Science Standards: Evidence of plate tectonics is partially derived from the distribution of fossils. Energy is transferred from organism to organism through food chains. Organisms can be categorized by the functions they serve in an ecosystem. Different kinds of organisms may play similar ecological roles in similar biomes.

Was T-Rex a Predator or a Scavenger?

Check out our giant T-rex. Notice some of the characteristics listed below.

Some Evidence for T-rex as a Scavenger:

1. Somewhat "human-proportioned" legs (meaning the thigh and shin are about the same length), are built for primarily walking long distances. Some scientists say the T-Rex moved at about 6 – 7 miles per hour.
2. Small front arms could not be used for grasping or holding struggling prey.
3. Scavengers often have a keen sense of smell; almost ½ of T-rex's brain may have been used for processing odors.

Some Evidence for T-rex as a Predator:

1. Some scientists estimate that T-rex could sprint up to 30 miles per hour (mph) and many prey animals ran less than 30 mph.
2. Sharp, replaceable teeth were helpful if teeth were torn out by struggling prey.
3. With a bite force of up to 80 pounds per square inch, T-rex could have killed a very large Triceratops. See our Triceratops on the wall below the T-rex.

Perhaps…

The mighty T-rex's role may have been similar to modern-day hyenas ~ taking prey when the opportunity presents itself, but scavenging and stealing food as the main part of their diet. What do you think?

Sixth Grade

Stop and Learn at the Making the Grade Learning Stations	REWARD
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DISCOVERY SCIENCE CENTER™

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First Floor Exhibits

Science Standard: Earthquakes are sudden motions along breaks in the crust called faults. Major geologic events, such as earthquakes, volcanic eruptions, and mountain building, result from plate motions.

Interview with Dr. Lucille Jones, Seismologist: Push the correct button to discover where and when the largest recorded earthquake occurred. The largest earthquake occurred in the year _____ in this place: _____. This subduction zone earthquake measured _____ on the Richter Scale.

Shake Table: Notice the model of four different heights of buildings. When the shaking starts, observe how the different heights of buildings will shake at different frequencies. If you set a block on each one of the "buildings," notice which block is shaken the most. Describe what you observe:

_____

Seismometer: Compare the two seismometers. Notice that you can interact with one of them by jumping on the floor nearby. When you jump, notice the peak that results on the seismogram. The height of this peak indicates the amplitude or intensity of the earthquake. The farther the line moves from the center point, the more energy the earthquake has. How much energy can you transfer to the seismometer?

Liquefaction: Lift the model house and set it lightly on the soil. Push the start button and watch as the house sinks, due to liquefaction, into the soil. Read the sign and explain, what causes liquefaction? _____

Name two cities in Orange County that are located in high liquefaction zones:

_____

Science of Hockey *Second Floor Exhibits*

Cool Fact! More than 60% of the net can be sealed (blocked off) by a goalie's equipment that meets the NHL maximum size requirement. This means that the padding that the goalies wear not only helps protect them, but helps protect against goals. How many hockey Cool Facts can you find? _____

Reaction Time: Besides being protected, a goalie has to be fast. Read the directions to learn how to play, then try this experiment: How quickly can you react to the light flash? Write down your first three scores. (1) _____ (2) _____ (3) _____
Did you get faster each time? (Yes / No)

You Be the Goalie: Find the sign for "You Be the Goalie" and write down how fast a goalie's reaction time is: _____ of a second. Was your reaction time faster than the goalie's reaction time? (Yes / No) Write down how many pucks you were able to keep out of the goalie's net: _____

Coaches' Corner: Find the sign inside the Coaches' Corner (inside the Locker Room). How many minutes of exercise do you need every day? _____
Look at the Activity Level chart and find the number of calories you should eat per day if you are moderately active. Write the number of calories here: _____ If you can burn .036 calories per pound per minute walking, multiply your weight by .036 to see how many calories you can burn per minute of walking. Write that number here: _____ Multiply that number by 30 to see how many calories you can burn by walking 30 minutes and write that amount here: _____

Watch out for these high-calorie foods on your food ingredient labels:

_____