



SPRING/SUMMER JAM LASER SPECTACULAR TEACHER GUIDES

Dear Assembly Coordinator and Teachers,

The following pages contain teacher guides to be used in conjunction with Prismatic Magic's Spring or Summer Jam Laser Spectacular assembly and the Spring or Summer Jam Student Worksheet Masters located on Prismatic Magic's Web site.

The teacher guides provide additional information about the laser show. They give ideas and suggestions for ways to tie the assembly into the curriculum for specific grade level ranges but you may use ideas from any age group you would like. All ideas are suggestions and may be used as deemed appropriate by individual teachers.

Sincerely,

Your Friends at Prismatic Magic



TEACHER GUIDE
GRADES K - 2

SPRING/SUMMER JAM LASER SPECTACULAR

To increase the educational aspect of the laser program, this guide is to be used AFTER the performance.

Language Skills

Parts of Speech

Make a list of as many adjectives the students can think of to describe the show. If they haven't learned about adjectives yet, ask them how they would describe the show or the lasers or the performance. Make a list of all the nouns they saw during the performance in person or on the screen. What happened during the show? Make a list of verbs. How did those things happen? Make a list of adverbs. Have a contest to see which student or group of students can come up with the most adjectives, nouns, verbs, or adverbs.

Writing

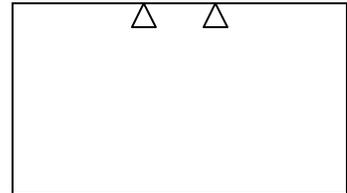
Write about what happened during the performance. What was their favorite part? What did they like or dislike? What would they have changed? What songs would they have added or taken out? Depending on the students' writing level, have them write a sentence, a paragraph, or a story about the show. Or have them draw a picture and dictate a sentence or paragraph about what they drew.

Listening/Following Directions

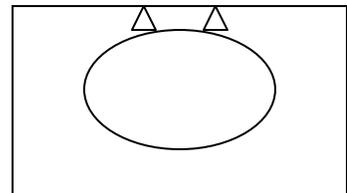
Give each student a 12 x 18 piece of paper. Read the following story and draw the corresponding pictures. Have each student draw the pictures while listening and watching. They will be amazed when they see the completed picture.

A Springtime Picnic

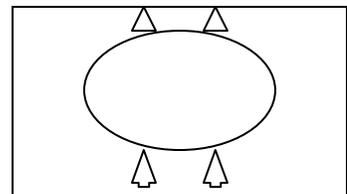
A brother and sister went camping in the mountains with their family. They each had their own tent.



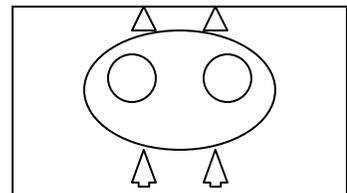
They camped on the shore of a large lake.



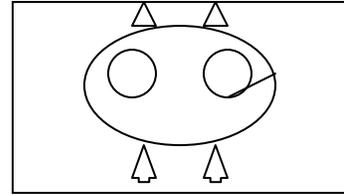
Two small trees grew on the other side of the lake.



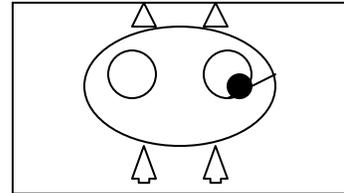
In the middle of the lake were two islands. The children really wanted to explore them. They asked their parents, and they were allowed to take a canoe out to the islands. They even got to take a picnic lunch with them.



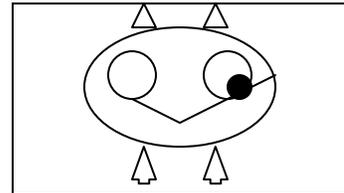
They promised their parents they would be really careful. They put on life jackets and paddled out to an island.



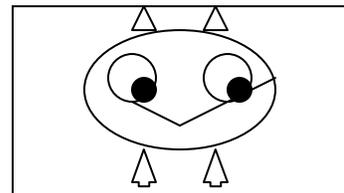
They chose a spot right next to the water and spread out a blanket to sit on for their picnic.



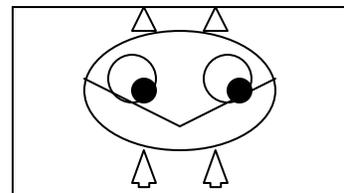
As soon as they finished eating their lunch, they heard a scary noise. Whoooo! Whoooo! They were so scared they grabbed their blanket, jumped in the canoe and paddled to the other island.



They spread out their blanket to rest.



As soon as they sat down, they heard the noise again. Whooo! Whooo! This time they decided to go back to camp. They told their parents all about the strange noise. Their parents knew what made the noise. Look at the picture you just made. Do you know what made the noise?



(If the students are unsure of what made the noise or what the picture is, remind them of the noise it made. they have trouble seeing it, point out the eyes, beak, feet, etc.)

Math

Basic Math Facts

Make up some simple stories about the laser show that can be used to teach basic math facts. Examples:

- The sun was shown 2 times in one song and 3 times in another. So what was the total number of times the sun appeared in the show?
- Three children in 2nd grade sang to *Walking on Sunshine*. Two children in 1st grade did not. How many more children sang to *Walking on Sunshine* than did not?
- Three classes watched the show. Two children in each class clapped along with every song. How many children clapped with every song?

Graphing

Many bar graphs can be constructed about the performance. Choose a few songs from the performance and graph the popularity of each one. Which part of the show was the most popular - the music or the laser images? Graph it and find out.

Art

Art Skills

Have the students draw a picture of their favorite part of the performance. They can also decide what they would like to include in a laser show and draw that. Or have them think of their favorite song and draw a laser scene from it. Listen to music and have students picture how they could create the music visually. Then have them create it. The movies *Fantasia* and *Fantasia 2000* are excellent examples of this.

Hungry Ants

Arty the Ant really wanted to get to the picnic. Make your own hungry ants that seem to move magically by themselves.

Materials needed:

Lightweight paper plate, one per student

Crayons

Construction paper

Paper clips

Small magnet, one per student

1. Using the crayons, have each student draw picnic food items on the paper plate. They could draw a sandwich, cookies, watermelon, cake, etc.
2. Cut out two ant shapes from the construction paper. For younger students, it may be easier to have the ants already cut out. The students can draw faces on the ants.
3. Clip a paper clip onto each ant shape.
4. Put the ants on the paper plate. To make the ants move, hold a magnet underneath the plate and move the magnet around. It will look like two hungry ants are trying to eat!

Your ideas

Go ahead and draw on your knowledge and skills to come up with any other activities. Relate the lasers to something you are teaching in any subject. Who better to come up with activities than you – the teacher!!



TEACHER GUIDE
GRADES 3 - 5

SPRING/SUMMER JAM LASER SPECTACULAR

To increase the educational aspect of the laser program, this guide is to be used AFTER the performance.

Language Skills

Parts of Speech

Make a list of as many adjectives the students can think of to describe the show. Make a list of all the nouns they saw during the performance in person or on the screen. What happened during the show? Make a list of verbs. How did those things happen? Make a list of adverbs.

Writing

Write about what happened during the performance. What was their favorite part? What did they like or dislike? What would they have changed? What songs would they have added or taken out? Have the students write an informative article about the performance, an advertisement or brochure for the performance, a critique of the show, a persuasive argument for or against this assembly, etc. Have the students come up with a theme for their own laser show. What would it be? What songs would go with their theme?

Word Puzzles

Give the students graph paper and let them create word searches, crossword puzzles, codes, etc., using patriotic words or phrases. Then let them trade puzzles with other students to see if they can solve them. As a class, create a giant puzzle on a piece of butcher paper and share it with another class.

How Many Words?

Write a spring themed word on the board. How many words can the students come up with using only those letters?

Example word: *springtime*

Words from *springtime*: *spring, time, rim, trim, ring, rip, grip, trip, sprint, . . .*

Math

Graphing

Many bar graphs can be constructed about the performance. Choose a few songs from the performance and graph the popularity of each one. Which part of the show was the most popular - the music or the laser images? Graph it and find out.

Distance to the moon

Lasers have been used to measure the distance from the earth to the moon. Can the students figure out that approximate distance with a few pieces of information? Speed of light, including lasers = approx. 186,000 miles per second. Time it takes a laser to travel to the moon, reflect off a mirror, and return to the earth = about 4 seconds.

$186,000 \text{ miles per second} \times 4 \text{ seconds} = 744,000 \text{ miles}$. That number must be divided by 2 since the laser is traveling to the moon and back. That means the moon is about 372,000 miles from the earth.

Art and Music

Art skills with music

Have the students draw a picture of their favorite part of the performance. They can also decide what they would like to include in a laser show and draw that. Or have them think of their favorite song and draw a laser scene from it. Listen to music and have students picture how they could create the music visually. Then have them create it. The movies Fantasia and Fantasia 2000 are excellent examples of this. To make it more interesting, only let the students use the primary colors of paint – red, yellow, and blue – to create their pictures. Let them mix colors as needed.

Recycled ant art

Spring is time to clean up. This includes cleaning up the neighborhood, park, school playground, etc. Students can have some fun with cleaning and recycling by making an ant out of garbage. Have students collect “garbage” at home – this could be empty cans, bags, boxes, tubes, string, newspaper, or anything that is being thrown out at home. Just be sure the students wash them out before bringing them in. Then let them be creative. They can create ants or any other springtime creature. Let them display their recycled creations around the classroom.

Raindrop art

Spring is famous for rain, so how about making some raindrop art?

Materials needed:

White construction paper – any size

Water

Paint brushes

Water colors

Markers

1. Using the paintbrush, cover the entire sheet of paper with water.
2. Make the water colors very thin by dropping water onto each color. You want the water color to drip off the paint brush.
3. While the paper is still wet, dip the paintbrush into one color of thin watercolor. Hold the brush over the wet paper and let a drop fall. The paint will blur, run, and fuzz.
4. Drip the watercolors around the paper, using the same or different colors. This should be done sparingly as the paints will spread around as they are dropped.
5. Let the papers dry completely. Have the students look for objects in the art. They could find animals, plants, or anything else. Using a marker, let the students draw an outline and a few other lines to define what they see in their raindrop art. You may be amazed at the creativity of your students.

Social Studies

Spring holidays and traditions

What holidays are celebrated in and around spring? Some are St. Patrick's Day, April Fool's Day, Easter, Mother's Day, Memorial Day, Flag Day, and Father's Day. Maybe your area has local celebrations or traditions in spring, like a parade. Have groups of students research these holidays. They can determine how these holidays or traditions started, how they are celebrated, if they are celebrated in other countries and how they celebrate them, etc. They can present their findings to the class with a skit, report, posters, etc. Maybe students can come up with their own holiday to celebrate in spring. What would they celebrate, what would they name the holiday, and how would it be celebrated?

Geography and weather

Spring means the melting of snow and the coming of warmer weather. But what happens in March in Australia or other countries that are south of the equator? This ties in very well if students are learning about the earth and the change of the seasons. If they haven't learned that, briefly demonstrate how the earth tilts on its axis and different parts of the earth are closer to the sun at different times of the year. Challenge students to determine what happens "down under" when we are entering spring. What is the weather like in Australia during our summer or on New Year's Eve?

Your ideas

Go ahead and draw on your knowledge and skills to come up with any other activities. Relate the lessons to something you are teaching in any subject. Who better to come up with activities than you – the teacher!!



TEACHER GUIDE
GRADES 6 - 8

SPRING/SUMMER JAM LASER SPECTACULAR

To increase the educational aspect of the laser program, this guide is to be used AFTER the performance.

Language Skills

Parts of Speech

Make a list of as many adjectives the students can think of to describe the show. Make a list of all the nouns they saw during the performance in person or on the screen. What happened during the show? Make a list of verbs. How did those things happen? Make a list of adverbs. Have a contest to see which student or group of students can come up with the most adjectives or other part of speech to describe the show.

Writing

Write about what happened during the performance. What was their favorite part? What did they like or dislike? What would they have changed? What songs would they have added or taken out? Have the students write an informative article about the performance, an advertisement or brochure for the performance, a critique of the show, a persuasive argument for or against this assembly, etc. Have the students come up with a theme for their own laser show. What would it be? What songs would go with their theme?

Word Puzzles

Give the students graph paper and let them create word searches, crossword puzzles, codes, etc., using patriotic words or phrases. Then let them trade puzzles with other students to see if they can solve them. As a class, create a giant puzzle on a piece of butcher paper and share it with another class.

How Many Words?

Write a spring themed word on the board. How many words can the students come up with using only those letters?

Example word: *springtime*

Words from *springtime*: *spring, time, rim, trim, ring, rip, grip, trip, sprint, . . .*

Math

Distance to the moon

Lasers have been used to measure the distance from the earth to the moon. Can the students figure out that approximate distance with a few pieces of information? Speed of light, including lasers = approx. 186,000 miles per second. Time it takes a laser to travel to the moon, reflect off a mirror, and return to the earth = about 4 seconds.

$186,000 \text{ miles per second} \times 4 \text{ seconds} = 744,000 \text{ miles}$. That number must be divided by 2 since the laser is traveling to the moon and back. That means the moon is about 372,000 miles from the earth.

History

Laser History

What do the students know about lasers? Who invented lasers? When were lasers invented? What else are they used for? Let them get on the Internet and search away! Have the students write a paragraph or make a poster about another use of lasers or a laser scientist.

Art and Music

Art skills with music

Have the students draw a picture of their favorite part of the performance. They can also decide what they would like to include in a laser show and draw that. Or have them think of their favorite song and draw a laser scene from it. Listen to music and have students picture how they could create the music visually. Then have them create it. The movies *Fantasia* and *Fantasia 2000* are excellent examples of this.

Science

Reflection

Reflection is what makes the lasers move around during the laser show. A fun way to learn about reflection of light is to gather several small mirrors and a flashlight. Cover the flashlight with an opaque material with a small hole in it. This will allow only a small beam of light to shine from the flashlight. Have the students try to hit a target with the beam of light. The trick is that they have to reflect the light off of one or more mirrors before hitting the target. How many mirrors can they use and still hit the target? This can be done as a class or in small groups. Throw some math into the mix by having the students measure and calculate angles. Have them plan out a path for the light beam using precise angles and draw it on a piece of paper. Then let them set it up in the classroom and try it. Did they calculate the angles correctly?

Go fly a kite

With spring comes wild weather, including wind. Most students have flown a kite or seen someone else fly a kite. Have the students design and build their own kite. You may want to bring in samples of kites so the students can see different types and variations of kite design. Let them use any materials they think will work best. When a windy day comes, let the students take their kites outside and see if they fly. Time them and see which kites stay in the air the longest. Measure the strings they use and see which kites go the highest. Then display the data with each kite and let the students determine which traits made a kite fly the best – the weight of the kite, the surface area of the kite, if it had a tail, etc. They can also be judged on their artistic merit – which is the most creative, unusual, smallest, largest, etc.

Create an insect

Ants and many other insects reemerge during the spring. Find out what the students already know about insects by having a group discussion and writing their ideas on the board. They should mention things like three sections of the body, six legs, etc. Then let them research insects. After they have discovered what makes an insect an insect, have the students design their own insects. They must be accurate with sections of the body, number of legs, placement of wings, etc., but let them be as creative as they can. Have them answer questions about their insect like what it eats, how it survives, what might eat it, how it travels, is it a pest or a helpful insect, etc.

Safety

Precautions

We take every necessary precaution to ensure everyone's safety during the show. It is not safe to shine any kind of laser directly into the eyes. Permanent damage may result. It is wise not to allow a laser to shine directly on any part of the body either as harmful radiation is emitted from a laser. You may want to emphasize that if lasers are used safely, they can be fun.

Your ideas

Go ahead and draw on your knowledge and skills to come up with any other activities. Relate the lasers to something you are teaching in any subject. Who better to come up with activities than you – the teacher!!