Hello students,

We hope that everyone is well and that you are getting some quality time with your family. We want to provide you with some Science work that will keep your brain in shape and ready for when we come back to school. We do not want this work to be a stress or cause you more worry, do not panic if you do not know the answer to certain questions. If you come to something that you do not know, do what we always tell you to do in class, skip it and come back to it. If you still cannot figure it out, we will be posting answers on Friday for that week's questions. These questions come straight from the leap practice that is put out by the state department. These questions are not easy, make sure you read directions carefully. Go over the answers on Friday and check your work. We will pick up packets when we come back to school.

This packet includes a calendar that tells you what problems to do each week. Do these questions in whatever way and whatever times work best for you.

In addition to the work packet, we would like to encourage you to use these online resources. (All sign ins should be in your planner):

www.discoveryeducation.com

www.mobymax.com

www.lomeagles.org – to check your teacher's webpage for information and updates.

We appreciate your patience as we move forward. Our students have always learned best when parents and teachers are on the same team and we appreciate your efforts in education from home. This is uncharted territory for all of us but we want you to know we are going to do our best to stay connected with you each step of the way. If you have any questions, please reach out to your child's science teacher. Monday – Friday we will be available to respond to your emails from 2pm – 4pm.

Sincerely,

5th Grade Science Teachers

March 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
8	9	10	11	12	13	14
15	16	17 St. Patrick's Day	18	19	20	21
22 This week complete #1-10 in leap practice packet	23	24	25	26	27 Answers will be posted on teacher's website for this weeks questions	28
29 #11-20 this week	30	31				

April 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3 Teacher will post answers for the week on website	4
#21-31 this week	6	7	8	9	10 Answers will be posted on ~~T~~teacher's website	11
12 Easter	13	14	15	16	17	18
19	20	21	22 Earth Day	23	24	25
26	27	28	29	30		

print-a-calendar.com

1. Rafflesia plants depend on *Tetrastigma* vines, insects, and small rain forest mammals so that they can grow and reproduce.

   Write the answer choice that **best** describes how each plant or animal helps rafflesia in the correct box. Not all answer choices will be used.

   Answer Choices:

   Eat fruit and spread seeds

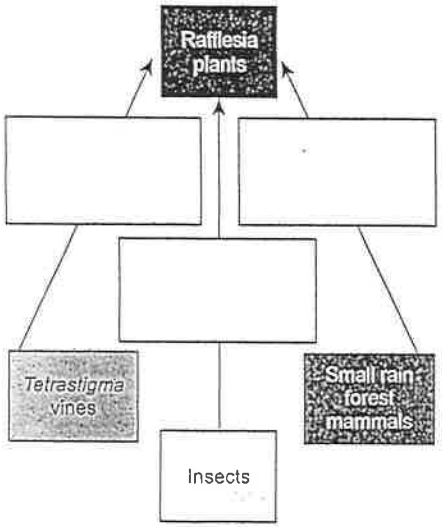
   Provide materials for growth

   Visit flowers and spread pollen

   Protect against cold temperatures

   Provide food from other parts of the rain forest

Rafflesia Ecosystem Model



2. Some scientists want to know more about how rafflesia plants affect *Tetrastigma* vines. Which question should the scientists test?

   A. How does the habitat of the rafflesia plant affect the rate of *Tetrastigma* growth?

   B. How does the size of the rafflesia plant affect the amount of air available for *Tetrastigma* growth?

   C. How does the color of the rafflesia plant affect the amount of soil the *Tetrastigma* can use for its growth?

   D. How does the presence of the rafflesia plant affect the amount of water the *Tetrastigma* can use for its growth?

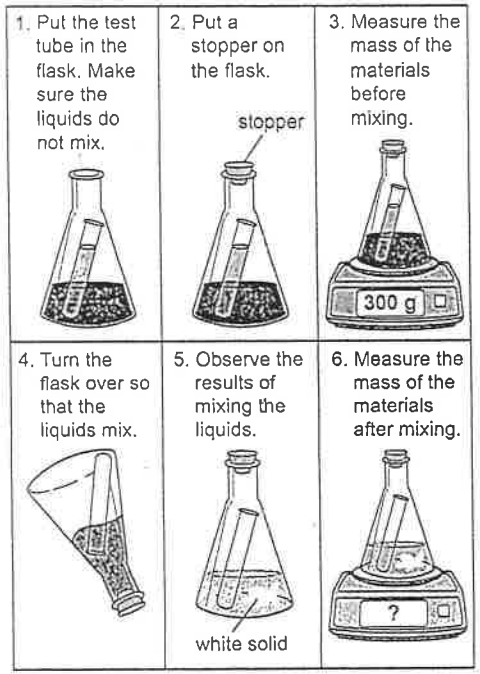
3. Matter transfers through a rafflesia food web. This food web helps other organisms obtain the nutrients they need in order to grow.

   Circle the correct bolded answer in **each** bracket to complete the sentence about where these nutrients come from.

   The nutrients in a rafflesia food web that small rain forest mammals need in order to grow come from **[Tetrastigma vines; rafflesia plants; the environment]** because this part of the food web provides **[shelter for the animals; matter to rafflesia plants; nutrients for pollinators]**.

The scientist then completes the steps in the experiment shown in Figure 2.

Figure 2. Steps in the Experiment



The students recorded data from the experiment in Table 1.

Table 1. Properties of Solutions

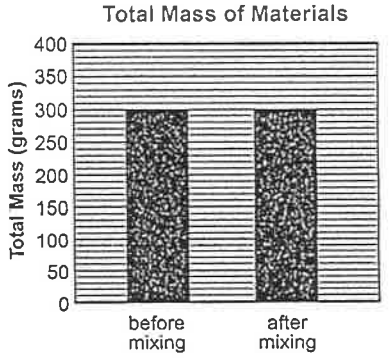
Property	Before Mixing		After Mixing
	Solution A	Solution B	
volume	5 mL	30 mL	35 mL
color	clear	blue	pale blue
temperature	23°C	23°C	23°C
solid present	no	no	yes

GO ON ▶

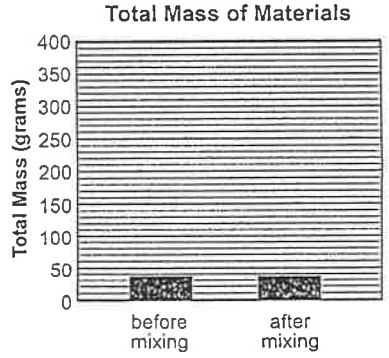
Session 1

5. Predict the mass of the materials after the liquids are mixed. Which bar graph shows the mass of the materials before mixing and the predicted mass of the materials after mixing?

A.



B.



GO ON ▶

8. Use the information in Figure 2 to answer the question.

Explain why the scientist put a stopper on the flask and measured the total mass of the materials before and after mixing the solutions.

Session 1

Use the information about controlling runoff and your knowledge of science to answer the questions.

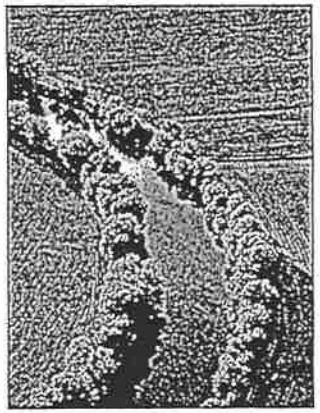
Controlling Runoff

Trees and grasses play an important part in filtering rainwater. They help by:

- slowing water down as it runs across the land so that the water can soak into the ground
- filtering out particles of mud before the water reaches rivers or groundwater
- filtering out chemicals and harmful bacteria

Trees and grasses are often removed to build a farm. This makes room to plant crops and graze animals. Sometimes, the trees and grasses are all removed except for a thin line on the banks of nearby streams and rivers, as shown in Picture 1.

Picture 1. Trees Bordering a River on a Farm



Source: David Zimmerman/Getty Images, Inc.

9. A farmer removes all the trees and native grasses from her land so that she can plant crops. A few years later, there is a serious drought, and the farmer observes a lot of dust in the air during the summer.

Identify the two systems that interact to cause each event.

Place a check mark in each correct box. Check only one box per row.

	Atmosphere and Geosphere	Biosphere and Geosphere	Hydrosphere and Biosphere
A drought causes the farmer's crops to die.			
Roots from crops stop holding down the soil.			
Wind blows away the loose soil.			

10. A farmer is evaluating four methods of preventing farm runoff from reaching the nearby streams and rivers.

Which method would be **best** for the farmer to use?

A. Build concrete canals on the farm to help water drain into a nearby lake.

B. Graze animals and plant crops on the sides of hills so that runoff flows more quickly.

C. Develop wide ditches filled with plants to give the runoff more time to soak into the ground.

D. Remove trees and grasses from the sides of the rivers and replace them with barriers made of rocks.

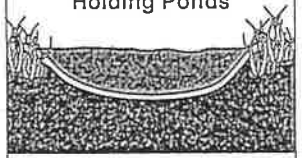
Session 1

11. A city neighborhood has many apartment buildings and very little open land. The neighborhood is evaluating four methods to protect local water resources.

Which methods would **best** help people in a city neighborhood filter runoff before it enters local streams?

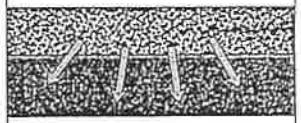
Circle the **two** correct answers.

Holding Ponds



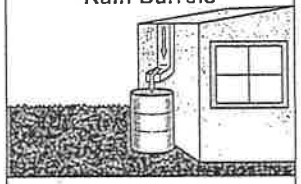
Rainwater flows into large concrete ponds and slowly evaporates.

Porous Pavement



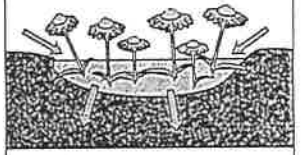
Rainwater drains through the pavement of streets and parking lots and soaks into the soil.

Rain Barrels



Rainwater drains off rooftops and is stored in barrels.

Rain Gardens



Rainwater is trapped by garden plants and slowly soaks into the soil.

14. Use the information and your knowledge of science to answer the questions.

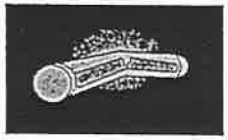
Daniel was playing with a glow stick and noticed that something inside the glow stick seemed to break when he bent it. He researched how a glow stick works and found this information.

How a Glow Stick Works

A plastic case contains Chemical X and a glass capsule that has Chemical W in it.

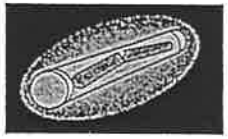
1. A person bends the glow stick.

2. The glass capsule breaks.



3. Chemical X and Chemical W mix together.

4. The glow stick produces light.



Part A

What causes the glow stick to produce light?

A. A new material is formed when the glass mixes with Chemical W.

B. A new material is formed when the glow stick's temperature changes.

C. A new material is formed when Chemical X and Chemical W are shaken.

D. A new material is formed when Chemical X mixes with Chemical W.

Part B

Which evidence **best** supports the answer to Part A?

A. The glow stick is brighter in cold temperatures.

B. The glass capsule is broken and cannot be fixed.

C. The glow stick produces light after the two chemicals are mixed.

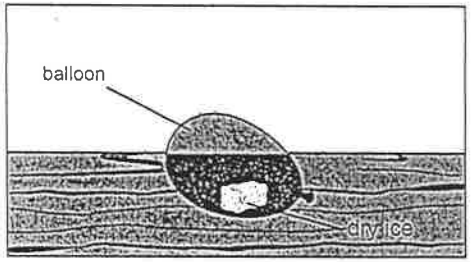
D. The two chemicals are separated inside a solid container.

22. **Use the information and your knowledge of science to answer the questions.**

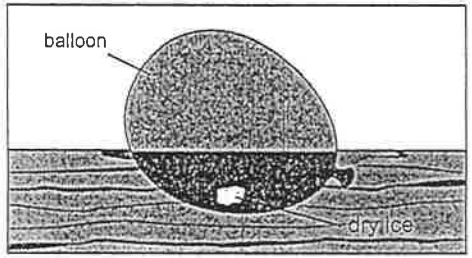
Dry ice goes from a solid directly to a gas when it gets warmer.

Students placed a small piece of dry ice inside a balloon, added air to the balloon, and sealed it. The figure shows the balloon and the dry ice at the beginning and end of the experiment.

Beginning of Experiment



End of Experiment



Session 2

Part A

Which statement **best** describes the balloon and the dry ice at the end of the experiment?

A. The total mass decreased, and the total volume increased.
B. The total mass increased, and the total volume decreased.
C. The total mass remained the same, and the total volume increased.
D. The total mass decreased, and the total volume remained the same.

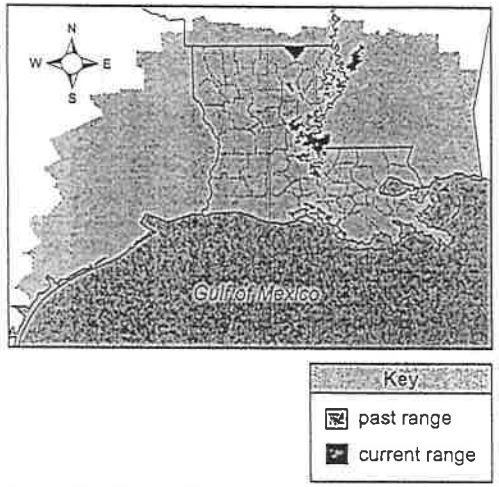
Part B

Which statement **best** explains the answer to Part A?

A. The dry ice inside the balloon got smaller over time.
B. The balloon expanded as it took in air from the room.
C. The balloon and the dry ice got warmer as they changed size.
D. The dry ice became a gas that was trapped inside the balloon.

Map 1 shows the past range of the black bears as well as their current range.

Map 1. Past and Current Louisiana Black Bear Ranges



Source: U.S. Fish and Wildlife Service.

In 1992 only about 200 bears were left in the wild. A plan to save the bears was made. The plan included these steps:

- Increase bear habitat.
- Reduce the illegal killing of bears.
- Use education to reduce bear deaths on roads.
- Connect areas where bears live so that they can travel farther to find mates.
- Move some bears to new areas within the state.

GO ON ▶

Session 3

Table 1 shows the numbers of acres of habitat available for bears in 1993 and in 2014 in Louisiana and Mississippi.

Table 1. Number of Acres of Habitat Available for Bears

Year	Louisiana	Mississippi	Total
1993	340,480	0	340,480
2014	1,423,853	382,703	1,806,556

In 2016 the number of Louisiana black bears had increased to about 1,000.

GO ON ▶

28. Hardness (how easily a mineral can be scratched) can be used to identify or classify minerals.

Which method would **best** help a scientist compare the hardness of these three minerals?

A. seeing whether a fingernail can put a dent in each mineral
B. seeing whether each mineral can scratch the other two minerals
C. seeing whether each mineral breaks apart when dropped on a wood floor
D. seeing whether hitting each mineral with a hammer will cause pieces to break off

29. Use the information in Table 1 to answer the question.

A scientist finds an unknown mineral that might be mineral Y. She decides to do several tests and compare her results with characteristics of mineral Y.

Identify which characteristic can be determined using **each** test.

Place a check mark in each correct box. Check only one box per row.

	the types of chemicals that make up the mineral	the strength of the connections between particles in the mineral
pour some vinegar over a small piece of the mineral		
slowly add mass on top of a small piece of the mineral		
place a small piece of the mineral in a beaker of water		
use a rock hammer to carefully break pieces off the mineral		

GO ON ▶

Session 3

30. A scientist scrapes mineral W across a ceramic tile and observes a pink streak on the tile.

Which statement **best** explains how the pink streak is created?

A. The pink streak is created by the ceramic tile.
B. The pink streak is created by tiny particles of the mineral.
C. The pink streak is created by the pink color of the mineral.
D. The pink streak is created by a reaction that occurs between the mineral and the ceramic tile.

31. Unlike the other two minerals in the table, mineral X does not have tiny pieces that appear to be separated from each other.

Circle the **three** statements that best explain that mineral X is made of particles that are too small to see.

The scientist observes mineral X with her eyes. At this scale, mineral X appears to be groups of metallic whiskers. The scientist then uses a strong microscope to look at mineral X. Under the strong microscope, mineral X appears to be a thin piece of material that is coiled up. The scientist then looks at mineral X under an even stronger microscope. Under the very strong microscope, each thin piece of material seems to be made of stacks of smaller layers. Even at this scale, the scientist cannot identify individual particles in the stacks.

GO ON ▶

34. **Use the information and your knowledge of science to answer the question.**

A scientist has been studying the amount of fresh water stored in polar ice caps for many years. He believes that one of the ice sheets in Antarctica is getting smaller.

What kind of data should the scientist collect to determine whether the ice sheet is changing size?

A. Measure the depth of the ice sheet for several months.
B. Measure the mass of the ice sheet for several weeks.
C. Measure the area and thickness of the ice sheet for several years.
D. Measure the width of the ice sheet from satellite images for several days.

35. **Use the information and your knowledge of science to answer the question.**

Carlos claims that air is made up of many tiny particles that have mass but are too small to see.

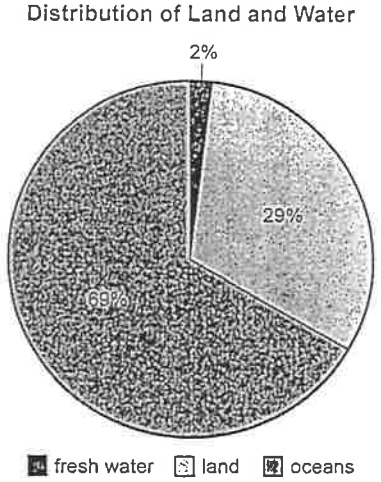
Which observations can be used as evidence to support his claim?

Circle the two correct answers.

A. rain falling from the clouds
B. leaves moving on a windy day
C. blowing into a balloon to inflate it
D. temperatures rising on a sunny day
E. tossing a basketball through the air

39. **Use the information and your knowledge of science to answer the question.**

A student created a circle graph to show the approximate area of Earth covered by fresh water, land, and oceans.



Based on the graph, which estimate **best** describes the areas of Earth's surface covered with salt water and fresh water?

A. 69% salt water and 2% fresh water
B. 29% salt water and 69% fresh water
C. 2% salt water and 29% fresh water
D. 69% salt water and 29% fresh water