ELINOR WONDERS WHY

EP 109A Speed Racer

By: Adam Ruben

Elinor’s Question: Why is Camilla's racecar so much faster than Elinor's wagon?

Logline: When Elinor wants her wagon to move faster, she changes its shape with some inspiration from aerodynamic animals.

Curriculum Goals:

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. (Elinor and her friends learn that animals' shapes help them move fast.)

ND3. 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. (Elinor and her friends build a car based on animals' shapes.)

SEP1d. Identify a problem that can be solved by the design of a new or improved object or tool. (Elinor and her friends identify that, to make the wagon as fast as Camilla's car, they need to improve its design.)

SEP3b. Compare and contrast objects and events by describing similarities and differences in detail. (Elinor and her friends consider the similarities [wheels] and differences [shape] between her wagon and Camilla's car.)

SEP3e. Design and build a solution to a simple problem. (Elinor and her friends design and build a faster car.)

SEP4c. Record observations to describe patterns and/or relationships in the natural and designed world(s) in order to answer scientific questions and solve problems. (Elinor and her friends notice the animals' shapes.)

SEP6b. Look for and describe patterns and relationships in natural phenomena. (Elinor and her friends notice that fast animals' shapes are similar.)

ET1. Begin to understand that asking questions, making observations, and gathering information are helpful in thinking about problems, and that it is important to clearly understand the problem before beginning to design a solution. (Elinor and her friends mistakenly believe that changing the car's decoration will make it faster.)

ET1c. Begin to understand that engineering is a collaborative process during which ideas can be exchanged and shared with others while defining a problem and working to design, test and revise a solution. (Elinor and her friends each have theories about why Camilla's car is faster.)

ET2b. Use a variety of low-tech tools including writing, drawing and painting utensils, scissors, magnifiers, balance scales, ramps, pulleys, hammers, screwdrivers, sieves, tubing, binoculars, whisks, measuring cups. (Elinor and her friends use scissors and paint to modify their car.)

Main Characters: Elinor, Olive, Ari, Mr. Rabbit
Secondary Characters: Camilla Dromedary
Backgrounds - Elinor's yard, hill near Elinor's house, forest near Elinor's house
Props - red wagon with taped-on cardboard box, paints, kid-sized racecar, bird, fish, scissors, tape, birdhouse, wood bits, Olive's notebook, Olive's backpack, crayon, pen

OUTLINE: January 25, 2019

FIRST DRAFT: February 19, 2019

SECOND DRAFT: March 11, 2019

POLISH DRAFT: April 11, 2019

RECORD DRAFT: April 17th, 2019

1. EXT. ELINOR'S YARD - DAY

Open on a sunny afternoon in ELINOR's yard, where MR. RABBIT is building a tall birdhouse nearby. Elinor, OLIVE, and ARI are excitedly putting the finishing touches on a real roadster! It's actually a cardboard box taped to the top of a pull wagon, but the kids are chattering and laughing as they decorate and tape the box, thrilled at the prospect of riding in a self-built car.

Elinor is adding a few pieces of tape to secure the cardboard box to the wagon, while Olive paints various objects on the side.

1 ELINOR 1
(casually singing to herself as she works)
We're building a car, we're building a car.

2 OLIVE 2
(picking up on the singing)
Yes we are! Yes we ARE!

Ari pops up from inside the box, holding Elinor's helmet.

3 ARI 3
(also singing)
We're gonna go far! In our caaaaar!

Ari, Elinor and Olive <SFX: LAUGH> Ari steps out of the box and hands Elinor her helmet.

4 ARI (CONT'D) 4
Wow! Our car looks amazing!

5 ELINOR 5
It sure does, Ari!

6 ARI 6
And those are some cool decorations, Olive.

7 OLIVE 7
Thanks!

ANGLE ON: Mr. Rabbit pauses his work, smiles, and comes over to the kids.

8 MR. RABBIT 8
That looks great, kids! What are you going to call your new car?
(MORE)

MR. RABBIT (CONT'D)
The Rabbit Racer? The Batmobile? The Elephant in the VROOOOOOOOM?

9 ELINOR 9
(aside, to Olive and Ari)
My dad likes silly jokes.

10 ARI 10
(nodding knowingly)
My dad does that, too.

11 OLIVE 11
Do you think it'll go fast, Mr. Rabbit?

12 ELINOR 12
Yeah, I want it to go super fast! I want to feel the wind in my ears! SHOOOM!

Elinor quickly straps on her helmet and runs around the yard.

13 MR. RABBIT 13
There's only one way to find out. Are you going to take it for a ride?

14 ARI 14
Yup! We're going to ride it down the little hill near here.

15 MR. RABBIT 15
Okay. Have fun, kids!

Olive puts on her backpack and starts to push the wagon away.

16 OLIVE 16
(to Mr. Rabbit)
Don't worry, Mr. Rabbit, we'll be extra careful!

17 OLIVE (CONT'D) 17
(to Ari and Elinor)
Dads also like being extra careful.

Ari and Elinor nod, and the kids exit, pushing the car, excited to go try it out.

2. EXT. HILL - A FEW MINUTES LATER

Elinor, Olive, and Ari push the car up the hill. It's a beautiful day, and we see the wind rustle a few leaves and a flock of birds fly by (maybe swallows, who are really good fliers, or robins, or sparrows which are already designed). One of the birds swoops down and zooms near the kids, which Elinor notices.

18 ELINOR 18
Whoa! That bird is so fast! I can't wait to see how fast we can go.

It's not a steep hill at all - much longer than it is tall. It's the sort of hill that gives a smooth ride to excite a kindergartener, but nowhere near dangerous enough to make a parent worry. The path leading down the hillside is wide enough for at least two cars the size of Elinor's wagon.

Elinor, Olive, and Ari give the final few <GRUNTS> of pushing the wagon to the hilltop.

19 ARI 19
Phew! That was hard work.

20 ELINOR 20
Okay, we're ready for our first test.

She climbs into the car.

21 OLIVE 21
Don't forget to buckle your helmet!

Elinor buckles her helmet.

22 ARI 22
Ready?

23 ELINOR 23
Ready!

24 OLIVE 24
Set?

25 ELINOR 25
Set!

Olive and Ari position themselves behind the wagon.

26 OLIVE/ARI 26
Three! Two! One! GO!

They give the wagon a little push, and it starts to roll down the hill. It's rolling down fairly slowly - still fun for Elinor, but clearly not as fast as possible.

ANGLE ON: Elinor's face peeking out over the box, with her ears through little holes in her helmet. Her ears flap in the wind, and she closes her eyes in delight.

27 ELINOR 27
Wheeeeeeee!

It's a prolonged "whee" for a long, slow ride, but it gets interrupted. We suddenly ZOOM OUT to see, coasting down the path next to Elinor, CAMILLA DROMEDARY. She's driving a store-bought kid's racecar the same general size as Elinor's and with identical wheels, but the chassis looks like a real roadster, painted yellow with a racing stripe. Camilla wears a helmet that matches her car.

Camilla honks her car's horn <SFX: Honk honk!> to signal as she passes.

28 CAMILLA 28
Coming through!

Camilla's car zips past Elinor's, and Elinor looks over in astonishment.

29 ELINOR 29
(impressed)
Whoa!

ANGLE ON: The bottom of the hill.

The look of amazement stays on Elinor's face as her car coasts to a stop - next to Camilla's, which has already been at the bottom of the hill for a few seconds.

Elinor hops out of her wagon immediately.

30 ELINOR (CONT'D) 30
Hi, Camilla!

Camilla removes her helmet.

31 CAMILLA 31
Hi, Elinor! Hold on - I have to turn off my headlights.

She reaches down and turns off the headlights <SFX: click!>. The headlights flip over and cover themselves.

32 ELINOR 32
Your car is amazing!

33 CAMILLA 33
Thanks! It's brand new. I got it for my birthday. I call it the Camilla Convertible!

34 ELINOR 34
(impressed)
Cool...

Ari and Olive enter, having scampered down the hill after Elinor's car. Camilla opens the door of her car and gets out.

35 ARI 35
Your car is so fast, Camilla!

36 OLIVE 36
I LOVE the yellow color. And look: It has a racing stripe.

37 ARI 37
And a cup holder!

Elinor, Ari, and Olive peer in wonder at the cup holder.

CU: The cup holder with the kids' faces peering down over it.

38 ELINOR, OLIVE, ARI 38
Oooooh.

39 CAMILLA 39
Your car is nice, too, Elinor.

40 ELINOR 40
Thanks, Camilla, we made it ourselves - but it's not going as fast as yours. I wonder... how can we make OUR car go faster?

Elinor frowns.

ANGLE ON: Elinor kneels and examines the wheels of both cars.

41 ELINOR (CONT'D) 41
Hmm. Both of our cars have the same wheels.

ANGLE ON: Elinor stands up again. She looks back at the hill they just descended.

42 ELINOR (CONT'D) 42
And we both went down the same hill.

She looks back at her friends again.

43 ELINOR (CONT'D) 43
I wonder why Camilla's car is faster than ours.

Ari looks at both cars back and forth and has an idea.

44 ARI 44
I know! Maybe if we paint our car yellow and draw a stripe on it like Camilla's, our car will go faster!

45 ELINOR 45
That's a **great** idea!

46 OLIVE 46
Let's take it back to your house and make some changes.

Elinor, Ari, and Olive start to exit with the car.

47 ARI 47
Bye, Camilla!

Camilla waves, then takes out a rag, exhales on her hood, then uses the rag to clean it.

CROSSFADE TO:

3. EXT. ELINOR'S YARD - A FEW MINUTES LATER

Elinor, Olive, and Ari stand around Elinor's wagon with their hands on their hips. Mr. Rabbit is still building the birdhouse in the background.

48 ELINOR 48
Okay, let's paint the car yellow.

49 OLIVE 49
And add a stripe!

SHORT MONTAGE: The kids repaint the car. When they're finished, it's the exact same color scheme as Camilla's - yellow with a racing stripe, although a bit less polished.

50 ELINOR 50
There!

Mr. Rabbit wipes his hands and joins them.

51 MR. RABBIT 51
Very nice! But why did you repaint your car?

52 OLIVE 52
Camilla has a fast car, and it's yellow.

53 ELINOR 53
With a racing stripe, just like this!

54 ARI 54
We thought if we made our car the same color as hers, our car might go faster too.

55 MR. RABBIT 55
Oh. Okay!

Elinor straps on her helmet.

56 ELINOR 56
And now to test it. Bye, Dad!

The kids pull their car out of the yard and off-screen.

4. EXT. FOREST - CONTINUOUS

The kids are pulling their car on the way to the hill. As they cross a short bridge over a small creek, Ari peeks over the side of the bridge and sees some fish hanging out.

57 ARI 57
Hi, little fishies!

The fish appear to look at Ari, then turn around and zip away, swimming really fast.

58 ARI (CONT'D) 58
Whoa, those are some fast fish!

He scampers to rejoin the others.

5. EXT. HILL - A FEW MINUTES LATER

The kids push the car up to the top of the hill again, and Elinor sits in the car again, helmet strapped on.

59 ELINOR 59
I have a good feeling about this!

60 OLIVE 60
Our car looks so fast!

61 ARI 61
Ready?

62 ELINOR 62
Set!

63 OLIVE, ARI 63
GO!

They give their car a gentle push, and it starts to roll down the hill.

ANGLE ON: Elinor once again driving her car downhill, ears flapping in the wind.

64 ELINOR 64
Wheeeeeeee!

As before, we suddenly ZOOM OUT to see Camilla passing Elinor in her car. Camilla honks her car's horn <SFX: Honk honk!>.

Camilla's car zips past, and Elinor looks surprised and disappointed.

At the bottom of the hill, Camilla's car keeps going a little farther, while Elinor's rolls to a stop. She hops out as Ari and Olive catch up.

65 ARI 65
Aw, it didn't go faster.

66 OLIVE 66
What happened?

67 ELINOR 67
Hmm.

ANGLE ON: Elinor steps back and looks at the car.

68 ELINOR (CONT'D) 68
Painting our car yellow with a racing stripe didn't make our car go faster.

69 ARI 69
I really thought that would help.

70 OLIVE 70
What else can we try?

Elinor looks over at Camilla's car, then at their car.

71 ELINOR 71
I think we need more observations. What else is different about our cars?

72 ARI 72
It's got to be the cup holder, right?

73 OLIVE 73
No - but I notice something!

Olive takes a pad of paper and a crayon from her satchel.

ANGLE ON: Overhead view of Olive drawing on paper. For each item they describe, Olive sketches a basic outline.

74 OLIVE (CONT'D) 74
Our car is boxy, like this.

She draws a rectangle with little wheels on it on the left side of the page.

75 OLIVE (CONT'D) 75
And Camilla's car is kind of shaped like this.

She draws a straight line down the middle of the page. On the right side she doodles Camilla's car: curved, aerodynamic.

76 ARI 76
Oh! I see the difference. Camilla's car has a different shape.

77 ELINOR 77
You're right! We need to change the SHAPE of our car. Come on, let's go back to my yard!

CROSSFADE TO:

6. EXT. ELINOR'S YARD - A BIT LATER

Elinor, Olive, and Ari stand around the car in Elinor's yard. Olive has her drawing materials out.

78 OLIVE 78
Ok, let's change the shape of our car.

79 ARI 79
Are we sure this is going to work?

80 ELINOR 80
Maybe we should think about other things that move fast. Just to be sure.

We see a THOUGHT BUBBLE form next to a thoughtful Elinor. In the bubble, we see the birds from earlier swooping by.

81 ELINOR (CONT'D) 81
Birds! Birds are really fast!

Olive doodles a simple side profile of a bird below Camilla's car and on the right side of the page. The bird's shape is curved and aerodynamic.

A THOUGHT BUBBLE on Ari shows the fish he saw earlier zipping away.

82 ARI 82
And fish! Fish are super fast, too!

ANGLE ON: Olive doodles a simple side profile of a fish below the bird shape: also curved and aerodynamic. The kids observe all three shapes on the right side of the page.

83 ARI (CONT'D) 83
Wait a second, look! They're all sort of the same shape.

84 OLIVE 84
Camilla's car, the bird, and the fish: They're all pointy in the front and round in the middle.

ANGLE ON: The kids smile at each other - they've figured it out!

85 ARI 85
And they're all FAST!

Mr. Rabbit walks over, wiping his hands and peering at their notebook.

86 MR. RABBIT 86
Ah, yes, that's called being "streamlined." It means it's easier for the air to go around you instead of pushing you back.

He points to the doodles in the notebook. A thought bubble forms around the drawings, and they begin to animate. We see little squiggles of air going around the aerodynamic shapes, while they bunch up in front of the square box, pushing it a little.

87 MR. RABBIT (CONT'D) 87
So things that are streamlined can move through the air faster, but boxy things get slowed down.

The animation stops and the thought bubble poofs away, leaving the original drawing.

ANGLE ON: The kids look at the notebook.

88 ELINOR 88
Whoa, that is so interesting!
(thinks, then)
Let's do it! Let's make the SHAPE of our car streamlined!

SONG MONTAGE: Elinor, Ari, and Olive change the shape of their car. Mr. Rabbit helps with scissors, and as they sing, they trim the cardboard to be pointy in front, like a bird's head. Just for fun, they also paint the car to look like a bird's head.

89 ELINOR, ARI, OLIVE 89
(singing)
OLIVE: If a car is painted slick,
ARI: But it's boxy like a brick,
ELINOR: Then it just won't go that quick!
OLIVE: So with scissors and some tape,
ARI: We're gonna change its shape!
ELINOR: 'Cuz we learned, and now we know
ALL: That pointy shapes help you go!

They share a laugh, then admire the car.

90 ELINOR 90
Woo hoo! Now it's a lot pointier. It's like a bird car!

91 MR. RABBIT 91
You could call it: The Chicken Coupe. (pause) That's another silly joke.

The kids <GIGGLE>. Elinor puts on her helmet again.

92 ELINOR 92
Okay, let's go try it!

CROSSFADE TO:

7. EXT. HILL - A BIT LATER

At the top of the hill, this time Elinor and Camilla begin their race alongside each other. Ari stands behind Elinor's car, and Olive stands behind Camilla's.

93 ARI 93
Ready?

94 OLIVE 94
Set?

95 OLIVE/ARI 95
GO!

ANGLE ON: The two cars coasting down the hill, side by side. <SFX: WHEEE! WALLA>

ANGLE ON: The two cars arrive at the bottom of the hill at the same time. Elinor and Camilla laugh and high-five.

96 CAMILLA 96
You DID it, Elinor! Now the car you made is just as fast as mine!

97 ELINOR 97
Yep, all because of its pointy shape. It's STREAMLINED, like a bird! Or a fish!

Elinor runs around, pretending to flap her wings. Olive and Ari run into the scene, and we ZOOM OUT as they all celebrate.

98 OLIVE, ARI 98
(ad libbing)
That was awesome! / You were so fast! / My turn next! / etc.

SEGMENT 2.

1. EXT PARK -- DAY

Open on Senor Tapir, with his guitar, in the park of Animal Town, sitting on a tree stump at the edge of a pond. A group of kids sit at his feet, including Elinor, Ari and Olive.

99 SENOR TAPIR 99
Let's sing a song about SPEED. Who knows what the word speed means?

Elinor's hand shoots up. She doesn't wait to be called on.

100 ELINOR 100
Speed is how fast or slow something moves.

101 ARI 101
I can move fast!

Ari suddenly bolts off screen and disappears.

102 SENOR TAPIR 102
You sure are fast! *(shouting a little louder)* But you might want to come back to hear the song.

Ari runs really fast back to sit down as Senor Tapir starts to strum his guitar and sings. After a line or two, we transition to a simpler style of animation that describes what he is singing.

103 SENOR TAPIR (CONT'D) 103
(singing)
Have you ever watched a train
rolling down the track,
And looked at the shape of its
nose?
The scientist Eiji Nakatsu did,
And this is how the story goes.

2. EXT. JAPAN -- DAY

Eiji Nakatsu (a Japanese Macaque) watches the Shinkansen bullet train with a round nose zoom past on a train track.

Eiji helped design a bullet train
For people in Japan to ride,
He looked for ideas to make the
train better,
By watching the birds outside.

Eiji Nakatsu watches a kingfisher bird dive from the tree branches down into the water to catch a fish. We see a close up of the bird's beak, which is long, pointy and wedge-shaped.

He saw the diving kingfisher bird,
Its long, pointy beak so unique!
He decided to change the bullet
train's nose
To be shaped like a kingfisher
beak.

We see the original shape of the bullet train's nose (which was long and round) change to the shape of the kingfisher's beak. The train goes through a tunnel and fast down the track. We see the shape of the train's nose compared to the shape of the kingfisher's beak. The train continues down the track, past trees, mountains, cities, houses, etc.

He got to choo--choo--choose the
shape of the train
And make the train better than
before,
So he use--use--used the shape of a
bird
And the train went faster than
before! Once more!

(sung even faster)

He got to choo --choo--choose the
shape of the train
And make the train better than
before,
So he use--use--used the shape of a
bird
And the train went faster than
before! Once more!

NOTE TO COMPOSERS: If we are short on time, we can cut the last chorus.

(sung even faster)

He got to choo--choo--choose the
shape of the train
And make the train better than
before,
So he use--use--used the shape of a
bird
And the train went faster than
before!

3. EXT PARK -- DAY

104 SENOR TAPIR 104
Whoah that song makes me want to go
fast!

105 ARI 105
Let's all go fast! Follow me!

Ari runs fast off screen, Senor Tapir tosses his guitar on the grass to follow, and all the kids run fast after him off screen. <SFX: KIDS CHEER WALLA>

FADE OUT, THE END.