



**Using a Light Box To Tell a Story**  
Lesson Plan

Grade Level(s)	K – 9
Name of Lesson/Activity	Making A Light Box Using A Light Box To Illuminate Your Story
Learning Outcomes/Outputs	<p>Students will:</p> <ul style="list-style-type: none"> <li>- Learn how to make a light box in small groups</li> <li>- Create or recount a story and use images on the light box to animate the theme of the story</li> <li>- Have the opportunity to reflect on the similarities and differences in technology in the Yukon between present day and the early 1900s</li> </ul>
Subject Area(s) - see also Curriculum Links at end	Arts Education, English Language Arts
Suggested Introductory Activities	<ul style="list-style-type: none"> <li>- Share the story of Bishop Stringer who spent many years in the Yukon around the turn of the 20<sup>th</sup> century and used a light box to illuminate images when describing his northern experiences during his travels outside of the Yukon.</li> <li>- Read <i>The Bishop Who Ate His Boots</i></li> <li>- Teacher makes a lightbox (or uses an overhead projector) as a demonstration. Use it to tell a personal story (e.g. family trip to a warm beach) using articles and images (e.g. shells, waves and sandcastle images)</li> </ul>
Main Activities	
Resources/Materials Needed	<ul style="list-style-type: none"> <li>- Story of Bishop Stringer and use of light box when sharing stories about the north in early 1900s</li> <li>- For light box: Clear rectangular plastic storage box, LED light(s) (e.g. Christmas lights or battery-operated LED camping light), tin foil, white tissue paper</li> </ul>

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	<ul style="list-style-type: none"> <li>- For images: cardstock or other articles relevant to student's story</li> </ul>
<p>Time Required</p>	<p>Light box: 30-60 minutes</p> <p>Story creation or recounting: 1+ class periods</p> <p>Image creation/collection: over the course of a few days or weeks</p> <p>Presentations to classmates, parents: 1+ class periods</p>
<p>Any Specific Instructions (see below for images)</p>	<p>To make light box:</p> <ul style="list-style-type: none"> <li>- Line inside walls and bottom with tin foil</li> <li>- Place LED light(s) inside on bottom; cut hole for cord if using AC powered</li> <li>- Attach (glue, tape) white tissue paper to inside of lid to diffuse light (could use different colours of tissue paper)</li> <li>- Place lid back on</li> </ul> <p>Story recounting or creation</p> <ul style="list-style-type: none"> <li>- Have students think of a past experience or create a story which they can use a light box to share with others; story could be oral or written depending on skill level</li> </ul> <p>For images on light box</p> <ul style="list-style-type: none"> <li>- Student can place small objects (e.g. leaves, stones, piece of wood) or draw and then cut outline shapes (simple example is a snowflake but can be more complicated); intricate shapes can be drawn on cardstock but might need to be cut out with an x-acto knife</li> </ul>
<p>Options</p>	<ul style="list-style-type: none"> <li>- Students can make light boxes in small groups which allows for more hands-on involvement</li> <li>- Sharing of stories can be done in small groups rather than large class experience if more suitable</li> <li>- Students can have a series of items they place on and remove from the light box as their story progresses</li> <li>- Small groups of students improvise a story together</li> </ul>

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	<p>using the light box where they each take turns putting an object on the light box and adding to the story</p> <ul style="list-style-type: none"> <li>- Students practice telling their stories in small groups with their light box and have group members learn when each object should be placed on the light box (fellow students become the “prop placers”); then have groups do their presentations to the class using an overhead projector</li> </ul>
<p>Post/Follow Up Activities</p>	<p>Ask students if stories are more interesting when</p> <ul style="list-style-type: none"> <li>- They are personal (e.g. they made them)</li> <li>- They are accompanied by an image(s)</li> </ul> <p>Ask students about changes in technology (Stringer’s light box vs. iPads and computer projectors)</p> <ul style="list-style-type: none"> <li>- Create a chart comparing the pros and cons</li> <li>- Have they been somewhere where modern technology did not work (no power, no internet); what was that like?</li> </ul>
<p>Curriculum Links</p>	<p>Arts Education</p> <ul style="list-style-type: none"> <li>- processes, materials, technologies, tools, and techniques to support arts activities/creative works (Gr 1-8)</li> <li>- a variety of dramatic forms (Gr 1-6)</li> <li>- personal and collective responsibility associated with creating, experiencing, or sharing in a safe learning environment (Gr 1-8)</li> </ul> <p>English Language Arts</p> <ul style="list-style-type: none"> <li>- Engage actively as listeners, viewers, and readers, as appropriate, to develop understanding of self, identity, and community (Gr KG-3)</li> <li>- Create stories and other texts to deepen awareness of self, family, and community (Gr KG-3)</li> <li>- Plan and create stories and other texts for different purposes and audiences (Gr KG)</li> <li>- Plan and create a variety of communication forms for different purposes and audiences (Gr 1-3)</li> </ul>

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	<ul style="list-style-type: none"><li>- Use writing and design processes to plan, develop, and create texts for a variety of purposes and audiences (Gr 4-5)</li><li>- Explore oral storytelling processes (Gr KG-5)</li><li>- Use and experiment with oral storytelling processes (Gr 6-9)</li></ul>
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### Light Box References

<https://www.danyabanya.com/diy-light-table/>

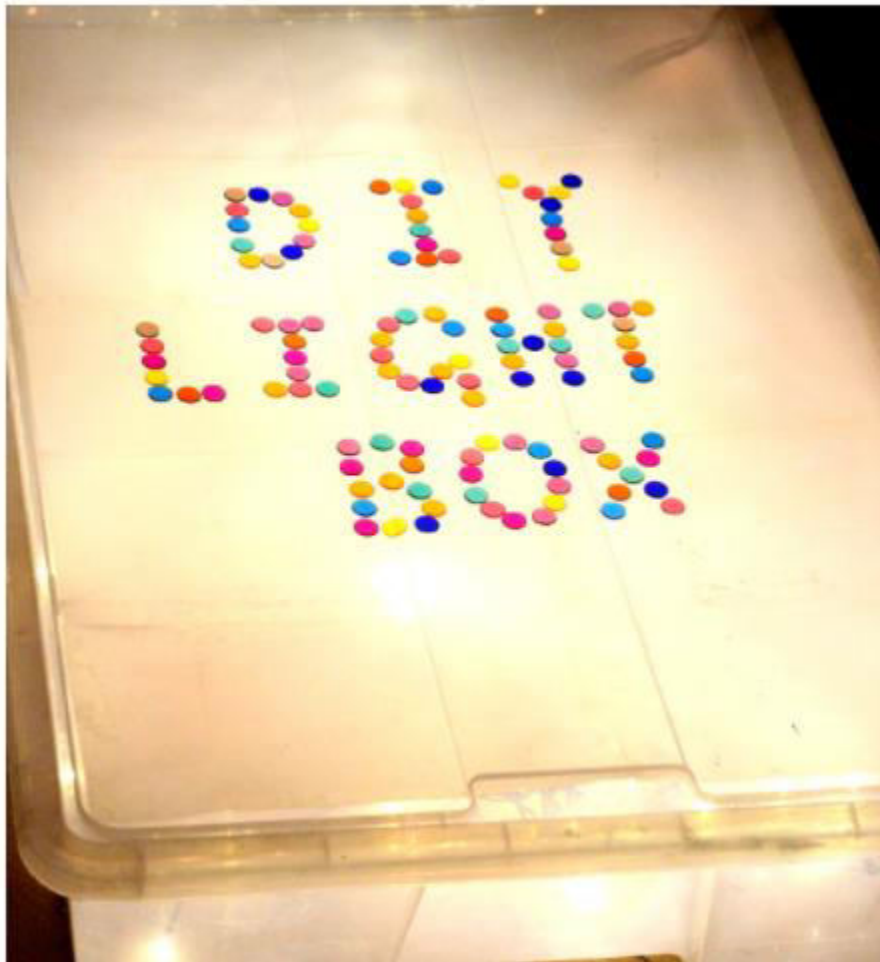
### Bishop Isaac Stringer

*The Bishop Who Ate His Boots* – Documentary film by grandson Richard Stringer on Isaac and Sadie Stringer (58:00 minutes) <https://vimeo.com/184636802>

*The Bishop Who Ate His Boots* – Biography of Isaac Stringer by Frank Peake



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### **Additional Resources**

The OLCM is happy to provide educators with a handout template for students to make their own DIY smartphone projectors, loan a magic lantern reproduction, provide black-and-white reproductions of glass slides in the museum's collection that can be easily printed on transparencies and colored with Sharpies, and downloadable color photographs used in Bishop Stringer's magic lantern lectures (including images of the Yukon circa 1900). The handout template, reproductions of black-and-white glass slides, and downloadable color photographs will be available for download in PDF format from the OLCM website (<http://www.oldlogchurchmuseum.ca/>).

## **The Bishop Who Ate His Boots**

In 1906, Isaac Stringer was made the second Bishop of Selkirk and his family moved to Dawson City. In his new position, Stringer travelled to parishes across a vast Diocese that stretched from present-day Northwest Territories to Yukon. One visit to the Mackenzie region nearly cost the bishop and his companion Charles Johnson their lives.

In the fall of 1909, Stringer and Johnson were returning to Dawson City from Fort McPherson, a 500-mile trek. The two had planned on taking a well-known route from the Rat River through McDougall's Pass, then to Rampart House on the Porcupine River, and into Dawson City. They were dressed in light clothing and carried enough provisions for 8 days though they expected to complete the trip in 5 days.

They set out by canoe on the Rat River when a fierce blizzard blew in causing the river to freeze, making river travel almost impossible. They persevered and smashed a way through the ice for the canoe hoping that once they reached the Porcupine River it would be ice free. Six days later, they were exhausted and had made little progress. The men cached their canoe and non-essential supplies and decided to walk back to Fort McPherson by going across the mountains, a distance of less than 100 miles. It was September 24th.

The men desperately looked for a pass through the mountains, their progress slowed by partially frozen rivers, and heavy snows that blocked familiar landmarks. After many days above the tree-line, with no wood for fire, they were still on the west side of the mountains. So much snow had fallen and without snowshoes, travel was extremely difficult. To add to their troubles their compass proved useless because their closeness to the magnetic pole confused its readings and Stringer and Johnson found themselves walking in circles. They decided to return to tree level even though this led them in a backward direction. Here they made camp and spent 3 days making snowshoes. Johnson, talented with an axe and pocket knife, whittled the frames while Stringer laced them with bits of string and raw hide.

The improvised snowshoes made travelling easier, but each man had grown weak, and their provisions were gone. Any game they spotted was too far off to waste the two remaining shotgun cartridges they had with them.

Near starvation, Stringer decided to heed an old story. He had heard of First Nations people who boiled and ate beaver skins after scorching off the hair. In their desperate state, he decided to try this with his extra pair of mukluks. He tried boiling the hide for many hours and then toasted it piece by piece over some coals. Comments from Isaac's diary bring the incident to life:

"October 15 – travelled 15 miles, made supper of toasted rawhide sealskin boots. Palatable. Feel encouraged"

"October 19 – no rabbit in snare. Breakfast and dinner of rawhide boots. Fine. But not enough"

Stringer and Johnson continued east. On October 20<sup>th</sup>, they reached a large river – it was the Peel. Here they found sled tracks and fresh-cut poplar poles. They had stumbled on the campsite of William Vittrekwa, Charlie Cluwetsit, and Andrew Cloh. After a ravenous meal, dog teams were harnessed and Stringer and Johnson were on their way to Fort McPherson, about twenty miles away. The ordeal lasted 52 days and each man had lost 50 pounds before they finally arrived at a small camp on October 20, 1909.

This journey was undoubtedly the most harrowing experience in the Bishop's life. It was some time before he could speak publicly about it. Two years later, in 1911, Bishop Stringer gave a vivid description of their journey to a large crowd in Dawson City. Stringer's amazing survival story made him famous.



**" THE BISHOP HAD LOST 50 LBS. DURING THESE TRYING DAYS."**

**This photograph was taken soon after the close of the memorable journey, and shows Bishop Stringer (left) and his companion, Mr. C. F. Johnson (right), holding the snow-shoes that took them three days to make.**

## The Amazing Stringer Travelling Road Show

Toward the end of the 19th century, there were a number of religious societies operating in England that raised funds and sent missionaries across the British Empire, including India, West Africa, Sri Lanka, the West Indies, and northern Canada. Anglican missionaries in the Yukon were primarily funded by a London-based organization called the Church Missionary Society. CMS missionaries that had been sent around the world would return to share stories of their experiences. Regarded as adventurers, their lectures packed auditoriums and concert halls.

In order to raise funds for northern missions, Bishop Isaac Stringer held lectures in cities in Eastern Canada, the United States, and England. He used a magic lantern projector with glass slides that depicted the beauty of the north and the lives of its people. Although Stringer had previously visited England in 1906, he returned with his wife Sadie in 1913. The couple spent several months there, capitalizing on the tremendous popularity of "the Bishop Who Ate His Boots." A curious public turned out in droves to hear Isaac, and Sadie, speak. King George V even invited them to a dinner party held at Lambeth Palace, hosted by the Archbishop of Canterbury.



Isaac and Sadie Stringer, London, 1914. OCLM 2001.126.8.



## The Magic Lantern

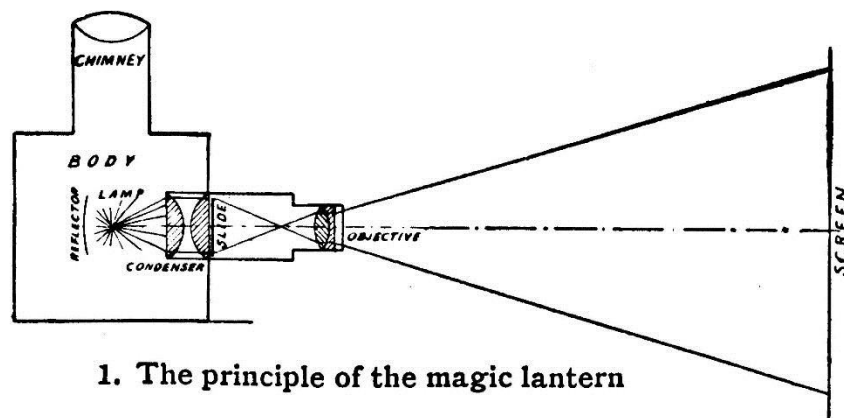
The magic lantern is the forerunner of the modern slide projector. It is part of the world of optical projection and has been used to educate, entertain and mystify audiences for hundreds of years.

The magic lantern displayed painted or photographic images on sheets of glass using a lens and a bright light source.

The first slides were initially hand-painted, but later photographic plates were used. The magic lantern had a concave mirror at the back of a light source to direct as much of the light as possible through a lantern slide and onward into a lens at the front of the apparatus. The lens was adjusted to optimally focus and enlarge the image of the slide on the screen.



Kerosene-powered lantern-slide projector. OLCM 1984.396.a-c



## *DIY Smartphone Projector*

*(Adult supervision suggested)*

This retro projector accommodates any smartphone! It will display & magnify your videos, photos, or text on a wall.

Materials needed:

- Smartphone
- Cardboard shoebox
- Magnifying glass lens
- Hobby knife (X-acto)
- Scrap cardboard
- Pencil
- Adhesive tape or glue

Position your shoebox in an upright position. Place your magnifying lens on top to centre it. Use a pencil to trace around the magnifying glass. This will be your cut line.

Cut out the round hole with the knife.

Position your lens in the hole and glue or tape in place.

Build a phone stand using scrap cardboard or other stiff material. Make sure its perpendicular from the base (an inverted T-shape) to avoid image distortion.

Use double-sided tape to mount your phone to the stand.

Set your phone to the brightest setting.

Set the lock-screen and disable the auto-rotate function.

Flip the image.

Slots can be made in the shoebox for speakers or a phone charger.

Position your phone at the end of the box, then slowly move it closer to the lens. You will notice that the image will turn sharper/softer. Move it back and forth until you get the sharpest projection. Enjoy!







