

Science Technology Engineering Art Math Create Discover Explore

The Center for Developing Excellence STEAM Academy We emphasize the FUN in teaching the FUNdamentals!

Jurassic World

Cost – in Dollars (not counting basic lab supplies and technology equipment if necessary):

\$ -- 0-25 \$\$ -- 25-50 \$\$\$ -- 50-100 **\$\$\$\$ -- OVER 100**

Objectives: Students will...

- Learn how to program LEGO EV3s.
- Work as a team to capture "escaped" dinosaurs.

Time Required: 1 – 45 to 60 min class period

Materials (For class of 20 students working in groups of 2):

- 10 LEGO EV3 sets (robots pre-assembled, see building instructions at end of lesson plan)
- 10 iPads or Apple computers equipped with EV3 programming software
- 10-15 plastic dinosaur models (Amazon.com)
- Assorted plastic plants

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- 10-15 large rocks
- 1 roll of blue painter's tape
- Jurassic World Official Score Card
- Demonstration computer and projection system
- 4 corner support posts
- Roll of yellow caution tape

Procedure:

Prep (the night before class):

• Select a large open area of your classroom floor and set up the Jurassic World "Park" with the dinosaurs similar to the diagram below. Mark out 10 starting locations around the Park. Pre-assemble the EV3 robots to a design that you have selected. If you are planning on having the students assemble the robots, you will need a set of directions for each group and a second day of class time.



Day of the Activity:

- As the students arrive into the classroom, describe to them the scenario of what has happened. (They were visiting Jurassic World when the dinosaurs accidently escaped. They are being hired to use special robotic systems to recapture as many of the escaped dinosaurs as possible before they harm any visitors to the park).
- Demonstrate how to use the EV3 software to program the robots.
- Assign a starting position to each team. They must start at the same position each time they program their robot.

• Have the students go to their programming station and had out the computers and EV3 robots. NOTE: To save time, have the robots and computers at the stations set to go with the software already booted-up.

Rules of the Simulation:

- Students are not allowed to enter inside the blue floor tape (inside the Park). If their robot hits an obstacle (rock, plant, or another robot), a person inside the Park (teacher or parent helper) will retrieve the robot for them. If this happens, they will then have to reprogram their robot and again start at their starting location.
- When their robot captures a dinosaur (they must touch it with their robot before their robot touches any other object in the Park), their instructor will record on their student sheet which one they have captured.
- The simulation is over when time runs out. The winning team is the one that has captured the most dinosaurs.

Assessment:

- Correctly programming their robot
- Capturing as many dinosaurs as possible

Jurassic World – Official Score Card

Туре	Туре
Brachiosaurus	Saichania
Triceratops	Dimetrodon
	1000 Carlos and
Velociraptor	Kentrosaurus
Stegosaurus	Therizinosaurus



Building Instructions

Right Motor Assembly



Left Motor Assembly



Back Castor Assembly



Assemble Right Motor, Left Motor and Back Castor



Turn Base around









Connect the Cables Left Motor : B - Right Motor : C (for this design, the cables will cross over)





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