AmplifyScience

Needs of Plants and Animals:

Milkweed and Monarchs

Investigation Notebook

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Developed by the Learning Design Group at the University of California, Berkeley's Lawrence Hall of Science.

Amplify Science Elementary is based on the *Seeds of Science/Roots of Reading*® approach, which is a collaboration between a science team led by Jacqueline Barber and a literacy team led by P. David Pearson.

www.scienceandliteracy.org

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Safety Guidelines for Science Investigations

1. **Follow instructions.** Listen carefully to your teacher's instructions. Ask questions if you do not know what to do.
2. **Do not taste things.** No tasting anything or putting it near your mouth unless your teacher says it is safe to do so.
3. **Smell substances like a chemist.** When you smell a substance, do not put your nose near it. Instead, gently move the air from above the substance to your nose. This is how chemists smell substances.
4. **Protect your eyes.** Wear safety goggles if something wet could splash into your eyes, if powder or dust might get in your eyes, or if something sharp could fly into your eyes.
5. **Protect your hands.** Wear gloves if you are working with materials or chemicals that could irritate your skin.
6. **Keep your hands away from your face.** Do not touch your face, mouth, ears, eyes, or nose while working with chemicals, plants, or animals.
7. **Tell your teacher if you have allergies.** This will keep you safe and comfortable during science class.
8. **Be calm and careful.** Move carefully and slowly around the classroom. Save your outdoor behavior for recess.

Safety Guidelines for Science Investigations (continued)

9. **Report all spills, accidents, and injuries to your teacher.** Tell your teacher if something spills, if there is an accident, or if someone gets injured.

10. **Avoid anything that could cause a burn.** Allow your teacher to work with hot water or hot equipment.

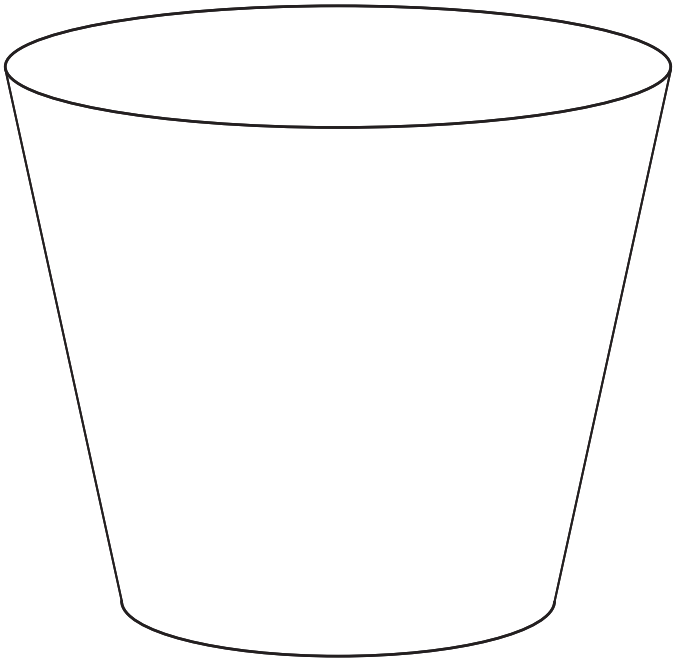
11. **Wash your hands after class.** Make sure to wash your hands thoroughly with soap and water after handling plants, animals, or science materials.

Name: _____ Date: _____

Garlic with Water

Directions:

1. Observe the garlic in water.
2. In the cup, draw what you observe.
3. On the lines below, write what you observe.



This garlic clove is in a cup **with** water.

_____

_____

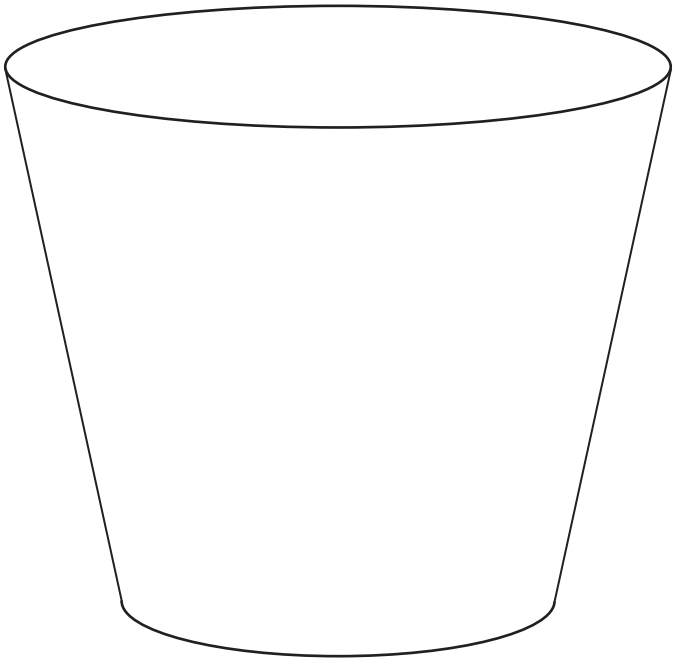
_____

Name: _____ Date: _____

Garlic with No Water

Directions:

1. Observe the garlic in no water.
2. In the cup, draw what you observe.
3. On the lines below, write what you observe.



This garlic clove is in a cup **with no** water.

_____

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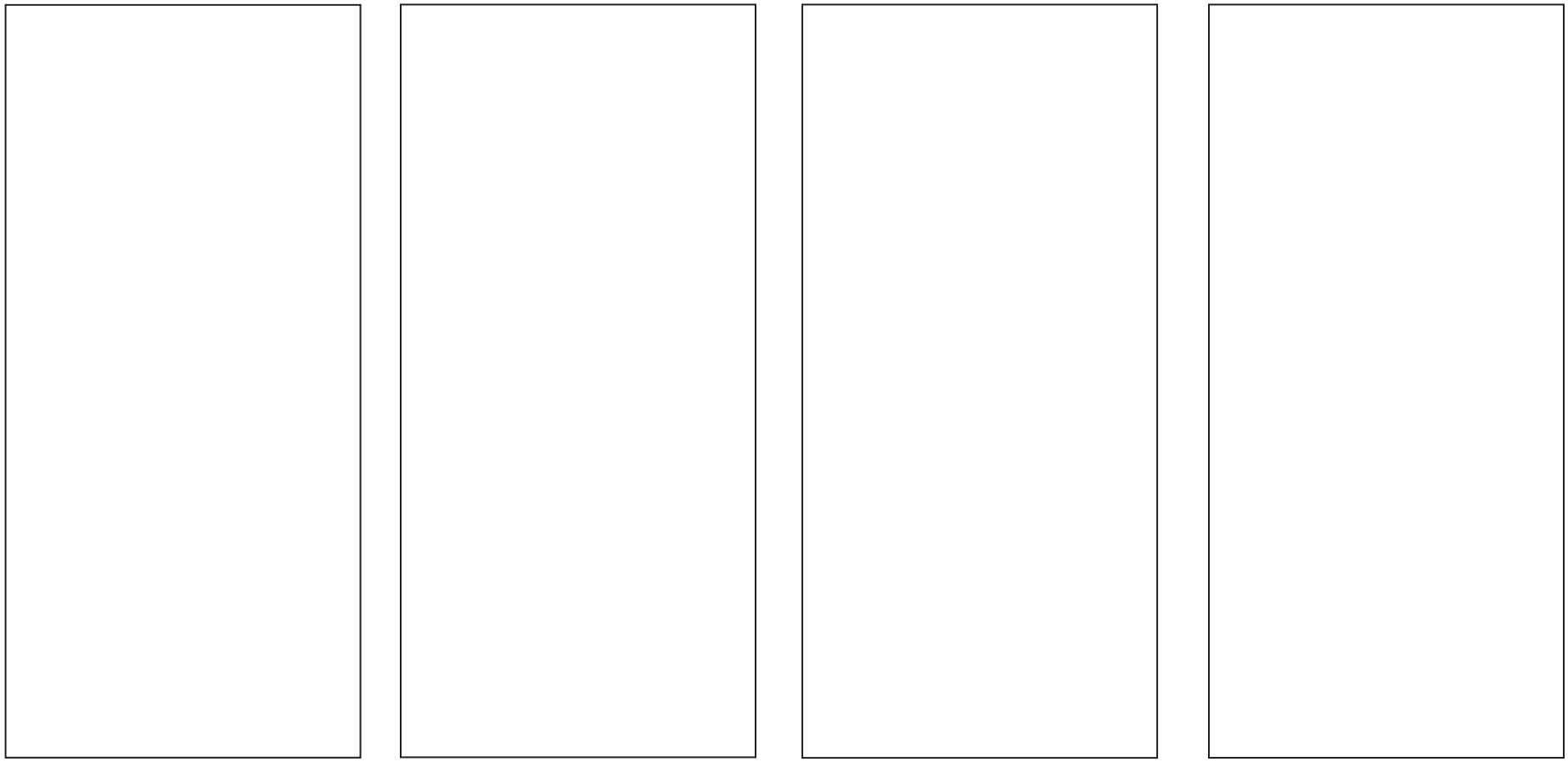
_____

Name: _____ Date: _____

Plant Growth Sequencing Mat

Directions:

Put the pictures of plants in growing order.



Name: _____ Date: _____

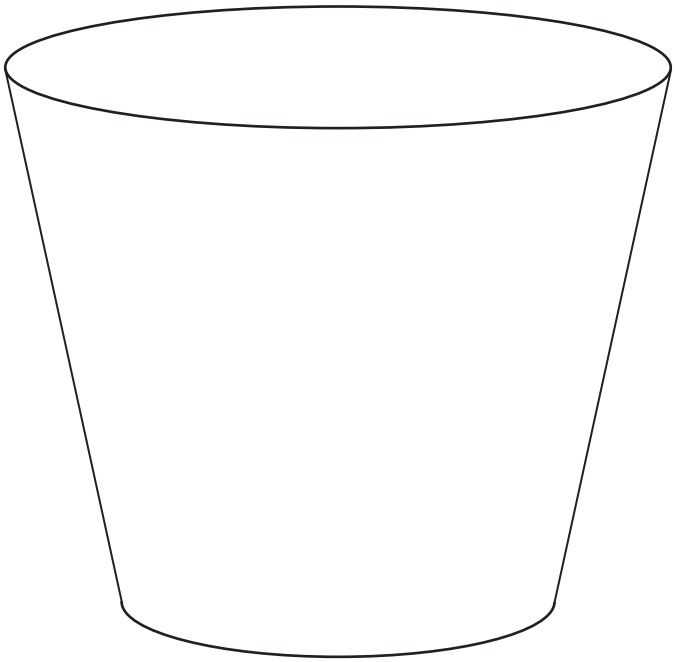
You can use this page to write notes or make drawings.

Name: _____ Date: _____

Garlic with Water

Directions:

1. Observe the garlic in water.
2. In the cup, draw what you observe.
3. On the lines below, write what you observe.



This garlic clove is in a cup **with** water.

_____

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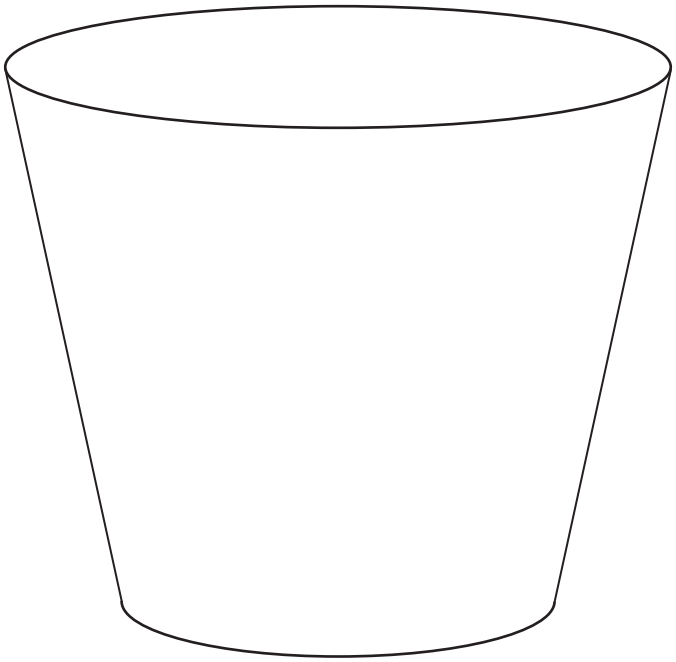
_____

Name: _____ Date: _____

Garlic with No Water

Directions:

1. Observe the garlic in no water.
2. In the cup, draw what you observe.
3. On the lines below, write what you observe.



This garlic clove is in a cup **with no** water.

_____

_____

_____

Name: _____ Date: _____

Garlic with Water

Directions:

1. Observe the garlic in water.
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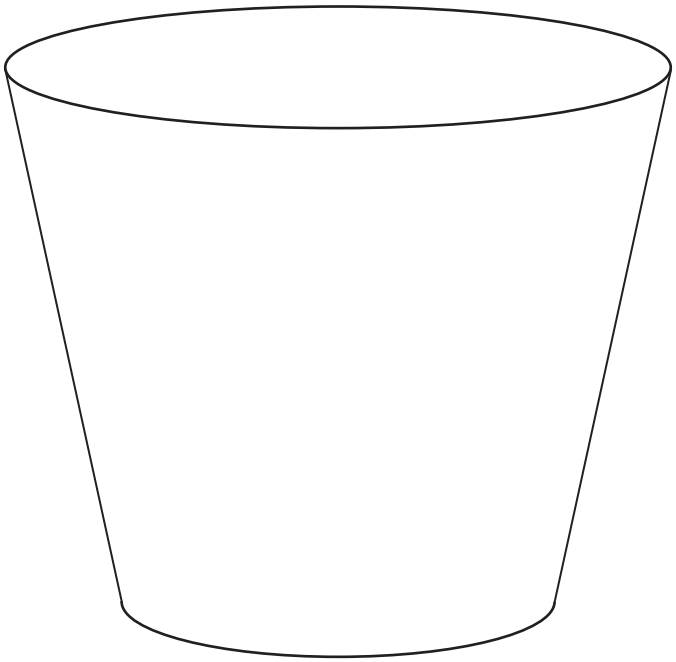


This garlic clove is in a cup **with** water.

_____

_____

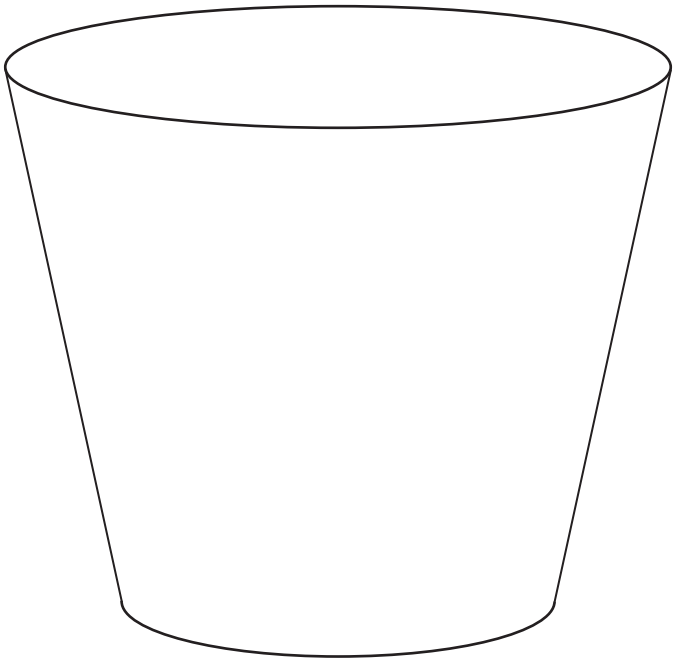
_____

Name: _____ Date: _____

Garlic with No Water

Directions:

1. Observe the garlic in no water.
2. In the cup, draw what you observe.
3. On the lines below, write what you observe.



This garlic clove is in a cup **with no** water.

_____

_____

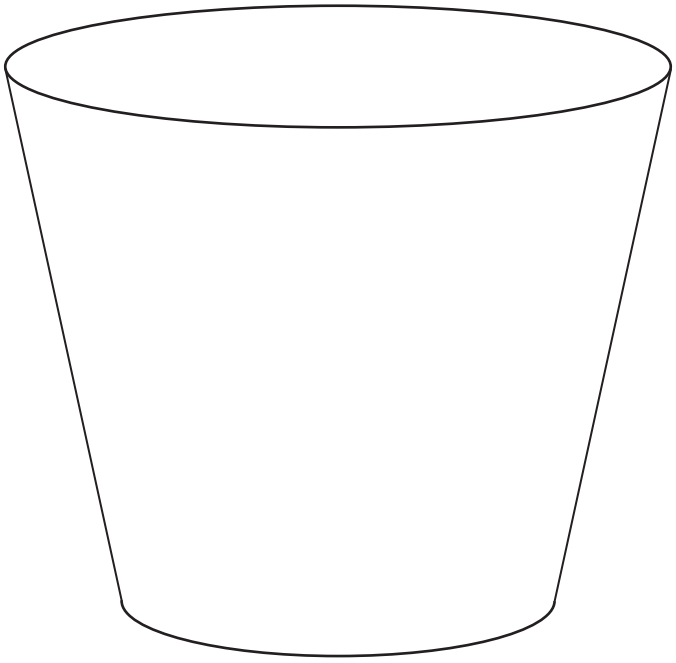
_____

Name: _____ Date: _____

Radish Seeds in Soil with Water

Directions:

1. Observe the radish seeds in the soil with water.
2. In the cup below, draw what you observe.
3. On the lines below, write what you observe.



Radish seeds in soil **with** water.

_____

_____

_____

Name: _____ Date: _____

Ms. Ray's Milkweed Plants

Directions:

Which plants were watered? Place a sticky note on each pot that got water.

circle pot

star pot

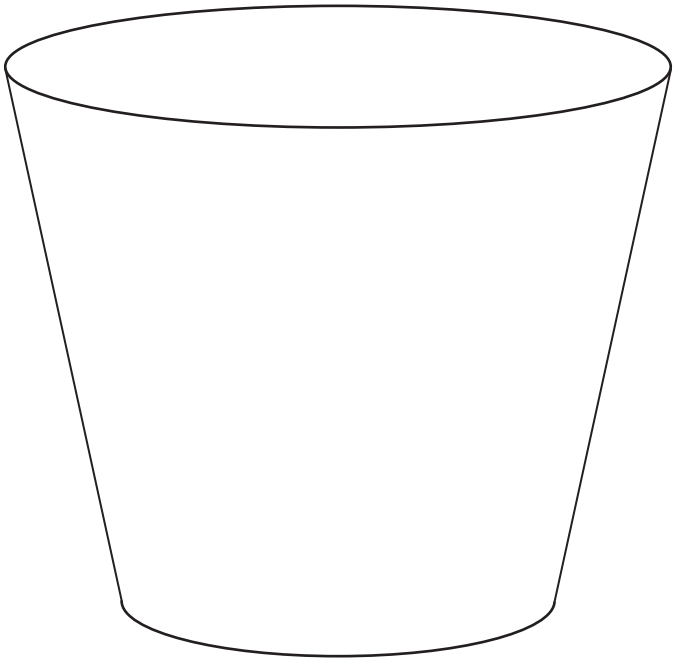
triangle pot

Name: _____ Date: _____

Sunflower with Light

Directions:

1. Observe the sunflower plant that got light.
2. In the cup, draw what you observe.
3. On the lines below, write what you observe.



These sunflower plants **got** light.

_____

_____

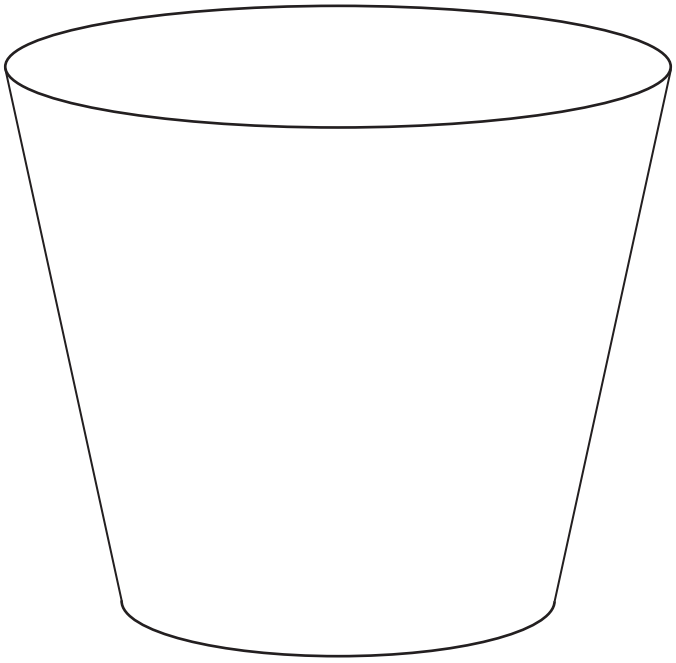
_____

Name: _____ Date: _____

Sunflower with No Light

Directions:

1. Observe the sunflower plant that got no light.
2. In the cup, draw what you observe.
3. On the lines below, write what you observe.



These sunflower plants **got no** light.

_____

_____

_____

Name: _____ Date: _____

Why Do the Milkweed Plants that Get Water Grow Differently?

Directions:

The plants in both pots got water. Why do the plants grow differently?

Talk with a partner to answer the question.

circle pot

star pot

Glossary

compare: to notice how two or more things are alike or different
comparar: notar en qué son iguales o diferentes dos o más cosas

grow: to get bigger or get new parts
crecer: hacerse más grande o hacer partes nuevas

habitat: the place where an animal or plant lives and grows
hábitat: el lugar donde vive y crece un animal o una planta

investigate: to try to learn more about something
investigar: tratar de aprender más sobre algo

leaves: the flat, green plant parts that catch light
hojas: las partes planas y verdes de una planta que atrapan la luz

observe: to use any of the five senses (sight, hearing, smell, taste, touch) to learn more about something
observar: usar cualquiera de los cinco sentidos (vista, oído, olfato, gusto, tacto) para aprender más sobre algo

record: to draw or write down information
apuntar: dibujar o escribir información

Glossary (continued)

roots: the underground plant parts that take in water
raíces: las partes subterráneas de una planta que absorben agua

scientist: someone who learns about the natural world
científico: alguien que aprende acerca del mundo natural

seed: a young plant that has not started to grow
semilla: una planta joven que no ha empezado a crecer

stem: the plant part that holds up the plant
tallo: la parte de una planta que la mantiene firme

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Your Investigation Notebook

Scientists use notebooks to keep track of their investigations. They record things they learn from other scientists. Sometimes they draw or make diagrams. They record ideas and information they want to remember.

Your Investigation Notebook is a place for you to keep track of:

- investigations you do in class.
- what you learn from reading science books.
- your questions, predictions, and observations.
- your explanations and the evidence you find to support those explanations.
- your ideas!

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UNIVERSITY OF CALIFORNIA, BERKELEY

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