# FLORIDA Cross-Curricular Connections

# SAVVAS SCIENCE EXPLORATIONS

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### **Cross-Curricular Connections**

**Printable Activities Sampler** 

#### **A Note to Reviewers**

Thank you for reviewing *Florida Savvas Science Explorations,* a new program developed for today's Florida science classroom. *Florida Savvas Science Explorations* is written specifically for Florida and meets 100% of the Florida State Academic Standards for Science. We are excited to partner with you to create an exceptional Elementary Science experience for your students and teachers.

This sampler contains one Topic's worth of the Cross-Curricular Activities that are available online only on Savvas Realize<sup>®</sup>. Provided here are the online annotated teacher pages as a sampler for your review. Student pages are available online.

The Cross-Curricular Activities are designed to help you integrate social studies and math instruction into your science lessons. Activities have been aligned to the science topics you currently teach as well as to holidays. All activities should take between 10-20 minutes so they can be easily incorporated into your lessons. Each activity includes support for differentiating instruction to meet the needs of all your learners. Available online as editable Microsoft Word<sup>®</sup> documents or Google Docs<sup>®</sup>, (and social studies lessons are also available as editable PowerPoints<sup>®</sup>). All activities are available to assign, edit, and or print directly from within Savvas Realize<sup>®</sup>.

Thank you, again, for your review of Florida Savvas Science Explorations!

# **Space Exploration Timeline**

### You will...

- Develop a claim about an event in space exploration.
- Defend your claim with supporting evidence.
- Engage in a discussion with classmates.

### What You Need to Know

You are going to examine a space exploration timeline. You will choose the most significant event. You will write a claim about why you think it is the most significant. Then, you will present your claim to your classmates. Remember, a claim is your opinion about a topic. Use evidence to support your claim.

### Steps

**1. Examine the Timeline** Read the information. Think about what happened in each event. What is important about each event?



#### Space Exploration Timeline

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**2. Choose an Event** Select which you think is the most important event in space exploration. Mark it on the timeline.

Answer: Responses will vary.

**3. Develop Your Claim** Write a claim about why you think the event you chose is the most important in space exploration.

I think the most important event in space exploration was:

Answer: Student responses will vary.

Write 2 or 3 reasons why you think this.

Answer: Students should provide evidence to support their claim.

- **4. Share Your Claim** Present your claim to your classmates. Take turns responding. Remember to be respectful!
- 5. Think About It Would you like to travel to space? Why or why not?

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Name\_

# **Improving Communication**

### You will...

- Analyze a primary and secondary source about telegraphs.
- Compare the information you learned from the sources.
- Connect what you learned to your own life.

### What You Need to Know

The telegraph was invented to improve communication. Primary and secondary sources can help us learn about the invention of the telegraph and the impact it had on communication.

### Steps

**1. Analyze Sources** Read the secondary source. Underline or highlight details about the impact of the telegraph.

### Secondary Source

### The Impact of the Telegraph

Before the telegraph was invented, people could only communicate over long distances with mail. Mail was delivered by riders on horse or later by train. Mail was sent across the oceans by ship. It could take days or weeks or even months for news to arrive!

In 1854, the telegraph changed communication. Sample Answer: Messages could be sent almost instantly. Telegraph machines sent and received messages as electrical signals along wires. Sample Answer: People could now share news across the country and across the world right away.



Read the primary source. Underline or highlight words that show the point of view of the authors.

#### **Primary Source**

Of all the Sample Answer: marvelous achievements of modern science the electric telegraph is ...the Sample Answer: greatest and most serviceable to mankind ... Sample Answer: How potent a power, then, is the telegraphic destined to become in the civilization of the world! This binds together by a vital cord all the nations of the earth. It is impossible that old prejudices and hostilities should longer exist, while such an instrument has been created for an exchange of thought between all the nations of the earth.

–Charles F. Briggs and Augustus Maverick, *The Story of the Telegraph and a History of the Great Atlantic Cable,* 1858

- 2. Compare and Discuss How did reading the secondary source help you better understand the impact of the telegraph? How did reading the primary source quote about the telegraph help you understand its significance? Share your ideas with classmates.
- **3. Reflect** Make connections to what you learned in the sources. Think about how important it is to you to communicate with your friends and family. Write about what that means to you. Answer: Student responses will vary.



# **Choose Playground Equipment**

### You will...

- Design a piece of playground equipment you think the town should add to the park.
- Persuade your classmates to choose your equipment.
- Vote for the pieces of equipment you like best.

### What You Need to Know

When you persuade others, you try to convince them to agree with you. You should provide reasons why they should agree.

### Steps

1. Make a Choice Choose a piece of playground equipment you think should be added to the park. Write the name of your equipment below.

### Sample Answer: Triple Dip Slide

- 2. Design and Describe Draw the equipment you want added to the playground on the next page. Be creative! Write a description on the lines below the drawing. Use words that will convince your classmates that your playground equipment is the best. Remember, you want others to vote for your equipment.
- **3. Cast Your Votes** Look at each posted design. Place a sticky note by your three favorite designs. The three designs with most votes win!

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Name\_\_\_\_\_

Answer: Student drawings will vary.	

Sample Answer: You will have hours of fun on the Triple Dip Slide!

You can slide down three different exciting slides! It has a curvy slide, a

fast slide, and a hilly slide.

Choose Playground Equipment

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# **Natural Resources and Conservation**

### You will...

- Vote in a group for a message that promotes the conservation of natural resources.
- Prepare a public service announcement about conservation.
- Present your announcement to the class.

### What You Need to Know

Spreading the word about ways to promote conservation can help encourage people to reduce waste. A public service announcement, or PSA, is an announcement that is made for the good of the public. These announcements can be used to raise awareness about an issue.

### Steps

- Make a Group Decision In your group, brainstorm ways to conserve resources at home, school, or in your community. Take a vote to decide which method you want to promote.
- 2. Plan Your PSA Work with your group to write a PSA about conservation. Take notes below or on the back of this paper.

Answer: Responses will vary. Students may plan a PSA about recycling

or they may encourage people to use fewer disposable items.

3. Present Share your PSA with the class.



# **Altering the Environment**

### You will...

- Evaluate facts.
- Take a stand on a topic.
- Discuss your position with your classmates.
- Consider other perspectives.

### What You Need to Know

You are going to evaluate the benefits and drawbacks of dams. You will take a stand on a statement about dams. To take a stand means to express your opinion. You should support your opinion with reasons and evidence.

### Steps

**1. Evaluate Facts** Review the information about dams. Which issues do you think are important?

Benefits of Dams	Drawbacks of Dams
<ul> <li>Generate energy</li> <li>Prevent flooding</li> <li>Improve water supply</li> <li>Provide recreation</li> </ul>	<ul> <li>Block fish movement</li> <li>Change water temperature</li> <li>Affect water quality</li> <li>Cause safety concerns</li> </ul>

![](_page_10_Picture_0.jpeg)

2. Form Your Opinion Listen to the statement your teacher reads about dams. Decide if you agree or disagree and make a claim. Write down notes to support your opinion.

Answer: Students should tell whether they agree or disagree with the

statement that dams are more helpful than harmful and should provide

supporting evidence.

**3. Take a Stand** Decide how much you agree or disagree with the statement. Stand in the spot that shows your opinion.

Explain your opinion to your classmates. Listen carefully as your classmates give their opinions. If you hear something that changes your opinion, move to the spot that shows your updated opinion.

**4. Reflect** Think about your opinion on dams. Did it change when you heard other views? Why or why not? Answer: Responses will vary.

![](_page_11_Figure_1.jpeg)

# **Butterflies in Flight**

Did You Know? Monarch butterflies fly south for the winter. In the fall, daylight becomes shorter in northern parts of Canada and the United States. That is when the butterflies fly to warmer climates. Many monarchs fly to the forests of Mexico and form large groups.

![](_page_11_Picture_4.jpeg)

**1** Draw a picture to model the total number of butterflies Ana saw.

### Check students' drawings.

**2** Use the number line to show the total number of butterflies Ana saw. How many butterflies did she see?

![](_page_11_Figure_8.jpeg)

**3** Write a multiplication equation to show the butterflies Ana saw.

### 5 × 3 = 15

![](_page_11_Picture_11.jpeg)

**Extension** Ana saw 2 monarch butterflies on each of 3 leaves. Each monarch butterfly has 2 wings. How many wings did Ana see? Show how to find the answer using the number lines below.

![](_page_11_Figure_13.jpeg)

![](_page_11_Picture_14.jpeg)

**Fall Journey of Monarch Butterflies** 

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Activity 1-2

enVision<sup>®</sup>STFM

![](_page_12_Picture_1.jpeg)

**enVision**®STFM Activity 1-6

Did You Know? Some fish travel in large groups called schools. Fish form schools for protection from predators and to make it easier to find food. Schooling also increases the length of time a fish can swim. Some schools can contain as many as one million fish!

Color	Number of Fish
Gray	20
Orange	24
Orange/Black	32
Silver	15

Darren volunteers at a pet store. He puts an equal number of fish in each tank.

1 Darren puts all of the gray fish in different tanks. Each tank gets 5 fish. Write subtraction equations to find how many tanks Darren fills.

### 4 tanks; 20 - 5 = 15; 15 - 5 = 10; 10 - 5 = 5;

### 5 - 5 = 0

**2** Darren writes these subtraction equations to find the number of tanks Darren fills with silver fish. Write a division equation Darren could use to represent the same problem.

|5 - 3 = |2||2 - 3 = 9|9 - 3 = 66 - 3 = 33 - 3 = 0

### $15 \div 3 = 5$

![](_page_12_Picture_12.jpeg)

3 Darren places all of the orange/black fish into the tanks in groups of 4. Draw a picture to represent how many tanks Darren fills.

![](_page_12_Picture_14.jpeg)

**Extension** Darren decides to combine the gray fish and the silver fish. There are 7 fish in each tank. How many tanks does he have? Show your answer using a division equation and subtraction equations.

5 tanks; 20 + 15 = 35 fish; Division: 35 ÷ 7 = 5;

### Subtraction: 35 – 7 = 28; 28 – 7 = 21; 21 – 7 = 14;

14 - 7 = 7; 7 - 7 = 0

![](_page_12_Picture_20.jpeg)

![](_page_13_Picture_1.jpeg)

# Lake Math

Did You Know? A lake is a body of water with land around it. Lakes are just one place water is found on Earth. Some lakes are made of salt water and some are made of fresh water.

Get drawing paper and crayons or markers.

- Lake Pontchartrain in Louisiana is 65 feet deep.
   Great Salt Lake in Utah is 33 feet deep.
   Draw and label a picture of each lake.
- How much deeper is Lake Pontchartrain Sample work shown. than Great Salt Lake? Use place-value blocks 65 and partial differences to solve. Record your work. - 30 32 feet 35 - 3
   Draw a third lake that is deeper than Great Salt Lake. 32 Decide how deep you want your lake to be.
- How much deeper is your lake than Great Salt Lake? Use place-value
   blocks and partial differences to solve. Record your work.

\_\_\_\_ feet

**5 Extension** With a partner, talk about how you used partial differences to solve each problem.

![](_page_13_Picture_11.jpeg)

### ienVision®STEM Activity **6-6**

## Name \_\_\_\_\_ Melting Math

Did You Know? A glacier is one place where water is found on Earth. A glacier is a large sheet of ice formed over many years. Heat makes glaciers melt into water.

A glacier is 82 miles long. Then, 34 miles of the glacier melts over time. How long is the glacier now? Solve and show your work.

![](_page_14_Figure_4.jpeg)

2 Jack sails next to a glacier for 17 miles. Then he sails 23 more miles. He wants to sail 69 miles in all. How many more miles does Jack need to sail?

![](_page_14_Figure_6.jpeg)

**29** more miles

**3 Extension** Write a two-step word problem about glaciers. Use bar diagrams to solve.

### Check students' work.

![](_page_14_Picture_11.jpeg)

![](_page_15_Picture_0.jpeg)

A class wanted to know what the shape of a bird's beak tells about its diet. Students chose kitchen tools similar in shape to those of birds' beaks. Two teams of students had 3 minutes to use their tools to pick up food similar in shape or texture to what the birds might eat. The table shows the results.

	Puffed Rice (Water Plants)	Gummy Worms (Fish)	Nuts in Shell (Nuts)
Chopsticks (egret)	248	526	0
Nutcracker (woodpecker)	98	186	352
Slotted spatula (duck)	627	119	8

1 How many items did the teams pick up with the slotted spatula?

### 754 items

2 Why does the slotted spatula work best at picking up puffed rice?

### Sample answer: It is similar to a duck's beak. Ducks

### have a beak that can collect food in water.

**3 Extension** The table shows the total number of food items picked up by two teams using each tool. One team used chopsticks to pick up 99 pieces of puffed rice and 314 gummy worms. How many pieces of puffed rice and gummy worms did the other team pick up with chopsticks? Show your work.

### 149 pieces of puffed rice; 212 gummy worms; Check

### students' work.

![](_page_15_Picture_12.jpeg)

eagle

# **Fractions in Nature**

Did You Know? Trees grow on land. Besides providing shade, trees are the homes of birds and insects. An insect can get all of its needs living on the leaves of trees.

Get a blue crayon and a yellow crayon.

Draw lines to show the butterfly egg in three equal parts.

![](_page_16_Picture_5.jpeg)

Check students' work.

The parts are called thirds

Color one part of the egg blue. Check students' work. What fraction of the egg is blue? one third

2 The lily pad shows halves

![](_page_16_Picture_10.jpeg)

What fraction of the lily pad is the frog on? one half

**3** Draw a rectangle to represent a small pond.

Draw lines to show fourths. Then draw a fish in one of the equal parts.

|--|--|--|--|

What fraction of the pond has a fish swimming? one fourth

enVision® STEM Activity

![](_page_16_Picture_17.jpeg)

**enVision**®STEM

Activity 8-2

# **Comparing Plant Lengths**

Did You Know? Plants need light to grow. You can test this yourself. Find two of the same size and type of plant. Grow one in sunlight. Grow the other in shade. Measure the heights after two weeks.

Estimate and then measure the height of each plant stem in centimeters.

![](_page_17_Figure_4.jpeg)

2 Why is the plant grown in sunlight taller?

Sample answer: Plants need sunlight to grow.

3 Extension Use a centimeter ruler. Measure the length of the stem of a plant grown in the sun. Draw a picture of the plant. Write the length of the stem on your drawing.

Check students' work.

![](_page_17_Picture_10.jpeg)

![](_page_17_Picture_12.jpeg)

# **FLORIDA**

# SAVVAS SCIENCE E X P L O R A T I O N STM

![](_page_19_Picture_2.jpeg)

The American crocodile finds itself at home in the warm waters of coastal Florida. As a reptile, the American crocodile is coldblooded and needs to live in warm habitats to survive. The crocodile uses the process of thermoregulation and manipulates its surroundings to control its internal body temperature. How do scientists use characteristics to classify living things? Explore the characteristics of animal classifications in Topic 5, as well as other phenomena from our living world in *Savvas Science Explorations*!

#### **GRADE 3**

![](_page_19_Picture_5.jpeg)

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![](_page_19_Picture_8.jpeg)