
Explore

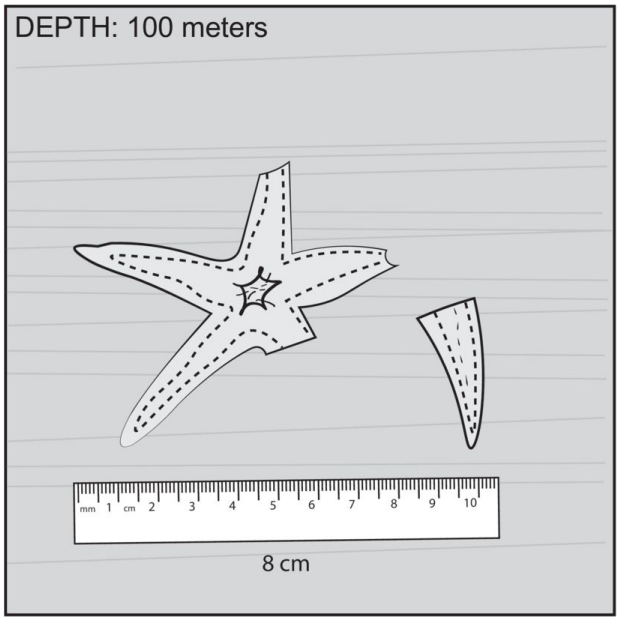
Fossil Cards

Ocean
100 Meters





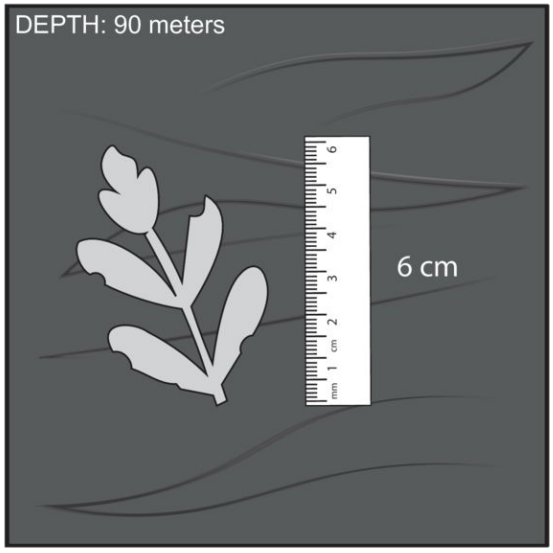


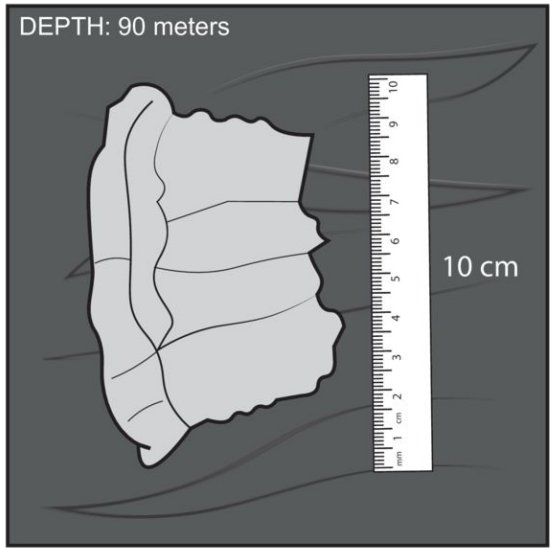


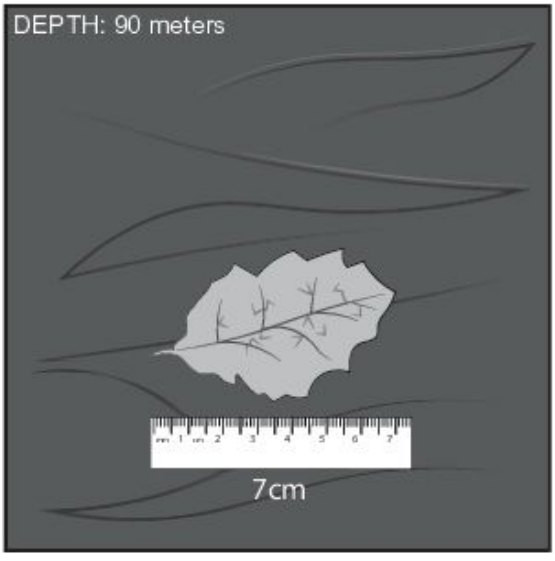
Explore

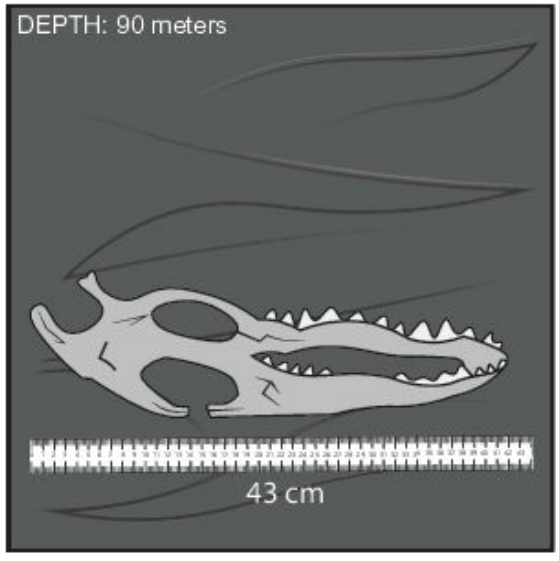
Fossil Cards

Swamp
90 Meters





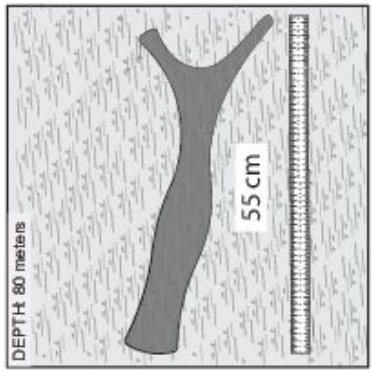




Explore

Fossil Cards

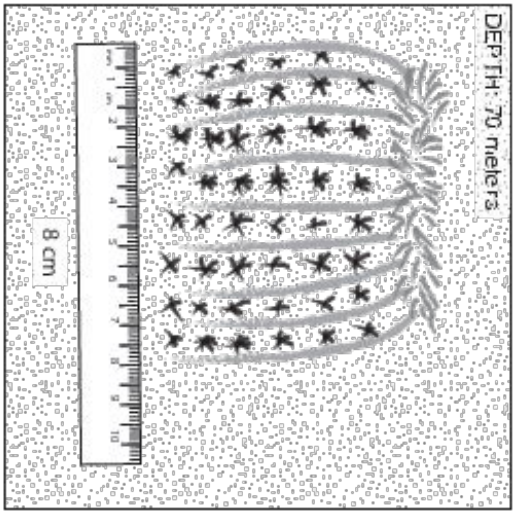
Land
80 Meters

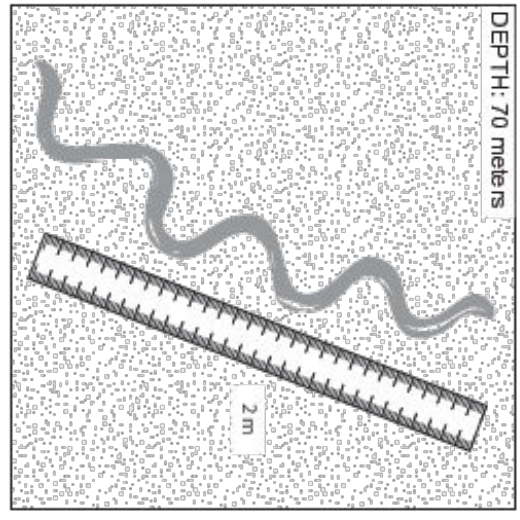


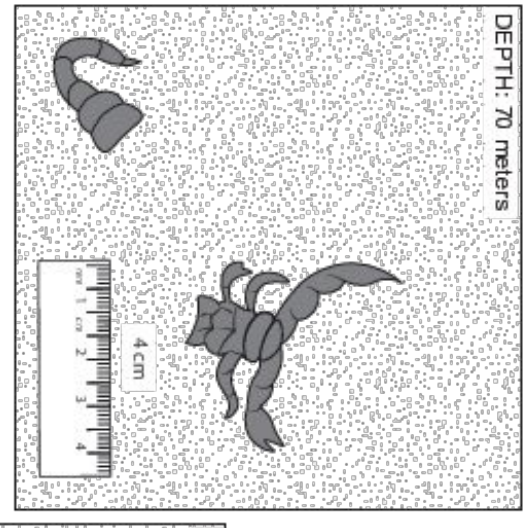
Explore

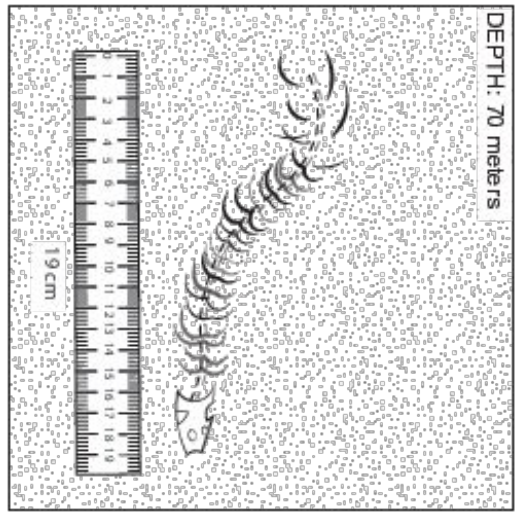
Fossil Cards

Desert
70 Meters









Explore

Name: _____ Date: _____

Fossil Dig
Claim-Evidence-Reasoning

Prompt

Write a scientific explanation comparing the fossils found at 90 meters and 70 meters. Make a claim, and state your evidence and reasoning.

Claim:

_____
_____

Evidence:

_____
_____
_____

Reasoning:

_____
_____
_____
_____
_____

Explore

Fossil Dig

Rubric for writing a Scientific Explanation

	2	1	0
Claim	Answers the question, cites the manipulated variables, and is accurate based on data.	Answers the question and could be inaccurate based on data.	No claim or does not answer the question.
Evidence	Cites accurate data from pictures.	Cites inaccurate data from the pictures.	Does not cite data from the pictures.
Reasoning	Cites the scientifically-accurate reason using correct vocabulary and connects this to the claim. Were able to accurately show they understood cause/effect stimulus response.	Cites a reason but it is inaccurate or does not support the claim. Reasoning does not use scientific terminology or uses it inaccurately.	No reasoning or restates the claim but offers no reasoning.

Explore

Fossil Dig

Rubric for writing a Scientific Explanation

	2	1	0
Content	Includes adequate detail. Science concepts are fully addressed. All constraints are met.	Includes some detail. Science concepts are partially addressed. Only some constraints are met.	Includes little to no detail. Science concepts are not addressed. Constraints are not met.
Organization	Project is well-organized. Science vocabulary is used correctly.	Project is somewhat organized. Some science vocabulary is used correctly.	Project is unorganized. No science vocabulary is used, or vocabulary is used incorrectly.
Presentation	Final product has a neat and detailed appearance. Student can easily discuss project findings	Product is clearly presented and the student can talk about project findings.	Product is not neatly presented and the student requires prompting to discuss findings.
Share and Critique	Student responded to two questions	Student responded to one question.	Student did not respond.

Fossil 1

Linking Literacy

Fossil 2

Linking Literacy

Fossil 3

Linking Literacy

Name: _____ Date: _____

Fossils: Main Ideas and Details

While you read: Look for details in the text that give more information about the three main ideas listed below. Write four details for every main idea.

<table>
<tr><td colspan="4">Text Topic:</td></tr>
<tr><td rowspan="2">Page</td><td>Main Idea:

We can determine the age of fossils.</td><td>Detail 1</td><td>Detail 2</td></tr>
<tr><td>Illustration:</td><td>Detail 3</td><td>Detail 4</td></tr>
</table>

Linking Literacy

Page	Main Idea: Fossils tell us what past environments were like.	Detail 1	Detail 2
	Illustration:	Detail 3	Detail 4
Page	Main Idea: We can represent fossils and past environments.	Detail 1	Detail 2
	Illustration:	Detail 3	Detail 4

Linking Literacy

Name: _____ Date: _____

Life of a Fossil Comic Strip

While you read: Create a comic strip using the boxes below. Each box should show one step in the process of the environment changing. Drawings should also show how these changes affect the types of fossils that will be formed in that rock layer.
