Transcript: Coding Pathways to the Zoo (second–third grade)

Text on screen: Coding Pathways to the Zoo (second–third grade).

Logo: Count, play, explore—for early education.

On screen: Mindi Weinmann, STEAM educator, speaks from her classroom. As she speaks, photos of a diorama of a zoo made from paper are shown. There is a large sign that says, “CALM Zoo,” several paper trees, and a host of different plastic animal figures.

Mindi Weinmann, STEAM Educator: Today we had the students come in and their job was to create a model of an animal that we had in our zoo that we had created. And so, we talked to the students about these different types of animals and their features and characteristics that make them distinct from other ones.

On screen: Mindi and her class stand along the perimeter of the classroom. The diorama is on the floor in the center of the room. There is also a network of roads on the floor that lead to the zoo. She addresses the children.

Mindi: What do we know about an alligator? Yes?

Child 1: An alligator can swim underwater.

Mindi: It can swim. Okay. Yes?

Child 2: They move pretty slow.

Mindi: Okay. Maybe they move a little bit slow.

Child 3: They're really dangerous.

Mindi: Yeah. They have some pretty sharp teeth too, huh?

On screen: As Mindi speaks, various pairs of children are shown decorating plastic cups so they look like zoo animals. The animal cups will be placed on top of small plastic robots called “Sphero’s” that will be programmed by the children to follow the roads to the zoo.

Mindi: So they used different materials, construction paper, some used popsicle sticks to create these animals and their special characteristics and features. We use those animals that they made with the cups to sit on top of our Sphero so that when they code it to the zoo, their animal would go to the right spot in our zoo that we had on the floor.

On screen: A photo shows a pair of children sitting on the floor. One is placing their cup animal on top of their Sphero at the end of one of the roads to the zoo. The other is holding a tablet.

Another pair of children is shown on the floor, watching their animal moving down the road. One child holds a tablet.

Child 4: See if it's going. Perfect, it's perfect.

On screen: The animal follows along the road, but misses its turn, continuing onto the bare carpet and turning incorrectly.

Child 4: That's a little too much seconds. And the angle, the degree, it's not right.

On screen: Another pair of children is trying to code their sphero to correctly follow the road.

Child 5: Put the penguin on there. Start it.

Child 6: Go, you can do this.

On screen: The animal begins moving along the road, but veers slightly off, and then stops just before reaching a 90 degree turn.

Child 5: Oh, there it goes. I think the direction went off, but don't change the direction. Let's go back to five.

On screen: A photo shows the user interface of the coding program the children are using on their tablets. Then, another pair of children is shown. Their animal rolls along the road, but stops short of the first turn.

Child 7: Don't go too far.

Child 8: Please, please, please, please, please.

Child 7: Oh.

Child 8: Wait, let's try five, no 4.5.

Child 7: Yeah.

On screen: We revisit the first pair of children. After adjusting their coding, their animal rolls along the road accurately, but then it turns early. However, this time, the animal turns in the right direction, causing it to roll on the carpet parallel to the road. Then, it navigates the next turn perfectly, putting it back on track.

Child 4: I feel like more seconds, so maybe seven and... Stop right there.

On screen: The animal stops almost as expected, prompting the children to go back to their tablet to adjust the coding.

Mindi: That's great. You have one, two, three blocks done already. Do you want to make any adjustments to that one?

Child 4: Yeah.

On screen: Mindi continues reflecting from her empty classroom. As she speaks, video clips show the children working on each part of the activity. The final clip shows the first pair of children, watching their animal roll to the zoo diorama at the end of the road.

Mindi: This experience covered a lot of different components of STEAM. We had the science of learning about the animals and talking about them, we had our technology with our Spheros, we had our arts creating those animals, and with the math it talks about the time so they can make those adjustments with time. Also, the direction is done in angles. They can see that, that it's 90 degrees or back the other way was 180 degrees. So I think this lesson really helped integrate a lot of the parts of STEAM.

Yay. Round of applause for Team Panda. Great job.

Text on screen: A special thanks to the children, families, and staff of Virginia Avenue Elementary, without whose help these videos would not have been possible.

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