

ELINOR WONDERS WHY

EW152: BIG TREES

Written by
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Question: How do I make my block tower tall?

Logline: Ari wants to build as big a block tower as he can, but it keeps falling down until he gets some building inspiration from the sequoia trees.

Curriculum: LS2. Understand that animals have different body parts that are used in different ways to meet their needs, and that plants have different parts that help them survive and grow:

- b. Identify the basic parts of plants and their function
- c. Compare how the external body parts of animals and plants are the same and/or different
- d. Explore how different external features of a plant or animal help it survive in its environment. (Elinor and her friends observe the size of the sequoia tree, especially the circumference of the base.)

ND3. (RTL Crosscutting concept 'Structure and Function'): Understand that structures and materials in the natural world can be used or can inspire the engineering of structures with similar function in the designed world. (Ari decides to copy the structure of the big tree to help him build a more stable block tower at home).

SEP1. Asking questions (science) and defining problems (engineering)

- a. Demonstrate curiosity about the greater world outside of their local environment

- b. Ask more complex questions about observable phenomena

- c. Ask and/or identify cause and effect questions that can be answered by an investigation

- d. Identify a problem that can be solved by the design a new or improved object or tool (engineering)

(Elinor and her friends observe the structure of the Sequoia, which Ari relates to the problem of his unstable block tower).

SEP3. Planning and carrying out investigations

- a. Identify and use a greater variety of tools to extend the senses for observing, measuring, and recording data about objects and events

- b. Compare and contrast objects and events by describing similarities and differences in detail

- c. Demonstrate an ability to make and test predictions based on background knowledge and experiences

- d. With guidance, plan and conduct simple investigations using simple tools

- e. Design and build a solution to a simple problem (engineering)

SEP5. Using mathematics and computational thinking

d. Use measurement tools to measure and quantify properties of observable phenomena and objects

(Elinor and her friends measure the base of the tree by counting the number of kids it takes to encircle it)

SEP6. Constructing explanations (science) and Designing Solutions (engineering)

a. Use background knowledge experiences, and data to construct reasonable explanations and theories of natural phenomena (science)

b. Look for and describe patterns and relationships in natural phenomena (science)

c. Use and apply productive science discourse to support an explanation

d. Use evidence to support a theory or solution to a problem (engineering) (Elinor and her friends observe that the Sequoia is more stable be-cause of it's wide base, and Ari used that idea to make his block tower more stable).

FIRST DRAFT: October 18, 2019
SECOND DRAFT: November 13, 2019

1. INT ARI'S LIVING ROOM / DAY

We open on a wooden toy block being held under another block. As we pull out, we see that it's being held up by ARI. The camera pulls out further and rotates to reveal that he's hanging upside down from the living room chandelier, holding a block with one hand while trying to place another one on top of a teetering tower of ~10 blocks. (If the height still doesn't work, we could put the block tower on top of the coffee table?).

*

Ari narrates to himself like a golf commentator.

1 ARI (COMICALLY LOUD WHISPER) 1
Here we go folks. If Ari can place
these last two blocks...

He slowly readies to place the first block.

2 ARI (CONT'D) 2
... this will officially be the
tallest block tower IN THE WORLD!

He gingerly places the block.

3 ARI (CONT'D) 3
Stay right there, little block. No
falling.

The tower teeters for a moment.

4 U_h o_h. ARI (CONT'D) 4

But the tower doesn't fall.

5 ARI (CONT'D) 5
Phew! One more block for the WORLD
RECORD.

He reaches out to place the next block. <SFX: MIRI OFFSCREEN
BABY COOING>

*

*

Ari reacts, pulling back his arm as Miri crawls near the base of the tower.

*

6 ARI (CONT'D) 6
Hi Miri. Be careful, I'm trying to
build the tallest block tower in
the world.

Miri gestures that she wants to play too.

7 ARI (CONT'D) 7
Oh, I know you want to help, but
this is really important. It's for
the world record.

Ari reaches out and puts the last block on the unstable
looking tower. The tower teeters.

8 ARI (CONT'D) 8
Uh oh.

The tower starts to lean one way. <SFX: GASP!> Ari flies
down. He hovers on the side that's falling and blows
desperately on the tower to keep it up. The tower teeters the
other way. Ari flies to the other side and blows on it again.
It sort of looks like it works, but then: PLOP. The tower
falls on him, showering him comically with blocks.

Miri <SFX: GIGGLES>.

9 ARI (CONT'D) 9
Yeah, I know. It's kinda fun when
it falls down.

He gets up and assesses the fallen blocks.

10 ARI (CONT'D) 10
I guess I'll have to keep trying!

11 MR. BAT (OS) 11
Ari, are you ready for school? It's
time to go.

Mr. Bat appears in the doorway.

12 ARI 12
Aww, can I build one more tower?
Pleaaaaase?

13 MR. BAT 13
You can't be late. Remember, today
is a special day: it's your class
field trip!

Ari gets very excited, does a little celebration dance as
Miri crawls over to Mr. Bat.

14 ARI 14
YES! Field trip! Wooo hoo!

Ari flies over to the kitchen table, where Mr. Bat has Ari's
hat and is packing his lunch. He puts the hat on Ari's head.

15 ARI (CONT'D) 15
Did you pack my extra snacks? Field
trips make me extra hungry.

16 MR BAT 16
I know. I've been your dad for a
few years now.

Mr. Bat calls out the snacks as he packs them.

17 MR BAT (CONT'D) 17
Here's your morning snack, your bus
ride snack. The mid-morning snack.
Lunch snack. Afternoon snack.

18	ARI	18	
	Wait, what about the emergency back-		*
	up snack?!		*

[illegible]

He puts one last snack in.

20 ARI 20
Thanks, Dad! You're the best. Bye
Miri!

He grabs the lunchbox with his feet and flies towards the door. The over-stuffed lunchbox pulls him to the floor as it goes over the edge of the table.

21 ARI (CONT'D) 21
Don't worry. I got this.

He comically drags it out of the kitchen.

2. EXT SCHOOL YARD / BUS - DAY

The class kids are gathered outside the school where a school bus sits waiting for everyone to arrive. Ari arrives carrying his lunchbox. His friends ELINOR and OLIVE are already there, hanging out by a nearby tree. The two girls have their arms wrapped around the tree, linking hands and <SFX: GIGGLING> as Ari walks up to them, eating his morning snack. *

22 ARI 22
Hi, Elinor! Hi, Olive! Uh, what are
you doing?

23 OLIVE 23
(giggles) We're hugging a tree! I really love trees, so I wanted to give this one a hug, but my arms couldn't reach all the way around.

24 ELINOR 24
So I helped her! And now we're playing ring around the tree.

The girls do a turn around the tree and let go, <SFX: GIGGLING> as they dust themselves off.

25 OLIVE 25
Ari, are you excited for our field trip today?

26 ARI 26
Yeah! Although... it did keep me from getting a world record this morning.

27 ELINOR 27
A world record?

28 ARI 28
Yup, I'm trying to build the TALLEST block tower in the world.

Ari raises one arm up as high as he can.

29 ELINOR 29
Ooooh.

30 OLIVE 30
Oh! Mz. Mole said we are going to see some TALL trees today for our field trip.

31 ARI 31 *
Really? I love tall things. How tall do you think the trees will be?

The kids think for a moment. Olive points to a nearby tree.

32 OLIVE 32 *
The trees in the playground are already pretty tall. They're taller than the school. *

33 ELINOR 33 *
Maybe the big trees will be even taller. Taller than my house!

We see a thought bubble with the tree from the schoolyard, compared to the school. Elinor's house appears and the tree pops and stretches to surpass its height.

*

ARI
That's pretty tall.

35 OLIVE 35
Or maybe, they'll be as tall as the
town hall tower!

In the thought bubble, we see the tree stretch up and the town hall tower appears next to it.

ARI

36

Whoa, now that would be TALL.

Elinor looks puzzled.

37 ELINOR 37
Hmmm, I never thought about it
before. I wonder how tall a tree
can get?

*
*

At that moment, the bus gets started, and Mz. Mole calls them in.

38 MZ. MOLE 38
 Alright, class! Who's excited about
 going on a field trip??

The kids all shout positively <SFX: YEAH! WOO HOO! WALLA>.

39 MZ. MOLE (CONT'D) 39
Well, hop on board!

The kids excitedly pile into the bus. As they climb up, they say hi to the conductor, DEPUTY MOUSE.

*

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40                                DEPUTY MOUSE                                40
                                Good morning, kids!

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41	ELINOR/ARI/OLIVE	41
	Hi, Deputy Mouse!/ Good morning	
	deputy mouse! / Hello!	

*
*
*

3. SCHOOL BUS - DAY

Inside, the three kids find their seats. Ari immediately opens his lunchbox.

ARI
Yes! Time for my bus snack!

43 MZ. MOLE 43
 Ok, Deputy Mouse, are you ready to
 drive us... back to school? *

The kids react in outrage.

44 ARI/OLIVE/ELINOR 44 *
 No!/We're already at school!/Mz.
 Mole! *

Deputy Mouse and Mz. Mole <SFX: CHUCKLES>. *

45 MZ. MOLE 45
 Just kidding! Deputy Mouse, please
 drive us to... the dentist!

More outrage. <SFX: NO!/NOT THE DENTIST!/MZ. MOLE! WALLA>.

46 ELINOR 46
 Mz. Mole! Field trips are supposed
 to be fun! *

47 MZ. MOLE 47
 Ha ha. Just some old teacher
 silliness. No, today we are going
 to see something VERY SPECIAL. It's
 a very tall kind of tree, called a
 Sequoia.

48 OLIVE 48
 Sequoia. I like that word!

49 ARI 49 *
 How tall is a Sequoia, Mz. Mole? Is
 it taller than the town hall tower? *

50 MZ. MOLE 50
 Why it's the tallest tree IN THE
 WORLD!

The kids <SFX: OOH/AHH/YAY!>.

51 DEPUTY MOUSE 51
 One Sequoia forest, coming right
 up!

Deputy Mouse gets the bus going (it purrs quietly, as it runs
 on green energy). *

4. EXT. ANIMAL TOWN AND BEYOND -- DAY

We see the bus roll out of Animal Town and over different
 landscapes.

Slowly, the vegetation starts to look slightly different and more like Northern California, near the Sequoia forest. As the bus rolls along, we have a musical montage of the kids playing (while staying seated), singing (we see musical notes coming from their mouths but don't hear them sing), eating their snacks, reading, looking out the window, etc.

*
*
*
*

5. EXT REDWOOD GROVE -- DAY

The bus pulls up amid a grove of tall, thick trees (~1.5 times the height of the trees from their school, not giants yet). Elinor, Olive and Ari (polishing off an apple) get out and <SFX: OOH and AHH>.

*

52 OLIVE 52
Wow, these trees are so tall!

53 ARI 53
They are much taller than our trees
at home. They're soooooo tall.

*

54 MZ. MOLE 54
Alright everyone. Who is ready to
see some tall trees?

*

55 ELINOR 55
Huh? Aren't these the tall trees we
came to see?

56 MZ. MOLE 56
Ha! These are pretty tall, but they
are just BABY Sequoia trees. The
really tall trees are the ones in
the forest!

*

The kids <SFX: OOH and AHH>.

57 MZ. MOLE (CONT'D) 57
Follow me to the giant Sequoias!

*

They go for a little walk through the redwoods, enjoying the cool ferny climate, which is foresty but also different from home. We see Elinor and other kids happily looking around.

They arrive at a small clearing, where there are some tall trees bigger than the first trees they saw. They have wide trunks, but the kids can see the tops of them from where they are.

58 OLIVE 58
Mz. Mole, are *these* the tall
sequoia trees?

Olive is in love. The kids are all astonished.

68	ARI	68
	Now THAT is a tall tree!	

Elinor looks curious.

69	ELINOR	69
	Mz. Mole, I have a question.	

70	MZ. MOLE	70	*
	Yes, Elinor?		*

71	ELINOR	71
	How tall is this tree? I can't even see the top.	

72	OLIVE	72
	Yeah, without seeing the top, we can't tell how tall it is.	

73	ARI	73
	That sounds like a job for everyone's favorite bat. <pause> I'm talking about me. I'll check it out!	

Ari takes off flying.

74	MZ. MOLE	74	*
	Be careful up there, Ari!		

We see Ari fly up... And up... And up. He passes some birds and keeps going... Up... and up... He goes through a small cloud... and keeps going! Finally, he gets to the very top. On a super wide shot, we get a full view of the scale of the tree. It's about 300ft (90m) tall.

75	ARI	75	*
	(out of breath)		*
	Wowwwwww.		

Ari looks at the top of the tree, then down to see his tiny class. There's a short breeze, and his hat blows off and falls down. *

76	ARI (CONT'D)	76
	My hat!	

We follow the hat down, down, down...

The hat lands on Mz. Mole, followed shortly by Ari.

77	ELINOR	77	
	How tall was it, Ari?		
78	ARI (OUT OF BREATH)	78	*
	So tall! But it also got thinner at the top.		
79	OLIVE	79	
	It took your hat FOREVER to fall down.		
80	ELINOR	80	
	Is it higher than the town hall tower?		
81	ARI (STILL OUT OF BREATH)	81	*
	Way higher! I passed some birds on the way up!		
82	OLIVE	82	
	Is it taller than the clouds?		
83	ARI (CATCHING HIS BREATH)	83	*
	I had to fly THROUGH a cloud to get to the top.		
	The class kids all <SFX: OOOH WALLA>.		
84	OLIVE	84	
	What was it like?		
85	ARI	85	
	(thinks for a beat) Mmm... cloudy.		
	The kids <SFX: GIGGLE>. Elinor looks up, curious.		
86	ELINOR	86	
	I wonder... Why is this tree so tall?		
87	OLIVE	87	
	Maybe it was planted by a giant?		
	(Thought bubble of giant Olive planting a giant tree).		
88	ARI	88	
	Or maybe it got stretched out by some birds?		
	(Thought bubble of birds pulling on a tree).		

89	ELINOR	89	
	(giggling) Those are funny ideas. I know, maybe it ate and drank a lot of water.		*
90	ARI	90	
	Wow. I don't think I could eat THAT many snacks.		*
91	MZ. MOLE	91	*
	Actually, you're right, Elinor! This forest is perfect for these trees to grow in. They have just the right amount of water and sun so they just keep growing and growing.		
92	OLIVE	92	
	Forever?		
93	MZ. MOLE	93	*
	Some of these trees, like this one, are THOUSANDS of years old.		
General <SFX: WHOAAA>.			
94	OLIVE	94	
	That's older than my mom.		
95	MZ. MOLE	95	*
	Ha! Yes, by quite a bit.		
96	ELINOR	96	
	Mz. Mole, does that mean that WE will also get really tall when we get old?		
97	MZ. MOLE	97	*
	Don't I wish! No, animals like you and me stop growing at some point.		*
	Olive goes up to the tree.		*
98	OLIVE	98	
	Look how wide the tree is here in the bottom. I wish I could hug it like I do our trees at home.		*
Olive tries hugging the tree.			
99	ELINOR	99	
	I'll help you, Olive!		

[illegible]

One by one, the class joins in, linking arms and making a
circle around the tree <SFX: ME TOO! YEAH! WALLA JUST ARI,
OLIVE, and ELINOR?>.

101	MZ. MOLE	101	*
	Ha ha, I love it!		

The kids form a circle, linking hands. Finally it takes the whole class including Mz. Mole. All the kids <SFX: GIGGLE> and enjoy this magical moment.

102 ELINOR 102
Wow. Why is the bottom of the tree
so WIDE, Mz. Mole?

103	MZ. MOLE	103	*
	Hmmm, good question, Elinor. What		
	do you think would happen if the		
	tree was thin from the very bottom		*
	to the top?		*

The kids think about that for a beat <SFX: HMMM>. Ari leans back against a little sapling, which bends under his weight.

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104             ARI
104             Woah! This tree is really bendy.

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Elinor curiously tries bending the tree a little. Then she has an idea. She runs over to the base of the giant tree, pushes on it. It's rock solid.

105 ELINOR 105
I know! If the tree was thin all
the way up, it would be really
bendy. And then it wouldn't be able
to stay up so tall.

On a thought bubble, she imagines a really thin tall tree.
The tree bends completely over.

106 ARI 106

It would fall over, just like my
block tower!

107	OLIVE	107	
	I get it. So the tree has to be		*
	wide at the bottom so that it can		
	be really tall at the top.		*

108 MZ. MOLE 108
That's exactly right, clever
scientists! Being really wide at
the bottom helps trees be really
tall without falling over. *

On their realization, the kids sing a song to recap:

109 ELINOR/ARI/OLIVE 109

Sequoias grow up, up, up
Into the sky
Sequoias grow big, big, big
We wonder why

How do these trees
Grow so tall
When the wind blows
Why don't they fall?

These trees are tall
but also wide *
That helps them stay
standing upright!

Sequoias grow up, up, up
Into the sky
Sequoias grow big, big, big
Tall and wide

As the song ends, the kids marvel at the tree and run around
the base of it <SFX: GIGGLING and LAUGHING WALLA>. We fade
out. *

6. INT ARI'S KITCHEN -- DAY

Ari comes in the door, bubbling with excitement.

110 ARI 110
I'm home!

His father is feeding Miri.

111 MR. BAT 111
How was your field trip?

112 ARI 112
Oh wow, it was awesome. We saw the
tallest trees in the WORLD. *

113 MR. BAT 113
Wow. Taller than me?

114 ARI 114
 SO much taller than you. But also,
 it was really wide.

115 MR. BAT 115
 Hmm. Wider than me?

116 ARI 116
 A little bit.

They <SFX: LAUGH>.

117 ARI (CONT'D) 117 *
 But that gave me an idea for how to
 build my block tower. Miri, wanna
 help me?

7. INT ARI'S LIVING ROOM / KITCHEN

In a call back to the opening scene, we see Ari holding up Miri as she places the last block carefully. We pull out and see that Ari is also being held up by Mr. Bat. Miri places the block on a VERY TALL (~20 blocks) tower that is wider at the base.

118 ARI 118
 Just like the tree, if you want to
 be tall, it helps to be wide at the
 bottom.

Miri <SFX: GIGGLES>.

119 ARI (CONT'D) 119
 Thank you, Miri!

They stand back and admire the tower.

120 MR. BAT 120
 Nice job, Ari. But you know, the
 most fun thing about building a
 tall tower is...

121 ARI 121
 Making it fall down!

Miri knocks the tower over and they all <SFX: LAUGH>.

END *