

Crickets & Constellations [Excerpt]

by Rickey Ainsworth

In this 40-minute program, an eccentric teacher leads her students on a field trip they'll never forget. Come along as they discover the night sky, learning about basic constellations and the phases of the Moon. This program contains a live segment about the current night sky, presented by a planetarium educator. Curriculum links available upon request. Lower Elementary. 40 minutes.

Cast:

The Astronomer Planetarium Presenter [LIVE]
 Ms. Herschel Lynne Brown Tepper
 Henry Stevie Hoffman
 Stella Amanda Wright
 The Class Audience [LIVE] + Recorded Classroom Audience

Scene 1: pre-show

The Astronomer:

[LIVE pre-show introduction, to be customized by each planetarium educator]

Walk-in lights up
 School exterior up

Welcome to the Chaffee Planetarium!

This sky theater is a place for imagination. We can travel anywhere and explore anything, from dinosaurs to distant galaxies. Today, we'll be going on an imaginary camping trip, deep into the forests of Northern Michigan.

Who here has ever been camping? **[Ask for raised hands]**

Did you camp in a forest? How about a park? Maybe even in your own backyard?

[Engage through a bit of back-and-forth banter; get students comfortable with the unconventional learning environment of the planetarium]

When you go camping, what do you take with you?

What do you like to do while camping? Play outdoor games? Sit around a campfire?

[Etc.]

On today's camping trip, we're going to meet some new friends, and learn about the outdoors. Before long, we'll watch the Sun set. Darkness will fall, the stars will come out to play, and together we'll explore the night-time sky.

Are you ready? We're about to begin our adventure, starring Stella, Henry, their leader Ms. Herschel, and... all of you! You'll be part of the class too, so don't be surprised if our new friends ask you some questions along the way, or invite you to join in when they sing a song or two.

Lights down slowly,
 allowing time for eyes
 to get adjusted

It's time to get going. Let's pretend that we're on a big, yellow school bus, heading out of the city and toward adventure...

Bus exterior fades up

These chairs are now bus seats; hold on tight!

[Recorded program begins; bus noises accompany us as we leave the school behind]

Bus ext. down
 School down

[More bus / driving / road sounds; upbeat music sting over title sequence]

Title sequence video
 Initial credit seq.

Scene 2: en route

[Bus sounds fade to background; children's singing fades up near end of song]

Bus exterior x-fades
 to bus interior

The Class:

*The bear went over the mountain,
 The bear went over the mountain,
 To see what he could see!*

Audience perspective:
 sitting in bus seat

[Cheering as song ends]

Stella:	That was fun! I love singing... and camping!	
Henry:	Me too, Stella. I brought snacks, and a flashlight, and... a compass, so we won't get lost!	Open backpack visual, showing gear
Stella:	I wonder if we'll see any animals out in the woods.	
Henry:	[Enthusiastically] Like bears?! I want to see a bear! Grrrrr!	Bear cartoon in thought bubble
Ms. Herschel:	[Chuckling] Henry, I guarantee you we'll see not one, but <i>two</i> bears tonight.	
Henry:	Really, Ms. Herschel?	
Ms. Herschel:	Well, if it's not too cloudy.	
Henry:	[Pauses to look out the window] I see a <i>few</i> clouds up there now, but the Sun's still shining.	X-fade bus interior to window frame w/ sky
Stella:	Hey, look, that cloud looks like a tree!	Tree cloud overlay
Henry:	That one looks like a fish!	Fish cloud overlay
Ms. Herschel:	Kids, can you imagine any other pictures in the clouds?	Other cloud overlays
	[Brief pause for audience to observe and imagine; subtle background 'ooohs' and 'aaahs']	Several other <u>cloud images</u> crossfade in and out
Henry:	Good ones! Hey, that one over there looks like... like...	
Stella:	[Dryly] Let me guess... A bear?	
Henry:	No, like our bus!	Bus cloud overlay
	[Airbrake sound]	
Ms. Herschel:	I think I know just the song...	
The Class:	[Singing] <i>The wheels on the bus go 'round and 'round, 'Round and 'round, 'Round and 'round, The wheels on the bus go 'round and 'round, All through the town!</i> <i>The wipers on the bus go swish swish swish, Swish swish swish, Swish swish swish...</i>	Window frame fades out, replaced by countryside exterior Bouncing ball lyrics Exterior view of bus, driving away; following road into distance Bus finally disappears over the horizon
	[Singing and bus sounds slowly fade out, replaced by interlude music]	

Scene 3: nature hike

	[Woodland scene music]	"Several hours later"
Ms. Herschel:	Come on, kids. This path will take us to our campsite.	Sun low on horizon
	[Footsteps on leaves; cricket sounds]	Woodland scene ext. w/ backpacking trail and pond
Henry:	What are those strange noises?	
Stella:	Those are crickets and katydid; little insects living in the grass and on the forest floor. I've heard those in my backyard at home.	Cricket and katydid close-ups
	[Splashing sound]	
Henry:	Look over there!	Heron appears in water
Stella:	Wow, a heron! I definitely <i>don't</i> see those at home.	

	[Another splashing sound]	Heron snatches a fish
Henry:	It just ate a fish!	
Ms. Herschel:	Isn't it interesting how all of these plants and animals are connected? The herons eat fish, the fish eat insects...	
Henry:	Like crickets!	
Ms. Herschel:	Right, and many insects eat plants. Other living things are part of the cycle, too.	Animated food web visual
Stella:	Like people! We eat plants <i>and</i> fish.	Add humans to web
Henry:	You know what else eats plants and fish? Bears!	Add bear to web
Ms. Herschel:	[Chuckling] All right, let's keep moving.	Scenery change; forest clearing w/ a more open sky
	[Footsteps on leaves continue]	
	I think the campsite is... this way.	
Henry:	Oh no! I just realized... I left my compass on the bus!	
Stella:	That's strange.	
Henry:	[Confused] Not really, I forget stuff all the time.	
Stella:	No, not that. I meant... Look over there. At the Sun.	Highlight Sun (circle / arrow)
Henry:	Ohhh. It's... really low. Almost down to the ground.	
Stella:	Right! Back on the bus, just a few hours ago, it was high overhead.	Ghost Sun in previous position
Ms. Herschel:	You kids are very perceptive. The Sun <i>has</i> changed position in our sky.	
Henry:	So... Sometimes it's high in our sky, sometimes it's low, and at night we don't see it at all. But why?	Animation: Sun's various positions across sky
Ms. Herschel:	Great question. The Sun is a star, just like the stars we see at night, only much, much closer.	"Sun" vocab. word
	We depend on the Sun's light and warmth to survive, and so do all the plants and animals out here in the forest.	Sun + Earth animation
	To understand the Sun's <i>motion</i> , though, we'll need to learn a little more about our Earth. Just like the Sun, the Earth is round... like a ball.	Earth shape anim.
	Half of the Earth faces the Sun. We call this daytime. The other half faces away from the Sun; we call this nighttime.	Earth sunlight + shadow animation
Henry:	And it spins, right? [Increasingly excited] Around and around and around and arrr-whoa, I'm getting dizzy!	Earth spinning faster and faster
	[Musical accent; quick "dizzying" arpeggio]	
Ms. Herschel:	[Laughing] Right. The Earth is spinning, like a big toy top. As it turns, sky objects--like the Sun--look like they're slowly creeping across our sky.	Kinetic Earth motion animation
Stella:	So when the Sun appears to move, it's really the Earth that's moving?	
Ms. Herschel:	You've got it. It takes about 24 hours for the Earth to spin around, or to <i>rotate</i> , once. We call this period a day.	"Rotate" vocab. word
	Let's keep moving, I think I see the campsite up ahead...	Earth segments conclude, focus returns to forest scene
	[Footsteps on leaves]	
The Class:	[Singing]	Sun slowly sets; sky darkens
	<i>Twinkle twinkle little star, How I wonder what you are, Up above the world so high, Like a diamond in the sky,</i>	Bouncing ball lyrics

*Twinkle twinkle little star,
How I wonder what you are.*

[Cheering; fades to interlude music]

Scene 4: the night sky

Ms. Herschel:	[Calling out] Okay everybody, let's set up our tents. Boys' tents over there, girls' tents over there, chaperones over here... [Voice fades to background as Henry speaks]	Night panorama up Stars up; Sky set to current day of prog.
The Class:	[Background chatter; kids having fun / setting up camp]	Tents fade into scene one by one; campfire w/ rising smoke
Henry:	Hey Stella, look over there. The Earth has "rotated" and we can't see the Sun anymore, but there's the Moon.	"Moon" vocab. word
Stella:	That's called a Crescent Moon. See how it's shaped like a crescent roll?	Crescent roll overlay on Moon's surface
Henry:	Hmmm, I guess that's a better name than "Banana Moon."	Banana overlay
	Ms. Herschel, why does the Moon change shape like that? Sometimes it's big and round, sometimes it looks like a half circle, and sometimes I can't find it anywhere in the sky.	Moon shape example images
Ms. Herschel:	That's another great question. Just like the Earth, the Moon is round, like a ball. And just like Earth, the Moon has day and night.	Moon phase animation sequence
Stella:	Thanks to the Sun's light.	
Ms. Herschel:	As the Moon travels around the Earth, we see different parts of its light and dark sides.	Animation continues
	Tonight we see just a little bit of the Moon's lighted side; a thin crescent of sunlight bouncing--or reflecting--off the Moon's surface.	Zoom in on tonight's Moon
	The full cycle--from New Moon, to Full Moon, and back again--takes about a month. In fact, that's where our word "month" came from: <i>moonth</i> .	"Moonth" word animation
Stella:	Wow, I didn't know that.	Phase animation ends
Ms. Herschel:	Well, now that it's getting later, and the sky is really dark, we can try to find some constellations.	Moon subtly dims a bit, giving more visual weight to stars
Henry:	Constellation? That's, like, a star picture, right?	Constellation vocab. word
Ms. Herschel:	That's right. For a very long time, people have looked up at the sky, and imagined people, animals, and objects that were important to them.	Constellation examples x-fade
	Remember earlier, when you were imagining pictures in the clouds? Star pictures work kind of like that. If you "connect the dots" between the stars, and have a good imagination, you can see pictures.	Quick cloud reminder image up / down
	Look up there now. Can you imagine any of your own star pictures?	
Henry:	Those stars look like a house!	House star overlay
Stella:	And there's a space ship!	Space ship star overlay
Ms. Herschel:	Any others?	

[END OF EXCERPT]

[Full script length: 15 pgs.]

[Program runtime, including live sky tour: 40 MINS.]